Alameda County Health

Aneeka Chaudhry
Director

AGENDA _____ April 28, 2026

April 6, 2026

The Honorable Board of Supervisors
County of Alameda
1221 Oak Street
Oakland, CA 94612

SUBJECT: ACCEPT THE SUBMISSION OF THE ANNUAL REPORT FOR THE COUNTY SERVICE AREA VC-1984-1 (VECTOR CONTROL SERVICES DISTRICT) AND SET A HEARING DATE FOR 06/02/26, TO CONFIRM THE ANNUAL REPORT AND ESTABLISH THE SPECIAL ASSESSMENT AND BENEFIT RATES FOR FISCAL YEAR 2026-27

Dear Board Members:

RECOMMENDATION:

A. Accept the submission of the 2025 Annual Report for the County Service Area (CSA) VC- 1984-1 (Vector Control Services District) which describes the historical and the proposed benefit assessments for real property parcels within the CSA and Financial Report outlining the FY 2026-27 proposed budget and the proposed services to be provided with changes from the prior year rate; and,

B. Set the public hearing for consideration of the Annual Engineer's Report and adoption of the proposed assessments for Fiscal Year 2026-2027 at your Board's 6/2/26 meeting;

C. Direct the Clerk to publish the Notice of Hearing once a week for two successive weeks, in accordance with Government Code Section 6066; and

D. At the public hearing, hear and consider statements for or against Fiscal Year 2026-2027 Annual Engineer's Report and proposed assessments, and after the hearing, consider a resolution confirming the Annual Engineer's Report and any adjustments made as a result of the hearing and establishing the assessments for Fiscal Year 2026-2027.

DISCUSSION/SUMMARY:

Alameda County Health, Environmental Health Department (ACEHD) requests the Board review and accept the Vector Control Services District Annual Report and consider the proposed assessment at the June 2026 FY 2026-27 County Budget Hearings. County Service Area VC-1984-1 (Vector Control Services District) was established by your Board and became effective July 1, 1984. In order to improve health and safety in Alameda County, the Vector Control CSA provides the following services to County residents:

- Investigation, identification, and abatement of insects, rodents, and other animal vectors, as well as conditions conducive to these vectors.

- Surveillance and investigation of reports of vector-borne diseases such as Lyme disease, Anaplasmosis, Plague, Hantavirus (HCPS), Leptospirosis, West Nile virus, Seoul Virus, Psittacosis, Flea-borne Typhus, and Rabies.

- Public education relating to the preventive measures against vectors and vector-borne diseases.

- Vector Control services to the local enforcement agencies to enforce the local ordinances and State Laws relating to vectors and casual environmental conditions.

- Routine inspection and suppression of rats in sewers, unhoused encampments and along waterfronts. This includes monitoring for changes in abundance and species composition of ectoparasites and the diseases they may harbor.

- Wildlife Management Program, which includes a Wildlife Services Specialist provided by contractual agreement with the U.S. Department of Agriculture, Wildlife Services.

The CSA is solely funded through a benefit assessment charged to each property parcel. The CSA's current budget supports a staffing level of thirty-one (31) positions. This includes management, supervisory, field, clerical, lab personnel and vector control biologists. Additional administrative and technical support is provided by ACEHD.

Since July 1, 2009, the CSA includes all cities and unincorporated areas of the County and provides countywide vector control services throughout Alameda County. As in the past, the City of Berkeley Department of Health and Human Services will continue to receive reimbursement funds via contractual agreement from the CSA to operate the vector control program in Berkeley.

The actual number of benefit units that met the criteria established by the Assessor's Office for the initial $5.92 Benefit Unit rate in FY 2025-26 was 446,862. The number of single-family equivalents (SFE) meeting the criteria established by SCI, the Consulting Firm contracted for this benefit assessment work, for the secondary $6.57 initial Benefit Unit rate in the FY 2025-26 was 404,022. From 1984 to FY 2025-26, the CSA Vector Control "basic" initial Benefit Assessments rates were based on land/property use as classified by the Assessor's Office. In calculating the secondary assessment, the values are based on the number of people who potentially live on or work at each different property use type. Therefore, the number of benefit units differs between those established under the $5.92 and $6.57 benchmarks.

The City of Oakland also has a "supplemental" assessment of $1.28 which supports the special sanitary sewer inspections and rat suppression program within the City which will remain the same as the FY 2025-26 rates. The number of benefit units within the City of Oakland is 139,887.

Both Emeryville and Fremont opted not to join the District when the CSA was established in 1984.

With the approval of your Board on March 11, 2008 (Item No. 14), and in compliance with Proposition 218, the CSA started the application of the annexation process and mailed out the balloting process to all parcel owners in Emeryville and Fremont regarding the proposed New Vector and Disease Control Assessment of $10 for a single-family residence in 2008. The balloting results were favorable and subsequently, your Board approved the newly proposed Vector and Disease Control Assessment of $10 for single-family residence on January 13, 2009 (Item No. 35). The single-family residence units in FY

2025-26 for Emeryville were 4,076 and for Fremont were 66,638. The rate assessment of single-family residence for FY 2025-26 is $12.49.

For FY 2026-27, with your Board's approval, the CSA proposes the levy of a fixed basic benefit assessment of $5.92 and a secondary benefit assessment of $6.77 per single family equivalent, an increase of $0.20 per benefit unit from FY 2025-26, for vector control services within the cities of Albany, Alameda, Berkeley, Castro Valley, Dublin, Hayward, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro, San Lorenzo, Sunol, Union City, and the unincorporated areas; the "Supplemental" benefit assessment rate within the City of Oakland is $1.28 per Benefit Unit; and the benefit assessment of $12.69 per single-family equivalent, an increase of $0.20 from FY 2025-26, is proposed for the annexed cities of Emeryville and Fremont for FY 2026-27.

Please see table below:

Single Family Residence	FY 2025-26	FY 2026-27	Difference
Basic Assessment per benefit unit	$5.92	$5.92	$0.00
Secondary Benefit Assessment per benefit unit	$6.57	$6.77	$0.20
Total Amount for each benefit unit for the following Cities: Albany, Alameda, Berkeley, Castro Valley, Dublin, Hayward, Livermore, Newark, Piedmont, Pleasanton, San Leandro, San Lorenzo, Sunol, Union City, and the unincorporated areas	$12.49	$12.69	$0.20
Oakland Assessment per benefit unit (Includes Supplemental Benefit Assessment of $1.28/Benefit Unit)	$13.77	$13.97	$0.20
Emeryville/Fremont Assessment per benefit unit	$12.49	$12.69	$0.20

For additional reference, the attached 2025 ACVCSD Annual Report provides comprehensive information regarding benefit assessments and the different types of property assessed within CSA Vector Control Services.

SELECTION CRITERIA/PROCESS:

Not applicable

FINANCING:

The Vector Control Services District (County Service Area VC-1984-1) is currently supported by a total budget of $9,400,413, as submitted in the FY 2026-27 Maintenance of Effort Budget. All CSA costs are fully offset by parcel assessment and miscellaneous non-General Fund revenue. Approval of these recommendations will have no impact on net County costs.

VISION 2036 GOAL:

Acceptance of the Annual Report for County Service Area VC-1984-1 (Vector Control Services District), and establishment of the special assessment and benefit rates for Fiscal Year 2026–27 support the 10X goal pathways of **Health for All** and **Accessible Infrastructure, advancing** our shared vision of a **Prosperous & Vibrant Economy**.

Sincerely,

Signed by:
Aneeka Chaudhry
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Aneeka Chaudhry, Director
Alameda County Health

ATTACHMENT A

VECTOR CONTROL SERVICES DISTRICT
BUDGET COMPARISON
March 30, 2026

BUDGET CATEGORY		FY 25/26 Approved Budget	FY 26/27 Requested Budget	Variance	Percentage Variance
APPROPRIATION					
Salaries & Benefits	operations	$ 5,547,024	$ 5,588,293	$ 41,269	0.74%
Disc. Serv. & Supplies	supplies	$ 2,447,129	$ 2,829,911	$ 382,782	15.64%
Non-Disc. Services	supplies	$ 654,968	$ 688,058	$ 33,090	5.05%
Other Charges	incidental cost	$ 105,693	$ 160,917	$ 55,224	52.25%
Other Financing Uses	contingency	$ 133,234	$ 133,234	$ -	0.00%
TOTAL APPROPRIATION		**$ 8,888,048**	**$ 9,400,413**	**$ 512,365**	**5.76%**
FINANCING					
Use of Money or Property		$ (40,000)	$ (40,000)	$ -	0.00%
Charges for Current Svcs.		$ (7,171,863)	$ (7,684,228)	$ (512,365)	7.14%
Other Revenue		$ (600)	$ (600)	$ -	0.00%
Other Financing Sources		$ (1,675,585)	$ (1,675,585)	$ -	0.00%
TOTAL FINANCING		**$ (8,888,048)**	**$ (9,400,413)**	**$ (512,365)**	**5.76%**
NET COUNTY COST		**$0**	**$0**	**$0**	**0%**
AUTHORIZED POSITIONS		**31.0**	**31.0**	**0.0**	**0%**

ALAMEDA COUNTY
VECTOR CONTROL

ANNUAL REPORT 2025







INTRODUCTION

This 2025 Annual Report for County Service Area (CSA) VC 1984-1 for Vector Control is presented to the Alameda County Board of Supervisors (BOS) in compliance with Section 25214 and 25215.3 of the Government Code; County Service Area Law Chapter 13.20, and California Health and Safety Code Section 116110-116180.

This report gives a history on how and why the County Service Area (CSA) (known as the Alameda County Vector Control Services District, or "the District") was formed, explains how the assessments are calculated, and includes assessment tables since the CSA was formed in 1984.

In addition, this report includes highlights from the District's field operations as well as a summary of disease surveillance activities and our public outreach program.

This report is available for public review at the Vector Control Services District, 1131 Harbor Bay Parkway, Suite 166, Alameda, CA 94502, and is also posted on our website at (http://www.acvcsd.org).

ALAMEDA COUNTY
VECTOR CONTROL SERVICES DISTRICT
COUNTY SERVICE AREA VC 1984-1

MISSION

The mission of the Vector Control Service District is to prevent the spread of vector-borne diseases, injury, and discomfort to the residents of the District by controlling insects, rodents, and other vectors and eliminating causal environmental conditions through education and integrated pest management practices.

DISTRICT SERVICES

Request for Service: Overview

- Conduct investigations in response to requests for service from the public for rodent, wildlife, and insect vectors of disease, assess environmental conditions for vector harborage and access, and recommend solutions to reduce vector activity and associated public health risks.

- Investigate reported public health and vermin problems related to rodents, cockroaches, flies, fleas, bed bugs, lice, stinging insects (yellowjackets and bees), ticks, mites, and spiders, and render or recommend the appropriate control services based on integrated pest management strategies.

- Provide insect, tick and spider identifications and recommend the least–toxic control strategies.

- Conduct surveys of rodents, insects and arthropods of public health importance, and maintain a reference collection.

- Survey and control cockroaches in public sewers, utility boxes, and storm drains.

- Conduct yellow jacket and bee control in public areas.

Wildlife Management and Rabies: Case Investigation

- Conduct investigations of nuisance wildlife problems relating to bats, skunks, opossums, raccoons, turkeys, feral pigs, foxes, coyotes, dogs, cats, rabbits, and birds (especially pigeons).

- Trap nuisance animals when preventative alternatives or exclusion practices are not possible or unlikely to be effective.

- Work in coordination with local animal control agencies and the Alameda County Public Health Department to monitor and test wildlife (bats, skunks, opossums, cats, etc.) for rabies and submit an annual report to the California Department of Public Health.

Rodent Control

- Provide recommendations for rodent proofing and population control in homes, neighborhoods, open areas, and businesses.

- Conduct rodent suppression during vector-borne disease outbreaks, public health emergencies, or when the residents are experiencing a public health risk from rodents and their ectoparasites.

- Conduct surveys of rat populations to assess species abundance, distribution, and disease carrying potentials.

- Conduct inspection and rodenticide baiting of sanitary sewers for rats within the City of Oakland.

- Inspect and test sewer laterals and mains to detect breaks, which may provide an egress for rats to move into adjacent neighborhoods.

Solid Waste Problems

- Investigate complaints regarding solid waste involving garbage, human or animal waste, and odors at residential properties and businesses. These issues often attract or harbor rodent and wildlife vectors.

Vector Borne Disease Surveillance and Control

- Investigate reports of animal or human cases of disease such as Lyme disease, Psittacosis, Plague, Hantavirus (HCPS), Flea-borne Typhus, Tick Relapsing Fever, Chagas disease, Reptilian salmonellosis, Ehrlichiosis, Anaplasmosis, and Rabies to determine cause, incidence, distribution, and appropriate prevention and remediation measures.

- Assist the public with tick identification, and submissions of ticks to laboratories for Lyme disease testing.

- Collect rodent ectoparasites and determine Plague potential (or other vector-borne disease transmission potentials) and implement rodent suppression and ectoparasite elimination strategies as required.

Public Education and Information

- Provide educational presentations to schools, civic groups, property managements, homeowner associations and the general public.

- Disseminate educational materials on vector-borne diseases to residents and interested groups.

- Engage with the public through interactive outreach booths at local health fairs, special events, and the Alameda County Fair.

- Post annual shellfish harvesting quarantine notices at the Alameda County Bay shoreline.

- Maintain a current, informative, and interactive web site.
- Provide timely and informative media releases on vector control issues.

Legal Enforcement

- Provide assistance to local code enforcement agencies to enforce state laws, regulations, and local ordinances related to rodent, wildlife, or insect vectors that pose a threat to public health and safety.

HISTORY

The County Service Area (CSA) 1984-1 for Vector Control was established in June 1984 to serve the public needs by providing a comprehensive vector control program. Prior to 1984, the Environmental Health Department was experiencing fiscal shortfalls and had to reduce vector control services in Alameda County. In response, the Board of Supervisors (BOS) created the County Service Area after the passage of Measure A, which received over 70% of voters' approval for the formation of the CSA. Initially, Dublin, Emeryville and Fremont were not included in the District and opted to seek alternative sources for providing vector programs.

In 1987, the City of Oakland recognized that it had a severe rat problem emanating from the sanitary sewers which exceeded the District's staff capabilities to control. Subsequently, Oakland voters approved a supplemental assessment, which was first levied in fiscal year 1988-89, and provided additional funding to control rodents in the sewers.

In 1992, at the request of the Dublin City Council, they voted to join the District and subsequently Dublin was annexed by the BOS.

In 2009, both Emeryville and Fremont were annexed to the District by the BOS after a successful Proposition 218 mail ballot process. Currently, the CSA is a countywide District, providing vector control services to all 14 cities in Alameda County, including the unincorporated county areas.

The City of Berkeley already had an existing vector control program when the CSA was formed in 1984. It is currently funded by a formal contract between the City of Berkeley and the CSA.

BACKGROUND

The County Service Area (CSA) VC 1984-1 is solely funded through two benefit assessments (BA) charged to parcels benefiting from District services. In 1997, California voters approved Proposition 218, requiring that all parcel owners subject to the assessment receive a mailed ballot regarding any proposed change in an assessment prior to imposing an increase. Since then, the District (CSA 1984-1) is not able to increase revenues without conducting a new revenue measure.

In 2007, the SCI Consulting Group was awarded a contract by the BOS to conduct a survey among the property owners to gauge their support for a new vector control benefit assessment. The survey showed that there was overwhelming support for an additional benefit assessment at the rate of $4.08 which when added to the existing levy of $5.92, would result in a total rate of $10 per single-family residence. Assessment ballots were mailed to all property owners within the original District boundary areas in May 2007. The ballot measure received 67.7% voter support and the BOS approved the new assessment of $4.08 in July of that same year.

Previously, in May 1995, the Alameda County Department of Public Health contracted with a private consultant to prepare a Strategic Marketing Plan. The recommendation for the CSA was to work with the Cities of Emeryville and Fremont toward incorporation into the CSA. The City of Emeryville contracted services with the District in the late 1980's but discontinued the contract for financial reasons. The City of Fremont attempted to create its own Vector Control program but was not able to secure the necessary funding to develop an effective program.

In 2006, the Alameda County Local Agency Formation Commission (LAFCO) contracted with Burr Consulting to review all the County Service Areas for possible consolidation. Burr Consulting recommended that the Vector Control District and the Mosquito Abatement Districts conduct balloting to provide countywide services and work toward consolidation.

In January 2008, SCI Consulting surveyed a sample of residents in Emeryville and Fremont; results from both cities were favorable for creating a new benefit assessment that would permit the CSA to provide vector services. In March 2008, the BOS authorized the CSA to proceed with an application to the LAFCO to obtain approval of the annexation process to annex Emeryville and Fremont. The CSA submitted the application which included environmental documents (Initial Study, Negative Declaration) pursuant to the California Environmental Quality ACT (CEQA). In July 2008, the LAFCO approved the CSA application of annexation and issued a Certified LAFCO Resolution. On September 9, 2008, the LAFCO adopted a Resolution and ordered the annexation. In compliance with Proposition 218, the CSA mailed out ballots to all parcel owners subject to the assessment in Emeryville and Fremont regarding the proposed New Vector and Disease Control Assessment of $10 for a single-family residence. The results were favorable (Emeryville-70.23% and Fremont- 66.36%) to support the new assessment in providing the vector services in both cities. In response, subsequently, the BOS approved the newly proposed Vector and Disease

Control Assessment of $10 for a single-family residence. As of July 1, 2009, the CSA has extended the vector control services to Emeryville and Fremont and became a county-wide service District.

Since the CSA's original assessment and the annexations of Emeryville and Fremont, the BA rate for those cities held at $4.08 and $10.00 per single-family residence, respectively, until FY 2019-20, when rates increased by $1.00 to $5.08 and $11.00.

With Board of Supervisors (BOS) approval, the CSA assessed $5.92 and $6.01 for basic and secondary vector control services countywide in FY 2022-23, an increase of $0.93 from the prior year, bringing the Emeryville and Fremont rate to $11.93 per single-family residence. In FY 2023-24, the secondary services rate increased by $0.19 to $6.19, while the basic rate held at $5.92; the Emeryville and Fremont rate rose correspondingly to $12.11.

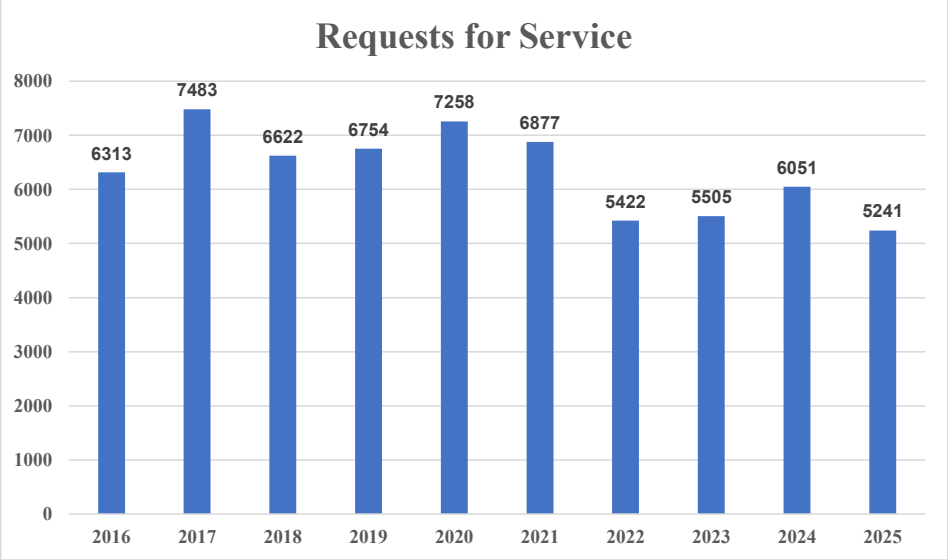
Subsequent years have continued to see a $0.19 annual adjustment to the secondary services rate: $6.38 in FY 2024-25 and $6.57 in FY 2025-26, with the Emeryville and Fremont rate rising to $12.30 and $12.49 per single-family residence, respectively. The basic rate has remained unchanged at $5.92. These assessments fund vector control services throughout the County.

VECTOR CONTROL FIELD SERVICES – OPERATIONS

REQUESTS FOR SERVICE

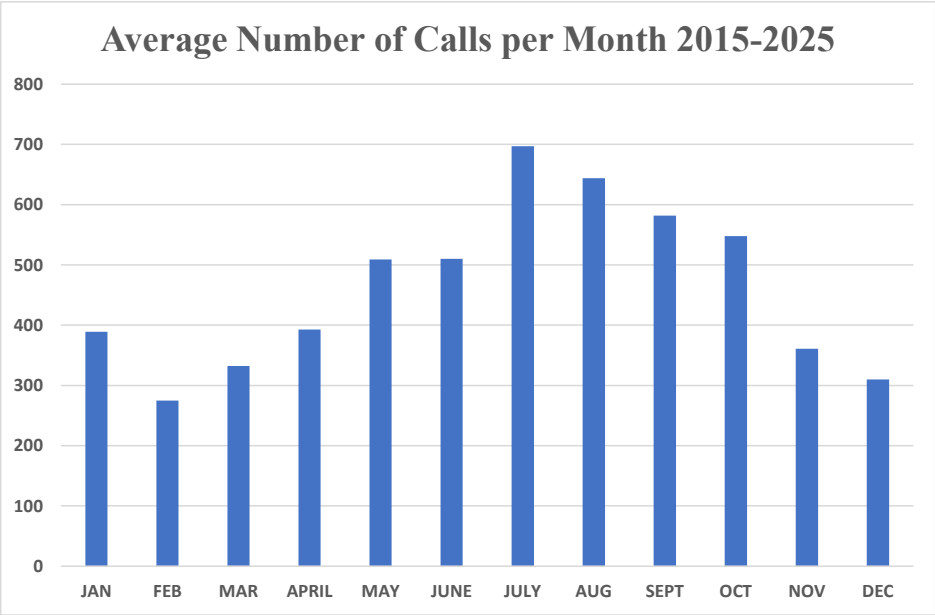
In 2025, the District received 5,241 Request for Service (RFS). There was a significant increase in the number of certain arthropod requests for service. “Yellow Jacket” and “Flea” RFS showed a significant increase, with “Flea” RFS reaching a 10-year high. In addition, actual calls to the District increased in 2025 compared to 2024. In 2024, the District received 6,051 calls, and in 2025 the District received 6,443 calls, reflecting a 6.5% increase. A call to the District can take the form of a direct phone call to the receptionist, filling in an online form found on our website, an email, or an in-person report. A single call may be comprised of more than one request for service. For example, a caller may report issues with cockroaches and mice. This represents one call and two requests for service.

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THE SEASONS OF OUR LOCAL VECTORS

A breakdown of calls received per month and averaged over ten years (2015-2025) reveals the busiest and slowest times of the year for the District's field staff. There are two distinct peaks, one relatively small and the other large. High numbers in January are due to skunk mating season, which can extend from December through February. Even though these vectors are nocturnal and avoid people, they receive a great deal of attention because of the overpowering odor they produce and their ability to spray as a defense against predators. Data shows February is the slowest time of the year, with overall vector activity steadily increasing each month until its peak in July. Warmer spring weather initiates and accelerates reproductive cycles for several vectors, including rodents, cockroaches, raccoons, fleas, and yellowjackets. Populations of several different species tend to peak towards the end of summer, before declining with cooler fall temperatures. Human behavior during the summer may also impact the number of received calls, as many residents are taking time off work and spending time at home, making interactions with vectors more likely. For our vector control biologists, July through October is clearly the busiest time of the year.

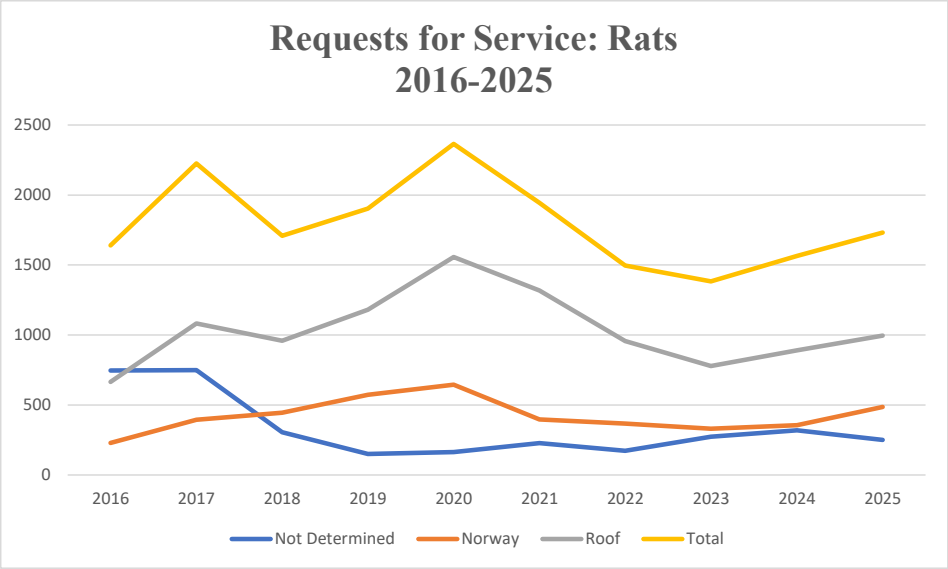


URBAN RODENT SURVEILLANCE AND CONTROL

The urban rodent surveillance program focuses on monitoring and controlling commensal rats (Norway and roof rats) and mice in residential, commercial and business properties. In 2025, the District received 2,122 requests for service (1,768 rats, and 354 mice) from the public for domestic rodents, representing 40.0% of all service requests. Compared to 2024, these numbers reflect a slight increase in rat service requests and decrease in mice service requests. Those 2,122 rodent service requests lead to staff biologists performing 14,947 field services operations related to domestic rodents. The Request for Service operations included smoke and dye tests of sewer lines for breaks, field and residential surveys for rodent activity, recommendations and follow-up evaluations of rodent control measures, and assistance of enforcement actions.

Staff biologists responding to a rodent service request will carry out thorough inspections of the exterior and interior premises looking for rodent harborage or activity and will then advise the property owner on necessary structural modifications to prevent rodent entry into their home or business. They will hand out brochures to neighbors and will inspect adjacent properties when necessary. Staff biologists also evaluate and survey neighborhoods that have significant rat activity based on clusters of complaints, or where residents report seeing rats roaming on surface streets.

Staff biologists will locate rodent sources (sewers, food items, infested buildings nearby, etc.) and implement rodent suppression strategies to prevent public health issues related to rodent-borne diseases.



When evidence indicates rats are surfacing near sewer laterals, staff biologists conduct inspections to locate broken sewer lines within the system and notify the homeowners or the Public Works Department to ensure repairs are made. In 2025, staff biologists conducted 19 smoke tests and found 18 broken sewer laterals.

As part of the City of Oakland's supplemental assessment targeting rodent populations in sanitary sewers, staff biologists conduct weekly inspections of underground sewer access structures (manholes) for signs of rodent activity (live rats or their droppings). To control rodent populations in areas with activity, rodenticide bait blocks are suspended in sewers to allow easy access for feeding. In 2025, a total of 8,804 sewer inspections were made in Oakland. The sewers that had active rodent activity totaled 2,024 and they were treated with a Contrac rodenticide bait block. In some cases, where signs of heavy rat activity were observed, additional rodenticide was used (220). In 2025, a few of the City of Alameda sewers were also inspected and treated. Of the 26 sewers inspected, 15 were baited, and five received additional bait.

Beginning in October 2022, the District initiated a baiting strategy referred to as "pulse bating". Essentially, this means targeting those areas in the sewer system where Norway rat activity is

heaviest. It involves re-inspecting the manholes that have recently been baited (within a specific time frame) and if at least 50% of the bait has been consumed, the manhole is immediately re-baited. This process continues until the bait is no longer consumed. This strategy contrasts with inspecting manholes strictly on a calendar basis and is likely to have a greater impact on sewer rat populations.

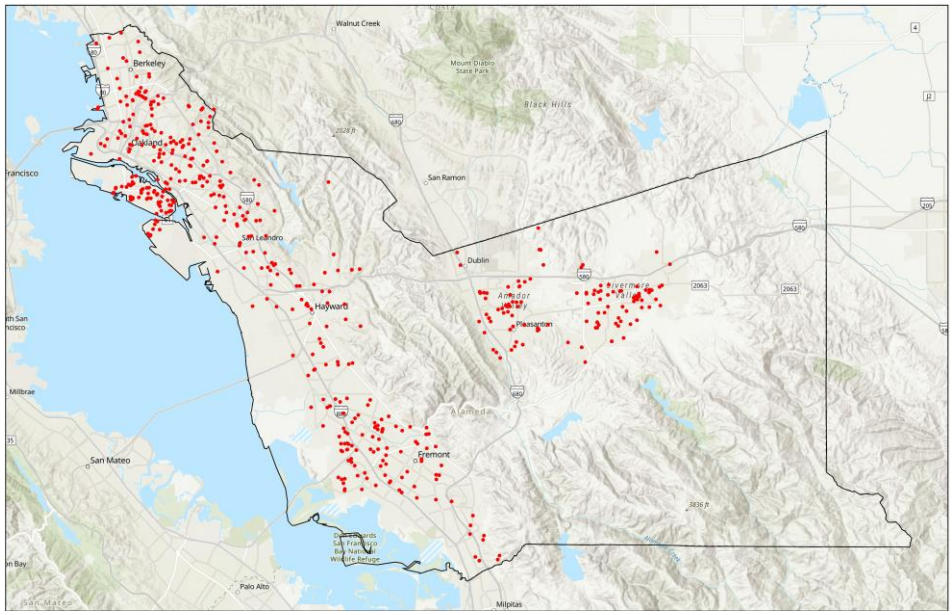
WILDLIFE MANAGEMENT PROGRAMS

In 2025, the District responded to 1,879 service requests concerning wildlife, and those service requests led to staff performing 11,862 field service operations within or near residential areas. Most of these service calls involved raccoons, skunks, opossums, and foxes. We advise homeowners to employ harassment techniques, make exclusion repairs, reduce food or other attractants, and modify the habitat to eliminate or prevent recurrence of the wildlife problem. Our staff biologists coordinate with the District's USDA Wildlife Specialist (WS) in the use of integrated pest management (IPM) techniques and who offers a wide range of preventive and population reduction methods. Below is a breakdown of the common wildlife nuisance species (raccoons and skunks) that account for most wildlife service requests the District receives.

Raccoons

In 2025, the District responded to 535 service requests related to raccoons. Raccoons often den in backyards, beneath decks, under homes, or in attics. They also feed on backyard fruits, insects, vegetables, garbage, and pet food left outside overnight. At certain times of the year, they dig for beetle grubs in lawns and can cause significant property damage. Raccoon "grubbing" on lawns was one of the leading reasons for raccoon related requests for service. To prevent damage to lawns, staff biologists and the WS may suggest applying commercial grub killer products, repellents, and cutting back on watering.

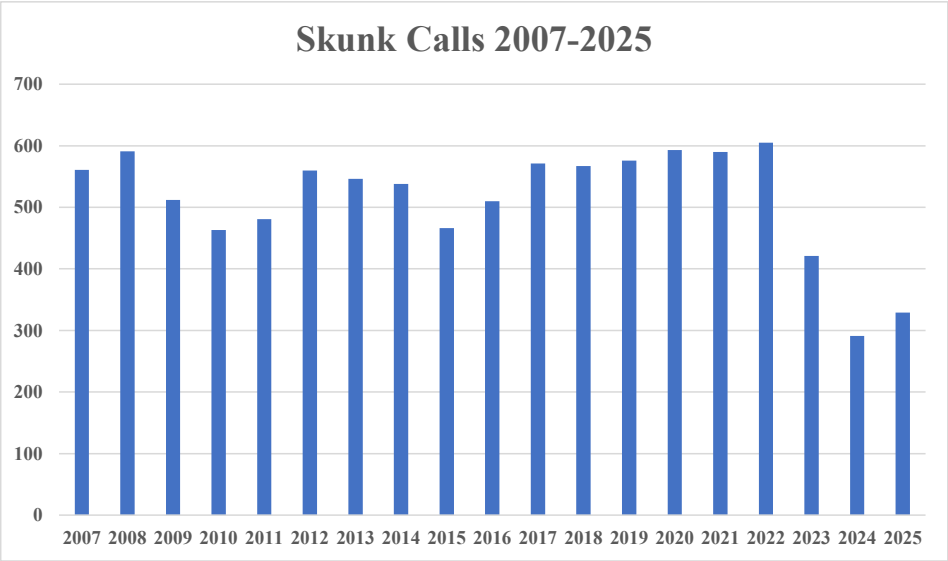
Young raccoons are generally born in April/May. Female raccoons readily nest and care for their young in attics and crawl spaces. This can result in urine and feces accumulating inside or underneath homes, creating an objectionable odor and a public health risk. These situations are a common service request we receive. Eviction and exclusion are the keys to eliminating den sites in structures. Raccoon eviction fluid, one-way doors, and harassment strategies can remove raccoons that have gained access to structures. The home then must be wildlife proofed by sealing all entry points. In situations where public safety is threatened, or property damage is recurring, trapping a nuisance raccoon may be necessary.



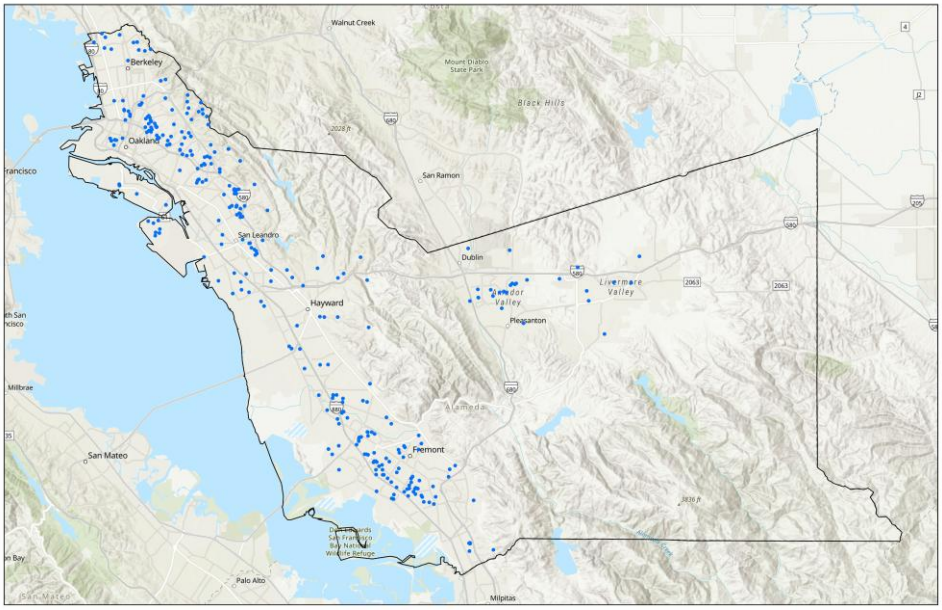
Raccoon Calls 2025

Skunks

In 2024, the number of skunk requests for service declined. In 2024 only 291 skunk requests for service were received by the district. This number is well below the previous 10-year average of 543 and is the lowest number recorded in the District's database, which started in 2006. Although it has never been officially confirmed, this decline is most likely due to distemper spreading among local populations. In 2025, the District received 329 calls, higher than the previous year but still much lower than average.



Skunks utilize residential areas because of the availability of food, water, and shelter. Skunk problems peak during their mating season (December through February), and young are born about 9 weeks later. During mating season, competing males will often spray, creating a nuisance. Females will often den in crawl spaces of homes. Additionally, skunks can be a carrier of rabies in California, creating a potential serious public health risk. Skunk control methods focus on harassment, eviction and exclusion through modifying den sites and access points, using one-way doors, and other deterrents like cayenne pepper and ammonia. Trapping may be warranted if these methods are not sufficient. Exclusion after successful evictions involves denying future access through screening and the use of 1/4-inch mesh hardware cloth. Homeowners can spray lawns with approved insecticide to control grubs and other insects, thus discouraging grubbing behavior.



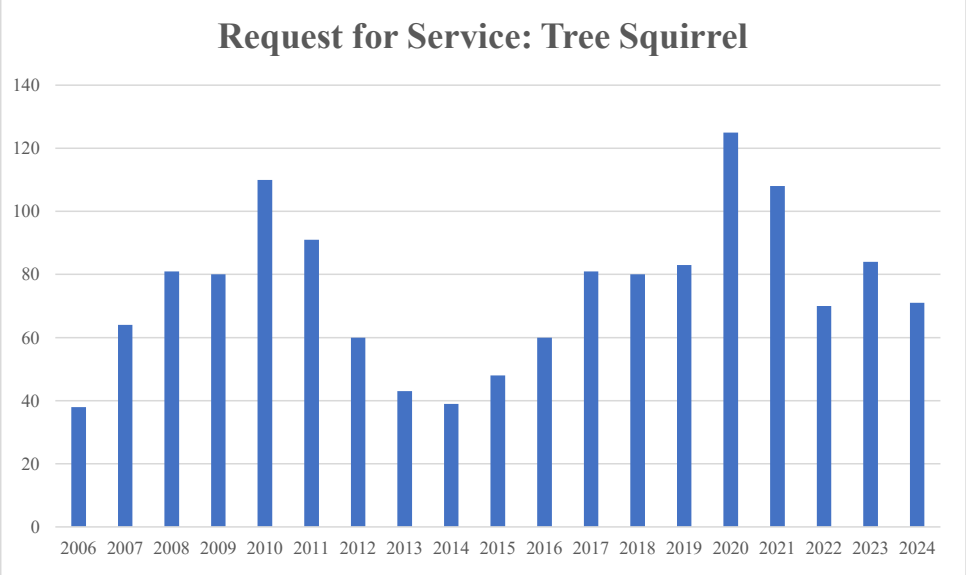
Skunk Calls 2025

Tree Squirrel Requests for Service

There are several tree squirrel species in California but in Alameda County only one is responsible for generating Requests for Service. The Eastern Fox squirrel, *Sciurus niger,* was introduced into California nearly 100 years ago. During this time, it has proven to be quite adaptable and has expanded its range, thriving in both urban and suburban environments. They are recognized by their overall gray color, orange-colored fur on the belly and a long bushy gray tail with orange on the sides.

Although many residents appreciate and enjoy this species, they may cause distress for others by damaging property. For example, they can injure trees by chewing off the bark or consuming green stems. They can damage electrical wiring, siding, and insulation or gnaw into eaves and fascia of houses, even chewing through drywall. They can gain access to attics and wall voids, where they may take up residence. During the fall, these squirrels harm garden and landscape plantings with their digging.

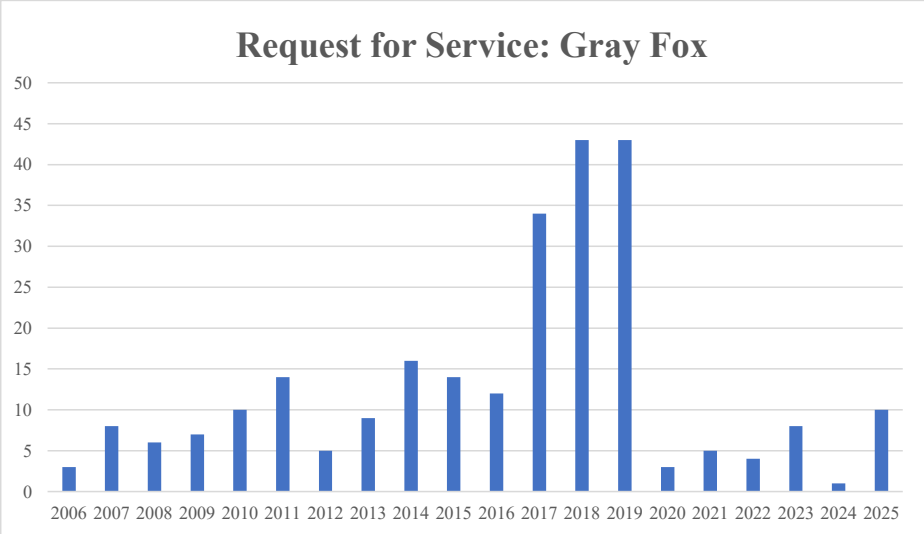
Alameda County Vector Control District has been tracking the number of tree squirrel Requests for Service since 2006. Graphing the number of these requests over time reveals an interesting pattern. Numbers are at their lowest in 2006 in 2014, a nine-year interval. Numbers peaked in 2010 and 2020, a 10-year interval. These changes in tree squirrel Requests for Service suggest significant shifts in the local population of these animals. Increases in numbers reveal that availability of resources such as food, water, and nesting sites are readily available. Factors such as intraspecific competition and disease incidence may cause changes in the population numbers and how they are affecting residents.



The Rise and Fall of the Gray Fox

Alameda County has two fox species, the non-native red fox (*Vulpes vulpes*) and the native gray fox (*Urocyon cinereoargenteus*). Because they are adaptable, skilled hunters with an omnivorous appetite, red foxes are considered a threat to native ecosystems. Gray foxes are the only fox species capable of climbing. This species has a widespread range, is naturally shy and actively avoids people or pets. However, they may intimidate residents by establishing dens beneath decks or other structures.

Vector Control has been tracking the number of gray fox Requests for Service since 2006. During the 11-year period 2006 to 2016, the number of calls concerning gray fox averaged approximately nine per year. Unexpectedly, the District saw these numbers increase four-fold during the three-year period 2017-2019, averaging forty per year. Then, from 2020 through 2025 the average number of gray fox Requests for Service dropped dramatically to five per year. Reasons for these dramatic shifts are unclear but declines in gray fox populations have been noted in other parts of the country. Loss of habitat, increases in predation, and perhaps most significantly, an increase of disease transmission such as distemper are cited as explanations.



VENOMOUS ARTHROPOD PROGRAMS

Venomous arthropods include mites, ticks, spiders, wasps (and other insects) that can sting, bite, secrete venoms, or cause allergic reactions in humans and domestic pets. In 2025, the District received 881 service requests for venomous arthropods. County residents can request the identification of various stinging insects and arachnids that they find in and around their homes. A staff biologist will collect and identify the arthropod and advise residents on how best to control the insect while minimizing the risks of bites and stings.

The District works quickly to treat yellowjacket and wasp nests located near residential and public areas because of the public health risk these insects may pose. Staff biologists contact the Alameda County Beekeepers Association to safely remove honeybee swarms and hives when possible. In 2025, the District responded to 677 venomous wasps and 94 honeybee complaints. The District saw an increase in venomous wasps calls this year. There was a 48.5% increase in calls in 2025.

MISCELLANEOUS ARTHROPOD PROGRAMS

In 2025, the District responded to service requests on a variety of other arthropods such as ants (33 requests), cockroaches (438 requests), flies (83 requests) and fleas (99 requests) infesting homes, yards, and commercial facilities. Our staff biologists frequently identify insects and other arthropod species collected by concerned residents. Staff biologists will conduct inspections to locate insect breeding locations and recommend control options. Additionally, residents frequently request treatment of residential or commercial areas where they see cockroaches openly roaming sidewalks and streets. With the ongoing research programs, staff biologists are developing new operational strategies for controlling cockroaches in sewers, water meter boxes and storm drains. The Turkestan cockroach, introduced into California in 1978 and first recorded in Alameda County in 2013, has significantly increased its range and abundance.

SWIMMER'S ITCH PROGRAM

Swimmer's itch, also called cercarial dermatitis, appears as a skin rash caused by an allergic reaction to certain parasites found in specific birds and mammals. When these microscopic parasites are released from infected snails, they can burrow into the nearby swimmer's skin, causing an allergic reaction and rash.

In 2025, there was one case of swimmer's itch reported. The case was not diagnosed, it was alleged. This is not a reportable disease by the County's Public Health Communicable Disease program, and the District will not be notified unless an outbreak of human cases has occurred.

NUISANCE ABATEMENT PROGRAM

Garbage, rubbish, abandoned vehicles, furniture/appliances, dog and cat waste, and animal manure stockpiles can become public nuisances when left unattended prior to disposal. In addition, these situations may provide harborage and food sources for rodents, flies, and other pests that might result in disease transmission to humans.

In 2025, staff biologists responded to 136 nuisance service requests for furniture, garbage, abandoned vehicles, overgrown vegetation, or rubbish. This resulted in 136 field services that included investigations, progress assessments, correspondence, and compliance inspections. When necessary, staff biologists work with local code enforcement agencies and public works to seek compliance with mediate problems.

VECTOR CONTROL LABORATORY SURVEILLANCE

AVIAN INFLUENZA SURVEILLANCE

Avian influenza is an infectious disease of birds caused by type A influenza viruses. The HPAI H5N1 strain causes significant disease in poultry, resulting in mortality of backyard and commercial flocks. Infections in wild birds may cause mild to severe disease or death, depending on the species and environmental conditions. For example, these viruses naturally circulate among waterfowl and waterbird populations and raptors that scavenge on these species are in jeopardy of acquiring infection. The Center for Disease Control and Prevention states that the probability of infection in humans is low, however some individuals may be at higher risk due to job-related or recreational exposure. Dead bird reports by the public can help reveal key sources of viral transmission and are continuously investigated by Vector Control to prevent disease amplification in Alameda County.

In 2025, the District provided surveillance of Highly Pathogenic Avian Influenza (HPAI) H5N1 in Alameda County. Forty-two birds from nine cities were screened for HPAI between January and December and a total of eight (19%) were positive for the virus. Half of the positive birds this season were owls.

ECTOPARASITE SURVEILLANCE ON SYLVATIC RODENTS, COMMENSAL RODENTS AND WILDLIFE

Sylvatic rodents such as pinyon and deer mice, woodrats, ground squirrels, and meadow voles are commonly found in rural and semi-rural areas of Alameda County. Commensal rodents refers to those rodents that live near humans and are typically non-native species. Wildlife species include the more common opossum, raccoon and skunk, but also include the less common fox, coyote, feral pig, bats, squirrels, and jackrabbits.

Many of these animals serve as reservoir hosts of zoonotic diseases such as Plague, Hantavirus Pulmonary Syndrome (HPS), Tularemia, Lyme disease, and Babesiosis. A reservoir host is an animal that remains infected with a pathogen for an extended period and may or may not develop symptoms of the disease. They serve as a source of infection. Ectoparasites (vectors) which feed on the host will transmit the pathogen to other animals or humans. Some reservoir hosts, such as deer mice, can spread pathogens through their feces and urine without ectoparasites. Our Vector Ecologist and staff Biologists routinely collect sylvatic and commensal rodent samples for surveillance and monitoring of ectoparasite abundance, diversity, and disease testing.

Host Species	Number of hosts	Number of hosts with fleas	Number of fleas	Flea species	Flea Index
SYLVATIC RODENTS					
Pinyon Mouse *Peromyscus truei*	18	0	0		0.0
Deer Mouse *Peromyscus maniculatus*	3	0	0		0.0
COMMENSAL RODENTS					
Norway Rat *Rattus norvegicus*	189	72	1070	*Xenopsylla cheopis* (1025) *Nosopsylla fasciatus* (37) *Ctenocephalides felis* (8)	5.7
Roof Rat *Rattus rattus*	9	0	0		0.0
WILDLIFE					
Desert Cottontail *Sylvilagus audubonii*	1	0	0		0.0
Fox (Tree) Squirrel *Sciurus niger*	6	4	13	*Orchopeas howardi* (12) *Hoplopsyllus anomalus* (1)	2.2
Ground Squirrel *Spermophilis beecheyi*	95	81	1143	*Oropsylla montana* (769) *Hoplopsyllus anomalus* (369) *Echidnophaga gallinacea (5)*	12.0
Jack Rabbit *Lepus californicus*	1	0	0		0.0
Mexican Free-tailed Bat *Tadarida brasiliensis*	1	1	30	*Myodopsylla gentilis (30)*	30.0
Opossum *Didelphis virginica*	9	9	423	*Ctenocephalides felis* (423) *Echidnophaga gallinacea (3)* *Nosopsyllus fasciatus (1)*	47.0
Raccoon *Procyon lotor*	7	4	10	*Pulex spp.* (6) *Ctenocephalides felis (4)*	1.4
Striped Skunk *Mephitis mephitis*	3	2	11	*Pulex spp.* (7) *Oropsylla montana* (3) *Ctenocephalides felis* (1)	3.7

Table 1. **Ectoparasites (fleas) collected from commensal and sylvatic rodents, and wildlife from urban and sylvatic areas (including rodents from homeless encampments), 2025**

HANTAVIRUS PULMONARY SYNDROME (HPS)

Hantavirus Cardiopulmonary Syndrome (HPS) was first recognized in 1993; it is a respiratory illness spread through airborne particles of rodent urine and feces contaminated with *Sin Nombre* virus (SNV). The deer mouse (*Peromyscus maniculatus*) is the principal reservoir host. Occasionally, deer mice will enter buildings and potentially expose human occupants to the virus. Past surveillance conducted at various localities within the county detected 6-18% of deer mice are infected with SNV.

In collaboration with the California Department of Public Health (CDPH), the Alameda County Vector Control District conducts hantavirus surveys in local parks to increase public awareness of the disease and to reduce exposure to deer mice and the structures they may inhabit.

Three hantavirus (SNV) surveys were conducted in 2025. A total of 21 deer mice, house mice, harvest mice and voles were collected and sent to the California Department of Public Health for testing. None of the 21 animals were positive by serology and by PCR (Table 2).

Date	Site	Specific Location	Species	Number Tested	Result
5/20/25	Castro Valley	Residence	*Peromyscus truei* Pinyon mouse	4	Negative
6/10/25	Oakland	North Oakland Sports Center	*Peromyscus truei* Pinyon mouse	5	Negative
			Peromyscus maniculatus Deer Mouse	1	Negative
9/23/25	Castro Valley	Anthony Chabot Campground	*Peromyscus truei* Pinyon mouse	9	Negative
			Peromyscus maniculatus Deer Mouse	2	Negative
			Total Tested	**21**	

Table 2. Hantavirus surveillance 2025

LEPTOSPIROSIS SURVEILLANCE

Leptospirosis is often considered the most widespread zoonosis in the world and is most common in temperate and tropical zones. It is caused by a bacterium that is spread through the urine of infected animals, which can get into water and soil where it can survive for weeks to months at a time. Various domestic and wild animals can carry the bacteria in their bodies and excrete it for months to several years. Humans can become infected through contact with urine, or other bodily fluids (except saliva) from infected animals or contact with soil, water or food that has been contaminated with the urine from infected animals. People most at risk are those that work outdoors or with animals. Symptoms in humans range from mild to severe, with most cases going unnoticed. Leptospira bacteria can be difficult to detect due to high variability between closely related strains. Leptospirosis was reinstated as a nationally notifiable disease by the CDC in 2013.

In 2025, the District responded to a dog that tested positive for leptospirosis in the City of Berkeley. Leptospira is maintained in nature through chronic renal infections of various animals, with dogs and rats being among the most common. Norway rats were trapped from the same area where the dog had been living and samples were sent to an external laboratory for antibody testing with MAT6 (Microscopic Agglutination Test). MAT6 is a serological test used to detect leptospira antibodies and the test can differentiate a specific Leptospira strain from among a total of 6 closely related strains. The District submitted five pools (3 rats per pool) and all five pools came back positive for a single Leptospira serovar (Table 3). To confirm infections were active at the time of collection, nine of the 15 rats were sent for PCR testing. Seven of these nine rats were PCR positive for Leptospira sp.

Due to the increased level of Leptospirosis surveillance in the last few years, the District decided to change its testing protocol. A subset of previously collected samples were sent for MAT 6 analysis and two locations from the City of Oakland came back as positive for servovar: Leptospira ictero.

The District is continuing to monitor sites countywide for the presence of Leptospira in rats to mitigate the risk of leptospirosis transmission.

MAT6 (Berkeley)			
Number of rats	Number of pools	Number of positive pools	Serovar Detected
15	5	5	*Leptospira icterohaemorrhagiae*
PCR confirmatory testing (Berkeley)			
Number of rats		Number positive for *Leptospira sp.*	
9		7	

MAT6 (Oakland)			
Number of rats	Number of pools	Number of positive pools	Serovar Detected
17	6	3	*Leptospira icterohaemorrhagiae*

Table 3. Leptospirosis testing 2025

WEST NILE VIRUS SURVEILLANCE

Our District has been assisting with monitoring for the presence and spread of West Nile Virus in Alameda County for many years. Initially this program consisted of testing live mosquitoes, dead birds, and sentinel chickens. Currently, the District maintains a sentinel chicken flock as part of its disease surveillance program for both avian and mosquito-borne diseases. This program is implemented in conjunction with the California Department of Public Health's (CDPH) Vector Borne Disease Section. In 2025, one of the sentinel chickens at the District's flock in the City of Livermore tested positive for West Nile Virus. CDPH and Alameda County Mosquito Abatement District used this data to help inform their West Nile Virus programs and responses.

HOMELESS ENCAMPMENT RODENTS, FLEAS, AND *RICKETTSIA SP.* SURVEILLANCE AND CONTROL OPERATIONS

In 2018, the District began conducting surveillance of commensal rodent and ectoparasite populations in homeless encampments within the City of Oakland.

The most common commensal rodent associated with homeless encampments is the Norway rat, *Rattus norvegicus*, which is a host for fleas, lice and mites that can vector diseases such as plague, flea-borne typhus, and salmonellosis.

It was found that several of these encampments had active Norway rat populations as indicated by active burrows within, and adjacent to the camps. These observations coincided with reports of

rat sightings by residents of the encampments, surrounding businesses, and members of the public. Staff biologists began live-trapping at a few of the larger encampments to ascertain the size of the Norway rat populations. Our Norway rat surveillance stopped for a time due to the COVID-19 pandemic but resumed in 2021.

In 2025, the District conducted 14 separate trapping events at seven different homeless encampments in the City of Oakland and collected 189 Norway rats (Table 4).

Staff biologists set out live cage traps in the afternoon and the traps are collected the following morning. Trapped rats are brought back to the laboratory for analysis, where they are combed for associated ectoparasites. Ectoparasites (especially cat fleas, *Ctenocephalides felis* and Oriental rat fleas, *Xenopsylla cheopis*) were sorted by species and tested for pathogens, specifically *Rickettsia felis* and *Rickettsia typhi.*

There were five Norway rat suppression applications conducted during 2025. Burrows are baited with rodenticide and rat carcasses are picked up post-treatment to reduce the risk of non-target effects on other domestic animals and wildlife.

Suppressing the Norway rat populations will continue by staff biologists following the clean-up of the encampments by Public Works staff, and the relocation of encampment residents and their pets into more permanent housing as they become available.

Ongoing Norway rat suppression is conducted in coordination with Public Works and other city/county agencies engaged with encampments.

Homeless Encampments Surveyed In the County	**# of Separate Trapping Events**	**Total # of Norway rats trapped**	**Total # of fleas collected for disease testing**	**Total # of rodenticide applications for Norway rat suppression**
7	14	189	1,069	5

Table 4. Norway Rats at Homeless Encampments Summary 2025

FLEA-BORNE RICKETTSIAL DISEASES SURVEILLANCE

Rickettsial diseases are found worldwide and are transmitted to humans via an arthropod host, specifically fleas, lice, ticks and mites. Most cases of flea-borne typhus occur in Texas, Hawaii and California, with approximately 300 human cases per year. Los Angeles and Orange counties are known endemic areas for flea-borne rickettsioses but sometimes cases are reported from other parts of California. Humans become infected with flea-borne *Rickettsia* through the infectious bite of a flea or through infectious flea fecal material.

In 2020, the Alameda County Vector Control Services District began a surveillance program examining flea borne Rickettsial disease by collecting fleas from different host animals throughout the County. The cat flea (*Ctenocephalides felis)* and the Oriental rat flea (*Xenopsylla cheopis*) are the focus of the surveillance program. Alameda County has historical populations of Oriental rat fleas and Norway rats, the rodent hosts.

Rickettsia typhi, the causative agent of endemic typhus, is maintained in a rat-flea-rat cycle involving Norway rats, *Rattus norvegicus,* and the Oriental rat flea, *X. cheopis.* Although *X. cheopis* is considered the major vector of murine typhus, natural infection with *R. typhi* has been reported in other flea species including *Leptopsylla segnis*, *Pulex* spp., and *Nosopsylla fasciatus*.

Rickettsia felis, the etiologic agent of flea-borne spotted fever, is suspected to be a human pathogen. *Rickettsia felis* appears to share the same suburban transmission cycle as *Rickettsia typhi* where the cat flea, *C. felis*, serves as the primary vector and domestic animals and urban wildlife act as potential reservoir hosts. The cat flea is cosmopolitan in nature and is highly associated with people and pets.

In 2025, the Alameda County Vector Control Services District continued its flea-borne Rickettsial disease surveillance program, collecting and testing fleas from different mammals. In total, 1,345 fleas were tested in pools (up to five fleas per pool, up to 50 fleas per host animal) using *Rickettsia* genus-specific real time PCR assay. Out of 101 animals, 15 were infested with fleas that showed the presence of Rickettsial DNA (Table 5). The animals were three Norway rats, eight opossums, and four raccoons.

Host	**Number of animals**	**Number of fleas tested**	**Number of animals with *Rickettsia* positive fleas**	**Percent of animals with *Rickettsia* positive fleas, %**
Norway rat	72	1,049	3	4.2
Opossum	19	207	8	42.1
Raccoon	8	81	4	50.0
Skunk	2	8	0	0
Total:	101	1,345	15	

Table 5. Infestation of commensal rodents and wildlife animals with *Rickettsia* spp. positive fleas.

In total, 274 *Ctenocephalides felis*, 953 *Xenopsylla cheopis,* 41 *Nosopsylla fasciatus*, 77 *Pulex spp* were tested for the presence of Rickettsial DNA (Table 6). The highest percentage of infected pools was found in the *C. felis* flea population. Our results showed that Rickettsial infections are not common in *X. cheopis, N. fasciatus, and H. anomalus* fleas in Alameda County.

To identify *Rickettsia* species, the positive samples were screened using additional PCR assays. *R. felis* infections were identified in 31 flea pools. *C. felis* (cat fleas) were commonly infected: out of 68 pools, 29 were positive. Occasionally, *R. felis* was present in *X. cheopis and Pulex* spp fleas from Norway rat and raccoons. *R. typhi* was not detected in any of the fleas collected in 2025

Flea spp.	**No. of fleas tested**	**No. of pools tested**	**No. of *R. felis* positive pools**	**Percent of *R. felis* positive pools, %**	**Minimum Infection Prevalence (MIP), %**
C. felis	274	68	29	42.6	10.6
X. cheopis	953	227	2	0.9	0.2
Pulex spp.	77	22	0	0	0
N. fasciatus	41	33	0	0	0
Total:	1,345	350	31	8.9	2.3

Table 6. *Rickettsia felis* infections in fleas collected in 2025.

Understanding the flea distributions on commensal rodents and urban wildlife animals is of public health concern because they regularly interact with humans in parks and housing communities. An analysis of the flea infestation on host animals and *R. felis* infections in fleas (Table 7 and Figure 1) shows that opossums and racoons have more fleas with the Rickettsial agent compared with other mammals.

Host	**Number of animals**	***X. cheopis*, No. of *R. felis* positive pools (No. of fleas tested)**	***C. felis*, No. of *R. felis* positive pools (No. of fleas tested)**	***N. fasciatus* No. of *R. felis* positive pools (No. of fleas tested**	***Pulex spp.*, No. of *R. felis* positive pools (No. of fleas tested)**	**TOTAL No. of *R. felis* positive pools (No. of fleas tested)**
Norway rat	72	2 (953)	1 (6)	0 (40)	0 (50)	3 (1,049)
Opossum	19		17 (206)	0 (1)		17 (207)
Raccoon	8		11 (61)		0 (20)	11 (81)
Skunk	2		0 (1)		0 (7)	0 (8)
Total:	101	2 (953)	29 (274)	0 (41)	0 (77)	31 (1,345)

Table 7. *Rickettsia felis* infection in fleas by host animal and by flea species.

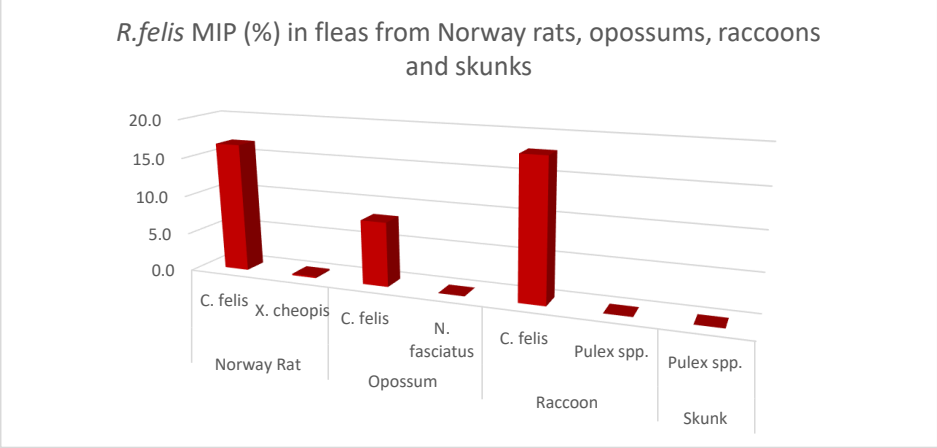


Figure 1. Comparison of *R. felis* Minimum Infection Prevalence (MIP, %) in fleas from Norway rats, opossums, raccoons, and skunks in 2025.

In 2025, *Rickettsia* positive fleas were found on mammals collected in Alameda, Albany, Fremont, Livermore, Newark, Oakland, Pleasanton, and San Leandro (Figure 2). Most of the locations included in the flea-borne Rickettsial disease surveillance program are considered urban or suburban. Due to ecological, biological, and behavioral factors promoting contact between humans and fleas, it is important to continue monitoring flea borne rickettsioses in Alameda County.

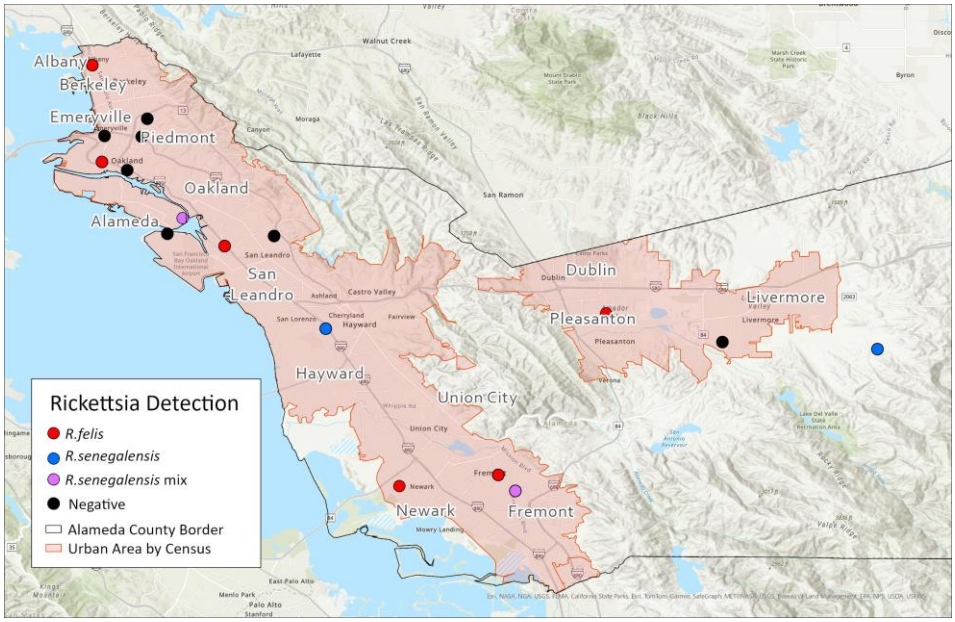


Figure 2. Distribution of *Rickettsia* infected fleas in Alameda County in 2025.

TICK SURVEILLANCE PROGRAM

Tick-borne diseases threaten the health of people. For over 25 years, Alameda County Vector Control Services District has conducted a tick surveillance program concurrent with the surveillance of pathogens in ticks that may cause disease in humans. Using a standard flagging method, ticks are collected in regional parks, city parks and public open spaces. In 2025, 6,937 *Ixodes pacificus*, 7,833 *Dermacentor occidentalis*, 112 *Dermacentor similis (formerly Dermacentor variabilis)*, 46 *Ixodes spinipalpis*, 7 *Haemaphysalis leporispalustris* ticks were collected during 141 collecting events (Table 8). More than 2,000 ticks were collected on trails in Pleasanton Ridge Regional Park, Redwood Regional Park, and Augustin Bernal Park, Pleasanton. In addition, Joaquin Miller Park in Oakland and Anthony Chabot Regional Park demonstrated the highest tick species diversity (5 species).

Location	***Ixodes pacificus***	***Dermacentor occidentalis***	***Dermacentor similis***	***Ixodes spinipalpis***	***Haemaphysalis leporispalustris***	**Total**
Anthony Chabot Regional Park	602	889	6	2	1	1,500
Augustin Bernal Park, Pleasanton	904	1,248	2			2,154
Butters Canyon Regional Open Preserve	6	8				14
Cull Canyon Regional Recreational Area	505	112	13			630
Don Castro Reg. Rec. Area	4	269	6			279
Joaquin Miller Park, Oakland	848	725	11	44	6	1,634
Pleasanton Ridge Regional Park	1,568	941	12			2,521
Redwood Regional Park	2,219	2,055	3			4,277
Tassajara Creek Regional Park	15	51	14			80
Open spaces, Berkeley	32	203	22			257
Open spaces, Dublin	1	2	2			5
Open spaces, Castro Valley	54	857	17			928
Open spaces, Pleasanton	179	473	4			656
Total per tick species	**6,937**	**7,833**	**112**	**46**	**7**	**14,935**

Table 8. Tick Collection Summary

Ixodes pacificus Tick Surveillance

***Borrelia* spirochetes**

Ixodes pacificus (*I. pacificus*) or Western Blacklegged tick is the main vector of Lyme disease, which is caused by the bacterium *Borrelia burgdorferi* and is also the vector of tick-borne relapsing fever (TBRF), which is caused by the bacterium *Borrelia miyamotoi*. Both pathogens are primarily transmitted to humans through the bite of an infected Western Blacklegged tick. The Western Blacklegged tick has three life stages: larva, nymph, and adult. All three stages can be found in parks and open spaces in Alameda County, but tick abundance varies across the County. Nymphal and adult ticks can bite humans and transmit bacteria. In 2025, 6,545 adult, 297 nymphal and 95 larval *I. pacificus* ticks were collected as a part of the District's tick surveillance program (Table 9).

Location	Adults	Nymphs	Larva	Total
Anthony Chabot Regional Park	550	51	1	602
Augustin Bernal Park, Pleasanton	886	18	0	904
Butters Canyon Regional Open Preserve	6	0	0	6
Cull Canyon Regional Recreational Area	463	34	8	505
Don Castro Reg. Rec. Area	3	1	0	4
Joaquin Miller Park, Oakland	633	133	82	848
Pleasanton Ridge Regional Park	1,520	46	2	1,568
Redwood Regional Park	2,219	0	0	2,219
Tassajara Creek Regional Park	15			15
Open spaces, Berkeley	32			32
Open spaces, Dublin	1			1
Open spaces, Castro Valley	54	0	0	54
Open spaces, Pleasanton	163	14	2	179
Total:	**6,545**	**297**	**95**	**6,937**

Table 9. *Ixodes pacificus* Collection Summary

The likelihood of encountering an *I. pacificus* tick depends upon stage-specific host-seeking behavior and seasonality. Adult ticks seek hosts in grass and brushy areas, whereas nymphal ticks can be found in leaf litter or on tree trunks. Tick activity is seasonal and depends on temperature and humidity. Figure 3 demonstrates the seasonal patterns in host-seeking. *I. pacificus* based on the number of collected ticks observed during the January-July period in 2025. Adult ticks were active from January through April. In contrast, April, May and June were the months of the highest activity for nymphal *I. pacificus* ticks.

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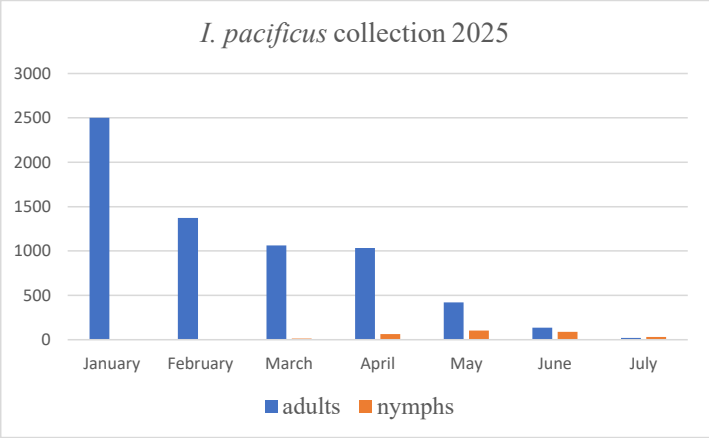


Figure 3. Monthly Numbers of Collected *I. pacificus* in 2025

Based on previous tick surveillance data and an estimated human risk of being bitten by a tick, i.e. how popular a given trail is with the general public, *I. pacificus* from selected locations were tested in groups, or "pools", of a maximum of five adults and two nymphs, for presence of *Borrelia sensu lato* (*Bbsl)* and *Borrelia miyamotoi (B.miya.)*. In 2025, DNA from 1,375 *I. pacificus* ticks (1,123 adults, 252 nymphs) were evaluated using *Borrelia* specific real-time PCR. The results are reported as a minimum infection prevalence, or MIP (Table 10). MIP is the ratio of the number of positive pools to the total number of ticks tested. This is the standard way of expressing the proportion of vectors infected with a specific pathogen assuming that only one vector in a positive pool is infected.

***I. pacificus* life stage**	**Number of ticks**	**Number of pools**	**Number of *Bbsl* positive pools**	**Number of *B.miya* positive pools**	***Bbsl* MIP, %**	***B.miya* MIP, %**
adults	1,123	226	11	13	1.0	1.2
nymphs	252	132	8	2	3.2	0.8
Totals	1,375	358	19	15		

Table 10. *Borrelia sensu lato* and *Borrelia miyamotoi* Infections in *Ixodes pacificus* Ticks

County-wide, *Borrelia sensu lato* and *B. miyamotoi* were detected at 1.0% and 1.2% MIP in adult *I. pacificus* ticks respectively. In nymphal *I. pacificus* ticks, *Borrelia sensu lato* and *B. miyamotoi* were detected at a MIP of 3.2% and 0.8% respectively. The MIP values recorded in 2025 are in a typical range of *Bbsl* and *B.miya*. infection prevalence for Alameda County.

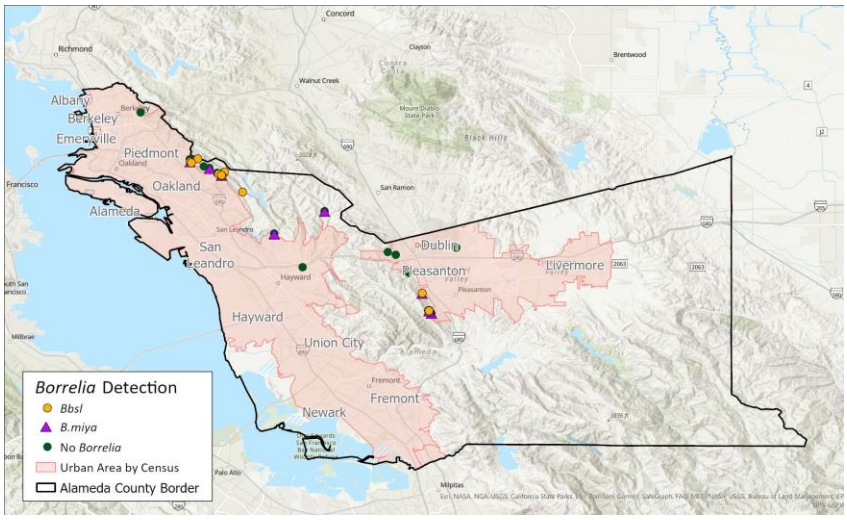


Figure 4. Distribution of *Borrelia sensu lato* and *B. miyamotoi* Positive ticks in Alameda County 2025

Anaplasma phagocytophilum

I. pacificus ticks can transmit *Anaplasma phagocytophilum*, a bacterium which causes human granulocytic anaplasmosis. The annual incidence of anaplasmosis in the U.S. has increased in recent years and in 2022 the District started to test *I. pacificus* ticks for the presence of *A. phagocytophilum.* In 2025, 1,123 adult ticks and 252 nymphal ticks were screened by real-time PCR. Out of 226 adult tick pools, 11 were positive for *A. phagocytophilum*, which corresponds to a county-wide MIP of 1.0%. Out of 132 nymphal tick pools, only one pool was positive, which corresponds to a MIP of 0.4% (Table 11). The spatial analysis of *A. phagocytophilum* data (Figure 5) demonstrates that *A. phagocytophilum* infected ticks can be found on both sides of the East Bay Hills but 75% of the infected ticks in 2025 were collected on maritime side of the East Bay Hills.

I. pacificus **life stage**	**Number of ticks**	**Number of pools**	**Number of *A.phagocytophilum* positive pools**	***A.phag.*** **MIP, %**
adults	1,123	226	11	1.0
nymphs	252	132	1	0.4
Totals	1,375	358	12	

Table 11. *A. phagocytophilum* Infections in *Ixodes pacificus* Ticks 2025

The spatial analysis of infected ticks across the County (Figure 5) illustrates the distribution of *Borrelia* and *Anaplasma* whose maintenance depends on tick vectors, vertebrate hosts, habitat, and climate.

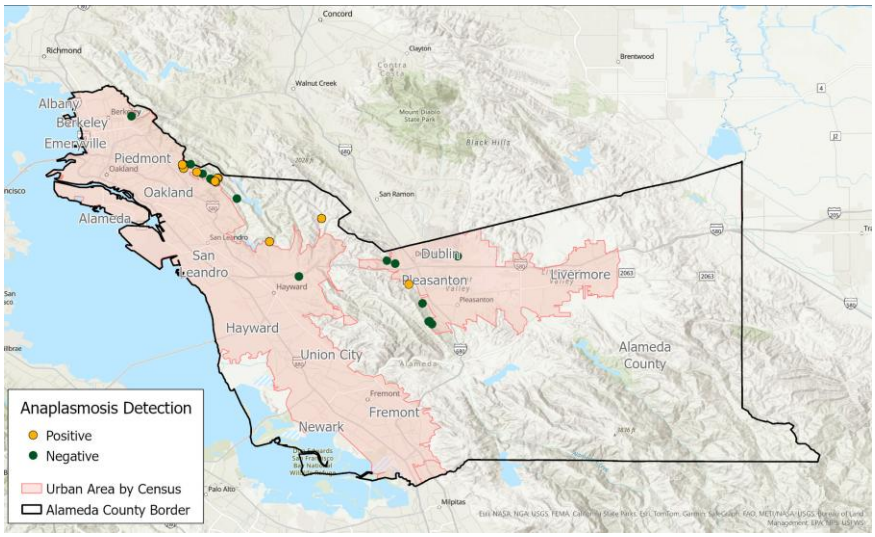


Figure 5. Distribution of *Anaplasma phagocytophilum* Positive Ticks in Alameda County in 2025

Dermacentor Tick Surveillance

Tick species in the genus *Dermacentor* are very important from medical and veterinary standpoints. In 2019, the District started surveillance for tick-borne diseases associated with *Dermacentor occidentalis* and *Dermacentor similis* (former *Dermacentor variabilis*) ticks. According to California Department of Public Health records, the Pacific Coast tick (*D. occidentalis*) is second only to *I. pacificus* in total numbers of tick attachments to humans and is the primary vector of *Rickettsia philipii*, the causative agent of Pacific Coast tick fever. The American dog tick (*D. similis*) is a vector of various viral and bacterial pathogens including *Rickettsia rickettsii*, the causative agent of Rocky Mountain Spotted Fever.

In 2025, 7,833 *D. occidentalis* and 112 *D. similis* ticks were collected in regional parks, city parks and open spaces (Table 9). Most of the ticks were adult ticks (7,829 *D. occidentalis* adults and 108 *D. similis* adults).

Pacific Coast ticks (*D. occidentalis*) may be found year-round in Alameda County, but they are most abundant in the late spring and early summer (Figure 6).

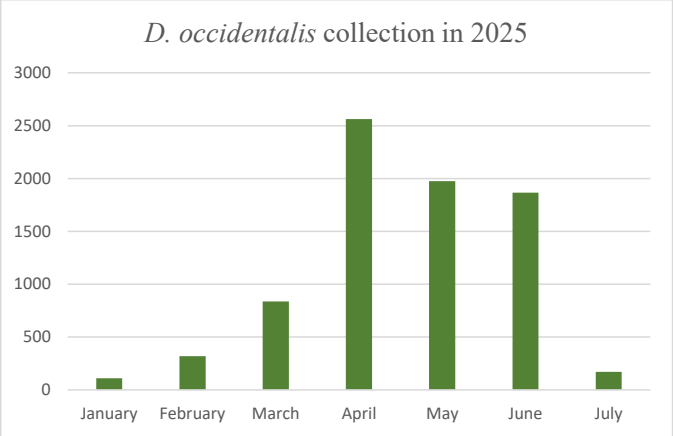


Figure 6. Monthly Numbers of *D. occidentalis* ticks Collected in 2025

In 2025, 1,281 *D. occidentalis* and 86 *D. similis* were tested in pools for the presence of rickettsia pathogens using PCR. (Table 12). A total of 106 *Dermacentor* pools were infected with rickettsia. An additional molecular assay identified the rickettsia species as *Rickettsia philipii*, *Rickettsia bellii,* and *Rickettsia rhipicephali. R. rickettsia*, the causative agent of Rocky Mountain Spotted Fever, was not found in *D. similis ticks. R. philipii*, the causative agent of Pacific Coast Tick Fever, was detected in six *D. occidentalis* pools collected in Anthony Chabot Regional Park, Joaquin Miller Park, Redwood Regional Park, Augustin Bernal Park, and Pleasanton Ridge Regional Park. *R. rhipicephali* and *R. bellii* were present in *D. occidentalis* and/or *D. variabilis* ticks from the areas where large populations of *Dermacentor* ticks were found. To date, neither *R. bellii* nor *R. rhipicephali* have been associated definitively with disease in humans or animals.

Dermacentor spp.	Number of ticks	Number of pools	Number of *Rickettsia* spp. positive pools	Number of *R. philipii* positive pools	Number of *R. rickettsii* positive pools
D. occidentalis	1,281	258	96	6	
D. similis	86	42	8		0

Table 12. Rickettsia Infections in Dermacentor ticks

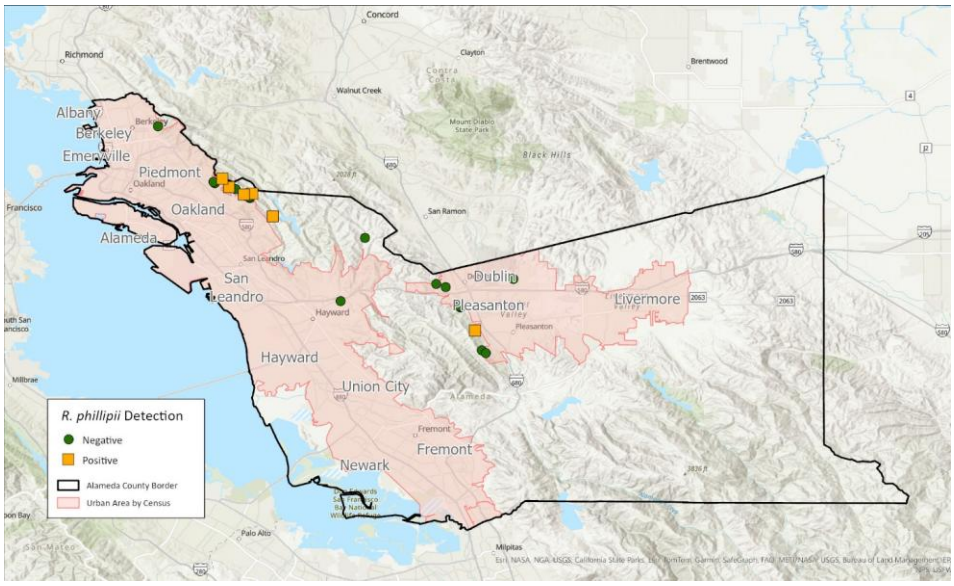


Figure 7. Distribution of *R. philipii* Positive Ticks in Alameda County in 2025

RABIES SURVEILLANCE

The authority for the rabies program is the responsibility of the County Health Officer at the Alameda County Public Health Department, which provides laboratory support for the program, and performs human case investigations. The District manages the statistical data and works cooperatively with the 13 local animal control agencies to administer the rabies surveillance program in Alameda County. Moreover, the District responds to service requests and conducts surveillance on skunks, bats, and other wildlife that are susceptible to rabies. Suspected animals involved in biting or exposure incidents may be euthanized and submitted to the Alameda County Public Health Laboratory (ACPHL) for rabies testing.

If requested, the District, along with Animal Control Agencies, investigates animal bite incidents and prepares an annual report for the California Department of Public Health (CDPH). Bats and skunks are the primary rabies-infected animals in California. Rabies is almost never found in squirrels, rabbits, rats, or mice. In 2025, the District submitted 176 animal samples, including bats, cats, dogs, opossums, raccoons, and skunks, to ACPHL for rabies testing. Eight (8) bats, two from Berkeley and six others across the county from Fremont, Oakland, and Alameda tested positive for the rabies virus. Seven submitted specimens were not testable.

Type of Animal	Number Negative	Number Positive	Total Tested
Bat	58	8	66
Cat	52	0	52
Dog	37	0	37
Fox	0	0	0
Opossum	9	0	9
Raccoon	12	0	12
Rat	0	0	0
Skunk	8	0	8
Total	176	8	176

COMMUNITY OUTREACH 2025

Vector Control staff attended the 94th Mosquito and Vector Control Association of California annual conference, where the following talk was presented by our group:

A Bite-sized Introduction to Rabies in Alameda County, which gave an overview of how the rabies program is run in Alameda County.

Vector Control Biologists participated in the following community outreach and education events:

- The 7th Annual Tri-Valley Innovation Fair
- Bug Day at San Francisco Randell Museum
- San Leandro Cherry Festival
- 31YZ Health and Resources Fair
- Alameda County Healthy Homes Webinar
- Oakland Chinatown Lunar New Year
- Oakland Chinatown Lions Club Health Fair
- Alameda County Fair
- Annual Backpack Distribution & Community Resource Fair
- Lodestar Backpacks Distribution
- Walnut Grove Elementary School
- Newark Day Information Fair
- Annual Harvest Festival and Resource Fair
- Trunk or Treat
- Hayward Ag Days
- Fremont Safety Fair
- Community Hero's Day

Our District continues to expand our outreach program to the public and our ethnically diverse communities by delivering our services directly to all Alameda County residents. Our department works with County Public Information Officers to issue press releases and respond to media requests for information and interviews.

Our website provides valuable information to visitors and is a conduit for the public to request our services. The District completed the development of a new and improved website in December 2016 and continued to enhance and update it during 2025. The public can access information on current vector-related issues, and the user-friendly online form simplifies making service requests. There are current plans to modernize the website. This will include making changes to the visual

design and overall aesthetic, improving the user experience and navigation, creating a new site map, ensuring cross-platform compatibility, streamlining site content and structure to enhance clarification and precision of information, and making the site ADA compatible. District staff are participating in this overhaul.

The District provides an on-going educational program aimed at "rental property management professionals" regarding bed bugs, cockroaches and other vector issues. Our goal is to be an educational resource to help rental property owners, property managers, tenants, and Alameda County residents to effectively respond to vector issues, such as bed bugs, cockroaches and rodent infestations in housing.

Mussel Quarantine (due to dangerous levels of paralytic shellfish poisoning (PSP) toxins) signs and "Bay Caught Fish" advisory signs were made for permanent posting. The mussel quarantine occurs during the same timeframe (May 1st through October 31st) and this should result in long-term cost and labor savings.

INTEGRATED PEST MANAGEMENT STRATEGY

The District participates in a countywide *Integrated Pest Management* policy set in place by the Alameda County Board of Supervisors. Most pesticide applications are used to suppress Norway rats in sanitary sewers or to destroy ground nesting yellow jacket nests. The total pesticide usage is listed below and is reviewed by the Alameda County Agricultural Commissioner, the Department of Pesticide Regulation, and the California Department of Public Health.

2025 Pesticide Use

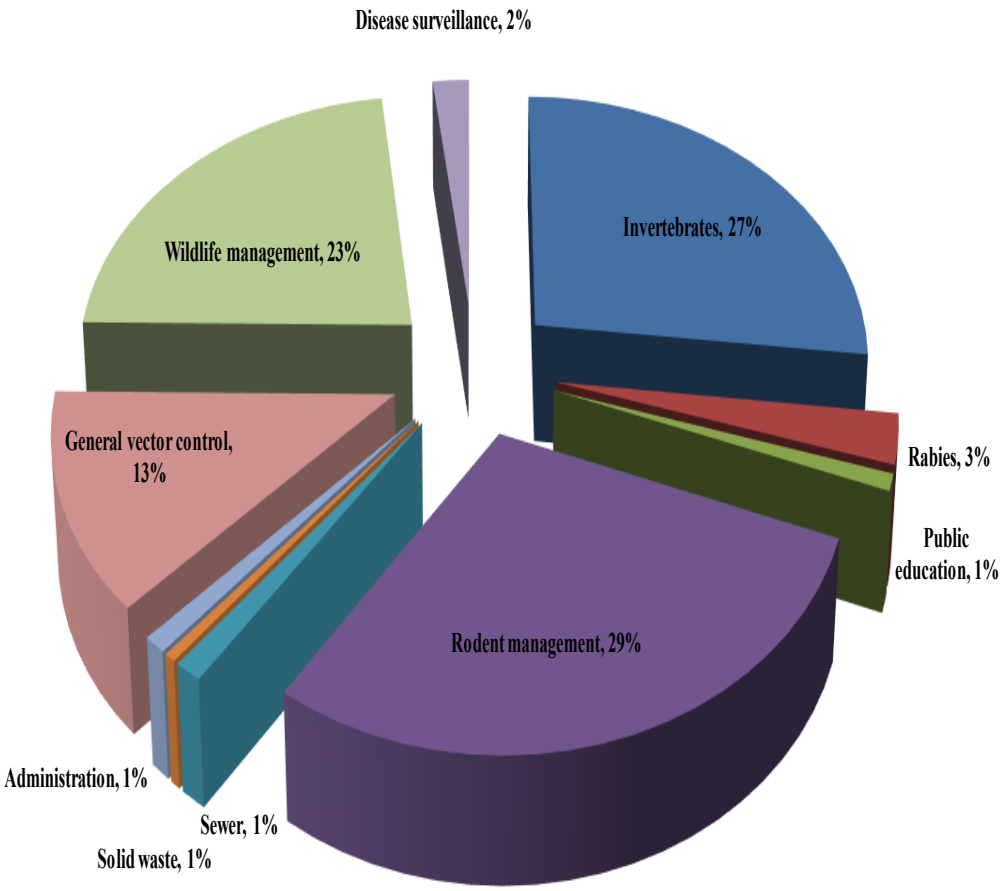
Pesticide	Manufacturer	Formulation	Target Pest	Amount Used	Applications
Contrac California Bromethalin Blox	Bell Labs	1 oz. Block	Domestic Rodents	848 oz.	11
Contrac Bulk Pellets	Bell Labs	Pellets	Domestic Rodents	892 oz.	5
Contrac Super Size Blox	Bell Labs	8 oz. Block	Domestic Rodents	17120 oz.	180
Delta Dust	Bayer	Insecticidal Dust	Fleas, Yellowjacket/Wasps	19.34 oz.	48

Drione Dust	Bayer	Insecticidal Dust	Yellowjacket/Wasps	74.205 oz.	364
EcoExempt D	EcoSMART Technologies Inc.	Aerosol Spray	Yellowjacket/Wasps	0.25 oz.	1
EcoVia WH	Wellmark International Inc.	Aerosol Spray	Yellowjacket/Wasps	2 oz.	1
Essentria Wasp & Hornet Spray	Zoecon	Aerosol Spray	Yellowjacket/Wasps	388.175 oz.	37
Maxforce Roach Gel Bait - FC Select	Bayer	Gel	Cockroaches	21.374 oz.	31
Maxforce Roach Gel Bait - Impact	Bayer	Gel	Cockroaches	56.939 oz.	86
Prescription Treatment P.I.	Whitmire	Aerosol Spray	Fleas, Yellowjacket/Wasps	0.5 oz.	1
ProVerde Wasp & Hornet Killer (PV1)	Envance	Aerosol Spray	Yellowjacket/Wasps	35.15 oz.	7
Wasp-X Wasp & Hornet Spray	Zoecon	Aerosol Spray	Yellowjacket/Wasps	2 oz.	1

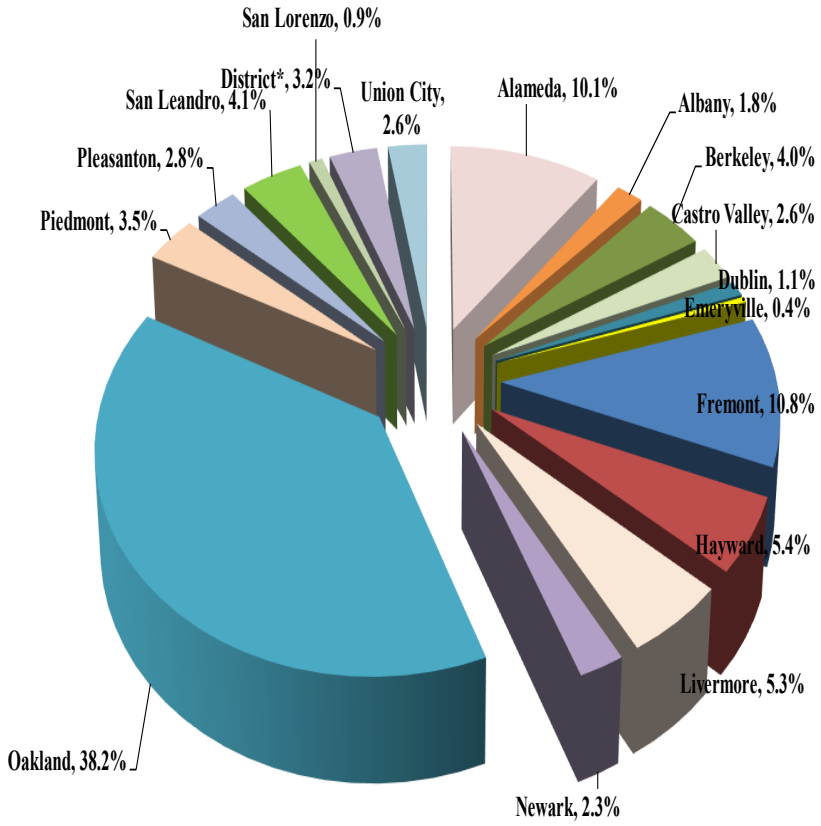
CITY OF BERKELEY VECTOR CONTROL PROGRAM

The City of Berkeley is one of four cities in California with its own environmental health jurisdiction. In 1976, the City adopted several environmental health ordinances that provide a mechanism to protect public health from vectors. The voters of Berkeley approved Measure A in 1984 and became part of the CSA. Since the Berkeley Division of Environmental Health already had a vector control program that has enforceable regulations for controlling rodents and other vectors, the CSA authorizes a contract each fiscal year to fund the City's vector program through the benefit assessment. In the years since 1984, the Berkeley vector program has been limited in their ability to perform all the duties expected of the CSA, and District staff continue to provide supportive field services within Berkeley to enhance their program.

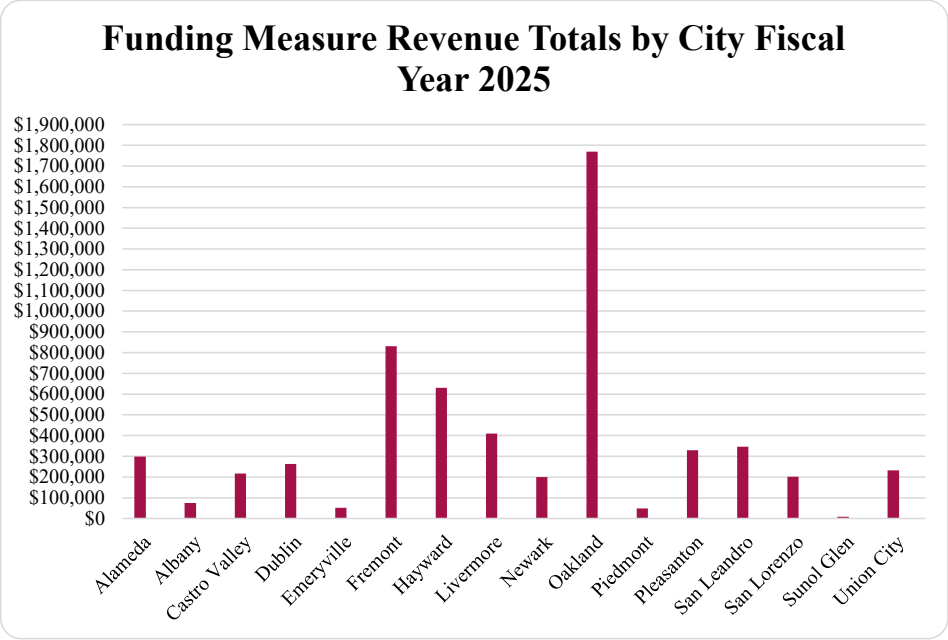
Alameda County Vector Control Services District
Services by Program, 2025

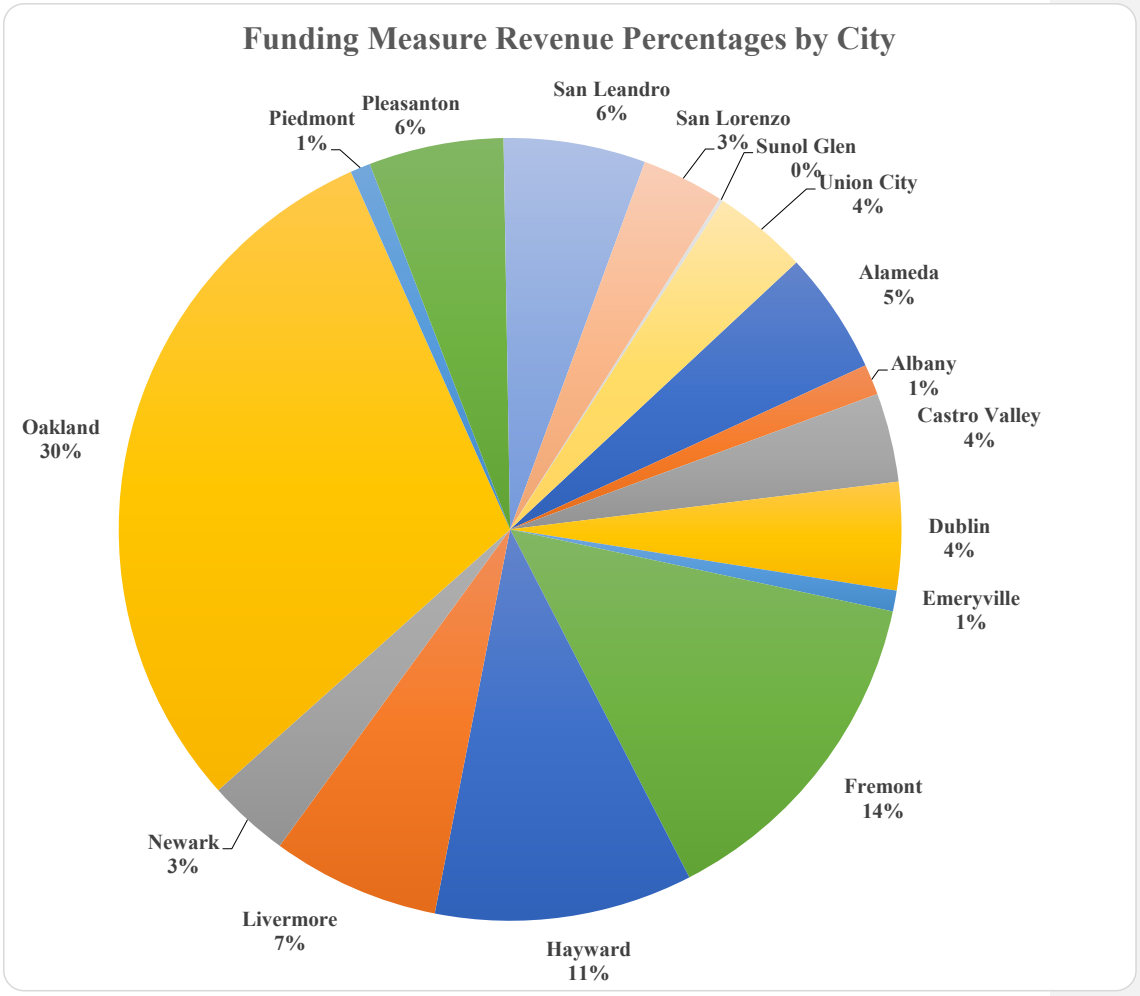


Alameda County Vector Control Services District
Total Services Provided to Cities, 2025



*District initiated includes disease surveillances and services to Sunol and Ashland


Funding Measure Revenue Totals by City Fiscal Year 2025
$1,900,000
$1,800,000
$1,700,000
$1,600,000
$1,500,000
$1,400,000
$1,300,000
$1,200,000
$1,100,000
$1,000,000
$900,000
$800,000
$700,000
$600,000
$500,000
$400,000
$300,000
$200,000
$100,000
$0
Alameda
Albany
Castro Valley
Dublin
Emeryville
Fremont
Hayward
Livermore
Newark
Oakland
Piedmont
Pleasanton
San Leandro
San Lorenzo
Sunol Glen
Union City


Funding Measure Revenue Percentages by City
San Leandro 6%
San Lorenzo 3%
Sunol Glen 0%
Union City 4%
Alameda 5%
Albany 1%
Castro Valley 4%
Dublin 4%
Emeryville 1%
Fremont 14%
Hayward 11%
Livermore 7%
Newark 3%
Oakland 30%
Piedmont 1%
Pleasanton 6%

BENEFIT ASSESSMENT (BA)

The Board of Supervisors annually reviews the planned operations and budgets, and the corresponding proposed rate of assessment and then conducts a public hearing to establish the assessment for the upcoming fiscal year. Funding for vector services comes from two funding sources described below.

Established in 1984, the CSA Vector Control Benefit Assessment (Initial Benefit Assessment) created a rate formula and methodology primarily based on land/property use as classified by the Assessor's Office.

Established in 2007, the Vector and Disease Control Assessment (Secondary Benefit Assessment) created a rate formula and methodology determined by several factors including the ratio of population density factors in relation to the usage density for different types of property. The table below depicts some of the differences between the two rate calculation methods.

Both funding sources are levied and collected at the same time and in the same manner as the general county property taxes. These levies are subject to the same fines, penalties, and forfeiture as property taxes.

LAND/PROPERTY USE CATEGORIES

Property Use Categories	CSA Vector Control Benefit Units/per property type (Initial Benefit Assessment)	CSA Vector Control Benefit Units/per property type (Secondary Benefit Assessment)
Single Family Residence/Condominium	1BU	1BU/0.61BU
Vacant Land Parcel	1BU	0.25 BU
Multiple Residential Small (2-4 units)	2 BUs	0.46 BUs
Commercial, Industrial	2 BUs	0.50 BUs
Large Rural Property	2 BUs	0.017 BUs (per 10 acres)
Multiple Residential (5units +)	5 BUs	0.32 BUs
Large Commercial (Hotels, Mobile Home Parks)	5 BUs	0.50 BUs (per ¼ acre increments)

CSA VECTOR CONTROL SERVICES
BENEFIT ASSESSMENTS, FY 2025-2026

Use/Size	CSA Vector Control Initial Benefit Assessment	Oakland (Residence only) + Supplement Assessment ($1.28)	CSA Vector Control Secondary Benefit Assessment	CSA Vector Control Emeryville/Fremont
Single-Family Residence/ Condominiums	$5.92	$7.20	$6.57/3.94	$12.49/7.49
Vacant Land	5.92	7.20	1.64	3.12
Multiple Residential Small (2-4 units)	11.84	14.40	3.02[1]	5.75[1]
Commercial, Industrial	11.84	14.40	3.29[4]	6.25[4]
Large Rural Property (More than 10 Acres)	11.84	14.40	0.55[3]	1.05[3]
Multiple Residential (5 units +)	29.60	36.00	2.10[3]	4.00[3]
Large Commercial (Hotels, Mobile Home Parks)	29.60	36.00	3.29[3]	6.25[3]

Notes:
1. This rate is per unit. There would be a minimum of 2 units for this category.
2. This rate is per unit. There would be a minimum of 5 units for this category.
3. A property would be charged this minimum.
4. These estimates are based on per ¼ acre increments.

ASSESSMENT FOR ONE BENEFIT UNIT (BU)

(Single Family Residence - CSA Basic Rate and Oakland) 1984-2025

Fiscal Year	CSA Basic Rate	OAKLAND Supplemental Rate*	OAKLAND Total Rate
84-85	$ 3.15	$ 0.00	$ 3.15
85-86	$ 2.66	$ 0.00	$ 2.66
86-87	$ 2.66	$ 0.00	$ 2.66
87-88	$ 3.24	$ 0.00	$ 3.24
88-89*	$ 3.30	$ 0.70	$ 4.00
89-90	$ 3.58	$ 0.66	$ 4.24
90-91	$ 3.80	$ 0.70	$ 4.50
91-92	$ 3.96	$ 0.70	$ 4.66
92-93	$ 3.96	$ 0.70	$ 4.66
93-94	$ 4.72	$ 1.04	$ 5.76
94-95	$ 4.82	$ 1.06	$ 5.88
95-96	$ 5.82	$ 1.26	$ 7.08
96-97	$ 5.92	$ 1.28	$ 7.20
97-98	$ 5.92	$ 1.28	$ 7.20
98-99	$ 5.92	$ 1.28	$ 7.20
99-00	$ 5.92	$ 1.28	$ 7.20
00-01	$ 5.92	$ 1.28	$ 7.20
01-02	$ 5.92	$ 1.28	$ 7.20
02-03	$ 5.92	$ 1.28	$ 7.20
03-04	$ 5.92	$ 1.28	$ 7.20
04-05	$ 5.92	$ 1.28	$ 7.20
05-06	$ 5.92	$ 1.28	$ 7.20
06-07	$ 5.92	$ 1.28	$ 7.20
07-08**	$ 10.00	$ 1.28	$ 11.28
08-09	$ 10.00	$ 1.28	$ 11.28
09-10***	$ 10.00	$ 1.28	$ 11.28
10-11	$ 10.00	$ 1.28	$ 11.28
11-12	$ 10.00	$ 1.28	$ 11.28
12-13	$ 10.00	$ 1.28	$ 11.28
13-14	$ 10.00	$ 1.28	$ 11.28

ASSESSMENT FOR ONE BENEFIT UNIT (BU)

(Single Family Residence - CSA Basic Rate and Oakland) 1984-2025

Fiscal Year	CSA Basic Rate	OAKLAND Supplemental Rate*	OAKLAND Total Rate
14-15	$ 10.00	$ 1.28	$ 11.28
15-16	$ 10.00	$ 1.28	$ 11.28
16-17	$ 10.00	$ 1.28	$ 11.28
17-18	$ 10.00	$ 1.28	$ 11.28
18-19	$ 10.00	$ 1.28	$ 11.28
19-20	$ 11.00	$ 1.28	$ 12.28
20-21	$ 11.00	$ 1.28	$ 12.28
21-22	$ 11.00	$ 1.28	$ 12.28
22-23	$ 11.93	$ 1.28	$ 13.21
23-24	$ 12.11	$ 1.28	$ 13.39
24-25	$ 12.30	$ 1.28	$ 13.58
25-26	$ 12.49	$ 1.28	$ 13.77

** Supplemental Oakland rate begins in FY 1988-89.*
*** FY 2007-08 reflects the increase in the CSA basic rate.*
**** FY 2009-10 annotation retained from prior report formatting.*

NOTICE OF HEARING

VECTOR CONTROL SERVICES DISTRICT
SPECIAL ASSESSMENT AND BENEFIT RATE INCREASE

NOTICE IS HEREBY GIVEN that the Board of Supervisors of the County of Alameda, State of California, has received a report concerning the proposed benefit assessments charges to be levied on real property for fiscal year 2026-2027 to finance the Vector Control Program within County Service Area No. VC-1984-1. A public hearing upon such report will take place on, June 2, 2026, at 1:00 PM, or as soon thereafter as the matter can be heard in the regular meeting room of the Board of Supervisors, Fifth Floor, Alameda County Administration Building, 1221 Oak Street, Oakland, California 94612.

At the hearing, the Board will hear and consider all protests. Members of the public may observe and participate in the hearing by following the instructions located on the Board of Supervisors' agenda for the hearing located at:

https://bos.acgov.org/broadcast/

Copies of the report listing the service charges are available for public examination at the following locations:

Clerk, Board of Supervisors
Alameda County Administration Building
1221 Oak Street, Fifth Floor
Oakland, CA 94612

https://www.acgov.org/board/bos_calendar/documents/DocsAgendaReg_05_14_24/HEALTH%20CARE%20SERVICES/Regular%20Calendar/ENVHLTH_367227.pdf

For other information regarding the hearing, including information on how to participate, you may also call (510) 208-4949.

Alameda County
Vector Control District

Vector and Disease Control Assessment

April 2026
Engineer's Report

Fiscal Year 2026-27

Pursuant to the Health and Safety Code, Government Code
and
Article XIIID of the California Constitution

Engineer of Work:

SCIConsultingGroup
Public Finance Consulting Services

4745 Mangels Boulevard
Fairfield, California 94534
707.430.4300
www.sci-cg.com

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Alameda County Vector Control District

Board of Supervisors

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Elisa Márquez, District 2

Lena Tam, District 3, Vice President

Nate Miley, District 4

Nikki Fortunato Bas, District 5

Chief/Scientific Program Manager

Adena Why, PhD

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Introduction

Overview

The Alameda County Vector Control Services District (also known as County Service Area VC 1984-1) controls and monitors disease-carrying vectors (rodents, insects, ticks) as well as nuisance wildlife and insects. The District was formed in June 1984, in order to meet the public health needs by providing a comprehensive vector control program following passage of Measure A, in which over 70% of the voters approved formation of the District. The District is a dependent district of Alameda County and is governed by the Alameda County Board of Supervisors ('Board').

The Mission Statement of the District is:

> *The mission of the Vector Control Service District is to prevent the spread of vector-borne diseases, injury, and discomfort to the residents of the District by controlling insects, rodents, and other vectors and eliminating causal environmental conditions through education and integrated pest management practices.*

The District provides its services throughout the County and includes the incorporated cities of Alameda, Albany, Berkeley, Dublin, Hayward, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro, Union City, and the unincorporated communities of Ashland, Castro Valley, San Lorenzo, and Sunol, as well as the remaining portions of unincorporated Alameda County. (The incorporated cities of Emeryville and Fremont were annexed into the District in 2008 and are detailed in separate reports). The District's vector and disease control services serve to reduce vector populations on property throughout the County, and the District is the only agency providing vector control and vector-borne disease protection and prevention services in the County.

The District provides vector control, surveillance of gnats, ticks, and other vectors, and disease control services within its boundaries. The District services are available to all properties in Alameda County. The purpose of the Alameda County Vector Control Services District is to reduce the risk of vector-borne disease and vector nuisance to property and the inhabitants of property within the District.

The District's core services are summarized as follows:

- Early detection of emerging or existing public health threats through comprehensive vector and disease surveillance.

- Elimination and/or control of vectors to protect public health and to diminish the nuisance and harm caused by insects and rodents.
- Appropriate, timely response to customer requests concerning the prevention and control of vectors and the diseases they can transmit.
- Provision of public outreach and education concerning vectors and vector diseases.

The District currently provides a "baseline" level of vector and disease control services in the County. Over the past few years, costs of providing services has exceeded revenue and without the additional assessment Services would have deteriorated. The services provided to the Assessment Area consist of maintaining the current level of services and in some cases expanded services, as listed below, above the existing baseline level of services.

The Assessment Area is narrowly drawn to include only properties that may request and/or receive direct and more frequent service, that are located within the scope of the vector surveillance area, that are located within flying or traveling distance of potential vector sources monitored by the District, and that will benefit from a reduction in the amount of vectors reaching and impacting the property as a result of the enhanced vector surveillance and control. The Assessment Diagram included in this report shows the boundaries of the Assessment Area.

The following is an outline of the primary services, programs and related costs that are funded by the vector and disease control assessment:[1]

- Request for Service Investigations
- Rodent Control
- Wildlife Management and Rabies Investigations
- Solid Waste Problems
- Vector-Borne Disease Surveillance and Control
- Public Education and Information

This Engineer's Report ("Report") defines the benefit assessment, which provides funding for these improved vector and disease control services for property throughout the District, as well as related costs for equipment, capital improvements and services, facilities necessary and incidental to vector and disease control programs.

As used within this Report and the benefit assessment ballot proceeding, the following terms are defined:

[1] The improved vector control and disease prevention services materially increases the usefulness, utility, livability and desirability of properties in the Assessment Area.

"Vector" means any animal capable of transmitting the causative agent of human disease or capable of producing human discomfort or injury, including, but not limited to, mosquitoes, flies, mites, ticks, other arthropods, and small mammals and other vertebrates (Health and Safety Code Section 2002(k)).

"Vector Control" shall mean any system of public improvements or services that is intended to provide for the surveillance, prevention, abatement, and control of vectors as defined in subdivision (k) of Section 2002 of the Health and Safety Code and a pest as defined in Section 5006 of the Food and Agricultural Code (Government Code Section 53750(m)).

The District operates under the authority of the Pest Abatement District Law of the State of California codified in the Health and Safety Code, Section 2800, et seq.

Following are excerpts from the Mosquito Abatement and Vector Control District Law of 2002, codified in the Health and Safety Code, Section 2000, et seq. which serve to summarize the State Legislature's findings and intent regarding mosquito abatement and vector control services:

2001. (a) The Legislature finds and declares all of the following:

(1) California's climate and topography support a wide diversity of biological organisms.

(2) Most of these organisms are beneficial, but some are vectors of human disease pathogens or directly cause other human diseases such as hypersensitivity, envenomization, and secondary infections.

(3) Some of these diseases, such as mosquito borne viral encephalitis, can be fatal, especially in children and older individuals.

(4) California's connections to the wider national and international economies increase the transport of vectors and pathogens.

(5) Invasions of the United States by vectors such as the Asian tiger mosquito and by pathogens such as the West Nile virus underscore the vulnerability of humans to uncontrolled vectors and pathogens.

(b) The Legislature further finds and declares:

(1) Individual protection against the vector borne diseases is only partially effective.

(2) Adequate protection of human health against vector borne diseases is best achieved by organized public programs.

(3) The protection of Californians and their communities against the discomforts and economic effects of vector borne diseases is an essential public service that is vital to public health, safety, and welfare.

> *(4) Since 1915, mosquito abatement and vector control districts have protected Californians and their communities against the threats of vector borne diseases.*
>
> *(c) In enacting this chapter, it is the intent of the Legislature to create and continue a broad statutory authority for a class of special districts with the power to conduct effective programs for the surveillance, prevention, abatement, and control of mosquitoes and other vectors.*
>
> *(d) It is also the intent of the Legislature that mosquito abatement and vector control districts cooperate with other public agencies to protect the public health, safety, and welfare. Further, the Legislature encourages local communities and local officials to adapt the powers and procedures provided by this chapter to meet the diversity of their own local circumstances and responsibilities.*

Further the Health and Safety Code, Section 2082 specifically authorizes the creation of benefit assessments for vector control, as follows:

> *A district may levy special benefit assessments consistent with the requirements of Article XIIID of the California Constitution to finance vector control projects and programs.*

This Engineer's Report ("Report") was prepared by SCI Consulting Group ("SCI") to describe the vector, disease surveillance and control services and related costs that are funded by the assessments, to establish the estimated costs for those Services, to determine the special benefits and general benefits received by property from the Services and to apportion the assessments to lots and parcels within the District based on the estimated special benefit each parcel receives from the services funded by the benefit assessment.

Legislative Analysis

Proposition 218

This assessment was formed consistent with Proposition 218, The Right to Vote on Taxes Act, which was approved by the voters of California on November 6, 1996, and is now Article XIIIC and XIIID of the California Constitution. Proposition 218 provides for benefit assessments to be levied to fund the cost of providing services, improvements, as well as maintenance and operation expenses to a public improvement which benefits the assessed property.

Proposition 218 describes several important requirements, including a property-owner balloting, for the formation and continuation of assessments, and these requirements are satisfied by the process used to establish this assessment. When Proposition 218 was initially approved in 1996, it allowed for certain types of assessments to be "grandfathered" in, and these were exempted from the property–owner balloting requirement.

> *Beginning July 1, 1997, all existing, new, or increased assessments shall comply with this article. Notwithstanding the foregoing, the following assessments existing on the effective date of this article shall be exempt from the procedures and approval process set forth in Section 4:*
>
> *(a) Any assessment imposed exclusively to finance the capital costs or maintenance and operation expenses for sidewalks, streets, sewers, water, flood control, drainage systems or vector control.*

Vector control was specifically "grandfathered in," underscoring the fact that the drafters of Proposition 218 and the voters who approved it were satisfied that funding for vector control is an appropriate use of benefit assessments, and therefore confers special benefit to property.

Silicon Valley Taxpayers Association, Inc. v. Santa Clara County Open Space Authority

In July of 2008, the California Supreme Court issued its ruling on the Silicon Valley Taxpayers Association, Inc. v. Santa Clara County Open Space Authority ("SVTA vs. SCCOSA"). This ruling is the most significant legal document in further legally clarifying Proposition 218. Several of the most important elements of the ruling included further emphasis that:

- Benefit assessments are for special benefit to property, not general benefits[2]
- The services and /or improvements funded by assessments must be clearly defined
- Special benefits are directly received by and provide a direct advantage to property in the assessment district

This Engineer's Report, and the process used to establish this assessment is consistent with the SVTA vs. SCCOSA decision.

[2] Article XIII D, § 2, subdivision (d) of the California Constitution states defines "district" as "an area determined by an agency to contain all parcels which will receive a special benefit from the proposed public improvement or property-related service."

Dahms v. Downtown Pomona Property

On June 8, 2009, the 4th Court of Appeal amended its original opinion upholding a benefit assessment for property in the downtown area of the City of Pomona. On July 22, 2009, the California Supreme Court denied review. On this date, Dahms became good law and binding precedent for assessments. In Dahms the Court upheld an assessment that was 100% special benefit (i.e. 0% general benefit) on the rationale that the services and improvements funded by the assessments were directly provided to property in the assessment district. The Court also upheld discounts and exemptions from the assessment for certain properties.

Bonander v. Town of Tiburon

On December 31, 2009, the 1st District Court of Appeal overturned a benefit assessment approved by property owners to pay for placing overhead utility lines underground in an area of the Town of Tiburon. The Court invalidated the assessments on the grounds that the assessments had been apportioned to assessed property based in part on relative costs within sub-areas of the assessment district instead of proportional special benefits.

Beutz v. County of Riverside

On May 26, 2010, the 4th District Court of Appeal issued a decision on the Steven Beutz v. County of Riverside ("Beutz") appeal. This decision overturned an assessment for park maintenance in Wildomar, California, primarily because the general benefits associated with improvements and services were not explicitly calculated, quantified and separated from the special benefits.

Golden Hill Neighborhood Association v. City of San Diego

On September 22, 2011, the San Diego Court of Appeal issued a decision on the Golden Hill Neighborhood Association v. City of San Diego appeal. This decision overturned an assessment for street and landscaping maintenance in the Greater Golden Hill neighborhood of San Diego, California. The court described two primary reasons for its decision. First, like in Beutz, the court found the general benefits associated with services were not explicitly calculated, quantified and separated from the special benefits. Second, the court found that the City had failed to record the basis for the assessment on its own parcels.

Compliance with Current Law

This Engineer's Report is consistent with the requirements of Article XIIIC and XIIID of the California Constitution and with the *SVTA* decision because the Services to be funded are clearly defined; the Services are available to and will be directly provided to all benefiting property in the Assessment District; and the Services provide a direct advantage to property in the Assessment District that would not be received in absence of the Assessments.

This Engineer's Report is consistent with *Dahms* because, similar to the Downtown Pomona assessment validated in *Dahms*, the Services will be directly provided to property in the Assessment District. Moreover, while *Dahms* could be used as the basis for a finding of 0% general benefits, this Engineer's Report establishes a more conservative measure of general benefits.

The Engineer's Report is consistent with *Bonander* because the Assessments have been apportioned based on the overall cost of the Services and proportional special benefit to each property. Finally, the Assessments are consistent with *Beutz* because the general benefits have been explicitly calculated and quantified and excluded from the Assessments.

Assessment Process

To allow property owners to ultimately decide whether additional funding should be provided for the District's vector and disease control services, the Board authorized by Resolution the Initiation of proceedings for a benefit assessment on April 24, 2007. In May and June of 2007, the District conducted an assessment ballot proceeding pursuant to the requirements of Article XIIID of the California Constitution ("The Taxpayer's Right to Vote on Taxes Act") and the Government Code. During this ballot proceeding, owners of property in the District were provided with a notice and ballot for the proposed special assessment. A 45-day period was provided for balloting and a public hearing was conducted on July 10, 2007 and continued to July 24, 2007.

It was determined after the conclusion of the public input portion of the public hearing that 67.7% of the weighted ballots returned were in support of the assessment. Since the assessment ballots submitted in opposition to the proposed assessments did not exceed the assessment ballots submitted in favor of the assessments (with each ballot weighted by the proportional financial obligation of the property for which ballot was submitted), the District gained the authority to approve the levy of the assessments for fiscal year 2007-08 and to continue to levy them in future years. The authority granted by the ballot proceeding includes an annual increase in the maximum authorized assessment rate equal to the annual change in the Consumer Price Index for the San Francisco Bay Area, not to exceed 3%. In the event that the annual change in the CPI exceeds 3%, any percentage change in excess of 3% can be cumulatively reserved and can be added to the annual change in the CPI for years in which the CPI change is less than 3%. In July 2007, the Board took action to approve the levy of the assessments.

If the Board approves the Engineer's Report and the assessments it establishes for fiscal year 2026-27, the assessments would be submitted to the County Auditor for inclusion on the property tax rolls for fiscal year 2026-27.

General Description of the District and Services

About the Vector Control District

The Alameda County Vector Control Services District (the "District") provides vector control services in all of Alameda County. Emeryville and Fremont were annexed into the District in 2009. The District protects the usefulness, desirability and livability of property and the inhabitants of property within its jurisdictional area through the control and surveillance of vertebrate and invertebrate vectors. In addition, the District regularly tests for diseases carried by vectors such as insects and small mammals. The District conducts an educational program to inform property owners and the occupants of property in the District about how to protect themselves from diseases transmitted by these vectors. In May 2018, the District completed construction on a new laboratory to conduct research to support their epidemiologic and surveillance programs. This Engineer's Report was updated and clarified to reflect the current scope of services, special benefit findings, and funding approach.

Description of Vector Control Program

As mentioned earlier, the District currently provides a "baseline" level of services in the County as permitted with the limited funding available. The Assessment provides the additional funding to operate the program and expand the services provided in the Assessment Area to an optimum level necessary to protect the usefulness, utility, desirability and livability of property within its jurisdictional area.

Introduction

Following are the Services and resulting level of service for the Assessment Area. As previously noted, the District provides a baseline level of service in the County. These Services are over and above the current baseline level of service. The formula below describes the relationship between the final level of service, the existing baseline level of service, and the enhanced level of service to be funded by the assessment.

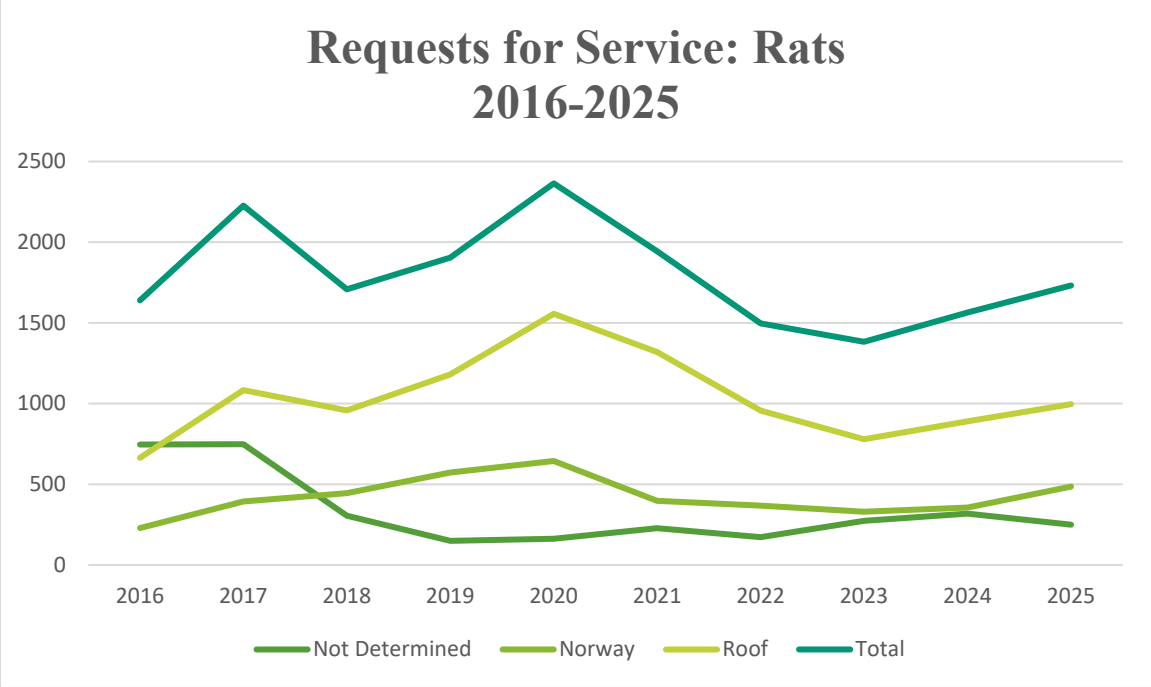
Final Level of Service	=	Baseline Level of Service	+	Enhanced Level of Service

The assessment provides funding for the continuation and enhancement of the service, surveillance, disease prevention, abatement, and control of vectors within the District boundaries. Such vector control and disease prevention projects and programs include, but are not limited to, environmental modifications, biological control, disease monitoring, public education, reporting, accountability, research and interagency cooperative activities, as well as capital costs, maintenance, and operation expenses (collectively "Services"). The cost of these Services also includes capital costs comprised of equipment, capital improvements and facilities and other expenses necessary and incidental to the vector control program.

Request For Service Investigations

The District conducts investigations as requested by district residents, businesses, and other property owners, assesses the degree of the problem, and develops a remedial strategy and action plan. Service requests include vector and nuisance issues pertaining to rats and other rodents, cockroaches, flies, fleas, lice, yellow jackets, and other insects, as well as, ticks, mites, and spiders. In this capacity, District staff assists with the identification and recommended control of insects and arachnids. Also, the District surveys and controls cockroach populations in public sewers, utility boxes and storm drains, as well as controlling bees and yellowjackets, particularly when there is a public health risk.

As an example, the graph bellows shows the Service Requests for rats over a ten-year period:



Rodent Control

In 2025, the District received 2,122 service requests (1,768 rats and 354 mice) from local residents for domestic rodents, representing 40.0% of all service requests. District staff educates homeowners to make environmental and structural modifications (also known as "rodent-proofing") that will make their property less attractive and exclude these unwanted pests. In addition, the District monitors district-wide rodent-related problems, and those 2,122 rodent service requests led to staff biologists performing 14,947 field service operations related to domestic rodents. Field service operations include smoke and dye tests of sewer lines for breaks, field and residential surveys for rodent activity, recommendations and follow-up evaluations of rodent control measures, and assistance of enforcement actions.

The District conducts a year-round monitoring of local rat populations to find out where they are living and feeding, how many there are, how much and what kind of damage they are causing, and which methods to use to suppress them. This monitoring and control is targeted against commensal rats (Norway and Roof rats) and mice in residential, commercial, and business properties. In particular, the District focuses on sanitary sewers, including making inspections to locate breaks, because the breaks offer opportunities for the rats to invade new neighborhoods.

In the event of a disease outbreak or emergency, the District will employ rodent suppression to lower the rodent populations and disrupt the disease transmission cycle. As part of the District's Integrated Pest Management policy, least toxic pesticides and trapping are used when feasible.

Alameda County has had a long history of Norway rats invading homes and neighborhoods from the sanitary sewers, especially in Oakland, due to the age and cost of maintenance of the sanitary sewer system. The District has established a high priority to ensure that these rodents do not enter homes and expose occupants to potential disease pathogens. Staff responsibilities during the inspection include thorough survey of interior and exterior premises to determine the extent and severity of rodent infestations and their causative conditions. They look for active rodent signs (droppings or rub marks), rodent entries to the house, and environmental deficiencies that provide food, water, and harborage. When rat infestations present a health risk to the occupants, staff recommends a combination of tactics including removing food sources and debris, repairing deteriorated structures, "rat proofing" structures, trapping and treating with least-toxic rodenticides. Additionally, staff hands out brochures (or fact sheets) and assists city code agencies with enforcement of local ordinances when property owners fail to comply with the necessary repairs and garbage removal. Neighborhood surveys are also conducted. Neighbors are informed about the conditions that sustain and harbor rats.

Cat Fleas (*Ctenocephalides felis*) and Oriental Rat Fleas (*Xenopsylla cheopis*) Surveillance and Control

The Oriental rat flea is an important vector, capable of transmitting plague and flea-borne typhus. The cat flea is highly associated with people and pets, capable of transmitting flea-borne typhus. In 2019, the District began a surveillance program looking at the disease prevalence found within the cat flea and the Oriental rat flea from different host animals throughout the County. This surveillance program began with the completion and certification of the new Vector Control Laboratory.

Ectoparasite Surveillance on Sylvatic and Commensal Rodents and Wildlife

The District conducts ongoing surveillance among sylvatic rodents for plague and other rodent-borne diseases. Many of these rodents are found only in rural areas, particularly in east Alameda County. In addition to the Plague, sylvatic rodents may be reservoir hosts to zoonotic diseases such as Hantavirus Cardiopulmonary Syndrome (HCPS), Tularemia, Lyme disease, and Babesiosis.

The results are summarized in Table 1 on the following page:

Table 1. Ectoparasites (fleas) collected from commensal and sylvatic rodents in urban and sylvatic areas (including rodents from homeless encampments).

Host Species	Number of hosts	Number of hosts with fleas	Number of fleas	Flea species	Flea Index
SYLVATIC RODENTS					
Pinyon Mouse *Peromyscus truei*	18	0	0		0.0
Deer Mouse *Peromyscus maniculatus*	3	0	0		0.0
COMMENSAL RODENTS					
Norway Rat *Rattus norvegicus*	189	72	1070	*Xenopsylla cheopis* (1025) *Nosopsylla fasciatus* (37) *Ctenocephalides felis* (8)	5.7
Roof Rat *Rattus rattus*	9	0	0		0.0
WILDLIFE					
Desert Cottontail *Sylvilagus audubonii*	1	0	0		0.0
Fox (Tree) Squirrel *Sciurus niger*	6	4	13	*Orchopeas howardi* (12) *Hoplopsyllus anomalus* (1)	2.2
Ground Squirrel *Spermophilis beecheyi*	95	81	1143	*Oropsylla montana* (769) *Hoplopsyllus anomalus* (369) *Echidnophaga gallinacea (5)*	12.0
Jack Rabbit *Lepus californicus*	1	0	0		0.0
Mexican Free-tailed Bat *Tadarida brasiliensis*	1	1	30	*Myodopsylla gentilis (30)*	30.0
Opossum *Didelphis virginica*	9	9	423	*Ctenocephalides felis* (423) *Echidnophaga gallinacea (3)* *Nosopsyllus fasciatus (1)*	47.0
Raccoon *Procyon lotor*	7	4	10	*Pulex spp.* (6) *Ctenocephalides felis (4)*	1.4
Striped Skunk *Mephitis mephitis*	3	2	11	*Pulex spp.* (7) *Oropsylla montana* (3) *Ctenocephalides felis* (1)	3.7

Source: 2025 Alameda County Vector Control Annual Report

Hantavirus Cardiopulmonary Syndrome (HCPS) Surveillance

HPS was first recognized in 1993; it is a respiratory illness associated with breathing air containing rodent urine and feces contaminated with the *Sin Nombre* virus (SNV) particles. Rodents, particularly deer mice, were identified as the principal reservoir host. Occasionally, deer mice will enter buildings and potentially expose the occupants to the virus. Past surveillance conducted at various localities within the County detected 6-18% of the deer mice are infected with SNV.

In collaboration with the California Department of Public Health (CDPH), the District conducts Hantavirus surveys in an effort to minimize the transmission of HPS disease.

Wildlife Management Program

In conjunction with local animal control agencies, the District is responsible for surveillance, result notifications, and oversight of the rabies program in Alameda County. District staff responds to service requests on raccoons, skunks, bats, as well as opossums, dogs, cats, and other wild animals. The District provides rabies testing on wild animals when public health risk is involved.

District staff provides services to homeowners on exclusion techniques that make their property unattractive to these wild animals. When prevention alternatives are not possible or ineffective, the District will trap biting or nuisance animals. The District staff biologist also coordinates with the District's USDA Wildlife Specialist who evaluates potentially hazardous situations and offers consultations.

The District's USDA Wildlife Specialist responds to service requests for raccoons, skunks, coyotes, wild turkeys or opossums, and advises homeowners on how to exclude these animals coming onto their properties and causing landscape damage (and killing livestock). If required, District Vector Control Biologists may assist property owners by coordinating with the USDA Wildlife Specialist to set traps, pick up and remove the animal. The District also responds to requests concerning other nuisance wildlife such as bobcats and mountain lions and has responded to an increase in service calls for coyotes and feral pigs.

In 2025, the District responded to 1,879 service requests concerning wildlife, and those service requests led to staff performing 11,862 field service operations within or near residential areas. Most of these service calls involved raccoons, skunks, opossums, and foxes. Advice is provided to homeowners on animal exclusion methods, as well as making their property unattractive to wildlife.

Solid Waste and Nuisance Problems

The District investigates complaints regarding solid waste handling and storage problems involving garbage, human or animal waste, and odors at residential properties and businesses.

Disease Surveillance and Control

Services includes arthropod sampling, field surveillance, data collection, investigation, determination of cause, and preventative recommendations to lower the risk and exposures to animal or human diseases such as hantavirus, plague, Flea-borne Typhus, psittacosis, scabies, tularemia, Lyme disease, anaplasmosis and other tick-borne diseases.

Public Education and Information

District staff gives vector control and services presentations and provides educational materials to schools, homeowners' associations, service clubs, and other interested groups. The District also staffs public displays at health fairs, special events, and at the County fair. Finally, the District also posts the annual shellfish harvesting quarantine notices at the Alameda County bay shorelines and maintains an informational web page.

Integrated Pest Management

The District embraces and follows the County's Integrated Pest Management (IPM) guidelines to manage pests with effective and environmentally sound tactics. The process involves regular monitoring to determine pest populations and the damage they cause, reduce the amount and frequency of pesticide applications to overcome pesticide resistance, use least-toxic pesticides, encourage using cultural and physical control methods, and direct educational outreach to inform residents, businesses, and appropriate government agencies.

The District staff has demonstrated extensive knowledge and expertise in these areas. To ensure that staff is kept informed and trained, they attend continuing education workshops and in-house training to learn about emerging disease as such West Nile virus as well as new products, equipment, and safety techniques. All District Vector Control Biologists are certified by the State Health Department to perform safe and effective pest control.

The successful adoption and implementation of urban IPM program will require better understanding of the attitudes and knowledge of local residents, business owners, and participating government agencies. Most urban pest problems are the result of poor waste management, ill-advised landscaping, and improper structural maintenance. Often, these problems can be mitigated through environmental, habitat, and structural modifications that deny food, water, and harborage to the pests. Residents and business owners need to realize that they may play a role in creating pest problems and to control the pest problems will require partnership with District staff. Therefore, the District is reaching out to the community, changing their attitudes and expectations, and educating them about monitoring procedures, tolerance levels, sanitation, habit modification and least-toxic control methods.

Service Requests

The District responds to service requests within its boundaries. Any property owner, business or resident in the District may contact the District to request vector control related service or inspection and a District Vector Control Biologist will respond promptly to the particular property to evaluate the property and situation and to perform appropriate surveillance and control services. The District responds to all service requests in a timely manner, regardless of location, within its boundaries.

Estimate of Cost

Figure 1 – Cost Estimate – FY 2026-27

Alameda County Vector Control District Vector and Disease Control Assessment		
Vector Control Services and Related Expenditures		
Vector Control and Disease Prevention		
Operations	$	5,588,293
Materials, Utilities and Supplies	$	3,517,969
Contingency	$	133,234
Total Vector Control Services and Related Expenditures		**$9,239,496**
Incidental Costs[1]		
County Collection, Levy Administration, and Other Incidentals	$	160,917
Total Incidental Costs		**$160,917**
Total Budget		**$9,400,413**
Total Benefits of Vector and Disease Control		$9,400,413
Single Family Equivalent Units (SFEs)		407,457
Benefit Received per SFE Unit		$23.07
Less		
Contributions from Other Sources		
Revenue from other sources[2]		($6,641,932)
Total Vector & Disease Control Services and Incidentals		**$2,758,481**
Budget Allocation to Property		
Total Assessment Budget[3]		$2,758,481
Total SFE Units[4]		407,457
Assessment Rate per SFE[56]		**$6.77**

Consolidated ER Notes:

1. Includes allowance for uncollectable assessments from assessments on public agency parcels, county collection charges and assessment administration costs.

2. Contributions from other sources to cover the costs of any general benefits and special benefits not funded by the assessments.

3. The assessment amounts are rounded down to the even penny for purposes of complying with the collection requirements from the County Auditor. Therefore, the total assessment amount for all parcels subject to the assessments may vary slightly from the net amount to be assessed.

4. SFE Units means Single Family Equivalent Benefit Units. See Method of Assessment in the following Section for further definition.

5. The assessment rate per SFE is the total amount of assessment per Single Family Equivalent benefit unit.

6. The assessment rate per SFE is in addition to an initial assessment of $5.92 per Benefit Unit and a supplemental rate in Oakland of $1.28 per Benefit Unit, both approved by voters. The total assessment rate is $12.69. In Oakland, the total, including the supplemental rate, is $13.97 per Benefit Unit .Additionally, the annexed cities of Emeryville and Fremont have a separate benefit assessment of $12.69 per SFE.

Note: The proceeds from the assessments will be deposited into a special fund for the Assessment. Funds raised by the assessment shall be used only for the purposes stated within this Report. Any balance remaining at the end of the fiscal year, June 30, must be carried over to the next fiscal year.

Method of Assessment

This section of the Report explains the benefits to be derived from the Services provided for property in the District, and the methodology used to apportion the total assessment to properties within the Vector and Disease Control Assessment area.

The Vector and Disease Control Assessment Service Area consists of the Assessor Parcels in Alameda County, (excluding the cities of Emeryville and Fremont which were annexed in 2008 and are detailed in separate reports), as defined within the area of the boundary diagram included within this Engineer's Report (see the Assessment Roll for a list of all the parcels included in the Service Area).

The method used for apportioning the assessment is based upon the proportional special benefits to be derived by the properties in the District over and above general benefits conferred on real property in the Assessment District. Special benefit is calculated for each parcel in the Assessment District using the following process:

1. Identification of total benefit to the properties derived from the Services
2. Calculation of the proportion of these benefits that are special vs. general
3. Determination of the relative special benefit within different areas within the Assessment District
4. Determination of the relative special benefit per property type and property characteristic
5. Calculation of the specific assessment for each individual parcel based upon special vs. general benefit; location, property type and property characteristics

Discussion of Benefit

In summary, the assessments can only be levied based on the special benefit to property. This benefit is received by property over and above any general benefits. This special benefit is received by property over and above any general benefits from the additional Services. With reference to the engineering requirements for property related assessments, under Proposition 218 an Engineer must determine and prepare a report evaluating the amount of special and general benefit received by property within the Assessment District as a result of the improvements or services provided by a local agency. That special benefit is to be determined in relation to the total cost to that local entity of providing the service and/or improvements.

Proposition 218 as described in Article XIIID of the California Constitution has confirmed that assessments must be based on the special benefit to property:

> *"No assessment shall be imposed on any parcel which exceeds the reasonable cost of the proportional special benefit conferred on that parcel."*

The below benefit factors, when applied to property in the Assessment Area, confer special benefits to property and ultimately improve the safety, utility, functionality and usability of property in the Assessment Area. These are special benefits to property in the Assessment Area in much the same way that storm drainage, sewer service, water service, lighting, sidewalks and paved streets enhance the safety, utility and functionality of each parcel of property served by these improvements, providing them with more utility of use and making them safer and more usable for occupants.

It should also be noted that Proposition 218 included a requirement that existing assessments in effect upon its effective date were required to be confirmed by either a majority vote of registered voters in the Assessment Area, or by weighted majority property owner approval using the new ballot proceeding requirements. However, certain assessments were excluded from these voter approval requirements. Of note is that in California Constitution Article XIIID Section 5(a) this special exemption was granted to assessments for sidewalks, streets, sewers, water, flood control, drainage systems and vector control. The Howard Jarvis Taxpayers Association explained this exemption in their Statement of Drafter's Intent:

> *"This is the "traditional purposes" exception. These existing assessments do not need property owner approval to continue. However, future assessments for these traditional purposes are covered."*[3]

Therefore, the drafters of Proposition 218 acknowledged that vector control assessments were a "traditional" and therefore acknowledged and accepted use.

Since all assessments, existing before or after Proposition 218 must be based on special benefit to property, the drafters of Proposition 218 inherently found that vector and disease control services confer special benefit on property. Moreover, the statement of drafter's intent also acknowledges that any new or increased vector control assessments after the effective date of Proposition 218 would need to comply with the voter approval requirements it established. This is an acknowledgement that additional assessments for such "traditional" purposes would be established after Proposition 218 was in effect. Therefore, the drafters of Proposition 218 clearly recognized vector and disease control assessments as a "traditional" use of assessments, acknowledged that new vector and disease assessments may be formed after Proposition 218 and inherently were satisfied that vector control services confer special benefit to properties.

[3] Howard Jarvis Taxpayers Association, "Statement of Drafter's Intent", January 1997.

The Legislature also made a specific determination after Proposition 218 was enacted that vector control services constitute a proper subject for special assessment. Health and Safety Code section 2082, which was signed into law in 2002, provides that a district may levy special assessments consistent with the requirements of Article XIIID of the California Constitution to finance vector and disease control projects and programs. The intent of the Legislature to allow and authorize benefit assessments for vector and disease control services after Proposition 218 is shown in the Assembly and Senate analysis of the Mosquito Abatement and Vector Control District Law where it states that the law:

> *Allows special benefit assessments to finance vector control projects and programs, consistent with Proposition 218.* [4]

Therefore, the State Legislature unanimously found that vector and disease control services are a valuable and important public service that can be funded by benefit assessments. To be funded by assessments, vector and disease control services must confer special benefit to property.

Vector and Disease Control Is a Special Benefit to Properties

As described below, this Engineer's Report concludes that vector and disease control is a special benefit that provides direct advantages to property in the Assessment District. For example, the assessment provides reduced levels of vectors on property throughout the Assessment District. Moreover, the assessment will reduce the risk of the presence of diseases on property throughout the Assessment District, which is another direct advantage received by property in the Assessment District. Moreover, the assessment funds Services that improve the use of property and reduce the nuisance and harm created by vectors on property throughout the Assessment District. These are tangible and direct special benefits that are received by property throughout the specific area covered by the Assessment.

The following section, Benefit Factors, describes how and why vector control services specially benefit properties in the Assessment Area. These benefits are particular and distinct from its effect on property in general or the public at large.

[4] Senate Bill 1588, Mosquito Abatement and Vector Control District Law, Legislative bill analysis

Benefit Factors

In order to allocate the assessments, the Engineer identified the types of special benefit arising from the aforementioned vector and disease control services and that would be provided to property within the District. The following benefit factors have been established that represent the types of special benefit to parcels resulting from the Services financed with the assessment proceeds. These types of special benefit are as follows:

Reduced vector populations on property and as a result, enhanced desirability, utility, usability and functionality of property in the Assessment District.

The assessments provide enhanced services for the control and abatement of nuisance and disease-carrying vectors. These Services will materially reduce the number of vectors on properties throughout the Assessment District. The lower vector populations on property in the Assessment District is a direct advantage to property that will serve to increase the desirability and "usability" of property. Clearly, properties are more desirable and usable in areas with lower vector populations and with a reduced risk of vector-borne disease. This is a special benefit to residential, commercial, agricultural, industrial and other types of properties because all such properties will directly benefit from reduced vector populations and properties with lower vector populations are more usable, functional and desirable.

Excessive vectors in the area can materially diminish the utility and usability of property. For example, prior to the commencement of vector control and abatement services, properties in many areas in the State were considered to be nearly uninhabitable during the times of year when the vector populations were high.[5] The prevention or reduction of such diminished utility and usability of property caused by vectors is a clear and direct advantage and special benefit to property in the Assessment District.

The State Legislature made the following finding on this issue:

> *"Excess numbers of mosquitoes and other vectors spread diseases of humans, livestock, and wildlife, reduce enjoyment of outdoor living spaces, both public and private, reduce property values, hinder outdoor work, reduce livestock productivity; and mosquitoes and other vectors can disperse or be transported long distances from their sources and are, therefore, a health risk and a public nuisance; and professional mosquito*

[5] Prior to the commencement of modern mosquito control services, areas in the State of California such as the Alameda County, San Mateo Peninsula, , Lake County and areas in Marin and Sonoma Counties had such high mosquito populations that they were considered to be nearly unlivable during certain times of the year and were largely used for part-time vacation cottages that were occupied primarily during the months when the natural mosquito populations were lower.

and vector control based on scientific research has made great advances in reducing mosquito and vector populations and the diseases they transmit." [6]

Rodents and other vectors emerge from sources throughout the Assessment District. Norway Rats, for example, travel up to 300 feet from known sources and can reach multiple properties. These sources include sewers, garbage dumps, lower floors of multi-story buildings, and homeless encampments. By controlling vectors at known and new sources, the Services will materially reduce vector populations on property throughout the Assessment District.

Homeless encampments are a recent and increasing source of vectors. In 2018, the District began conducting surveillance of commensal rodent and ectoparasite populations in homeless encampments within the City of Oakland. In 2025, staff biologists conducted 14 separate trapping events at seven different homeless encampments in the City of Oakland, collecting 189 Norway rats. Five Norway rat suppression applications were also conducted during 2025. The Norway rat surveillance and control operations are expected to be continued indefinitely.

Increased safety of property in the Assessment District.

The Assessments result in improved year-round proactive Services to control and abate vectors that otherwise would occupy properties throughout the Assessment District. Vectors are transmitters of diseases, so the reduction of vector populations makes property safer for use and enjoyment. In absence of the assessments, these Services would not be provided, so the Services funded by the assessments make properties in the Assessment District safer, which is a distinct special benefit to property in the Assessment District.[7] This is not a general benefit to property in the Assessment District or the public at large because the Services are tangible vector and disease control services that are provided directly to the properties in the Assessment District and the Services are over and above what otherwise would be provided by the District or any other agency.

This finding was confirmed in 2003 by the State Legislature:

"Mosquitoes and other vectors, including but not limited to, ticks, Africanized honey bees, rats, fleas, and flies, continue to be a source of human suffering, illness, death, and a public nuisance in California and around the world. Adequately funded mosquito and vector control, monitoring and public awareness programs are the best way to prevent

[6] Assembly Concurrent Resolution 52, chaptered April 1, 2003

[7] By reducing the risk of disease and increasing the safety of property, the Services will materially increase the usefulness and desirability of certain properties in the Assessment Area.

outbreaks of West Nile Virus and other diseases borne by mosquitoes and other vectors." [8]

Also, the Legislature, in Health and Safety Code Section 2001, finds that:

"The protection of Californians and their communities against the discomforts and economic effects of vector-borne diseases is an essential public service that is vital to public health, safety, and welfare."

Reductions in the risk of new diseases and infections on property in the Assessment District.

Some vector populations are highly mobile and may introduce new vector-borne diseases into previously unexposed areas:

"Distribution of vector-borne diseases is determined by complex demographic, environmental and social factors. Global travel and trade, unplanned urbanization and environmental challenges such as climate change can impact on pathogen transmission, making transmission season longer or more intense or causing diseases to emerge in countries where they were previously unknown."[9]

Vectors, including ticks, have proven to be a major contributor to the spread of new diseases such as Lyme disease, among others.

"In 2017, state and local health departments reported a record number of cases of tickborne disease to CDC. Cases of Lyme disease, anaplasmosis/ehrlichiosis, spotted fever rickettsiosis (including Rocky Mountain spotted fever), babesiosis, tularemia, and Powassan virus disease all increased—from 48,610 cases in 2016 to 59,349 cases in 2017. These 2017 data capture only a fraction of the number of people with tickborne illnesses. Under-reporting of all tickborne diseases is common, so the number of people actually infected is much higher.

This increase follows an accelerating trend of tickborne diseases reported in the United States. Between 2004 and 2016, the number of reported cases of tickborne disease doubled, and researchers discovered seven new tickborne pathogens that infect people. [10]

[8] Assembly Concurrent Resolution 52, chaptered April 1, 2003.
[9] Vector-borne Diseases. World Health Organization. October 2017. https://www.who.int/news-room/fact-sheets/detail/vector-borne-diseases
[10] Record Number Of Tickborne Diseases Reported in U.s. in 2017 | Cdc Online Newsroom | Cdc

A study of the effect of aerial spraying conducted by the Sacramento-Yolo Mosquito and Vector Control District (SYMVCD) to control a West Nile Virus disease outbreak found that the SYMVCD's mosquito control efforts materially decreased the risk of new diseases in the treated areas:

> *After spraying, infection rates decreased from 8.2 (95% CI 3.1–18.0) to 4.3 (95% CI 0.3–20.3) per 1,000 females in the spray area and increased from 2.0 (95% CI 0.1–9.7) to 8.7 (95% CI 3.3–18.9) per 1,000 females in the untreated area. Furthermore, no additional positive pools were detected in the northern treatment area during the remainder of the year, whereas positive pools were detected in the untreated area until the end of September (D.-E.A Elnaiem, unpub. data). These independent lines of evidence corroborate our conclusion that actions taken by SYMVCD were effective in disrupting the WNV transmission cycle and reducing human illness and potential deaths associated with WNV.* [11]

The Services funded by the assessments help prevent on a year-round basis the presence of vector-borne diseases on property in the Assessment District. This is another tangible and direct special benefit to property in the Assessment District that would not be received in absence of the assessments.

Protection of economic activity on property in the Assessment District.

As recently demonstrated by the SARS outbreak in China and outbreaks of Avian Flu, outbreaks of pathogens can materially and negatively impact economic activity in the affected area. Such outbreaks and other public health threats can have a drastic negative effect on tourism, business and residential activities in the affected area. The assessments help to prevent the likelihood of such outbreaks in the District.

Vectors hinder, annoy and harm residents, guests, visitors, farm workers, and employees. A vector-borne disease outbreak and other related public health threats would have a drastic negative effect on agricultural, business and residential activities in the Assessment District.

The economic impact of diseases is well documented. According to a study prepared for the Centers for Disease Control and Prevention, economic losses due to the transmission of West Nile Virus in Louisiana was estimated to cost over $20 million over approximately one year:

https://www.cdc.gov/media/releases/2018/s1114-record-number-tickborne-diseases.html

[11] Carney, Ryan. (2008), Efficiency of Aerial Spraying of Mosquito Adulticide in Reducing the Incidence of West Nile Virus, California, 2005. Emerging Infectious Diseases, Vol 14(5)

> *The estimated cost of the Louisiana epidemic was $20.1 million from June 2002 to February 2003, including a $10.9 million cost of illness ($4.4 million medical and $6.5 million nonmedical costs) and a $9.2 million cost of public health response. These data indicate a substantial short-term cost of the WNV disease epidemic in Louisiana.* [12]

Moreover, research from John Hopkins Bloomberg School of Public Health found that Lyme Disease costs the United States healthcare system an average of $3,000 per patient or between $712 million to $1.3 billion a year for the tick-borne illness. The disease significantly impacted lifestyles of those who were infected including those patients with persistent symptoms after treatment called post-treatment Lyme disease Syndrome or (PTLDS)[13]

The Services funded by the assessments help prevent the likelihood of such outbreaks on property in the Assessment District and will reduce the harm to economic activity on property caused by existing vector populations. This is another direct advantage received by property in the Assessment District that would not be received in absence of the assessments.

Protection of Assessment District's agriculture, tourism, and business industries.

The agriculture, tourism and business industries will benefit from reduced levels of harmful or nuisance vectors. Conversely, any outbreaks of emerging vector-borne pathogens such as Plague, Hantavirus, Lyme disease, Flea-borne Typhus, and West Nile Virus could also materially negatively affect these industries. Diseases transmitted by vectors can adversely impact business and recreational functions.

> *A study prepared for the United States Department of Agriculture in 2003 found that over 1,400 horses died from West Nile Virus in Colorado and Nebraska and that these fatal disease cases created over $1.2 million in costs and lost revenues. In addition, horse owners in these two states spent over $2.75 million to vaccinate their horses for this disease. The study states that "Clearly, WNV has had a marked impact on the Colorado and Nebraska equine industry."* [14]

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[12] Zohrabian A, Meltzer MI, Ratard R, Billah K, Molinari NA, Roy K, et al. West Nile Virus economic impact, Louisiana, 2002. Emerging Infectious Disease, 2004 Oct. Available from http://www.cdc.gov/ncidod/EID/vol10no10/03-0925.htm

[13] Lyme Disease Costs Up To $1.3 Billion Per Year To Treat, Study Finds
Barbara Benham- JH Bloomberg School of Public Health - https://www.jhsph.edu/news/news-releases/2015/lyme-disease-costs-more-than-one-billion-dollars-per-year-to-treat-study-finds.html

[14] S. Geiser, A. Seitzinger, P. Salazar, J. Traub-Dargatz, P. Morley, M. Salman, D. Wilmot, D. Steffen, W. Cunningham, Economic Impact of West Nile Virus on the Colorado and Nebraska Equine Industries: 2002, April 2003, Available from http://www.aphis.usda.gov/vs/ceah/cnahs/nahms/equine/wnv2002_CO_NB.pdf

> *Pesticides for mosquito control impart economic benefits to agriculture in general. Anecdotal reports from farmers and ranchers indicate that cattle, if left unprotected, can be exsanguinated by mosquitoes, especially in Florida and other southeast coastal areas. Dairy cattle produce less milk when bitten frequently by mosquitoes* [15]

The assessments serve to protect the businesses and industries and the employees and residents that benefit from these businesses and industries. This is a direct advantage and special benefit to property in the Assessment District.

Reduced risk of nuisance and liability on property in the Assessment District

In addition to vector-borne disease risks, uncontrolled vector populations create a nuisance for the occupants of property in the Assessment District. Properties in the Assessment District, therefore, benefit from the reduced nuisance factor that is created by the Services.

Agricultural, range, golf course, cemetery, open space and other such lands in the Assessment District contain large areas of vector habitat and are therefore a significant source of vector populations. In addition, residential and business properties in the Assessment District can also contain significant sources.[16] It is conceivable that sources of vectors could be held liable for the transmission of diseases or other harm. For example, in August 2004, the City of Los Angeles approved new fines of up to $1,000 per day for property owners who don't remove standing water sources of mosquitoes on their property.

The Services serve to protect the businesses and industries in the Assessment District. This is a direct advantage and a special benefit to property in the Assessment District.

Improved marketability of property.

As described previously, the Services specially benefit properties in the Assessment District by making them more useable, livable and functional. The Services also make properties in the Assessment District more desirable, and more desirable properties also benefit from improved marketability. This is another tangible and direct special benefit to property which will not be enjoyed in absence of the Services.[17]

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[15] Jennings, Allen. (2001). USDA Letter to EPA on Fenthion IRED. United States Department of Agriculture, Office of Pest Management Policy. March 8, 2001.

[16] Sources of mosquitoes on residential, business, agricultural, range and other types of properties include removable sources such as containers that hold standing water.

[17] If one were to compare two hypothetical properties with similar characteristics, the property with lower mosquito infestation and reduced risk of mosquito-borne disease will clearly be more desirable, marketable and usable.

Benefit Finding

In summary, the special benefits described in this Report and the expansion of Services in the Assessment District directly benefit and protect the real properties in the District in excess of the assessments for these properties. Therefore, the assessment engineer finds that the cumulative special benefits to property from the Services are reasonably equal to or greater than the annual assessment amount per benefit unit.

General vs. Special Benefit

Article XIIIC of the California Constitution requires any local agency proposing to increase or impose a benefit assessment to "separate the general benefits from the special benefits conferred on a parcel." The rationale for separating special and general benefits is to ensure that property owners subject to the benefit assessment are not paying for general benefits. The assessment can fund the special benefits to property in the Assessment Area but cannot fund any general benefits. Accordingly, a separate estimate of the special and general benefit is given in this section.

In other words:

Total Benefit	=	General Benefit	+	Special Benefit

There is no widely-accepted or statutory formula for general benefit from vector and disease control services. General benefits are benefits from improvements or services that are not special in nature, are not "particular and distinct" and are not "over and above" benefits received by other properties. General benefits are conferred to properties located "in the district,[18]" but outside the narrowly-drawn Assessment District and to "the public at large." SVTA vs. SCCOSA provides some clarification by indicating that general benefits provide "an indirect, derivative advantage" and are not necessarily proximate to the improvements and services funded by the assessments.

[18] SVTA vs. SCCOSA explains as follows:
OSA observes that Proposition 218's definition of "special benefit" presents a paradox when considered with its definition of "district." Section 2, subdivision (i) defines a "special benefit" as "a particular and distinct benefit over and above general benefits conferred on real property located in the district or to the

A formula to estimate the general benefit is listed below:

General Benefit	=	Benefit to Real Property Outside the Assessment District	+	Benefit to Real Property Inside the Assessment District that is Indirect and Derivative	+	Benefit to the Public at Large

Special benefit, on the other hand, is defined in the state constitution as "a particular and distinct benefit over and above general benefits conferred on real property located in the district or to the public at large." The SVTA v. SCCOSA decision indicates that a special benefit is conferred to a property if it "receives a direct advantage from the improvement (e.g., proximity to a park)." In this assessment, the overwhelming proportion of the benefits conferred to property is special, since the advantages from the vector and disease control/protection funded by the Assessments are directly received by the properties in the Assessment District and are only minimally received by property outside the Assessment District or the public at large.

Proposition 218 twice uses the phrase "over and above" general benefits in describing special benefit. (Art. XIIID, sections 2(i) & 4(f).) There currently are some vector and disease control related services being provided to the Assessment District area. Consequently, there currently are some vector control related benefits being provided to the Assessment District and any new and extended service provided by the District would be over and above this baseline. Arguably, all of the Services funded by the assessment therefore are a special benefit because the additional Services would particularly and distinctly benefit and protect the Assessment District over and above the previous baseline benefits and service.

Nevertheless, arguably some of the Services would benefit the public at large and properties outside the Assessment District. In this report, the general benefit is conservatively estimated and described, and then budgeted so that it is funded by sources other than the assessment.

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public at large." (Art. XIII D, § 2, subd. (i), italics added.) Section 2, subdivision (d) defines "district" as "an area determined by an agency to contains all parcels which will receive a special benefit from a proposed public improvement or property-related service." (Art. XIII D, § 2, subd. (d), italics added.) In a well-drawn district — limited to only parcels receiving special benefits from the improvement — every parcel within that district receives a shared special benefit. Under section 2, subdivision (i), these benefits can be construed as being general benefits since they are not "particular and distinct" and are not "over and above" the benefits received by other properties "located in the district."

In the 2009 *Dahms* case, the court upheld an assessment that was 100% special benefit on the rationale that the services funded by the assessments were directly provided to property in the assessment district. Similar to the assessments in Pomona that were validated by *Dahms*, the Assessments described in this Engineer's Report fund vector and disease control services directly provided to property in the assessment area. Moreover, as noted in this Report, the Services directly reduce mosquito and vector populations on all property in the assessment area. Therefore, *Dahms* establishes a basis for minimal or zero general benefits from the Assessments. However, in this report, the general benefit is more conservatively estimated and described, and then budgeted so that it is funded by sources other than the assessment.

Calculating General Benefit

Without this assessment the District would lack the funds to extend the additional Services to the Assessment District. The only additional service that is being provided is the vector control program assessment-funded Services. Consistent with footnote 8 of *SVTA v. SCCOSA*, and for the reasons described above, the District has determined that all parcels in the Assessment District receive a shared direct advantage and special benefit from the Services. The Services directly and particularly serve and benefit each parcel, and are not a mere indirect, derivative advantage. As explained above, Proposition 218 relies on the concept of "over and above" in distinguishing special benefits from general benefits. As applied to an assessment proceeding concurrent with the annexation this concept means that all vector and disease control services, which provide direct advantage to property in the Assessment District, are over and above the baseline and therefore are special.

Nevertheless, the Services provide a degree of general benefit, in addition to the predominant special benefit. This section provides a conservative measure of the general benefits from the Assessments.

Benefit to Property Outside the District

Properties within the Assessment District receive almost all of the special benefits from the Services because the Services funded by the Assessments are provided directly to protect property within the Assessment District from vectors and vector-borne diseases. However, properties adjacent to, but just outside of, the District boundaries may receive some benefit from the Services in the form of reduced vector populations on property outside the Assessment District. Since this benefit, is conferred to properties outside the district boundaries, it contributes to the overall general benefit calculation and will not be funded by the assessment.

A measure of this general benefit is the proportion of Services that would affect properties outside of the Assessment District. Each year, the District will provide some of its Services in areas near the boundaries of the Assessment District. By abating vector populations near the borders of the Assessment District, the Services could provide benefits in the form of reduced vector populations and reduced risk of disease transmission to properties outside the Assessment District. If vectors were not controlled inside the Assessment District, more of them would migrate from the Assessment District. Therefore, control of vectors within the Assessment District provides some benefit to properties outside the Assessment District but within the travel range of vectors, in the form of reduced vector populations and vector-borne disease transmission.

Since domestic rodents (rats and mice) are the primary vectors that are controlled and easily travel from their source location to properties in the area, typical rodent destination ranges will be used to measure the extent that the Services will create reduced vector populations on property outside the Assessment District. This is a measure of the general benefits to property outside the Assessment District because this is a benefit from the Services that is not specially conferred upon property in the assessment area.

The vector potential outside the Assessment District is based on studies of rodent dispersion concentrations. Domestic rodents can travel up to 300 feet, on average, so this destination range is used. This number of parcels outside the Assessment District and within the destination range to measure this general benefit is calculated as follows:

CRITERIA:

Rats may travel an average of up to 300 feet from their breeding source.

1,482 parcels within 300 feet of, but outside of the District,

MAY receive some vector and disease protection benefit

392,273 Parcels in the District

Calculations:

Percentage of overall parcel equivalents = 1,482 / 392,273 = **0.004%**

Therefore, for the overall benefits provided by the Services to the Assessment District, it is determined that 0.004% of the benefits would be received by the parcels within 300 feet of the Assessment District boundaries. Recognizing that this calculation is an approximation, this benefit will be rounded up to 1.0%.

Benefit to Property *Inside* the District that is *Indirect and Derivative*

The "indirect and derivative" benefit to property within the Assessment District is particularly difficult to calculate. As explained above, all benefit within the Assessment District is special because the vector and disease control services in the Assessment District would provide direct service and protection that is clearly "over and above" and "particular and distinct" when compared with the level of such protection under current conditions. Further the properties are within the Assessment District boundaries and this Engineer's Report demonstrates the direct benefits received by individual properties from vector and disease control services.

In determining the Assessment District area, the District was careful to limit it to an area of parcels that will directly receive the Services. All parcels directly benefit from the surveillance, monitoring and treatment provided on an equivalent basis throughout the Assessment District in order to maintain the same improved level of protection against vectors and reduced vector populations throughout the area. The surveillance and monitoring sites are spread on a balanced basis throughout the area. Vector and disease control and treatment is provided as needed throughout the area based on the surveillance and monitoring results. The shared special benefit - reduced vector levels and reduced presence of vector-borne diseases - are received on an equivalent basis by all parcels in the Assessment District. Furthermore, all parcels in the Assessment District directly benefit from the ability to request service from the District and to have a District field technician promptly respond directly to the parcel and address the owner's or resident's service need.

The *SVTA vs. SCCOSA* decision indicates that the fact that a benefit is conferred throughout the Assessment District area does not make the benefit general rather than special, so long as the Assessment district is narrowly drawn and limited to the parcels directly receiving shared special benefits from the service. This concept is particularly applicable in situations involving a landowner-approved assessment-funded extension of a local government service to benefit lands previously not receiving that particular service. The District therefore concludes that, other than the small general benefit to properties outside the Assessment District (discussed above) and to the public at large (discussed below), all of the benefits of the Services to the parcels within the Assessment District are special benefits and it is not possible or appropriate to separate any general benefits from the benefits conferred on parcels in the Assessment District.

Benefit To The Public At Large

With the type and scope of Services provided to the Assessment District, it is very difficult to calculate and quantify the scope of the general benefit conferred on the public at large. Because the Services directly serve and benefit all of the property in the Assessment Area, any general benefit conferred on the public at large is small. Nevertheless, there is some indirect general benefit to the public at large.

The public at large uses the public highways, streets and sidewalks, and when traveling in and through the Assessment Area they will benefit from the Services. A fair and appropriate measure of the general benefit to the public at large therefore is the amount of highway, street and sidewalk area within the Assessment Area relative to the overall land area. An analysis of maps of the Assessment Area shows that approximately 1.2% of the land area in the Assessment Area is covered by highways, streets and sidewalks. This 1.2% therefore is a fair and appropriate measure of the general benefit to the public at large within the Assessment Area

Summary of General Benefits

Using a sum of the measures of general benefit for the public at large and land outside the Assessment Area, we find that approximately 2.2% of the benefits conferred by the Vector and Disease Control Assessment may be general in nature and should be funded by sources other than the Assessment.

General Benefit Calculation

	1.0%	(Outside the Assessment District)
+	0.0%	(Property within the Assessment District)
+	1.2%	(Public at Large)
=	**2.2%**	**(Total General Benefit)**

This amount allocated to general benefit also covers general benefit to parcels in the Assessment Area if it is later determined that there is some general benefit conferred on those parcels.

The Vector and Disease Control Assessment total vector abatement, disease control, and capital improvement is $8,865,002. Of this total budget amount, the District will contribute approximately 70% of the total budget from sources other than the Vector and Disease Control Assessment. This contribution offsets any general benefits from the Vector and Disease Control Assessment Services.

Zones of Benefit

The District's vector and disease control programs, projects and Services that are funded by the Vector and Disease Control Assessment are provided in all areas within the District. Parcels of similar type in the District would receive similar vector abatement benefits on a per parcel and land area basis. Therefore, zones of benefit are not justified.

The *SVTA vs. SCCOSA* decision indicates:

> *In a well-drawn district — limited to only parcels receiving special benefits from the improvement — every parcel within that district receives a shared special benefit. Under section 2, subdivision (i), these benefits can be construed as being general benefits since they are not "particular and distinct" and are not "over and above" the benefits received by other properties "located in the district."*
>
> *We do not believe that the voters intended to invalidate an assessment district that is narrowly drawn to include only properties directly benefiting from an improvement. Indeed, the ballot materials reflect otherwise. Thus, if an assessment district is narrowly drawn, the fact that a benefit is conferred throughout the district does not make it general rather than special. In that circumstance, the characterization of a benefit may depend on whether the parcel receives a direct advantage from the improvement (e.g., proximity to park) or receives an indirect, derivative advantage resulting from the overall public benefits of the improvement (e.g., general enhancement of the district's property values).*

In the Assessment Area, the advantage that each parcel receives from the Services is direct and the boundary for the Service Area is narrowly drawn so the Service Area includes parcels that receive the similar levels of benefit from the Services. Therefore, the even spread of assessment for similar properties in the narrowly drawn Service Area within the Program is indeed consistent with the OSA decision.

Method of Assessment

As previously discussed, the Assessments fund enhanced, comprehensive, year-round vector control, disease surveillance and control Services that will reduce vector populations on property and will clearly confer special benefits to properties in the Assessment Area. These benefits can also partially be measured by the occupants on property in the Improvement District because such parcel population density is a measure of the relative benefit a parcel receives from the Improvements. Therefore, the apportionment of benefit is partially based on the population density of parcels. It should be noted that many other types of "traditional" assessments also use parcel population densities to apportion the assessments. For example, the assessments for sewer systems, roads and water systems are typically allocated based on the population density of the parcels assessed.

Moreover, assessments have a long history of use in California and are in large part based on the principle that any benefits from a service or improvement funded by assessments that is enjoyed by tenants and other non-property owners ultimately is conferred directly to the underlying property.[19]

With regard to benefits and source locations, the assessment engineer determined that since vectors may move from their breeding locations to all properties in their travel range and since many vectors are actually attracted to properties occupied by people or animals, the benefits from vector control extend beyond the source locations to all properties that are a "destination" for vectors. In other words, the control and abatement of vector populations ultimately confers benefits to all properties that are a destination of vectors, rather than just those that are source habitats of vectors.

[19] For example, in *Federal Construction Co. v. Ensign (1922) 59 Cal.App. 200 at 211*, the appellate court determined that a sewer system specially benefited property even though the direct benefit was to the people who used the sewers: "Practically every inhabitant of a city either is the owner of the land on which he resides or on which he pursues his vocation, or he is the tenant of the owner, or is the agent or servant of such owner or of such tenant. And since it is the inhabitants who make by far the greater use of a city's sewer system, it is to them, as lot owners or as tenants, or as the servants or agents of such lot owners or tenants, that the advantages of actual use will redound. But this advantage of use means that, in the final analysis, it is the lot owners themselves who will be especially benefited in a financial sense."

Although some primary vector habitats may be located outside of residential areas, residential properties can and do generate their own, often significant, populations of vector organisms. For example, broken sewer pipes in residential areas in the Service Area are a common source of rats. Since rats can travel over 300 feet, most homes in the Service Area are within the travel zone of rat habitats or could become a future vector habitat. Moreover, there are many other common residential potential breeding sources of vectors, such as miscellaneous areas under and around homes. Clearly, there is a potential for vector breeding habitats on virtually all property.

Because the Services are provided throughout the Assessment District with the same level of control objective, vectors can rapidly and readily travel from their breeding locations to other properties over a large area and because there are current or potential breeding habitats literally everywhere in the Service Area, the assessment engineer determined that all similar properties have generally equivalent vector "destination" potential and, therefore, receive equivalent levels of benefit.

In the process of determining the appropriate method of assessment, the Engineer considered various alternatives. For example, a fixed assessment amount per parcel for all residential improved property was considered but was determined to be inappropriate because agricultural lands, commercial property and other property also receive benefits from the assessments. Likewise, an assessment exclusively for agricultural land was considered but deemed inappropriate because other types of property, such as residential and commercial, also receive the special benefit factors described previously.

A fixed or flat assessment was deemed to be inappropriate because larger residential, commercial and industrial properties receive a higher degree of benefit than other similarly used properties that are significantly smaller. (For two properties used for commercial purposes, there is clearly a higher benefit provided to a property that covers several acres in comparison to a smaller commercial property that is on a 0.25 acre site. The larger property generally has a larger coverage area and higher usage by employees, customers, tourists and guests that benefit from reduced vector populations, as well as the reduced threat from diseases carried by vectors. This benefit ultimately flows to the property.) Larger commercial, industrial and apartment parcels, therefore, receive an increased benefit from the assessments.

In conclusion, the assessment engineer determined that the appropriate method of assessment apportionment should be based on the type and use of property, the relative size of the property its relative population and usage potential, and its destination potential for vectors. This method is further described below.

Assessment Apportionment

The special benefits derived from the Vector and Disease Control Assessment are conferred on property and are not based on a specific property owner's occupancy of property or the property owner's demographic status, such as age or number of dependents. However, it is ultimately people who do or could use the property and who enjoy the special benefits described above. Therefore, the opportunity to use and enjoy the region within the Service Area without the excessive nuisance, diminished "livability" or the potential health hazards brought by vectors and the diseases they carry is a special benefit to properties in the Service Area. This benefit can be in part measured by the number of people who potentially live on, work at, visit or otherwise use the property, because people ultimately determine the value of the benefits by choosing to live, work and/or recreate in the area, and by choosing to purchase property in the area.[20]

In order to apportion the cost of the Services to property, each property in the Assessment District is assigned a relative special benefit factor. This process involves determining the relative benefit received by each property in relation to a single-family home, or, in other words, on the basis of Single-Family Equivalents (SFE). This SFE methodology is commonly used to distribute assessments in proportion to estimated special benefit. For the purposes of this Engineer's Report, all properties are designated a SFE value, which is each property's relative benefit in relation to a "benchmark" parcel in the Assessment District. The "benchmark" property is the single-family detached dwelling on a parcel of less than one acre. This benchmark parcel is assigned one Single-Family Equivalent benefit unit or one SFE.

The calculation of the special benefit apportionment and relative benefit to properties in the Assessment Area from the Services is summarized in the following equation:

Special Benefit (per parcel)	=	$\sum f$ (Special Benefits, Property Specific Attributes[1])(per parcel)

1. Such as use, property type, size, as well as vector-specific attributes such as destination potential and population potential

[20] It should be noted that the benefits conferred upon property are related to the average number of people who could potentially live on, work at or otherwise could use a property, not how the property is currently used by the present owner.

Residential Properties

Certain residential properties in the Abatement District that contain a single residential dwelling unit and are on a lot of less than or equal to one acre are assigned one Single-Family Equivalent or 1.0 SFE. Traditional houses, zero-lot line houses, and town homes are included in this category of single-family residential property.

Single-family residential properties in excess of one acre receive additional benefit relative to a single-family home on up to one acre, because the larger parcels provide more area for vector breeding sources and the District's vector and disease control Services. Therefore, such larger parcels receive additional benefits relative to a single-family home on less than one acre and are assigned 1.0 SFE for the residential unit and an additional rate equal to the agricultural rate described below of 0.0021 SFE per one-fourth acre of land area in excess of one acre. Mobile home parcels on a separate parcel and in excess of one acre also receive this additional acreage rate.

Other types of properties with residential units, such as agricultural properties, are assigned the residential SFE rates for the dwelling units on the property and are assigned additional SFE benefit units for the agricultural-use land area on the property.

Properties with more than one residential unit are designated as multi-family residential properties. These properties, along with condominiums, benefit from the Services in proportion to the number of dwelling units that occupy each property, the average number of people who reside in each property and the average size of each property in relation to a single-family home in the District. This Report analyzed Alameda County population density factors from the 2000 US Census as well as average dwelling unit size for each property type. After determining the Population Density Factor and Square Footage Factor for each property type, an SFE rate is generated for each residential property structure, as indicated in Figure 2 below.

The SFE factor of 0.46 per dwelling unit for multifamily residential properties applies to such properties with two to four units (duplex, triplex, fourplex). Properties in excess of 5 units typically offer on-site management, monitoring and other control services that tend to offset some of the benefits provided by the District. Therefore, the benefit for properties in excess of 5 units is determined to be .32 SFE per unit for the first 20 units and 0.10 SFE per each additional unit in excess of 20 dwelling units.

Figure 2 – Residential Assessment Factors

Type of Residential Property	Total Population	Occupied Households	Persons per Household	Pop. Density Equivalent	SqFt Factor	Proposed Rate
Single Family Residential	866,596	284,662	3.04	1.00	1.00	**1.00**
Condominium	103,373	37,417	2.76	0.91	0.66	**0.60**
Duplex, Triplex, Fourplex	144,626	57,815	2.50	0.82	0.56	**0.46**
Multi-Family Residential (5+ Units)	286,957	136,173	2.11	0.69	0.47	**0.32**
Mobile Home on Separate Lot	13,464	6,660	2.02	0.66	0.41	**0.27**

Source: 2000 Census, Alameda County, and property dwelling size information from the Alameda County Assessor data and other sources.

Commercial/Industrial Properties

Commercial and industrial properties receive relatively lower levels of benefit in comparison to a single-family home because they are generally open and operated for more limited times and employees of indoor businesses tend to spend less time outdoors. Since the hours of operation and the potential exposure to vectors are measures of relative benefit, commercial and industrial properties receive lower relative levels of benefit. Therefore, commercial and industrial properties are determined to receive 0.50 SFE of benefit per one-quarter acre (10,890 square feet) of land area.

The SFE values for various commercial and industrial land uses are further defined by using average employee densities because the special benefit factors described previously are also related to the average number of people who work at commercial/industrial properties.

To determine employee density factors, this Report utilizes the findings from the San Diego County Association of Governments Traffic Generators Study (the "SANDAG Study") because these findings were approved by the State Legislature which determined the SANDAG Study to be a good representation of the average number of employees per acre of land area for commercial and industrial properties. As determined by the SANDAG Study, the average number of employees per acre for commercial and industrial property is 24. As presented in Figure 3, the SFE factors for other types of businesses are determined relative to their typical employee density in relation to the average of 24 employees per acre of commercial property.

Self-storage and golf course property benefit factors are similarly based on average usage densities. Figure 3 below lists the benefit assessment factors for such business properties.

Agricultural, Rangeland, and Cemetery Properties

Utilizing research and agricultural employment reports from UC Davis and the California Employment Development Department and other sources, this Report calculated an average usage density of 0.05 people per acre for agriculture property, 0.01 for rangelands and timber and .10 for cemeteries. Since these properties typically are a source of vectors and/or are typically closest to other sources of vectors, it is reasonable to determine that the benefit to these properties is twice the usage density ratio of commercial and industrial properties. The SFE factors per 0.25 acres of land area are shown in the following Figure 3.

Figure 3 – Commercial/Industrial Benefit Assessment Factors

Type of Commercial/ Industrial Land Use	*Average Employees Per Acre [1]*	*SFE Units per Fraction Acre [2]*	*SFE Units per Acre After 5*
Commercial	24	0.500	0.500
Office	68	1.420	1.420
Shopping Center	24	0.500	0.500
Industrial	24	0.500	0.500

1. Source: San Diego Association of Governments Traffic Generators Study, University of California, Davis and other studies and sources.
2. The SFE factors for commercial and industrial parcels indicated above are applied to each fourth acre of building area or portion thereof. (Therefore, the SFE rate for any assessable parcel with 10,890 square feet or less in these categories is the SFE Units listed above.)

Figure 4 – Other Land Benefit Assessment Factors

Other Types of Land Use	*Average Employees Per Acre [1]*	*SFE Units per 1/4 Acre [2]*
Self-Storage or Parking Lot	1.00	0.021
Wineries	12.00	0.250
Golf Course	3.00	0.063
Cemeteries	1.20	0.050
Agriculture / Vineyards	0.05	0.0021
Timberland / Dry Rangeland	0.01	0.00042

1. Source: San Diego Association of Governments Traffic Generators Study, University of California, Davis and other studies and sources.
2. The SFE factors for commercial and industrial parcels indicated above are applied to each fourth acre of land area or portion thereof. (Therefore, the minimum assessment for any assessable parcel in these categories is the SFE Units listed herein.)

Vacant Properties

The benefit to vacant properties is determined to be proportional to the corresponding benefits for similar type developed properties. However, vacant properties are assessed at a lower rate due to the lack of active benefits, as measured by use by residents, employees, customers and guests. A measure of the benefits accruing to the underlying land is the average value of land in relation to improvements for developed property. An analysis of the assessed valuation data from Alameda County found that 50% of the assessed value of improved properties is classified as land value. Since vacant properties have very low to zero population/use densities until they are developed, a 50% benefit discount is applied to the valuation factor of 0.50 to account for the current low use density and potential for harm or nuisance to the property owner or his residents, employees, customers and guests. The combination of these measures results in a 0.25 factor. It is reasonable to assume, therefore, that approximately 25% of the benefits are related to the underlying land and 75% are related to the day-to-day use of the property. Using this ratio, the SFE factor for vacant parcels is 0.25 per parcel.

Other Properties

Article XIIID stipulates that publicly owned properties must be assessed unless those properties are reasonably determined to receive no special benefit from the assessment. All properties that are specially benefited are assessed. Publicly owned property that is used for purposes similar to private residential, commercial, industrial or institutional uses is benefited and assessed at the same rate as such privately owned property.

Other public properties such as watershed parcels, parks, open space parcels are determined to, on average, receive similar benefits as a single-family home. Therefore such parcels are assessed an SFE benefit factor of 1. Miscellaneous, small and other parcels such as roads, right-of-way parcels, and common areas typically do not generate significant numbers of employees, residents, customers or guests and have limited economic value. These miscellaneous parcels receive minimal benefit from the Services and are assessed an SFE benefit factor of 0.

Church parcels, institutional properties, and property used for educational purposes typically generate employees on a less consistent basis than other non-residential parcels. Many of these properties with higher population factors provide on-site management, monitoring and other control services that tend to offset some of the benefits provided by the District. Therefore, these parcels are determined to, on average, receive similar benefits as a single-family home. Therefore such parcels are assessed an SFE benefit factor of 1.

Miscellaneous, small and other parcels such as roads, right-of-way parcels, and common areas typically do not generate significant numbers of employees, residents, customers or guests and have limited economic value. These miscellaneous parcels receive minimal benefit from the Services and are assessed an SFE benefit factor of 0.

Duration of Assessment

It is proposed that the Assessment be levied for fiscal year 2026-27 and continued every year thereafter, so long as vectors remain in existence and the Alameda County Vector Control District requires funding from the Assessment for its Services in the District. As noted previously, if the Assessment and the duration of the Assessment were approved by property owners in an assessment ballot proceeding, the Assessment can continue to be levied annually after the Alameda County Board of Supervisors approves an annually updated Engineer's Report, budget for the Assessment, Services to be provided, and other specifics of the Assessment, if the assessment rate is increased. In addition, the Alameda County Board of Supervisors must hold an annual public hearing to continue the Assessment.

Appeals and Interpretation

Any property owner who feels that the assessment levied on the subject property is in error as a result of incorrect information being used to apply the foregoing method of assessment, may file a written appeal with the District Manager of the Alameda County Vector Control District or his or her designee. Any such appeal is limited to correction of an assessment during the then current fiscal year or, if before July 1, the upcoming fiscal year. Upon the filing of any such appeal, the District Manager or his or her designee will promptly review the appeal and any information provided by the property owner. If the District Manager or his or her designee finds that the assessment should be modified, the appropriate changes shall be made to the assessment roll. If any such changes are approved after the assessment roll has been filed with Alameda County for collection, the District Manager or his or her designee is authorized to refund to the property owner the amount of any approved reduction. Any dispute over the decision of the District Manager, or his or her designee, shall be referred to the Alameda County Board of Supervisors. The decision of the County Board of Supervisors shall be final.

Assessment

WHEREAS, the Alameda County Board of Supervisors contracted with the undersigned Engineer of Work to prepare and file a report presenting an estimate of costs of Services, a diagram for the benefit assessment area, an assessment of the estimated costs of Services, and the special and general benefits conferred thereby upon all assessable parcels within the Alameda County Vector Control District - Vector and Disease Control Assessment;

NOW, THEREFORE, the undersigned, by virtue of the power vested in me under Article XIIID of the California Constitution, the Government Code and the Health and Safety Code and the order of the Alameda County Board of Supervisors, hereby make the following determination of an assessment to cover the portion of the estimated cost of the Services, and the costs and expenses incidental thereto to be paid by the Vector and Disease Control Assessment.

The District has evaluated and estimated the costs of extending and providing the Services to the Assessment District. The estimated costs are summarized in Figure 1 and detailed in Figure 5, below.

The amount to be paid for the Services and the expenses incidental thereto, to be paid by the Alameda County Vector Control District for fiscal year 2026-27 is generally as follows:

Figure 5 – Summary Cost Estimate – FY 2026-27

Vector Abatement & Disease Control Services	$5,588,293
Materials, Utilities and Supplies	$3,517,969
Contingency	$133,234
Total Vector Control Services and Related Expenditures	**$9,239,496**
Incidentals	$160,917
Total Budget	**$9,400,413**
Less Contributions from Other Sources:	
Revenue from other sources	($6,641,932)
Net Amount To Assessments	**$2,758,481**
General Contribution to Total Vector Control Services and Relate Expenditures	70.66%

An Assessment Diagram is hereto attached and made a part hereof showing the exterior boundaries of the assessment area. The distinctive number of each parcel or lot of land in the Vector and Disease Control Assessment is its Assessor Parcel Number appearing on the Assessment Roll.

I do hereby determine and apportion the net amount of the cost and expenses of the Services, including the costs and expenses incidental thereto, upon the parcels and lots of land within the Vector and Disease Control Assessment, in accordance with the special benefits to be received by each parcel or lot, from the Services, and more particularly set forth in this Engineer's Report.

The assessment determination is made upon the parcels or lots of land within the assessment area in proportion to the special benefits to be received by the parcels or lots of land, from the Services.

The assessment is subject to an annual increase tied to the Consumer Price Index-U for the San Francisco Bay Area as of December of each succeeding year (the "CPI"), with a maximum annual increase not to exceed 3%. Any change in the CPI in excess of 3% shall be cumulatively reserved as the "Unused CPI" and shall be used to increase the maximum authorized assessment rate in years in which the CPI is less than 3%. The maximum authorized assessment rate is equal to the maximum assessment rate in the first fiscal year the assessment was levied adjusted annually by the minimum of 1) 3% or 2) the change in the CPI plus any Unused CPI as described above.

The change in the CPI from December 2024 to December 2025 was 3.0365%. Therefore, the maximum assessment rate for fiscal year 2026-27 is $6.77, which is the maximum rate for fiscal year 2025-26 ($6.57) plus 3% for fiscal year 2026-27. The estimate of cost and budget in this Engineer's Report proposes assessments for fiscal year 2026-27 at the rate of $6.77.

Each parcel or lot of land is described in the Assessment Roll by reference to its parcel number as shown on the Assessor's Maps of the County of Alameda for the fiscal year 2026-27. For a more particular description of the property, reference is hereby made to the deeds and maps on file and of record in the office of the County Assessor of the County of Alameda.

I hereby place opposite the Assessor Parcel Number for each parcel or lot within the Assessment Roll, the proposed amount of the assessment for the fiscal year 2026-27 for each parcel or lot of land within the Alameda County Vector Control District- Vector and Disease Control Assessment.[21]

[21] Each parcel has a uniquely calculated assessment based on the estimated level of special benefit to the property as determined in accordance with this Engineer's Report.

Dated: April 15, 2026



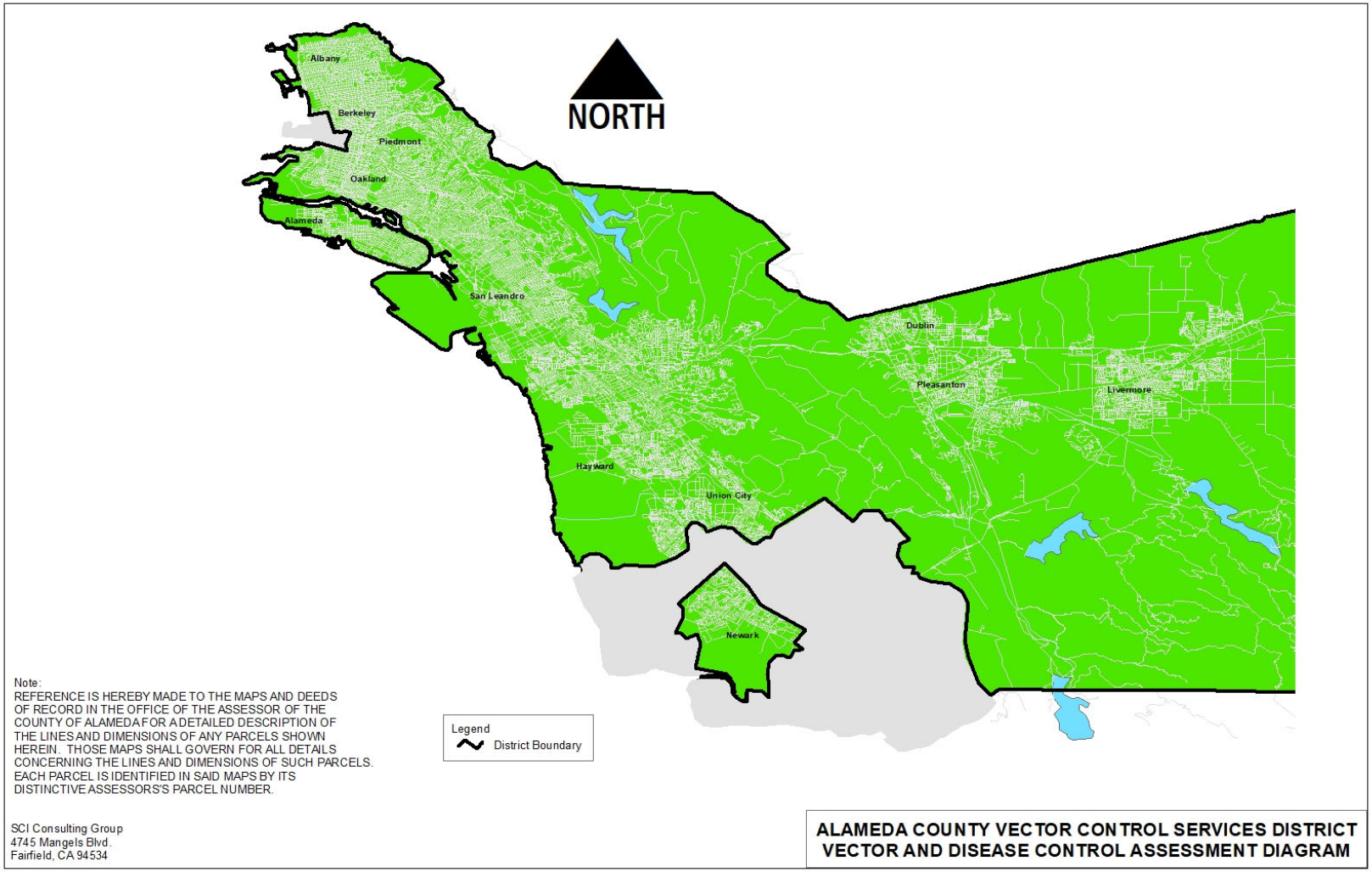
Engineer of Work

By _____

John W. Bliss, License No. C052091

Assessment Diagram

The boundaries of the Vector and Disease Control Assessment Area are displayed on the following Assessment Diagram.


NORTH
Albany
Berkeley
Piedmont
Oakland
Alameda
San Leandro
Hayward
Union City
Newark
Dublin
Pleasanton
Livermore
Note:
REFERENCE IS HEREBY MADE TO THE MAPS AND DEEDS OF RECORD IN THE OFFICE OF THE ASSESSOR OF THE COUNTY OF ALAMEDA FOR A DETAILED DESCRIPTION OF THE LINES AND DIMENSIONS OF ANY PARCELS SHOWN HEREIN. THOSE MAPS SHALL GOVERN FOR ALL DETAILS CONCERNING THE LINES AND DIMENSIONS OF SUCH PARCELS. EACH PARCEL IS IDENTIFIED IN SAID MAPS BY ITS DISTINCTIVE ASSESSORS'S PARCEL NUMBER.
Legend
District Boundary
SCI Consulting Group
4745 Mangels Blvd.
Fairfield, CA 94534
ALAMEDA COUNTY VECTOR CONTROL SERVICES DISTRICT
VECTOR AND DISEASE CONTROL ASSESSMENT DIAGRAM

Assessment Roll

Reference is hereby made to the Assessment Roll in and for the assessment proceedings on file in the office of the Alameda County Vector Control District, as the Assessment Roll is too voluminous to be bound with this Report.

Alameda County
Vector Control District

Emeryville Annexation

Vector and Disease Control Assessment

April 2026
Engineer's Report

Fiscal Year 2026-27

Pursuant to the Health and Safety Code, Government Code
and
Article XIIID of the California Constitution

Engineer of Work:

SCIConsultingGroup
Public Finance Consulting Services

4745 Mangels Boulevard
Fairfield, California 94534
707.430.4300
www.sci-cg.com

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Alameda County Vector Control District

Board of Supervisors

David Haubert, District 1, President

Elisa Márquez, District 2

Lena Tam, District 3, Vice President

Nate Miley, District 4

Nikki Fortunato Bas, District 5

~~VECTOR CONTROL MANAGER~~Chief/Scientific Program Manager

~~Bruce Kirkpatrick, PhD~~Adena Why, PhD

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Introduction

Overview

The Alameda County Vector Control Services District (also known as County Service Area VC 1984-1) controls and monitors disease-carrying vectors (rodents, insects, ticks) as well as nuisance wildlife and insects. The District was formed in June 1984, in order to meet the public health needs by providing a comprehensive vector control program following passage of Measure A, in which over 70% of the voters approved formation of the District. The District is a dependent district of Alameda County and is governed by the Alameda County Board of Supervisors ('Board').

In 2008, the District desired to provide vector and disease surveillance services to the unprotected City of Emeryville and proposed a new assessment on all specially benefiting properties within this unserved area. In 2009, the District annexed the City of Emeryville into its boundaries (referred to in this report as the "Emeryville Annexation" or "Service Area.") Neither the District, nor any other public agency, provided comprehensive vector control or vector borne disease protection and surveillance services in Emeryville. *(Please note that the term "vector" is used throughout this report to include all non-mosquito vectors. Mosquito control is provided in Emeryville by an existing special district).*

The Mission Statement of the District is:

> *The mission of the Vector Control Service District is to prevent the spread of vector-borne diseases, injury, and discomfort to the residents of the District by controlling insects, rodents, and other vectors and eliminating causal environmental conditions through education and integrated pest management practices.*

The District provides its services throughout the County and includes the incorporated cities of Alameda, Albany, Berkeley, Dublin, Hayward, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro, Union City, and the unincorporated communities of Ashland, Castro Valley, San Lorenzo, and Sunol, as well as the remaining portions of unincorporated Alameda County. In 2009, the incorporated cities of Emeryville and Fremont were annexed into the District. The District's vector and disease control services serve to reduce vector populations on property throughout the County, and the District is the only agency providing vector control and vector-borne disease protection and prevention services in the County.

The District provides vector control, surveillance of gnats, ticks, and other vectors, and disease control services within its boundaries. The District services are available to all properties in Alameda County. The purpose of the Alameda County Vector Control Services District is to reduce the risk of vector-borne disease and vector nuisance to property and the inhabitants of property within the District.

The District's core services are summarized as follows:

- Early detection of emerging or existing public health threats through comprehensive vector and disease surveillance.
- Elimination and/or control of vectors to protect public health and to diminish the nuisance and harm caused by insects and rodents.
- Appropriate, timely response to customer requests concerning the prevention and control of vectors and the diseases they can transmit.
- Provision of public outreach and education concerning vectors and vector diseases.

Prior to 2009, the District did not offer services in the Service Area, a "baseline" level of vector and disease control services. After 2009, the services were expanded to the Service Area, as listed below, above the existing baseline level of services.

The Service Area is narrowly drawn to include only properties that may request and/or receive direct and more frequent service, that are located within the scope of the vector surveillance area, that are located within flying or traveling distance of potential vector sources monitored by the District, and that will benefit from a reduction in the amount of vectors reaching and impacting the property as a result of the enhanced vector surveillance and control. The Assessment Diagram included in this report shows the boundaries of the Service Area.

The following is an outline of the primary services, programs and related costs that are funded by the vector and disease control assessment:[1]

- Request for Service Investigations
- Rodent Control
- Wildlife Management and Rabies Investigations
- Solid Waste Problems
- Vector-Borne Disease Surveillance and Control
- Public Education and Information

[1] The improved vector control and disease prevention services materially increases the usefulness, utility, livability and desirability of properties in the Assessment Area.

This Engineer's Report ("Report") defines the benefit assessment, which provides funding for these improved vector and disease control services for property in the City of Emeryville, as well as related costs for equipment, capital improvements and services, facilities necessary and incidental to vector and disease control programs.

As used within this Report and the benefit assessment ballot proceeding, the following terms are defined:

> *"Vector" means any animal capable of transmitting the causative agent of human disease or capable of producing human discomfort or injury, including, but not limited to, mosquitoes, flies, mites, ticks, other arthropods, and small mammals and other vertebrates (Health and Safety Code Section 2002(k)).*
>
> *"Vector Control" shall mean any system of public improvements or services that is intended to provide for the surveillance, prevention, abatement, and control of vectors as defined in subdivision (k) of Section 2002 of the Health and Safety Code and a pest as defined in Section 5006 of the Food and Agricultural Code (Government Code Section 53750(m)).*

The District operates under the authority of the Pest Abatement District Law of the State of California codified in the Health and Safety Code, Section 2800, et seq.

Following are excerpts from the Mosquito Abatement and Vector Control District Law of 2002, codified in the Health and Safety Code, Section 2000, et seq. which serve to summarize the State Legislature's findings and intent regarding mosquito abatement and vector control services:

> *2001. (a) The Legislature finds and declares all of the following:*
> *(1) California's climate and topography support a wide diversity of biological organisms.*
> *(2) Most of these organisms are beneficial, but some are vectors of human disease pathogens or directly cause other human diseases such as hypersensitivity, envenomization, and secondary infections.*
> *(3) Some of these diseases, such as mosquito borne viral encephalitis, can be fatal, especially in children and older individuals.*
> *(4) California's connections to the wider national and international economies increase the transport of vectors and pathogens.*
> *(5) Invasions of the United States by vectors such as the Asian tiger mosquito and by pathogens such as the West Nile virus underscore the vulnerability of humans to uncontrolled vectors and pathogens.*
> *(b) The Legislature further finds and declares:*
> *(1) Individual protection against the vector borne diseases is only partially effective.*

(2) Adequate protection of human health against vector borne diseases is best achieved by organized public programs.

(3) The protection of Californians and their communities against the discomforts and economic effects of vector borne diseases is an essential public service that is vital to public health, safety, and welfare.

(4) Since 1915, mosquito abatement and vector control districts have protected Californians and their communities against the threats of vector borne diseases.

(c) In enacting this chapter, it is the intent of the Legislature to create and continue a broad statutory authority for a class of special districts with the power to conduct effective programs for the surveillance, prevention, abatement, and control of mosquitoes and other vectors.

(d) It is also the intent of the Legislature that mosquito abatement and vector control districts cooperate with other public agencies to protect the public health, safety, and welfare. Further, the Legislature encourages local communities and local officials to adapt the powers and procedures provided by this chapter to meet the diversity of their own local circumstances and responsibilities.

Further the Health and Safety Code, Section 2082 specifically authorizes the creation of benefit assessments for vector control, as follows:

(a) A district may levy special benefit assessments consistent with the requirements of Article XIIID of the California Constitution to finance vector control projects and programs.

This Engineer's Report ("Report") was prepared by SCI Consulting Group ("SCI") to describe the vector, disease surveillance and control services and related costs that are funded by the assessments, to establish the estimated costs for those Services, to determine the special benefits and general benefits received by property from the Services and to apportion the assessments to lots and parcels within the District based on the estimated special benefit each parcel receives from the services funded by the benefit assessment.

Legislative Analysis

Proposition 218

This assessment was formed consistent with Proposition 218, The Right to Vote on Taxes Act, which was approved by the voters of California on November 6, 1996, and is now Article XIIIC and XIIID of the California Constitution. Proposition 218 provides for benefit assessments to be levied to fund the cost of providing services, improvements, as well as maintenance and operation expenses to a public improvement which benefits the assessed property.

Proposition 218 describes several important requirements, including a property-owner balloting, for the formation and continuation of assessments, and these requirements are satisfied by the process used to establish this assessment. When Proposition 218 was initially approved in 1996, it allowed for certain types of assessments to be "grandfathered" in, and these were exempted from the property–owner balloting requirement.

> *Beginning July 1, 1997, all existing, new, or increased assessments shall comply with this article. Notwithstanding the foregoing, the following assessments existing on the effective date of this article shall be exempt from the procedures and approval process set forth in Section 4:*
>
> *(a) Any assessment imposed exclusively to finance the capital costs or maintenance and operation expenses for sidewalks, streets, sewers, water, flood control, drainage systems or vector control.*

Vector control was specifically "grandfathered in," underscoring the fact that the drafters of Proposition 218 and the voters who approved it were satisfied that funding for vector control is an appropriate use of benefit assessments, and therefore confers special benefit to property.

Silicon Valley Taxpayers Association, Inc. v. Santa Clara County Open Space Authority

In July of 2008, the California Supreme Court issued its ruling on the *Silicon Valley Taxpayers Association, Inc. v. Santa Clara County Open Space Authority ("SVTA vs. SCCOSA")*. This ruling is the most significant legal document in further legally clarifying Proposition 218. Several of the most important elements of the ruling included further emphasis that:

- Benefit assessments are for special benefit to property, not general benefits[2]
- The services and /or improvements funded by assessments must be clearly defined
- Special benefits are directly received by and provide a direct advantage to property in the assessment district

This Engineer's Report, and the process used to establish this assessment is consistent with the SVTA vs. SCCOSA decision.

[2] Article XIII D, § 2, subdivision (d) of the California Constitution states defines "district" as "an area determined by an agency to contain all parcels which will receive a special benefit from the proposed public improvement or property-related service."

Dahms v. Downtown Pomona Property

On June 8, 2009, the 4th Court of Appeal amended its original opinion upholding a benefit assessment for property in the downtown area of the City of Pomona. On July 22, 2009, the California Supreme Court denied review. On this date, *Dahms* became good law and binding precedent for assessments. In *Dahms,* the Court upheld an assessment that was 100% special benefit (i.e. 0% general benefit) on the rationale that the services and improvements funded by the assessments were directly provided to property in the assessment district. The Court also upheld discounts and exemptions from the assessment for certain properties.

Bonander v. Town of Tiburon

On December 31, 2009, the 1st District Court of Appeal overturned a benefit assessment approved by property owners to pay for placing overhead utility lines underground in an area of the Town of Tiburon. The Court invalidated the assessments on the grounds that the assessments had been apportioned to assessed property based in part on relative costs within sub-areas of the assessment district instead of proportional special benefits.

Beutz v. County of Riverside

On May 26, 2010, the 4th District Court of Appeal issued a decision on the *Steven Beutz v. County of Riverside ("Beutz")* appeal. This decision overturned an assessment for park maintenance in Wildomar, California, primarily because the general benefits associated with improvements and services were not explicitly calculated, quantified and separated from the special benefits.

Golden Hill Neighborhood Association v. City of San Diego

On September 22, 2011, the San Diego Court of Appeal issued a decision on the *Golden Hill Neighborhood Association v. City of San Diego*. This decision overturned an assessment for street and landscaping maintenance in the Greater Golden Hill neighborhood of San Diego, California. The court described two primary reasons for its decision. First, like in *Beutz*, the court found the general benefits associated with services were not explicitly calculated, quantified and separated from the special benefits. Second, the court found that the City had failed to record the basis for the assessment on its own parcels.

Compliance with Current Law

This Engineer's Report is consistent with the requirements of Article XIIIC and XIIID of the California Constitution and with the *SVTA* decision because the Services to be funded are clearly defined; the Services are available to and will be directly provided to all benefiting property in the Service Area; and the Services provide a direct advantage to property in the Service Area that would not be received in absence of the Assessments.

This Engineer's Report is consistent with *Dahms* because, similar to the Downtown Pomona assessment validated in *Dahms*, the Services will be directly provided to property in the Service Area. Moreover, while *Dahms* could be used as the basis for a finding of 0% general benefits, this Engineer's Report establishes a more conservative measure of general benefits.

The Engineer's Report is consistent with *Bonander* because the Assessments have been apportioned based on the overall cost of the Services and proportional special benefit to each property. Finally, the Assessments are consistent with *Beutz* because the general benefits have been explicitly calculated and quantified and excluded from the Assessments.

Assessment Process

In order to allow property owners to ultimately decide whether additional funding should be provided for the District's vector and disease control services, the Board authorized by Resolution the Initiation of proceedings for a benefit assessment on September 30, 2008. In October and November of 2008, the District conducted an assessment ballot proceeding pursuant to the requirements of Article XIIID of the California Constitution ("The Taxpayer's Right to Vote on Taxes Act") and the Government Code. During this ballot proceeding, owners of property in the District were provided with a notice and ballot for the proposed special assessment. A 45-day period was provided for balloting and a public hearing was conducted on December 9, 2008 and continued to January 6, 2009.

It was determined after the conclusion of the public input portion of the public hearing that 70.48% of the weighted ballots returned were in support of the assessment. Since the assessment ballots submitted in opposition to the proposed assessments did not exceed the assessment ballots submitted in favor of the assessments (with each ballot weighted by the proportional financial obligation of the property for which ballot was submitted), the District gained the authority to approve the levy of the assessments for fiscal year 2009-10 and to continue to levy them in future years. The authority granted by the ballot proceeding includes an annual increase in the maximum authorized assessment rate equal to the annual change in the Consumer Price Index for the San Francisco Bay Area, not to exceed 3%. If the annual change in the CPI exceeds 3%, any percentage change in excess of 3% can be cumulatively reserved and can be added to the annual change in the CPI for years in which the CPI change is less than 3%. The Board took action to approve the levy of the assessments.

If the Board approves Engineer's Report and the assessments it establishes for fiscal year 2026-27, the assessments would be submitted to the County Auditor for inclusion on the property tax rolls for fiscal year 2026-27.

General Description of the District and Services

About the Vector Control District

The Alameda County Vector Control Services District (the "District") provides vector control services in all of Alameda County. Emeryville and Fremont were annexed into the District in 2009. The District protects the usefulness, desirability and livability of property and the inhabitants of property within its jurisdictional area through the control and surveillance of vertebrate and invertebrate vectors. In addition, the District regularly tests for diseases carried by vectors such as insects and small mammals. The District conducts an educational program to inform property owners and the occupants of property in the District about how to protect themselves from diseases transmitted by these vectors. In May 2018, the District completed construction on a new laboratory to conduct research to support their epidemiologic and surveillance programs. This Engineer's Report was updated and clarified to reflect current scope of services, special benefit findings, funding approach, and rate in the Spring of 2023.

Description of Vector Control Program

The Emeryville Annexation assessment provides the funding to operate the program in the City of Emeryville to an optimum level necessary to protect the usefulness, utility, desirability and livability of property within its jurisdictional area.

Introduction

Following are the Services and resulting level of service for the Emeryville Annexation. As previously noted, the District provides a baseline level of service in the County. These Services are over and above the current baseline level of service. The formula below describes the relationship between the final level of service, the existing baseline level of service, and the enhanced level of service to be funded by the assessment.

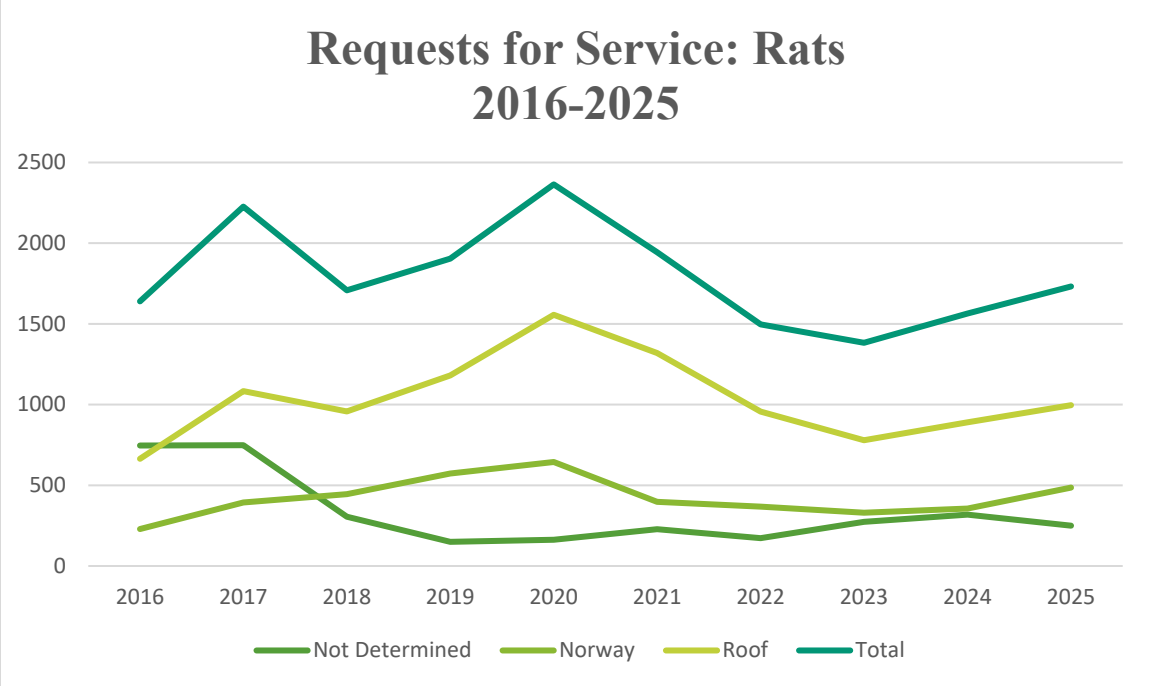
Final Level of Service	=	Baseline Level of Service	+	Enhanced Level of Service

The assessment provides funding for the enhancement of the service, surveillance, disease prevention, abatement, and control of vectors within the Service Area. Such vector control and disease prevention projects and programs include, but are not limited to, environmental modifications, biological control, disease monitoring, public education, reporting, accountability, research and interagency cooperative activities, as well as capital costs, maintenance, and operation expenses (collectively "Services"). The cost of these Services also includes capital costs comprised of equipment, capital improvements and facilities and other expenses necessary and incidental to the vector control program.

Request For Service Investigations

The District conducts investigations as requested by district residents, businesses, and other property owners, assesses the degree of the problem, and develops a remedial strategy and action plan. Service requests include vector and nuisance issues pertaining to rats and other rodents, cockroaches, flies, fleas, lice, yellow jackets, and other insects, as well as, ticks, mites, and spiders. In this capacity, District staff assists with the identification and recommended control of insects and arachnids. Also, the District surveys and controls cockroach populations in public sewers, utility boxes and storm drains, as well as controlling bees and yellowjackets, particularly when there is a public health risk.

As an example, the graph bellows shows the Service Requests for rats over a ten-year period:



Rodent Control

In 2025, the District received 2,122 service requests (1,768 rats and 354 mice) from local residents for domestic rodents, representing 40.0% of all service requests. District staff educates homeowners to make environmental and structural modifications (also known as "rodent-proofing") that will make their property less attractive and exclude these unwanted pests. In addition, the District monitors district-wide rodent-related problems, and those 2,122 rodent service requests led to staff biologists performing 14,947 field service operations related to domestic rodents. Field service operations include smoke and dye tests of sewer lines for breaks, field and residential surveys for rodent activity, recommendations and follow-up evaluations of rodent control measures, and assistance of enforcement actions.

The District conducts a year-round monitoring of local rat populations to find out where they are living and feeding, how many there are, how much and what kind of damage they are causing, and which methods to use to suppress them. This monitoring and control is targeted against commensal rats (Norway and Roof rats) and mice in residential, commercial, and business properties. In particular, the District focuses on sanitary sewers, including making inspections to locate breaks, because the breaks offer opportunities for the rats to invade new neighborhoods.

In the event of a disease outbreak or emergency, the District will employ rodent suppression to lower the rodent populations and disrupt the disease transmission cycle. As part of the District's Integrated Pest Management policy, least toxic pesticides and trapping are used when feasible.

Alameda County has had a long history of Norway rats invading homes and neighborhoods from the sanitary sewers, especially in Oakland, due to the age and cost of maintenance of the sanitary sewer system. The District has established a high priority to ensure that these rodents do not enter homes and expose occupants to potential disease pathogens. Staff responsibilities during the inspection include thorough survey of interior and exterior premises to determine the extent and severity of rodent infestations and their causative conditions. They look for active rodent signs (droppings or rub marks), rodent entries to the house, and environmental deficiencies that provide food, water, and harborage. When rat infestations present a health risk to the occupants, staff recommends a combination of tactics including removing food sources and debris, repairing deteriorated structures, "rat proofing" structures, trapping and treating with least-toxic rodenticides. Additionally, staff hands out brochures (or fact sheets) and assists city code agencies with enforcement of local ordinances when property owners fail to comply with the necessary repairs and garbage removal. Neighborhood surveys are also conducted. Neighbors are informed about the conditions that sustain and harbor rats.

Cat Fleas (*Ctenocephalides felis*) and Oriental Rat Fleas (*Xenopsylla cheopis*) Surveillance and Control

The Oriental rat flea is an important vector, capable of transmitting plague and flea-borne typhus. The cat flea is highly associated with people and pets, capable of transmitting flea-borne typhus. In 2019, the District began a surveillance program looking at the disease prevalence found within the cat flea and the Oriental rat flea from different host animals throughout the County. This surveillance program began with the completion and certification of the new Vector Control Laboratory.

Ectoparasite Surveillance on Sylvatic and Commensal Rodents and Wildlife

The District conducts ongoing surveillance among sylvatic rodents for plague and other rodent-borne diseases. Many of these rodents are found only in rural areas, particularly in east Alameda County. In addition to the Plague, sylvatic rodents may be reservoir hosts to zoonotic diseases such as Hantavirus Cardiopulmonary Syndrome (HCPS), Tularemia, Lyme disease, and Babesiosis.

The results are summarized in Table 1 on the following page:

Table 1. Ectoparasites (fleas) collected from commensal and sylvatic rodents in urban and sylvatic areas (including rodents from homeless encampments).

Host Species	Number of hosts	Number of hosts with fleas	Number of fleas	Flea species	Flea Index
SYLVATIC RODENTS					
Pinyon Mouse *Peromyscus truei*	18	0	0		0.0
Deer Mouse *Peromyscus maniculatus*	3	0	0		0.0
COMMENSAL RODENTS					
Norway Rat *Rattus norvegicus*	189	72	1070	*Xenopsylla cheopis* (1025) *Nosopsylla fasciatus* (37) *Ctenocephalides felis* (8)	5.7
Roof Rat *Rattus rattus*	9	0	0		0.0
WILDLIFE					
Desert Cottontail *Sylvilagus audubonii*	1	0	0		0.0
Fox (Tree) Squirrel *Sciurus niger*	6	4	13	*Orchopeas howardi* (12) *Hoplopsyllus anomalus* (1)	2.2
Ground Squirrel *Spermophilis beecheyi*	95	81	1143	*Oropsylla montana* (769) *Hoplopsyllus anomalus* (369) *Echidnophaga gallinacea (5)*	12.0
Jack Rabbit *Lepus californicus*	1	0	0		0.0
Mexican Free-tailed Bat *Tadarida brasiliensis*	1	1	30	*Myodopsylla gentilis (30)*	30.0
Opossum *Didelphis virginica*	9	9	423	*Ctenocephalides felis* (423) *Echidnophaga gallinacea (3)* *Nosopsyllus fasciatus (1)*	47.0
Raccoon *Procyon lotor*	7	4	10	*Pulex spp.* (6) *Ctenocephalides felis (4)*	1.4
Striped Skunk *Mephitis mephitis*	3	2	11	*Pulex spp.* (7) *Oropsylla montana* (3) *Ctenocephalides felis* (1)	3.7

Source: 2025 Alameda County Vector Control Annual Report

Hantavirus Cardiopulmonary Syndrome (HCPS) Surveillance

HPS was first recognized in 1993; it is a respiratory illness associated with breathing air containing rodent urine and feces contaminated with the Sin Nombre virus (SNV) particles. Rodents, particularly deer mice, were identified as the principal reservoir host. Occasionally, deer mice will enter buildings and potentially expose the occupants to the virus. Past surveillance conducted at various localities within the County detected 6-18% of the deer mice are infected with SNV.

In collaboration with the California Department of Public Health (CDPH), the District conducts Hantavirus surveys in an effort to minimize the transmission of HPS disease.

Wildlife Management Program

In conjunction with local animal control agencies, the District is responsible for surveillance, result notifications, and oversight of the rabies program in Alameda County. District staff responds to service requests on raccoons, skunks, bats, as well as opossums, dogs, cats, and other wild animals. The District provides rabies testing on wild animals when public health risk is involved.

District staff provides services to homeowners on exclusion techniques that make their property unattractive to these wild animals. When prevention alternatives are not possible or ineffective, the District will trap biting or nuisance animals. The District staff biologist also coordinates with the District's USDA Wildlife Specialist who evaluates potentially hazardous situations and offers consultations.

The District's USDA Wildlife Specialist responds to service requests for raccoons, skunks, coyotes, wild turkeys or opossums, and advises homeowners on how to exclude these animals coming onto their properties and causing landscape damage (and killing livestock). If required, District Vector Control Biologists may assist property owners by coordinating with the USDA Wildlife Specialist to set traps, pick up and remove the animal. The District also responds to requests concerning other nuisance wildlife such as bobcats and mountain lions and has responded to an increase in service calls for coyotes and feral pigs.

In 2025, the District responded to 1,879 service requests concerning wildlife, and those service requests led to staff performing 11,862 field service operations within or near residential areas. Most of these service calls involved raccoons, skunks, opossums, and foxes. Advice is provided to homeowners on animal exclusion methods, as well as making their property unattractive to wildlife.

Solid Waste and Nuisance Problems

The District investigates complaints regarding solid waste handling and storage problems involving garbage, human or animal waste, and odors at residential properties and businesses.

Disease Surveillance and Control

Services includes arthropod sampling, field surveillance, data collection, investigation, determination of cause, and preventative recommendations to lower the risk and exposures to animal or human diseases such as hantavirus, plague, Flea-borne Typhus, psittacosis, scabies, tularemia, Lyme disease, anaplasmosis and other tick-borne diseases.

Public Education and Information

District staff gives vector control and services presentations and provides educational materials to schools, homeowners' associations, service clubs, and other interested groups. The District also staffs public displays at health fairs, special events, and at the County fair. Finally, the District also posts the annual shellfish harvesting quarantine notices at the Alameda County bay shorelines and maintains an informational web page.

Integrated Pest Management

The District embraces and follows the County's Integrated Pest Management (IPM) guidelines to manage pests with effective and environmentally sound tactics. The process involves regular monitoring to determine pest populations and the damage they cause, reduce the amount and frequency of pesticide applications to overcome pesticide resistance, use least-toxic pesticides, encourage using cultural and physical control methods, and direct educational outreach to inform residents, businesses, and appropriate government agencies.

The District staff has demonstrated extensive knowledge and expertise in these areas. To ensure that staff is kept informed and trained, they attend continuing education workshops and in-house training to learn about emerging disease as such West Nile virus as well as new products, equipment, and safety techniques. All District Vector Control Biologists are certified by the State Health Department to perform safe and effective pest control.

The successful adoption and implementation of urban IPM program will require better understanding of the attitudes and knowledge of local residents, business owners, and participating government agencies. Most urban pest problems are the result of poor waste management, ill-advised landscaping, and improper structural maintenance. Often, these problems can be mitigated through environmental, habitat, and structural modifications that deny food, water, and harborage to the pests. Residents and business owners need to realize that they may play a role in creating pest problems and to control the pest problems will require partnership with District staff. Therefore, the District is reaching out to the community, changing their attitudes and expectations, and educating them about monitoring procedures, tolerance levels, sanitation, habit modification and least-toxic control methods.

Service Requests

The District responds to service requests within its boundaries. Any property owner, business or resident in the District may contact the District to request vector control related service or inspection and a District Vector Control Biologist will respond promptly to the particular property to evaluate the property and situation and to perform appropriate surveillance and control services. The District responds to all service requests in a timely manner, regardless of location, within its boundaries.

Estimate of Cost

Figure 1 – Cost Estimate – FY 2026-27

Alameda County Vector Control District Vector and Disease Control Assessment - Emeryville Annexation	
Vector Control Services and Related Expenditures	
Vector Control and Disease Prevention Operations	$5,588,293
Materials, Utilities and Supplies	$3,517,969
Contingency	$133,234
Total Vector Control Services and Related Expenditures	**$9,239,496**
Incidental Costs[1]	
County Collection, Levy Administration, and Other Incidentals	$160,917
Total Incidental Costs	**$160,917**
Total Budget	**$9,400,413**
Less	
Contributions from Other Sources	
Revenue from other sources[2]	($9,348,307)
Total Vector & Disease Control Services and Incidentals	**$52,106**
Budget Allocation to Property	
Total Assessment Budget[3]	$52,106
Total SFE Units[4]	4,106
Assessment Rate per SFE[5]	**$12.69**

Consolidated ER Notes:

1. Includes allowance for uncollectable assessments from assessments on public agency parcels, county collection charges and assessment administration costs.

2. Contributions from other sources to cover the costs of any general benefits and special benefits not funded by the assessments.

3. The assessment amounts are rounded down to the even penny for purposes of complying with the collection requirements from the County Auditor. Therefore, the total assessment amount for all parcels subject to the assessments may vary slightly from the net amount to be assessed.

4. SFE Units means Single Family Equivalent Benefit Units. See method of assessment in the following Section for further definition.

5. The assessment rate per SFE is the total amount of assessment per Single Family Equivalent benefit unit.

The proceeds from the assessments will be deposited into a special fund for the Assessment. Funds raised by the assessment shall be used only for the purposes stated within this Report. Any balance remaining at the end of the fiscal year, June 30, must be carried over to the next fiscal year.

Method of Assessment

This section of the Report explains the benefits to be derived from the Services provided for property in Emeryville by the District, and the methodology used to apportion the total assessment to properties within the Service Area.

The Service Area consists of the Assessor Parcels in the incorporated City of Emeryville as defined within the area of the boundary diagram included within this Engineer's Report (see the Assessment Roll for a list of all the parcels included in the Service Area).

The method used for apportioning the assessment is based upon the proportional special benefits to be derived by the properties in Emeryville over and above general benefits conferred on real property in the Service Area. Special benefit is calculated for each parcel in the Service Area using the following process:

1. Identification of total benefit to the properties derived from the Services
2. Calculation of the proportion of these benefits that are special vs. general
3. Determination of the relative special benefit within different areas within the Assessment District
4. Determination of the relative special benefit per property type and property characteristic
5. Calculation of the specific assessment for each individual parcel based upon special vs. general benefit; location, property type and property characteristics

Discussion of Benefit

In summary, the assessments can only be levied based on the special benefit to property. This benefit is received by property over and above any general benefits. This special benefit is received by property over and above any general benefits from the additional Services. With reference to the engineering requirements for property related assessments, under Proposition 218 an Engineer must determine and prepare a report evaluating the amount of special and general benefit received by property within the Service Area as a result of the improvements or services provided by a local agency. That special benefit is to be determined in relation to the total cost to that local entity of providing the service and/or improvements.

Proposition 218 as described in Article XIIID of the California Constitution has confirmed that assessments must be based on the special benefit to property:

> *"No assessment shall be imposed on any parcel which exceeds the reasonable cost of the proportional special benefit conferred on that parcel."*

The below benefit factors, when applied to property in the Service Area, confer special benefits to property and ultimately improve the safety, utility, functionality and usability of property in the Service Area. These are special benefits to property in the Service Area in much the same way that storm drainage, sewer service, water service, lighting, sidewalks and paved streets enhance the safety, utility and functionality of each parcel of property served by these improvements, providing them with more utility of use and making them safer and more usable for occupants.

It should also be noted that Proposition 218 included a requirement that existing assessments in effect upon its effective date were required to be confirmed by either a majority vote of registered voters in the Assessment Area, or by weighted majority property owner approval using the new ballot proceeding requirements. However, certain assessments were excluded from these voter approval requirements. Of note is that in California Constitution Article XIIID Section 5(a) this special exemption was granted to assessments for sidewalks, streets, sewers, water, flood control, drainage systems and vector control. The Howard Jarvis Taxpayers Association explained this exemption in their Statement of Drafter's Intent:

> *"This is the "traditional purposes" exception. These existing assessments do not need property owner approval to continue. However, future assessments for these traditional purposes are covered."*[3]

Therefore, the drafters of Proposition 218 acknowledged that vector control assessments were a "traditional" and therefore acknowledged and accepted use.

Since all assessments, existing before or after Proposition 218 must be based on special benefit to property, the drafters of Proposition 218 inherently found that vector and disease control services confer special benefit on property. Moreover, the statement of drafter's intent also acknowledges that any new or increased vector control assessments after the effective date of Proposition 218 would need to comply with the voter approval requirements it established. This is an acknowledgement that additional assessments for such "traditional" purposes would be established after Proposition 218 was in effect. Therefore, the drafters of Proposition 218 clearly recognized vector and disease control assessments as a "traditional" use of assessments, acknowledged that new vector and disease assessments may be formed after Proposition 218 and inherently were satisfied that vector control services confer special benefit to properties.

[3] Howard Jarvis Taxpayers Association, "Statement of Drafter's Intent", January 1997.

The Legislature also made a specific determination after Proposition 218 was enacted that vector control services constitute a proper subject for special assessment. Health and Safety Code section 2082, which was signed into law in 2002, provides that a district may levy special assessments consistent with the requirements of Article XIIID of the California Constitution to finance vector and disease control projects and programs. The intent of the Legislature to allow and authorize benefit assessments for vector and disease control services after Proposition 218 is shown in the Assembly and Senate analysis of the Mosquito Abatement and Vector Control District Law where it states that the law:

> *Allows special benefit assessments to finance vector control projects and programs, consistent with Proposition 218.* [4]

Therefore, the State Legislature unanimously found that vector and disease control services are a valuable and important public service that can be funded by benefit assessments. To be funded by assessments, vector and disease control services must confer special benefit to property.

Vector and Disease Control Is a Special Benefit to Properties

As described below, this Engineer's Report concludes that vector and disease control is a special benefit that provides direct advantages to property in the Service Area. For example, the assessment provides reduced levels of vectors on property throughout the Service Area. Moreover, the assessment will reduce the risk of the presence of diseases on property throughout the Service Area, which is another direct advantage received by property in the Service Area. Moreover, the assessment funds Services that improve the use of property and reduce the nuisance and harm created by vectors on property throughout the Service Area. These are tangible and direct special benefits that are received by property throughout the specific area covered by the Assessment.

The following section, Benefit Factors, describes how and why vector control services specially benefit properties in the Service Area. These benefits are particular and distinct from its effect on property in general or the public at large.

[4] Senate Bill 1588, Mosquito Abatement and Vector Control District Law, Legislative bill analysis

Benefit Factors

In order to allocate the assessments, the Engineer identified the types of special benefit arising from the aforementioned vector and disease control services and that would be provided to property within the Service Area. The following benefit factors have been established that represent the types of special benefit to parcels resulting from the Services financed with the assessment proceeds. These types of special benefit are as follows:

Reduced vector populations on property and as a result, enhanced desirability, utility, usability and functionality of property in Emeryville.

The assessments provide enhanced services for the control and abatement of nuisance and disease-carrying vectors. These Services will materially reduce the number of vectors on properties throughout the Service Area. The lower vector populations on property in the Service Area is a direct advantage to property that will serve to increase the desirability and "usability" of property. Clearly, properties are more desirable and usable in areas with lower vector populations and with a reduced risk of vector-borne disease. This is a special benefit to residential, commercial, agricultural, industrial and other types of properties because all such properties will directly benefit from reduced vector populations and properties with lower vector populations are more usable, functional and desirable.

Excessive vectors in the area can materially diminish the utility and usability of property. For example, prior to the commencement of vector control and abatement services, properties in many areas in the State were considered to be nearly uninhabitable during the times of year when the vector populations were high.[5] The prevention or reduction of such diminished utility and usability of property caused by vectors is a clear and direct advantage and special benefit to property in Service Area.

The State Legislature made the following finding on this issue:

> *"Excess numbers of mosquitoes and other vectors spread diseases of humans, livestock, and wildlife, reduce enjoyment of outdoor living spaces, both public and private, reduce property values, hinder outdoor work, reduce livestock productivity; and mosquitoes and other vectors can disperse or be*

[5] Prior to the commencement of modern mosquito control services, areas in the State of California such as the Alameda County, San Mateo Peninsula, , Lake County and areas in Marin and Sonoma Counties had such high mosquito populations that they were considered to be nearly unlivable during certain times of the year and were largely used for part-time vacation cottages that were occupied primarily during the months when the natural mosquito populations were lower.

transported long distances from their sources and are, therefore, a health risk and a public nuisance; and professional mosquito and vector control based on scientific research has made great advances in reducing mosquito and vector populations and the diseases they transmit." [6]

Rodents and other vectors emerge from sources throughout the District. Norway Rats, for example, travel up to 300 feet from known sources and can reach multiple properties. These sources include sewers, garbage dumps, lower floors of multi-story buildings, and homeless encampments. By controlling vectors at known and new sources, the Services will materially reduce vector populations on property throughout the Service Area.

Homeless encampments are a recent and increasing source of vectors. In 2018, the District began conducting surveillance of commensal rodent and ectoparasite populations in homeless encampments within the City of Oakland. In 2025, staff biologists conducted 14 separate trapping events at seven different homeless encampments in the City of Oakland, collecting 189 Norway rats. Five Norway rat suppression applications were also conducted during 2025. The Norway rat surveillance and control operations are expected to be continued indefinitely.

Increased safety of property in Emeryville.

The Assessments result in improved year-round proactive Services to control and abate vectors that otherwise would occupy properties throughout the Service Area. Vectors are transmitters of diseases, so the reduction of vector populations makes property safer for use and enjoyment. In absence of the assessments, these Services would not be provided, so the Services funded by the assessments make properties in the Service Area safer, which is a distinct special benefit to property in Emeryville.7 This is not a general benefit to property in the Service Area or the public at large because the Services are tangible vector and disease control services that are provided directly to the properties in the Service Area and the Services are over and above what otherwise would be provided by the District or any other agency.

This finding was confirmed in 2003 by the State Legislature:

"Mosquitoes and other vectors, including but not limited to, ticks, Africanized honey bees, rats, fleas, and flies, continue to be a source of human suffering, illness, death, and a public nuisance in California and around the world. Adequately funded mosquito and vector control, monitoring and public awareness programs are the best way to prevent

[6] Assembly Concurrent Resolution 52, chaptered April 1, 2003

[7] By reducing the risk of disease and increasing the safety of property, the Services will materially increase the usefulness and desirability of certain properties in the Assessment Area.

outbreaks of West Nile Virus and other diseases borne by mosquitoes and other vectors."[8]

Also, the Legislature, in Health and Safety Code Section 2001, finds that:

"The protection of Californians and their communities against the discomforts and economic effects of vector-borne diseases is an essential public service that is vital to public health, safety, and welfare."

Reductions in the risk of new diseases and infections on property in Emeryville.

Some vector populations are highly mobile and may introduce new vector-borne diseases into previously unexposed areas:

"Distribution of vector-borne diseases is determined by complex demographic, environmental and social factors. Global travel and trade, unplanned urbanization and environmental challenges such as climate change can impact on pathogen transmission, making transmission season longer or more intense or causing diseases to emerge in countries where they were previously unknown."[9]

Vectors, including ticks, have proven to be a major contributor to the spread of new diseases such as Lyme disease, among others.

"In 2017, state and local health departments reported a record number of cases of tickborne disease to CDC. Cases of Lyme disease, anaplasmosis/ehrlichiosis, spotted fever rickettsiosis (including Rocky Mountain spotted fever), babesiosis, tularemia, and Powassan virus disease all increased—from 48,610 cases in 2016 to 59,349 cases in 2017. These 2017 data capture only a fraction of the number of people with tickborne illnesses. Under-reporting of all tickborne diseases is common, so the number of people actually infected is much higher.

This increase follows an accelerating trend of tickborne diseases reported in the United States. Between 2004 and 2016, the number of reported cases

[8] Assembly Concurrent Resolution 52, chaptered April 1, 2003.
[9] Vector-borne Diseases. World Health Organization. October 2017. https://www.who.int/news-room/fact-sheets/detail/vector-borne-diseases

> *of tickborne disease doubled, and researchers discovered seven new tickborne pathogens that infect people.* [10]

A study of the effect of aerial spraying conducted by the Sacramento-Yolo Mosquito and Vector Control District (SYMVCD) to control a West Nile Virus disease outbreak found that the SYMVCD's mosquito control efforts materially decreased the risk of new diseases in the treated areas:

> *After spraying, infection rates decreased from 8.2 (95% CI 3.1–18.0) to 4.3 (95% CI 0.3–20.3) per 1,000 females in the spray area and increased from 2.0 (95% CI 0.1–9.7) to 8.7 (95% CI 3.3–18.9) per 1,000 females in the untreated area. Furthermore, no additional positive pools were detected in the northern treatment area during the remainder of the year, whereas positive pools were detected in the untreated area until the end of September (D.-E.A Elnaiem, unpub. data). These independent lines of evidence corroborate our conclusion that actions taken by SYMVCD were effective in disrupting the WNV transmission cycle and reducing human illness and potential deaths associated with WNV.* [11]

The Services funded by the assessments help prevent on a year-round basis the presence of vector-borne diseases on property in the Service Area. This is another tangible and direct special benefit to property in the Service Area that would not be received in absence of the assessments.

Protection of economic activity on property in Emeryville.

As recently demonstrated by the SARS outbreak in China and outbreaks of Avian Flu, outbreaks of pathogens can materially and negatively impact economic activity in the affected area. Such outbreaks and other public health threats can have a drastic negative effect on tourism, business and residential activities in the affected area. The assessments help to prevent the likelihood of such outbreaks in the Emeryville.

Vectors hinder, annoy and harm residents, guests, visitors, farm workers, and employees. A vector-borne disease outbreak and other related public health threats would have a drastic negative effect on agricultural, business and residential activities in Emeryville.

[10] Record Number Of Tickborne Diseases Reported in U.s. in 2017 | Cdc Online Newsroom | Cdc https://www.cdc.gov/media/releases/2018/s1114-record-number-tickborne-diseases.html

[11] Carney, Ryan. (2008), Efficiency of Aerial Spraying of Mosquito Adulticide in Reducing the Incidence of West Nile Virus, California, 2005. Emerging Infectious Diseases, Vol 14(5)

The economic impact of diseases is well documented. According to a study prepared for the Centers for Disease Control and Prevention, economic losses due to the transmission of West Nile Virus in Louisiana was estimated to cost over $20 million over approximately one year:

> *The estimated cost of the Louisiana epidemic was $20.1 million from June 2002 to February 2003, including a $10.9 million cost of illness ($4.4 million medical and $6.5 million nonmedical costs) and a $9.2 million cost of public health response. These data indicate a substantial short-term cost of the WNV disease epidemic in Louisiana.* [12]

Moreover, research from John Hopkins Bloomberg School of Public Health found that Lyme Disease costs the United States healthcare system an average of $3,000 per patient or between $712 million to $1.3 billion a year for the tick-borne illness. The disease significantly impacted lifestyles of those who were infected including those patients with persistent symptoms after treatment called post-treatment Lyme disease Syndrome or (PTLDS)[13]

The Services funded by the assessments help prevent the likelihood of such outbreaks on property in the Service Area and will reduce the harm to economic activity on property caused by existing vector populations. This is another direct advantage received by property in the Service Area that would not be received in absence of the assessments.

Protection of Service Area's agriculture, tourism, and business industries.

The agriculture, tourism and business industries will benefit from reduced levels of harmful or nuisance vectors. Conversely, any outbreaks of emerging vector-borne pathogens such as Plague, Hantavirus, Lyme disease, Flea-borne Typhus, and West Nile Virus could also materially negatively affect these industries. Diseases transmitted by vectors can adversely impact business and recreational functions.

> *A study prepared for the United States Department of Agriculture in 2003 found that over 1,400 horses died from West Nile Virus in Colorado and Nebraska and that these fatal disease cases created over $1.2 million in costs and lost revenues. In addition, horse owners in these two states spent over $2.75 million to vaccinate their horses for this disease. The study*

[12] Zohrabian A, Meltzer MI, Ratard R, Billah K, Molinari NA, Roy K, et al. West Nile Virus economic impact, Louisiana, 2002. Emerging Infectious Disease, 2004 Oct. Available from http://www.cdc.gov/ncidod/EID/vol10no10/03-0925.htm

[13] Lyme Disease Costs Up To $1.3 Billion Per Year To Treat, Study Finds
Barbara Benham- JH Bloomberg School of Public Health - https://www.jhsph.edu/news/news-releases/2015/lyme-disease-costs-more-than-one-billion-dollars-per-year-to-treat-study-finds.html

states that "Clearly, WNV has had a marked impact on the Colorado and Nebraska equine industry." [14]

Pesticides for mosquito control impart economic benefits to agriculture in general. Anecdotal reports from farmers and ranchers indicate that cattle, if left unprotected, can be exsanguinated by mosquitoes, especially in Florida and other southeast coastal areas. Dairy cattle produce less milk when bitten frequently by mosquitoes [15]

The assessments serve to protect the businesses and industries and the employees and residents that benefit from these businesses and industries. This is a direct advantage and special benefit to property in the Service Area.

Reduced risk of nuisance and liability on property in Emeryville

In addition to vector-borne disease risks, uncontrolled vector populations create a nuisance for the occupants of property in the Service Area. Properties in the Service Area, therefore, benefit from the reduced nuisance factor that is created by the Services.

Agricultural, range, golf course, cemetery, open space and other such lands in the Service Area contain large areas of vector habitat and are therefore a significant source of vector populations. In addition, residential and business properties in the Service Area can also contain significant sources.[16] It is conceivable that sources of vectors could be held liable for the transmission of diseases or other harm. For example, in August 2004, the City of Los Angeles approved new fines of up to $1,000 per day for property owners who don't remove standing water sources of mosquitoes on their property.

The Services serve to protect the businesses and industries in the Service Area. This is a direct advantage and a special benefit to property in the Service Area.

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[14] S. Geiser, A. Seitzinger, P. Salazar, J. Traub-Dargatz, P. Morley, M. Salman, D. Wilmot, D. Steffen, W. Cunningham, Economic Impact of West Nile Virus on the Colorado and Nebraska Equine Industries: 2002, April 2003, Available from http://www.aphis.usda.gov/vs/ceah/cnahs/nahms/equine/wnv2002_CO_NB.pdf

[15] Jennings, Allen. (2001). USDA Letter to EPA on Fenthion IRED. United States Department of Agriculture, Office of Pest Management Policy. March 8, 2001.

[16] Sources of mosquitoes on residential, business, agricultural, range and other types of properties include removable sources such as containers that hold standing water.

Improved marketability of property.

As described previously, the Services specially benefit properties in the Service Area by making them more useable, livable and functional. The Services also make properties in the Service Area more desirable, and more desirable properties also benefit from improved marketability. This is another tangible and direct special benefit to property which will not be enjoyed in absence of the Services.[17]

Benefit Finding

In summary, the special benefits described in this Report and the expansion of Services in the Emeryville Annexation directly benefit and protect the real properties in the District in excess of the assessments for these properties. Therefore, the assessment engineer finds that the cumulative special benefits to property from the Services are reasonably equal to or greater than the annual assessment amount per benefit unit.

General vs. Special Benefit

Article XIIIC of the California Constitution requires any local agency proposing to increase or impose a benefit assessment to "separate the general benefits from the special benefits conferred on a parcel." The rationale for separating special and general benefits is to ensure that property owners subject to the benefit assessment are not paying for general benefits. The assessment can fund the special benefits to property in the Service Area but cannot fund any general benefits. Accordingly, a separate estimate of the special and general benefit is given in this section.

In other words:

Total Benefit	=	General Benefit	+	Special Benefit

[17] If one were to compare two hypothetical properties with similar characteristics, the property with lower mosquito infestation and reduced risk of mosquito-borne disease will clearly be more desirable, marketable and usable.

There is no widely-accepted or statutory formula for general benefit from vector and disease control services. General benefits are benefits from improvements or services that are not special in nature, are not "particular and distinct" and are not "over and above" benefits received by other properties. General benefits are conferred to properties located "in the district,18" but outside the narrowly-drawn Service Area and to "the public at large." SVTA vs. SCCOSA provides some clarification by indicating that general benefits provide "an indirect, derivative advantage" and are not necessarily proximate to the improvements and services funded by the assessments.

A formula to estimate the general benefit is listed below:

General Benefit	=	Benefit to Real Property Outside the Service Area	+	Benefit to Real Property Inside the Service Area that is Indirect and Derivative	+	Benefit to the Public at Large

Special benefit, on the other hand, is defined in the state constitution as "a particular and distinct benefit over and above general benefits conferred on real property located in the district or to the public at large." The SVTA v. SCCOSA decision indicates that a special benefit is conferred to a property if it "receives a direct advantage from the improvement (e.g., proximity to a park)." In this assessment, the overwhelming proportion of the benefits conferred to property is special, since the advantages from the vector and disease control/protection funded by the Assessments are directly received by the properties in the Service Area and are only minimally received by property outside the Service Area or the public at large.

[18] SVTA vs. SCCOSA explains as follows:
OSA observes that Proposition 218's definition of "special benefit" presents a paradox when considered with its definition of "district." Section 2, subdivision (i) defines a "special benefit" as "a particular and distinct benefit over and above general benefits conferred on real property located in the district or to the public at large." (Art. XIII D, § 2, subd. (i), italics added.) Section 2, subdivision (d) defines "district" as "an area determined by an agency to contains all parcels which will receive a special benefit from a proposed public improvement or property-related service." (Art. XIII D, § 2, subd. (d), italics added.) In a well-drawn district — limited to only parcels receiving special benefits from the improvement — every parcel within that district receives a shared special benefit. Under section 2, subdivision (i), these benefits can be construed as being general benefits since they are not "particular and distinct" and are not "over and above" the benefits received by other properties "located in the district."

Proposition 218 twice uses the phrase "over and above" general benefits in describing special benefit. (Art. XIIID, sections 2(i) & 4(f).) Prior to 2009, the Service Area did not receive vector and disease control related services. Today, there are vector control related benefits being provided to the Service Area the District that is over and above this baseline. Arguably, all of the Services funded by the assessment therefore are a special benefit because the additional Services would particularly and distinctly benefit and protect the Service Area over and above the previous baseline benefits and service.

Nevertheless, arguably some of the Services would benefit the public at large and properties outside the Service Area. In this report, the general benefit is conservatively estimated and described, and then budgeted so that it is funded by sources other than the assessment.

In the 2009 *Dahms* case, the court upheld an assessment that was 100% special benefit on the rationale that the services funded by the assessments were directly provided to property in the assessment district. Similar to the assessments in Pomona that were validated by *Dahms*, the Assessments described in this Engineer's Report fund vector and disease control services directly provided to property in the assessment area. Moreover, as noted in this Report, the Services directly reduce mosquito and vector populations on all property in the assessment area. Therefore, *Dahms* establishes a basis for minimal or zero general benefits from the Assessments. However, in this report, the general benefit is more conservatively estimated and described, and then budgeted so that it is funded by sources other than the assessment.

Calculating General Benefit

Without this assessment the City of Emeryville would lack the funds to receive the Services from the District. The only service that is being provided is the vector control program assessment-funded Services. Consistent with footnote 8 of SVTA v. SCCOSA, and for the reasons described above, the District has determined that all parcels in the Service Area receive a shared direct advantage and special benefit from the Services. The Services directly and particularly serve and benefit each parcel, and are not a mere indirect, derivative advantage. As explained above, Proposition 218 relies on the concept of "over and above" in distinguishing special benefits from general benefits. As applied to an assessment proceeding concurrent with the annexation this concept means that all vector and disease control services, which provide direct advantage to property in the Service Area, are over and above the baseline and therefore are special.

Nevertheless, the Services provide a degree of general benefit, in addition to the predominant special benefit. This section provides a conservative measure of the general benefits from the Assessments.

Benefit to Property Outside the District

Properties within the Service Area receive almost all of the special benefits from the Services because the Services funded by the Assessments are provided directly to protect property within the Service Area from vectors and vector-borne diseases. However, properties adjacent to, but just outside of, the District boundaries may receive some benefit from the Services in the form of reduced vector populations on property outside the Service Area. Since this benefit, is conferred to properties outside the district boundaries, it contributes to the overall general benefit calculation and will not be funded by the assessment.

A measure of this general benefit is the proportion of Services that would affect properties outside of the Service Area. Each year, the District will provide some of its Services in areas near the boundaries of the City of Emeryville. By abating vector populations near the borders of the Service Area, the Services could provide benefits in the form of reduced vector populations and reduced risk of disease transmission to properties outside the Service Area. If vectors were not controlled inside the Service Area, more of them would migrate from the Service Area. Therefore, control of vectors within the Service Area provides some benefit to properties outside the Service Area but within the travel range of vectors, in the form of reduced vector populations and vector-borne disease transmission.

Since domestic rodents (rats and mice) are the primary vectors that are controlled and easily travel from their source location to properties in the area, typical rodent destination ranges will be used to measure the extent that the Services will create reduced vector populations on property outside the Service Area. This is a measure of the general benefits to property outside the Service Area because this is a benefit from the Services that is not specially conferred upon property in the assessment area.

The vector potential outside the Service Area is based on studies of rodent dispersion concentrations. Domestic rodents can travel up to 300 feet, on average, so this destination range is used. A 50% reduction factor is applied to this number to better model the likelihood of vector travelling, breeding, and causing property damage outside of Emeryville. This number of parcels outside the Service Area and within the destination range to measure this general benefit is calculated as follows:

CRITERIA:

Rats may travel an average of up to 300 feet from their breeding source.

400 parcels within 300 feet of, but outside of the District,

MAY receive some vector and disease protection benefit

5,029 Parcels in the District

Calculations:

Percentage of overall parcel equivalents = ((400*.5) / 5,029 = **3.976%**

Therefore, for the overall benefits provided by the Services to the Service Area, it is determined that 3.976% of the benefits would be received by the parcels within 300 feet of the Service Area boundaries. Recognizing that this calculation is an approximation, this benefit will be rounded up to 4.0%.

Benefit to Property *Inside* the District that is *Indirect and Derivative*

The "indirect and derivative" benefit to property within the Service Area is particularly difficult to calculate. As explained above, all benefit within the Service Area is special because the vector and disease control services in the Service Area would provide direct service and protection that is clearly "over and above" and "particular and distinct" when compared with the level of such protection under current conditions. Further the properties are within the Service Area boundaries and this Engineer's Report demonstrates the direct benefits received by individual properties from vector and disease control services.

In determining the Service Area area, the District was careful to limit it to an area of parcels that will directly receive the Services. All parcels directly benefit from the surveillance, monitoring and treatment provided on an equivalent basis throughout the Service Area in order to maintain the same improved level of protection against vectors and reduced vector populations throughout the area. The surveillance and monitoring sites are spread on a balanced basis throughout the area. Vector and disease control and treatment is provided as needed throughout the area based on the surveillance and monitoring results. The shared special benefit - reduced vector levels and reduced presence of vector-borne diseases - are received on an equivalent basis by all parcels in the Service Area. Furthermore, all parcels in the Service Area directly benefit from the ability to request service from the District and to have a District field technician promptly respond directly to the parcel and address the owner's or resident's service need.

The *SVTA vs. SCCOSA* decision indicates that the fact that a benefit is conferred throughout the Service Area area does not make the benefit general rather than special, so long as the Service Area is narrowly drawn and limited to the parcels directly receiving shared special benefits from the service. This concept is particularly applicable in situations involving a landowner-approved assessment-funded extension of a local government service to benefit lands previously not receiving that particular service. The District therefore concludes that, other than the small general benefit to properties outside the Service Area (discussed above) and to the public at large (discussed below), all of the benefits of the Services to the parcels within the Service Area are special benefits and it is not possible or appropriate to separate any general benefits from the benefits conferred on parcels in the Service Area.

Benefit To The Public At Large

With the type and scope of Services provided to the Service Area, it is very difficult to calculate and quantify the scope of the general benefit conferred on the public at large. Because the Services directly serve and benefit all of the property in the Assessment Area, any general benefit conferred on the public at large is small. Nevertheless, there is some indirect general benefit to the public at large.

The public at large uses the public highways, streets and sidewalks, and when traveling in and through the Assessment Area they will benefit from the Services. A fair and appropriate measure of the general benefit to the public at large therefore is the amount of highway, street and sidewalk area within the Assessment Area relative to the overall land area. An analysis of maps of the Assessment Area shows that approximately 2.5% of the land area in the Assessment Area is covered by highways, streets and sidewalks. This 2.5% therefore is a fair and appropriate measure of the general benefit to the public at large within the Assessment Area

Summary of General Benefits

Using a sum of the measures of general benefit for the public at large and land outside the Assessment Area, we find that approximately 6.5% of the benefits conferred by the Vector and Disease Control Assessment may be general in nature and should be funded by sources other than the Assessment.

General Benefit Calculation

	4.0%	(Outside the Service Area)
+	0.0%	(Property within the Service Area)
+	2.5%	(Public at Large)
=	**6.5%**	**(Total General Benefit)**

This amount allocated to general benefit also covers general benefit to parcels in the Assessment Area if it is later determined that there is some general benefit conferred on those parcels.

The Vector and Disease Control Assessment total vector abatement, disease control, and capital improvement is $8,865,002. Of this total budget amount, the District contributes greater than 7% from sources other than the Vector and Disease Control Assessment. This contribution offsets any general benefits from the Vector and Disease Control Assessment Services.

Zones of Benefit

The District's vector and disease control programs, projects and Services that are funded by the Vector and Disease Control Assessment are provided in all areas within the District. Parcels of similar type in the District would receive similar vector abatement benefits on a per parcel and land area basis. Therefore, zones of benefit are not justified.

The *SVTA vs. SCCOSA* decision indicates:

> *In a well-drawn district — limited to only parcels receiving special benefits from the improvement — every parcel within that district receives a shared special benefit. Under section 2, subdivision (i), these benefits can be construed as being general benefits since they are not "particular and distinct" and are not "over and above" the benefits received by other properties "located in the district."*
>
> *We do not believe that the voters intended to invalidate an assessment district that is narrowly drawn to include only properties directly benefiting from an improvement. Indeed, the ballot materials reflect otherwise. Thus, if an assessment district is narrowly drawn, the fact that a benefit is conferred throughout the district does not make it general rather than special. In that circumstance, the characterization of a benefit may depend on whether the parcel receives a direct advantage from the improvement (e.g., proximity to park) or receives an indirect, derivative advantage resulting from the overall public benefits of the improvement (e.g., general enhancement of the district's property values).*

In the Assessment Area, the advantage that each parcel receives from the Services is direct and the boundary for the Service Area is narrowly drawn so the Service Area includes parcels that receive the similar levels of benefit from the Services. Therefore, the even spread of assessment for similar properties in the narrowly drawn Service Area within the Program is indeed consistent with the OSA decision.

Method of Assessment

As previously discussed, the Assessments fund enhanced, comprehensive, year-round vector control, disease surveillance and control Services that will reduce vector populations on property and will clearly confer special benefits to properties in the Assessment Area. These benefits can also partially be measured by the occupants on property in the Improvement District because such parcel population density is a measure of the relative benefit a parcel receives from the Improvements. Therefore, the apportionment of benefit is partially based on the population density of parcels. It should be noted that many other types of "traditional" assessments also use parcel population densities to apportion the assessments. For example, the assessments for sewer systems, roads and water systems are typically allocated based on the population density of the parcels assessed.

Moreover, assessments have a long history of use in California and are in large part based on the principle that any benefits from a service or improvement funded by assessments that is enjoyed by tenants and other non-property owners ultimately is conferred directly to the underlying property.[19]

With regard to benefits and source locations, the assessment engineer determined that since vectors may move from their breeding locations to all properties in their travel range and since many vectors are actually attracted to properties occupied by people or animals, the benefits from vector control extend beyond the source locations to all properties that are a "destination" for vectors. In other words, the control and abatement of vector populations ultimately confers benefits to all properties that are a destination of vectors, rather than just those that are source habitats of vectors.

Although some primary vector habitats may be located outside of residential areas, residential properties can and do generate their own, often significant, populations of vector organisms. For example, broken sewer pipes in residential areas in the Service Area are a common source of rats. Since rats can travel over 300 feet, most homes in the Service Area are within the travel zone of rat habitats or could become a future vector habitat. Moreover, there are many other common residential potential breeding sources of vectors, such as miscellaneous areas under and around homes. Clearly, there is a potential for vector breeding habitats on virtually all property.

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[19] For example, in *Federal Construction Co. v. Ensign (1922) 59 Cal.App. 200 at 211*, the appellate court determined that a sewer system specially benefited property even though the direct benefit was to the people who used the sewers: "Practically every inhabitant of a city either is the owner of the land on which he resides or on which he pursues his vocation, or he is the tenant of the owner, or is the agent or servant of such owner or of such tenant. And since it is the inhabitants who make by far the greater use of a city's sewer system, it is to them, as lot owners or as tenants, or as the servants or agents of such lot owners or tenants, that the advantages of actual use will redound. But this advantage of use means that, in the final analysis, it is the lot owners themselves who will be especially benefited in a financial sense."

Because the Services are provided throughout the Service Area with the same level of control objective, vectors can rapidly and readily travel from their breeding locations to other properties over a large area and because there are current or potential breeding habitats literally everywhere in the Service Area, the assessment engineer determined that all similar properties have generally equivalent vector "destination" potential and, therefore, receive equivalent levels of benefit.

In the process of determining the appropriate method of assessment, the Engineer considered various alternatives. For example, a fixed assessment amount per parcel for all residential improved property was considered but was determined to be inappropriate because agricultural lands, commercial property and other property also receive benefits from the assessments. Likewise, an assessment exclusively for agricultural land was considered but deemed inappropriate because other types of property, such as residential and commercial, also receive the special benefit factors described previously.

A fixed or flat assessment was deemed to be inappropriate because larger residential, commercial and industrial properties receive a higher degree of benefit than other similarly used properties that are significantly smaller. (For two properties used for commercial purposes, there is clearly a higher benefit provided to a property that covers several acres in comparison to a smaller commercial property that is on a 0.25 acre site. The larger property generally has a larger coverage area and higher usage by employees, customers, tourists and guests that benefit from reduced vector populations, as well as the reduced threat from diseases carried by vectors. This benefit ultimately flows to the property.) Larger commercial, industrial and apartment parcels, therefore, receive an increased benefit from the assessments.

In conclusion, the assessment engineer determined that the appropriate method of assessment apportionment should be based on the type and use of property, the relative size of the property, its relative population and usage potential, and its destination potential for vectors. This method is further described below.

Assessment Apportionment

The special benefits derived from the Vector and Disease Control Assessment are conferred on property and are not based on a specific property owner's occupancy of property or the property owner's demographic status, such as age or number of dependents. However, it is ultimately people who do or could use the property and who enjoy the special benefits described above. Therefore, the opportunity to use and enjoy the region within the Service Area without the excessive nuisance, diminished "livability" or the potential health hazards brought by vectors and the diseases they carry is a special benefit to properties in the Service Area. This benefit can be in part measured by the number of people who potentially live on, work at, visit or otherwise use the property, because people ultimately determine the value of the benefits by choosing to live, work and/or recreate in the area, and by choosing to purchase property in the area.[20]

In order to apportion the cost of the Services to property, each property in the Service Area is assigned a relative special benefit factor. This process involves determining the relative benefit received by each property in relation to a single-family home, or, in other words, on the basis of Single-Family Equivalents (SFE). This SFE methodology is commonly used to distribute assessments in proportion to estimated special benefit. For the purposes of this Engineer's Report, all properties are designated a SFE value, which is each property's relative benefit in relation to a "benchmark" parcel in the Service Area. The "benchmark" property is the single-family detached dwelling on a parcel of less than one acre. This benchmark parcel is assigned one Single-Family Equivalent benefit unit or one SFE.

The calculation of the special benefit apportionment and relative benefit to properties in the Assessment Area from the Services is summarized in the following equation:

Special Benefit $_{\text{(per parcel)}}$	=	$\sum \int$ (Special Benefits, Property Specific Attributes[1])$_{\text{(per parcel)}}$

1. Such as use, property type, size, as well as vector-specific attributes such as destination potential and population potential

[20] It should be noted that the benefits conferred upon property are related to the average number of people who could potentially live on, work at or otherwise could use a property, not how the property is currently used by the present owner.

Residential Properties

Certain residential properties in the Abatement District that contain a single residential dwelling unit and are on a lot of less than or equal to one acre are assigned one Single-Family Equivalent or 1.0 SFE. Traditional houses, zero-lot line houses, and town homes are included in this category of single-family residential property.

Single-family residential properties in excess of one acre receive additional benefit relative to a single-family home on up to one acre, because the larger parcels provide more area for vector breeding sources and the District's vector and disease control Services. Therefore, such larger parcels receive additional benefits relative to a single-family home on less than one acre and are assigned 1.0 SFE for the residential unit and an additional rate equal to the agricultural rate described below of 0.0021 SFE per one-fourth acre of land area in excess of one acre. Mobile home parcels on a separate parcel and in excess of one acre also receive this additional acreage rate.

Other types of properties with residential units, such as agricultural properties, are assigned the residential SFE rates for the dwelling units on the property and are assigned additional SFE benefit units for the agricultural-use land area on the property.

Properties with more than one residential unit are designated as multi-family residential properties. These properties, along with condominiums, benefit from the Services in proportion to the number of dwelling units that occupy each property, the average number of people who reside in each property and the average size of each property in relation to a single-family home in the District. This Report analyzed Alameda County population density factors from the 2000 US Census as well as average dwelling unit size for each property type. After determining the Population Density Factor and Square Footage Factor for each property type, an SFE rate is generated for each residential property structure, as indicated in Figure 2 below.

The SFE factor of 0.46 per dwelling unit for multifamily residential properties applies to such properties with two to four units (duplex, triplex, fourplex). Properties in excess of 5 units typically offer on-site management, monitoring and other control services that tend to offset some of the benefits provided by the District. Therefore, the benefit for properties in excess of 5 units is determined to be .32 SFE per unit for the first 20 units and 0.10 SFE per each additional unit in excess of 20 dwelling units.

Figure 2 – Residential Assessment Factors

Type of Residential Property	Total Population	Occupied Households	Persons per Household	Pop. Density Equivalent	SqFt Factor	Proposed Rate
Single Family Residential	866,596	284,662	3.04	1.00	1.00	**1.00**
Condominium	103,373	37,417	2.76	0.91	0.66	**0.60**
Duplex, Triplex, Fourplex	144,626	57,815	2.50	0.82	0.56	**0.46**
Multi-Family Residential (5+ Units)	286,957	136,173	2.11	0.69	0.47	**0.32**
Mobile Home on Separate Lot	13,464	6,660	2.02	0.66	0.41	**0.27**

Source: 2000 Census, Alameda County, and property dwelling size information from the Alameda County Assessor data and other sources.

Commercial/Industrial Properties

Commercial and industrial properties receive relatively lower levels of benefit in comparison to a single-family home because they are generally open and operated for more limited times and employees of indoor businesses tend to spend less time outdoors. Since the hours of operation and the potential exposure to vectors are measures of relative benefit, commercial and industrial properties receive lower relative levels of benefit. Therefore, commercial and industrial properties are determined to receive 0.50 SFE of benefit per one-quarter acre (10,890 square feet) of land area.

The SFE values for various commercial and industrial land uses are further defined by using average employee densities because the special benefit factors described previously are also related to the average number of people who work at commercial/industrial properties.

To determine employee density factors, this Report utilizes the findings from the San Diego County Association of Governments Traffic Generators Study (the "SANDAG Study") because these findings were approved by the State Legislature which determined the SANDAG Study to be a good representation of the average number of employees per acre of land area for commercial and industrial properties. As determined by the SANDAG Study, the average number of employees per acre for commercial and industrial property is 24. As presented in Figure 3, the SFE factors for other types of businesses are determined relative to their typical employee density in relation to the average of 24 employees per acre of commercial property.

Self-storage and golf course property benefit factors are similarly based on average usage densities. Figure 3 below lists the benefit assessment factors for such business properties.

Agricultural, Rangeland, and Cemetery Properties

Utilizing research and agricultural employment reports from UC Davis and the California Employment Development Department and other sources, this Report calculated an average usage density of 0.05 people per acre for agriculture property, 0.01 for rangelands and timber and .10 for cemeteries. Since these properties typically are a source of vectors and/or are typically closest to other sources of vectors, it is reasonable to determine that the benefit to these properties is twice the usage density ratio of commercial and industrial properties. The SFE factors per 0.25 acres of land area are shown in the following Figure 3.

Figure 3 – Commercial/Industrial Benefit Assessment Factors

Type of Commercial/ Industrial Land Use	*Average Employees Per Acre [1]*	*SFE Units per Fraction Acre [2]*	*SFE Units per Acre After 5*
Commercial	24	0.500	0.500
Office	68	1.420	1.420
Shopping Center	24	0.500	0.500
Industrial	24	0.500	0.500

1. Source: San Diego Association of Governments Traffic Generators Study, University of California, Davis and other studies and sources.
2. The SFE factors for commercial and industrial parcels indicated above are applied to each fourth acre of building area or portion thereof. (Therefore, the SFE rate for any assessable parcel with 10,890 square feet or less in these categories is the SFE Units listed above.)

Figure 4 – Other Land Benefit Assessment Factors

Other Types of Land Use	*Average Employees Per Acre [1]*	*SFE Units per 1/4 Acre [2]*
Self-Storage or Parking Lot	1.00	0.021
Wineries	12.00	0.250
Golf Course	3.00	0.063
Cemeteries	1.20	0.050
Agriculture / Vineyards	0.05	0.0021
Timberland / Dry Rangeland	0.01	0.00042

1. Source: San Diego Association of Governments Traffic Generators Study, University of California, Davis and other studies and sources.
2. The SFE factors for commercial and industrial parcels indicated above are applied to each fourth acre of land area or portion thereof. (Therefore, the minimum assessment for any assessable parcel in these categories is the SFE Units listed herein.)

Vacant Properties

The benefit to vacant properties is determined to be proportional to the corresponding benefits for similar type developed properties. However, vacant properties are assessed at a lower rate due to the lack of active benefits, as measured by use by residents, employees, customers and guests. A measure of the benefits accruing to the underlying land is the average value of land in relation to improvements for developed property. An analysis of the assessed valuation data from Alameda County found that 50% of the assessed value of improved properties is classified as land value. Since vacant properties have very low to zero population/use densities until they are developed, a 50% benefit discount is applied to the valuation factor of 0.50 to account for the current low use density and potential for harm or nuisance to the property owner or his residents, employees, customers and guests. The combination of these measures results in a 0.25 factor. It is reasonable to assume, therefore, that approximately 25% of the benefits are related to the underlying land and 75% are related to the day-to-day use of the property. Using this ratio, the SFE factor for vacant parcels is 0.25 per parcel.

Other Properties

Article XIIID stipulates that publicly owned properties must be assessed unless those properties are reasonably determined to receive no special benefit from the assessment. All properties that are specially benefited are assessed. Publicly owned property that is used for purposes similar to private residential, commercial, industrial or institutional uses is benefited and assessed at the same rate as such privately owned property.

Other public properties such as watershed parcels, parks, open space parcels are determined to, on average, receive similar benefits as a single-family home. Therefore such parcels are assessed an SFE benefit factor of 1. Miscellaneous, small and other parcels such as roads, right-of-way parcels, and common areas typically do not generate significant numbers of employees, residents, customers or guests and have limited economic value. These miscellaneous parcels receive minimal benefit from the Services and are assessed an SFE benefit factor of 0.

Church parcels, institutional properties, and property used for educational purposes typically generate employees on a less consistent basis than other non-residential parcels. Many of these properties with higher population factors provide on-site management, monitoring and other control services that tend to offset some of the benefits provided by the District. Therefore, these parcels are determined to, on average, receive similar benefits as a single-family home. Therefore, such parcels are assessed an SFE benefit factor of 1.

Miscellaneous, small and other parcels such as roads, right-of-way parcels, and common areas typically do not generate significant numbers of employees, residents, customers or guests and have limited economic value. These miscellaneous parcels receive minimal benefit from the Services and are assessed an SFE benefit factor of 0.

Duration of Assessment

It is proposed that the Assessment be levied for fiscal year 2026-27 and continued every year thereafter, so long as vectors remain in existence and the Alameda County Vector Control District requires funding from the Assessment for its Services in the District. As noted previously, if the Assessment and the duration of the Assessment were approved by property owners in an assessment ballot proceeding, the Assessment can continue to be levied annually after the Alameda County Board of Supervisors approves an annually updated Engineer's Report, budget for the Assessment, Services to be provided, and other specifics of the Assessment, if the assessment rate is increased. In addition, the Alameda County Board of Supervisors must hold an annual public hearing to continue the Assessment.

Appeals and Interpretation

Any property owner who feels that the assessment levied on the subject property is in error as a result of incorrect information being used to apply the foregoing method of assessment, may file a written appeal with the District Manager of the Alameda County Vector Control District or his or her designee. Any such appeal is limited to correction of an assessment during the then current fiscal year or, if before July 1, the upcoming fiscal year. Upon the filing of any such appeal, the District Manager or his or her designee will promptly review the appeal and any information provided by the property owner. If the District Manager or his or her designee finds that the assessment should be modified, the appropriate changes shall be made to the assessment roll. If any such changes are approved after the assessment roll has been filed with Alameda County for collection, the District Manager or his or her designee is authorized to refund to the property owner the amount of any approved reduction. Any dispute over the decision of the District Manager, or his or her designee, shall be referred to the Alameda County Board of Supervisors. The decision of the County Board of Supervisors shall be final.

Assessment

Whereas, the Alameda County Board of Supervisors contracted with the undersigned Engineer of Work to prepare and file a report presenting an estimate of costs of Services, a diagram for the benefit assessment area, an assessment of the estimated costs of Services, and the special and general benefits conferred thereby upon all assessable parcels within the Alameda County Vector Control District - Vector and Disease Control Assessment;

Now, **therefore**, the undersigned, by virtue of the power vested in me under Article XIIID of the California Constitution, the Government Code and the Health and Safety Code and the order of the Alameda County Board of Supervisors, hereby make the following determination of an assessment to cover the portion of the estimated cost of the Services, and the costs and expenses incidental thereto to be paid by the Vector and Disease Control Assessment.

The District has evaluated and estimated the costs of extending and providing the Services to the Service Area. The estimated costs are summarized in Figure 1 and detailed in Figure 5, below.

The amount to be paid for the Services and the expenses incidental thereto, to be paid by the Alameda County Vector Control District for fiscal year 2026-27 is generally as follows:

Figure 5 – Summary Cost Estimate – FY 2026-27

Vector Abatement & Disease Control Services	$5,588,293
Materials, Utilities and Supplies	$3,517,969
Contingency	$133,234
Total Vector Control Services and Related Expenditures	**$9,239,496**
Incidentals	$160,917
Total Budget	**$9,400,413**
Less Contributions from Other Sources:	
Revenue from other sources	($9,348,307)
Net Amount To Assessments	**$52,106**
General Contribution to Total Vector Control Services and Relate Expenditures	99.45%

An Assessment Diagram is hereto attached and made a part hereof showing the exterior boundaries of the assessment area. The distinctive number of each parcel or lot of land in the Vector and Disease Control Assessment is its Assessor Parcel Number appearing on the Assessment Roll.

I do hereby determine and apportion the net amount of the cost and expenses of the Services, including the costs and expenses incidental thereto, upon the parcels and lots of land within the Vector and Disease Control Assessment, in accordance with the special benefits to be received by each parcel or lot, from the Services, and more particularly set forth in this Engineer's Report.

The assessment determination is made upon the parcels or lots of land within the assessment area in proportion to the special benefits to be received by the parcels or lots of land, from the Services.

The assessment is subject to an annual increase tied to the Consumer Price Index-U for the San Francisco Bay Area as of December of each succeeding year (the "CPI"), with a maximum annual increase not to exceed 3%. Any change in the CPI in excess of 3% shall be cumulatively reserved as the "Unused CPI" and shall be used to increase the maximum authorized assessment rate in years in which the CPI is less than 3%. The maximum authorized assessment rate is equal to the maximum assessment rate in the first fiscal year the assessment was levied adjusted annually by the minimum of 1) 3% or 2) the change in the CPI plus any Unused CPI as described above.

The change in the CPI from December 2024 to December 2025 was 3.0365%. Therefore, the maximum assessment rate for fiscal year 2026-27 is $15.97, which is the maximum rate for fiscal year 2025-26 ($15.51) plus 3% for fiscal year 2026-27. The estimate of cost and budget in this Engineer's Report proposes assessments for fiscal year 2026-27 at the rate of $12.69, which is below the maximum authorized assessment rate.

Each parcel or lot of land is described in the Assessment Roll by reference to its parcel number as shown on the Assessor's Maps of the County of Alameda for the fiscal year 2026-27. For a more particular description of the property, reference is hereby made to the deeds and maps on file and of record in the office of the County Assessor of the County of Alameda.

I hereby place opposite the Assessor Parcel Number for each parcel or lot within the Assessment Roll, the proposed amount of the assessment for the fiscal year 2026-27 for each parcel or lot of land within the Alameda County Vector Control District- Vector and Disease Control Assessment.[21]

Dated: April 15, 2026



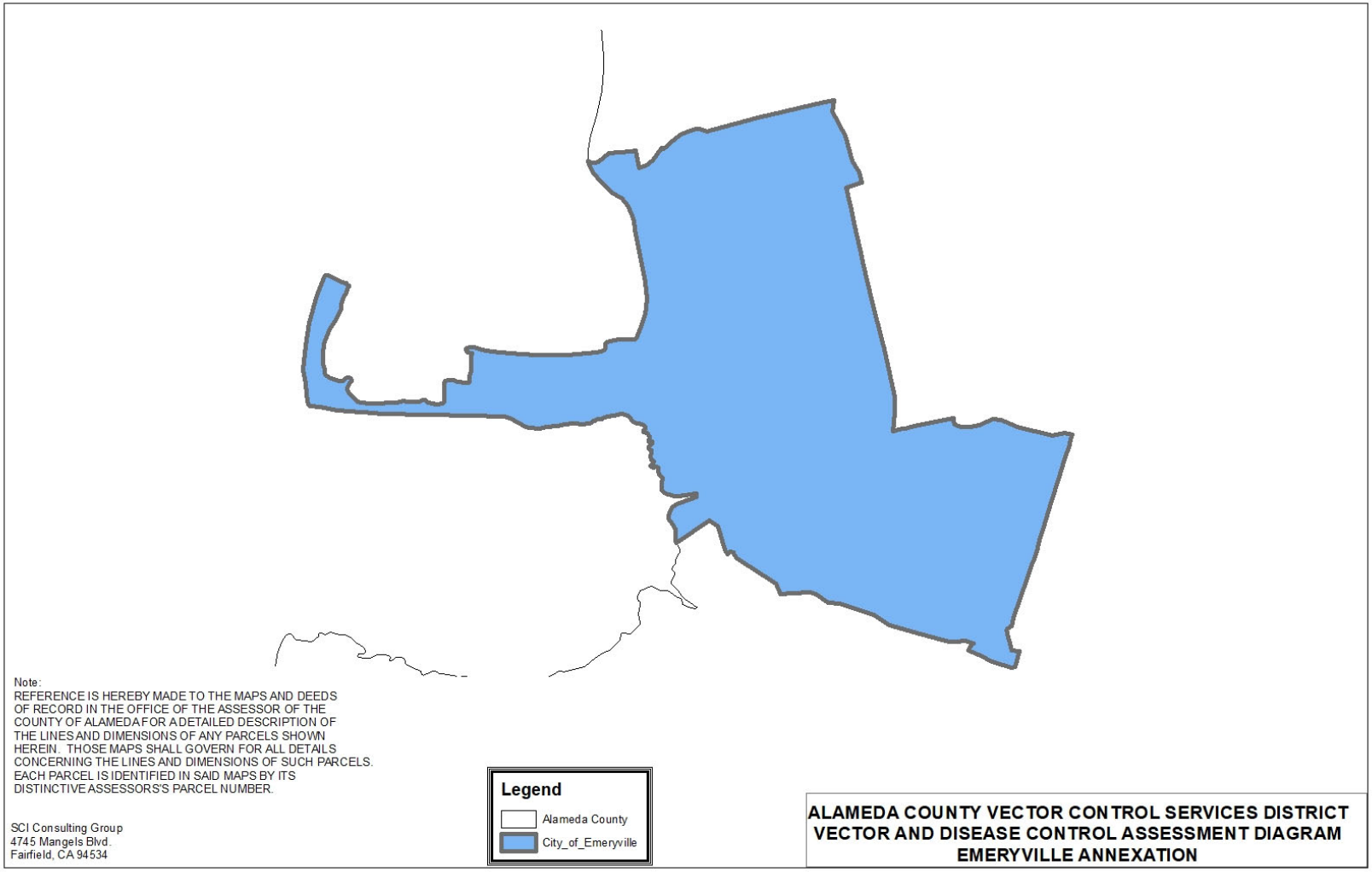
Engineer of Work

By _____

[21] Each parcel has a uniquely calculated assessment based on the estimated level of special benefit to the property as determined in accordance with this Engineer's Report.

John Assessment Diagram

The boundaries of the Vector and Disease Control Assessment Area are displayed on the following Assessment Diagram.


Note:
REFERENCE IS HEREBY MADE TO THE MAPS AND DEEDS OF RECORD IN THE OFFICE OF THE ASSESSOR OF THE COUNTY OF ALAMEDA FOR A DETAILED DESCRIPTION OF THE LINES AND DIMENSIONS OF ANY PARCELS SHOWN HEREIN. THOSE MAPS SHALL GOVERN FOR ALL DETAILS CONCERNING THE LINES AND DIMENSIONS OF SUCH PARCELS. EACH PARCEL IS IDENTIFIED IN SAID MAPS BY ITS DISTINCTIVE ASSESSORS'S PARCEL NUMBER.
SCI Consulting Group
4745 Mangels Blvd.
Fairfield, CA 94534
Legend
Alameda County
City_of_Emeryville
ALAMEDA COUNTY VECTOR CONTROL SERVICES DISTRICT
VECTOR AND DISEASE CONTROL ASSESSMENT DIAGRAM
EMERYVILLE ANNEXATION

Assessment Roll

Reference is hereby made to the Assessment Roll in and for the assessment proceedings on file in the office of the Alameda County Vector Control District, as the Assessment Roll is too voluminous to be bound with this Report.

Alameda County
Vector Control District

Fremont Annexation

Vector and Disease Control Assessment

April 2026
Engineer's Report

Fiscal Year 2026-27

Pursuant to the Health and Safety Code, Government Code
and
Article XIIID of the California Constitution

Engineer of Work:

SCIConsultingGroup
Public Finance Consulting Services

4745 Mangels Boulevard
Fairfield, California 94534
707.430.4300
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Alameda County Vector Control District

Board of Supervisors

David Haubert, District 1, President

Elisa Márquez, District 2

Lena Tam, District 3, Vice President

Nate Miley, District 4

Nikki Fortunato Bas, District 5

Chief/Scientific Program Manager

Adena Why, PhD

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Introduction

Overview

The Alameda County Vector Control Services District (also known as County Service Area VC 1984-1) controls and monitors disease-carrying vectors (rodents, insects, ticks) as well as nuisance wildlife and insects. The District was formed in June 1984, in order to meet the public health needs by providing a comprehensive vector control program following passage of Measure A, in which over 70% of the voters approved formation of the District. The District is a dependent district of Alameda County and is governed by the Alameda County Board of Supervisors ('Board').

In 2008, the District desired to provide vector and disease surveillance services to the unprotected City of Fremont and proposed a new assessment on all specially benefiting properties within this unserved area. In 2009, the District annexed the City of Fremont into its boundaries (referred to in this report as the "Fremont Annexation" or "Service Area.") Neither the District, nor any other public agency, provided comprehensive vector control or vector borne disease protection and surveillance services in Fremont. *(Please note that the term "vector" is used throughout this report to include all non-mosquito vectors. Mosquito control is provided in Fremont by an existing special district).*

The Mission Statement of the District is:

> *The mission of the Vector Control Service District is to prevent the spread of vector-borne diseases, injury, and discomfort to the residents of the District by controlling insects, rodents, and other vectors and eliminating causal environmental conditions through education and integrated pest management practices.*

The District provides its services throughout the County and includes the incorporated cities of Alameda, Albany, Berkeley, Dublin, Hayward, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro, Union City, and the unincorporated communities of Ashland, Castro Valley, San Lorenzo, and Sunol, as well as the remaining portions of unincorporated Alameda County. In 2009, the incorporated cities of Fremont (Fremont Annexation or Service Area) and Emeryville were annexed into the District. The District's vector and disease control services serve to reduce vector populations on property throughout the County, and the District is the only agency providing vector control and vector-borne disease protection and prevention services in the County.

The District provides vector control, surveillance of gnats, ticks, and other vectors, and disease control services within its boundaries. The District services are available to all properties in Alameda County. The purpose of the Alameda County Vector Control Services District is to reduce the risk of vector-borne disease and vector nuisance to property and the inhabitants of property within the District.

The District's core services are summarized as follows:

- Early detection of emerging or existing public health threats through comprehensive vector and disease surveillance.
- Elimination and/or control of vectors to protect public health and to diminish the nuisance and harm caused by insects and rodents.
- Appropriate, timely response to customer requests concerning the prevention and control of vectors and the diseases they can transmit.
- Provision of public outreach and education concerning vectors and vector diseases.

Prior to 2009, the District did not offer services in the Service Area, a "baseline" level of vector and disease control services. After 2009, the services were expanded to the Service Area, as listed below, above the existing baseline level of services.

The Service Area is narrowly drawn to include only properties that may request and/or receive direct and more frequent service, that are located within the scope of the vector surveillance area, that are located within flying or traveling distance of potential vector sources monitored by the District, and that will benefit from a reduction in the amount of vectors reaching and impacting the property as a result of the enhanced vector surveillance and control. The Assessment Diagram included in this report shows the boundaries of the Service Area.

The following is an outline of the primary services, programs and related costs that are funded by the vector and disease control assessment:[1]

- Request for Service Investigations
- Rodent Control
- Wildlife Management and Rabies Investigations
- Solid Waste Problems
- Vector-Borne Disease Surveillance and Control
- Public Education and Information

[1] The improved vector control and disease prevention services materially increases the usefulness, utility, livability and desirability of properties in the Assessment Area.

This Engineer's Report ("Report") defines the benefit assessment, which provides funding for these improved vector and disease control services for property in the City of Fremont, as well as related costs for equipment, capital improvements and services, facilities necessary and incidental to vector and disease control programs.

As used within this Report and the benefit assessment ballot proceeding, the following terms are defined:

> *"Vector" means any animal capable of transmitting the causative agent of human disease or capable of producing human discomfort or injury, including, but not limited to, mosquitoes, flies, mites, ticks, other arthropods, and small mammals and other vertebrates (Health and Safety Code Section 2002(k)).*
>
> *"Vector Control" shall mean any system of public improvements or services that is intended to provide for the surveillance, prevention, abatement, and control of vectors as defined in subdivision (k) of Section 2002 of the Health and Safety Code and a pest as defined in Section 5006 of the Food and Agricultural Code (Government Code Section 53750(m)).*

The District operates under the authority of the Pest Abatement District Law of the State of California codified in the Health and Safety Code, Section 2800, et seq.

Following are excerpts from the Mosquito Abatement and Vector Control District Law of 2002, codified in the Health and Safety Code, Section 2000, et seq. which serve to summarize the State Legislature's findings and intent regarding mosquito abatement and vector control services:

> *2001. (a) The Legislature finds and declares all of the following:*
> *(1) California's climate and topography support a wide diversity of biological organisms.*
> *(2) Most of these organisms are beneficial, but some are vectors of human disease pathogens or directly cause other human diseases such as hypersensitivity, envenomization, and secondary infections.*
> *(3) Some of these diseases, such as mosquito borne viral encephalitis, can be fatal, especially in children and older individuals.*
> *(4) California's connections to the wider national and international economies increase the transport of vectors and pathogens.*
> *(5) Invasions of the United States by vectors such as the Asian tiger mosquito and by pathogens such as the West Nile virus underscore the vulnerability of humans to uncontrolled vectors and pathogens.*
> *(b) The Legislature further finds and declares:*
> *(1) Individual protection against the vector borne diseases is only partially effective.*

(2) Adequate protection of human health against vector borne diseases is best achieved by organized public programs.

(3) The protection of Californians and their communities against the discomforts and economic effects of vector borne diseases is an essential public service that is vital to public health, safety, and welfare.

(4) Since 1915, mosquito abatement and vector control districts have protected Californians and their communities against the threats of vector borne diseases.

(c) In enacting this chapter, it is the intent of the Legislature to create and continue a broad statutory authority for a class of special districts with the power to conduct effective programs for the surveillance, prevention, abatement, and control of mosquitoes and other vectors.

(d) It is also the intent of the Legislature that mosquito abatement and vector control districts cooperate with other public agencies to protect the public health, safety, and welfare. Further, the Legislature encourages local communities and local officials to adapt the powers and procedures provided by this chapter to meet the diversity of their own local circumstances and responsibilities.

Further the Health and Safety Code, Section 2082 specifically authorizes the creation of benefit assessments for vector control, as follows:

(a) A district may levy special benefit assessments consistent with the requirements of Article XIIID of the California Constitution to finance vector control projects and programs.

This Engineer's Report ("Report") was prepared by SCI Consulting Group ("SCI") to describe the vector, disease surveillance and control services and related costs that are funded by the assessments, to establish the estimated costs for those Services, to determine the special benefits and general benefits received by property from the Services and to apportion the assessments to lots and parcels within the District based on the estimated special benefit each parcel receives from the services funded by the benefit assessment.

Legislative Analysis

Proposition 218

This assessment was formed consistent with Proposition 218, The Right to Vote on Taxes Act, which was approved by the voters of California on November 6, 1996, and is now Article XIIIC and XIIID of the California Constitution. Proposition 218 provides for benefit assessments to be levied to fund the cost of providing services, improvements, as well as maintenance and operation expenses to a public improvement which benefits the assessed property.

Proposition 218 describes several important requirements, including a property-owner balloting, for the formation and continuation of assessments, and these requirements are satisfied by the process used to establish this assessment. When Proposition 218 was initially approved in 1996, it allowed for certain types of assessments to be "grandfathered" in, and these were exempted from the property–owner balloting requirement.

> *Beginning July 1, 1997, all existing, new, or increased assessments shall comply with this article. Notwithstanding the foregoing, the following assessments existing on the effective date of this article shall be exempt from the procedures and approval process set forth in Section 4:*
>
> *Any assessment imposed exclusively to finance the capital costs or maintenance and operation expenses for sidewalks, streets, sewers, water, flood control, drainage systems or vector control.*

Vector control was specifically "grandfathered in," underscoring the fact that the drafters of Proposition 218 and the voters who approved it were satisfied that funding for vector control is an appropriate use of benefit assessments, and therefore confers special benefit to property.

Silicon Valley Taxpayers Association, Inc. v. Santa Clara County Open Space Authority

In July of 2008, the California Supreme Court issued its ruling on the Silicon Valley Taxpayers Association, Inc. v. Santa Clara County Open Space Authority ("SVTA vs. SCCOSA"). This ruling is the most significant legal document in further legally clarifying Proposition 218. Several of the most important elements of the ruling included further emphasis that:

- Benefit assessments are for special benefit to property, not general benefits[2]
- The services and /or improvements funded by assessments must be clearly defined
- Special benefits are directly received by and provide a direct advantage to property in the assessment district

This Engineer's Report, and the process used to establish this assessment is consistent with the SVTA vs. SCCOSA decision.

Dahms v. Downtown Pomona Property

On June 8, 2009, the 4th Court of Appeal amended its original opinion upholding a benefit assessment for property in the downtown area of the City of Pomona. On July 22, 2009, the California Supreme Court denied review. On this date, *Dahms* became good law and binding precedent for assessments. In *Dahms* the Court upheld an assessment that was 100% special benefit (i.e. 0% general benefit) on the rationale that the services and improvements funded by the assessments were directly provided to property in the assessment district. The Court also upheld discounts and exemptions from the assessment for certain properties.

Bonander v. Town of Tiburon

On December 31, 2009, the 1st District Court of Appeal overturned a benefit assessment approved by property owners to pay for placing overhead utility lines underground in an area of the Town of Tiburon. The Court invalidated the assessments on the grounds that the assessments had been apportioned to assessed property based in part on relative costs within sub-areas of the assessment district instead of proportional special benefits.

Beutz v. County of Riverside

On May 26, 2010, the 4th District Court of Appeal issued a decision on the *Steven Beutz v. County of Riverside ("Beutz")* appeal. This decision overturned an assessment for park maintenance in Wildomar, California, primarily because the general benefits associated with improvements and services were not explicitly calculated, quantified and separated from the special benefits.

[2] Article XIII D, § 2, subdivision (d) of the California Constitution states defines "district" as "an area determined by an agency to contain all parcels which will receive a special benefit from the proposed public improvement or property-related service."

Golden Hill Neighborhood Association v. City of San Diego

On September 22, 2011, the San Diego Court of Appeal issued a decision on the *Golden Hill Neighborhood Association v. City of San Diego*. This decision overturned an assessment for street and landscaping maintenance in the Greater Golden Hill neighborhood of San Diego, California. The court described two primary reasons for its decision. First, like in *Beutz*, the court found the general benefits associated with services were not explicitly calculated, quantified and separated from the special benefits. Second, the court found that the City had failed to record the basis for the assessment on its own parcels.

Compliance with Current Law

This Engineer's Report is consistent with the requirements of Article XIIIC and XIIID of the California Constitution and with the *SVTA* decision because the Services to be funded are clearly defined; the Services are available to and will be directly provided to all benefiting property in the Service Area; and the Services provide a direct advantage to property in the Service Area that would not be received in absence of the Assessments.

This Engineer's Report is consistent with *Dahms* because, similar to the Downtown Pomona assessment validated in *Dahms*, the Services will be directly provided to property in the Service Area. Moreover, while *Dahms* could be used as the basis for a finding of 0% general benefits, this Engineer's Report establishes a more conservative measure of general benefits.

The Engineer's Report is consistent with *Bonander* because the Assessments have been apportioned based on the overall cost of the Services and proportional special benefit to each property. Finally, the Assessments are consistent with *Beutz* because the general benefits have been explicitly calculated and quantified and excluded from the Assessments.

Assessment Process

In order to allow property owners to ultimately decide whether additional funding should be provided for the District's vector and disease control services, the Board authorized by Resolution the Initiation of proceedings for a benefit assessment on September 30, 2008. In October and November of 2008, the District conducted an assessment ballot proceeding pursuant to the requirements of Article XIIID of the California Constitution ("The Taxpayer's Right to Vote on Taxes Act") and the Government Code. During this ballot proceeding, owners of property in the District were provided with a notice and ballot for the proposed special assessment. A 45-day period was provided for balloting and a public hearing was conducted on December 9, 2008 and continued to January 6, 2009.

It was determined after the conclusion of the public input portion of the public hearing that 70.2% of the weighted ballots returned were in support of the assessment. Since the assessment ballots submitted in opposition to the proposed assessments did not exceed the assessment ballots submitted in favor of the assessments (with each ballot weighted by the proportional financial obligation of the property for which ballot was submitted), the District gained the authority to approve the levy of the assessments for fiscal year 2009-10 and to continue to levy them in future years. The authority granted by the ballot proceeding includes an annual increase in the maximum authorized assessment rate equal to the annual change in the Consumer Price Index for the San Francisco Bay Area, not to exceed 3%. If the annual change in the CPI exceeds 3%, any percentage change in excess of 3% can be cumulatively reserved and can be added to the annual change in the CPI for years in which the CPI change is less than 3%. The Board took action to approve the levy of the assessments.

If the Board approves Engineer's Report and the assessments it establishes for fiscal year 2026-27, the assessments would be submitted to the County Auditor for inclusion on the property tax rolls for fiscal year 2026-27.

General Description of the District and Services

About the Vector Control District

The Alameda County Vector Control Services District (the "District") provides vector control services in all of Alameda County. Emeryville and Fremont were annexed into the District in 2009. The District protects the usefulness, desirability and livability of property and the inhabitants of property within its jurisdictional area through the control and surveillance of vertebrate and invertebrate vectors. In addition, the District regularly tests for diseases carried by vectors such as insects and small mammals. The District conducts an educational program to inform property owners and the occupants of property in the District about how to protect themselves from diseases transmitted by these vectors. In May 2018, the District completed construction on a new laboratory to conduct research to support their epidemiologic and surveillance programs. This Engineer's Report was updated and clarified to reflect the current scope of services, special benefit findings, and funding approach.

Description of Vector Control Program

The Fremont Annexation assessment provides the funding to operate the program in the City of Fremont to an optimum level necessary to protect the usefulness, utility, desirability and livability of property within its jurisdictional area.

Introduction

Following are the Services and resulting level of service for the Fremont Annexation. As previously noted, the District provides a baseline level of service in the County. These Services are over and above the current baseline level of service. The formula below describes the relationship between the final level of service, the existing baseline level of service, and the enhanced level of service to be funded by the assessment.

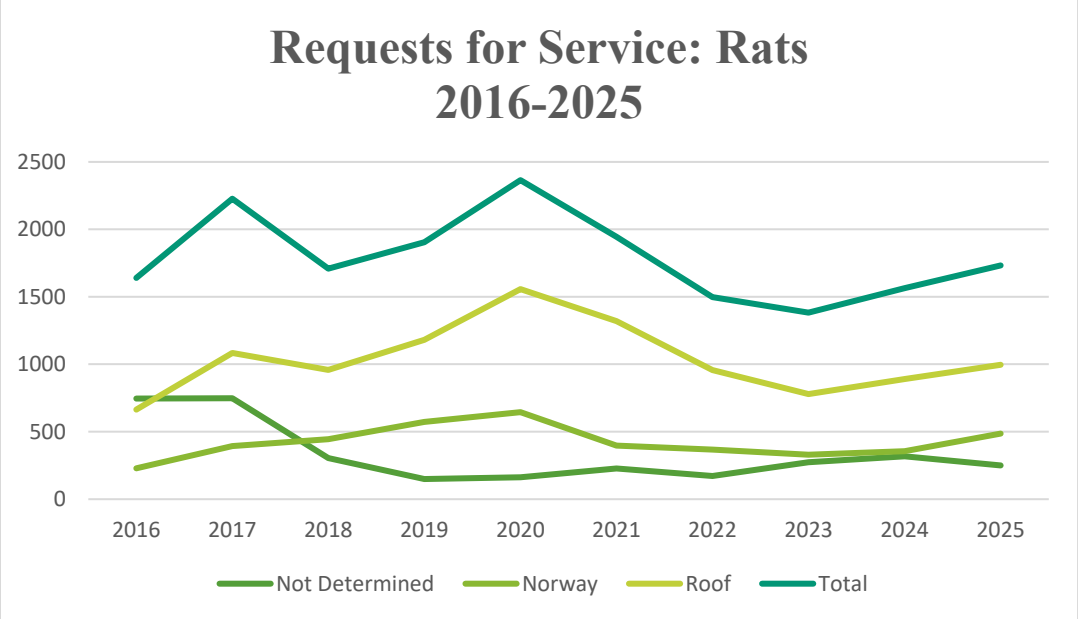
Final Level of Service	=	Baseline Level of Service	+	Enhanced Level of Service

The assessment provides funding for the enhancement of the service, surveillance, disease prevention, abatement, and control of vectors within the Service Area. Such vector control and disease prevention projects and programs include, but are not limited to, environmental modifications, biological control, disease monitoring, public education, reporting, accountability, research and interagency cooperative activities, as well as capital costs, maintenance, and operation expenses (collectively "Services"). The cost of these Services also includes capital costs comprised of equipment, capital improvements and facilities and other expenses necessary and incidental to the vector control program.

Request For Service Investigations

The District conducts investigations as requested by district residents, businesses, and other property owners, assesses the degree of the problem, and develops a remedial strategy and action plan. Service requests include vector and nuisance issues pertaining to rats and other rodents, cockroaches, flies, fleas, lice, yellow jackets, and other insects, as well as, ticks, mites, and spiders. In this capacity, District staff assists with the identification and recommended control of insects and arachnids. Also, the District surveys and controls cockroach populations in public sewers, utility boxes and storm drains, as well as controlling bees and yellowjackets, particularly when there is a public health risk.

As an example, the graph bellows shows the Service Requests for rats over a ten-year period:



Rodent Control

In 2025, the District received 2,122 service requests (1,768 rats and 354 mice) from local residents for domestic rodents, representing 40.0% of all service requests. District staff educates homeowners to make environmental and structural modifications (also known as "rodent-proofing") that will make their property less attractive and exclude these unwanted pests. In addition, the District monitors district-wide rodent-related problems, and those 2,122 rodent service requests led to staff biologists performing 14,947 field service operations related to domestic rodents. Field service operations include smoke and dye tests of sewer lines for breaks, field and residential surveys for rodent activity, recommendations and follow-up evaluations of rodent control measures, and assistance of enforcement actions.

The District conducts a year-round monitoring of local rat populations to find out where they are living and feeding, how many there are, how much and what kind of damage they are causing, and which methods to use to suppress them. This monitoring and control is targeted against commensal rats (Norway and Roof rats) and mice in residential, commercial, and business properties. In particular, the District focuses on sanitary sewers, including making inspections to locate breaks, because the breaks offer opportunities for the rats to invade new neighborhoods.

In the event of a disease outbreak or emergency, the District will employ rodent suppression to lower the rodent populations and disrupt the disease transmission cycle. As part of the District's Integrated Pest Management policy, least toxic pesticides and trapping are used when feasible.

Alameda County has had a long history of Norway rats invading homes and neighborhoods from the sanitary sewers, especially in Oakland, due to the age and cost of maintenance of the sanitary sewer system. The District has established a high priority to ensure that these rodents do not enter homes and expose occupants to potential disease pathogens. Staff responsibilities during the inspection include thorough survey of interior and exterior premises to determine the extent and severity of rodent infestations and their causative conditions. They look for active rodent signs (droppings or rub marks), rodent entries to the house, and environmental deficiencies that provide food, water, and harborage. When rat infestations present a health risk to the occupants, staff recommends a combination of tactics including removing food sources and debris, repairing deteriorated structures, "rat proofing" structures, trapping and treating with least-toxic rodenticides. Additionally, staff hands out brochures (or fact sheets) and assists city code agencies with enforcement of local ordinances when property owners fail to comply with the necessary repairs and garbage removal. Neighborhood surveys are also conducted. Neighbors are informed about the conditions that sustain and harbor rats.

Cat Fleas (*Ctenocephalides felis*) and Oriental Rat Fleas (*Xenopsylla cheopis*) Surveillance and Control

The Oriental rat flea is an important vector, capable of transmitting plague and flea-borne typhus. The cat flea is highly associated with people and pets, capable of transmitting flea-borne typhus. In 2019, the District began a surveillance program looking at the disease prevalence found within the cat flea and the Oriental rat flea from different host animals throughout the County. This surveillance program began with the completion and certification of the new Vector Control Laboratory.

Ectoparasite Surveillance on Sylvatic and Commensal Rodents and Wildlife

The District conducts ongoing surveillance among sylvatic rodents for plague and other rodent-borne diseases. Many of these rodents are found only in rural areas, particularly in east Alameda County. In addition to the Plague, sylvatic rodents may be reservoir hosts to zoonotic diseases such as Hantavirus Cardiopulmonary Syndrome (HCPS), Tularemia, Lyme disease, and Babesiosis.

The results are summarized in Table 1 on the following page:

Table 1. Ectoparasites (fleas) collected from commensal and sylvatic rodents in urban and sylvatic areas (including rodents from homeless encampments).

Host Species	Number of hosts	Number of hosts with fleas	Number of fleas	Flea species	Flea Index
SYLVATIC RODENTS					
Pinyon Mouse *Peromyscus truei*	18	0	0		0.0
Deer Mouse *Peromyscus maniculatus*	3	0	0		0.0
COMMENSAL RODENTS					
Norway Rat *Rattus norvegicus*	189	72	1070	*Xenopsylla cheopis* (1025) *Nosopsylla fasciatus* (37) *Ctenocephalides felis* (8)	5.7
Roof Rat *Rattus rattus*	9	0	0		0.0
WILDLIFE					
Desert Cottontail *Sylvilagus audubonii*	1	0	0		0.0
Fox (Tree) Squirrel *Sciurus niger*	6	4	13	*Orchopeas howardi* (12) *Hoplopsyllus anomalus* (1)	2.2
Ground Squirrel *Spermophilis beecheyi*	95	81	1143	*Oropsylla montana* (769) *Hoplopsyllus anomalus* (369) *Echidnophaga gallinacea (5)*	12.0
Jack Rabbit *Lepus californicus*	1	0	0		0.0
Mexican Free-tailed Bat *Tadarida brasiliensis*	1	1	30	*Myodopsylla gentilis (30)*	30.0
Opossum *Didelphis virginica*	9	9	423	*Ctenocephalides felis* (423) *Echidnophaga gallinacea (3)* *Nosopsyllus fasciatus (1)*	47.0
Raccoon *Procyon lotor*	7	4	10	*Pulex spp.* (6) *Ctenocephalides felis (4)*	1.4
Striped Skunk *Mephitis mephitis*	3	2	11	*Pulex spp.* (7) *Oropsylla montana* (3) *Ctenocephalides felis* (1)	3.7

Source: 2025 Alameda County Vector Control Annual Report

Hantavirus Cardiopulmonary Syndrome (HCPS) Surveillance

HPS was first recognized in 1993; it is a respiratory illness associated with breathing air containing rodent urine and feces contaminated with the Sin Nombre virus (SNV) particles. Rodents, particularly deer mice, were identified as the principal reservoir host. Occasionally, deer mice will enter buildings and potentially expose the occupants to the virus. Past surveillance conducted at various localities within the County detected 6-18% of the deer mice are infected with SNV.

In collaboration with the California Department of Public Health (CDPH), the District conducts Hantavirus surveys in an effort to minimize the transmission of HPS disease.

Wildlife Management Program

In conjunction with local animal control agencies, the District is responsible for surveillance, result notifications, and oversight of the rabies program in Alameda County. District staff responds to service requests on raccoons, skunks, bats, as well as opossums, dogs, cats, and other wild animals. The District provides rabies testing on wild animals when public health risk is involved.

District staff provides services to homeowners on exclusion techniques that make their property unattractive to these wild animals. When prevention alternatives are not possible or ineffective, the District will trap biting or nuisance animals. The District staff biologist also coordinates with the District's USDA Wildlife Specialist who evaluates potentially hazardous situations and offers consultations.

The District's USDA Wildlife Specialist responds to service requests for raccoons, skunks, coyotes, wild turkeys or opossums, and advises homeowners on how to exclude these animals coming onto their properties and causing landscape damage (and killing livestock). If required, District Vector Control Biologists may assist property owners by coordinating with the USDA Wildlife Specialist to set traps, pick up and remove the animal. The District also responds to requests concerning other nuisance wildlife such as bobcats and mountain lions and has responded to an increase in service calls for coyotes and feral pigs.

In 2025, the District responded to 1,879 service requests concerning wildlife, and those service requests led to staff performing 11,862 field service operations within or near residential areas. Most of these service calls involved raccoons, skunks, opossums, and foxes. Advice is provided to homeowners on animal exclusion methods, as well as making their property unattractive to wildlife.

Solid Waste and Nuisance Problems

The District investigates complaints regarding solid waste handling and storage problems involving garbage, human or animal waste, and odors at residential properties and businesses.

Disease Surveillance and Control

Services includes arthropod sampling, field surveillance, data collection, investigation, determination of cause, and preventative recommendations to lower the risk and exposures to animal or human diseases such as hantavirus, plague, Flea-borne Typhus, psittacosis, scabies, tularemia, Lyme disease, anaplasmosis and other tick-borne diseases.

Public Education and Information

District staff gives vector control and services presentations and provides educational materials to schools, homeowners' associations, service clubs, and other interested groups. The District also staffs public displays at health fairs, special events, and at the County fair. Finally, the District also posts the annual shellfish harvesting quarantine notices at the Alameda County bay shorelines and maintains an informational web page.

Integrated Pest Management

The District embraces and follows the County's Integrated Pest Management (IPM) guidelines to manage pests with effective and environmentally sound tactics. The process involves regular monitoring to determine pest populations and the damage they cause, reduce the amount and frequency of pesticide applications to overcome pesticide resistance, use least-toxic pesticides, encourage using cultural and physical control methods, and direct educational outreach to inform residents, businesses, and appropriate government agencies.

The District staff has demonstrated extensive knowledge and expertise in these areas. To ensure that staff is kept informed and trained, they attend continuing education workshops and in-house training to learn about emerging disease as such West Nile virus as well as new products, equipment, and safety techniques. All District Vector Control Biologists are certified by the State Health Department to perform safe and effective pest control.

The successful adoption and implementation of urban IPM program will require better understanding of the attitudes and knowledge of local residents, business owners, and participating government agencies. Most urban pest problems are the result of poor waste management, ill-advised landscaping, and improper structural maintenance. Often, these problems can be mitigated through environmental, habitat, and structural modifications that deny food, water, and harborage to the pests. Residents and business owners need to realize that they may play a role in creating pest problems and to control the pest problems will require partnership with District staff. Therefore, the District is reaching out to the community, changing their attitudes and expectations, and educating them about monitoring procedures, tolerance levels, sanitation, habit modification and least-toxic control methods.

Service Requests

The District responds to service requests within its boundaries. Any property owner, business or resident in the District may contact the District to request vector control related service or inspection and a District Vector Control Biologist will respond promptly to the particular property to evaluate the property and situation and to perform appropriate surveillance and control services. The District responds to all service requests in a timely manner, regardless of location, within its boundaries.

Estimate of Cost

Figure 1 – Cost Estimate – FY 2026-27

Alameda County Vector Control District Vector and Disease Control Assessment - Fremont Annexation		
Vector Control Services and Related Expenditures		
Vector Control and Disease Prevention Operations		$5,588,293
Materials, Utilities and Supplies		$3,517,969
Contingency		$133,234
Total Vector Control Services and Related Expenditures		**$9,239,496**
Incidental Costs[1]		
County Collection, Levy Administration, and Other Incidentals		$160,917
Total Incidental Costs		**$160,917**
Total Budget		**$9,400,413**
Less		
Contributions from Other Sources		
Revenue from other sources[2]		($8,548,431)
Total Vector & Disease Control Services and Incidentals		**$851,982**
Budget Allocation to Property		
Total Assessment Budget[3]		$851,982
	Total SFE Units[4]	67,138
	Assessment Rate per SFE[5]	**$12.69**

Consolidated ER Notes:

1. Includes allowance for uncollectable assessments from assessments on public agency parcels, county collection charges and assessment administration costs.

2. Contributions from other sources to cover the costs of any general benefits and special benefits not funded by the assessments.

3. The assessment amounts are rounded down to the even penny for purposes of complying with the collection requirements from the County Auditor. Therefore, the total assessment amount for all parcels subject to the assessments may vary slightly from the net amount to be assessed.

4. SFE Units means Single Family Equivalent Benefit Units. See method of assessment in the following Section for further definition.

5. The assessment rate per SFE is the total amount of assessment per Single Family Equivalent benefit unit.

The proceeds from the assessments will be deposited into a special fund for the Assessment. Funds raised by the assessment shall be used only for the purposes stated within this Report. Any balance remaining at the end of the fiscal year, June 30, must be carried over to the next fiscal year.

Method of Assessment

This section of the Report explains the benefits to be derived from the Services provided for property in Fremont by the District, and the methodology used to apportion the total assessment to properties within the Service Area.

The Service Area consists of the Assessor Parcels in the incorporated City of Fremont as defined within the area of the boundary diagram included within this Engineer's Report (see the Assessment Roll for a list of all the parcels included in the Service Area).

The method used for apportioning the assessment is based upon the proportional special benefits to be derived by the properties in Fremont over and above general benefits conferred on real property in the Service Area. Special benefit is calculated for each parcel in the Service Area using the following process:

1. Identification of total benefit to the properties derived from the Services
2. Calculation of the proportion of these benefits that are special vs. general
3. Determination of the relative special benefit within different areas within the Assessment District
4. Determination of the relative special benefit per property type and property characteristic
5. Calculation of the specific assessment for each individual parcel based upon special vs. general benefit; location, property type and property characteristics

Discussion of Benefit

In summary, the assessments can only be levied based on the special benefit to property. This benefit is received by property over and above any general benefits. This special benefit is received by property over and above any general benefits from the additional Services. With reference to the engineering requirements for property related assessments, under Proposition 218 an Engineer must determine and prepare a report evaluating the amount of special and general benefit received by property within the Service Area as a result of the improvements or services provided by a local agency. That special benefit is to be determined in relation to the total cost to that local entity of providing the service and/or improvements.

Proposition 218 as described in Article XIIID of the California Constitution has confirmed that assessments must be based on the special benefit to property:

> *"No assessment shall be imposed on any parcel which exceeds the reasonable cost of the proportional special benefit conferred on that parcel."*

The below benefit factors, when applied to property in the Service Area, confer special benefits to property and ultimately improve the safety, utility, functionality and usability of property in the Service Area. These are special benefits to property in the Service Area in much the same way that storm drainage, sewer service, water service, lighting, sidewalks and paved streets enhance the safety, utility and functionality of each parcel of property served by these improvements, providing them with more utility of use and making them safer and more usable for occupants.

It should also be noted that Proposition 218 included a requirement that existing assessments in effect upon its effective date were required to be confirmed by either a majority vote of registered voters in the Assessment Area, or by weighted majority property owner approval using the new ballot proceeding requirements. However, certain assessments were excluded from these voter approval requirements. Of note is that in California Constitution Article XIIID Section 5(a) this special exemption was granted to assessments for sidewalks, streets, sewers, water, flood control, drainage systems and vector control. The Howard Jarvis Taxpayers Association explained this exemption in their Statement of Drafter's Intent:

> *"This is the "traditional purposes" exception. These existing assessments do not need property owner approval to continue. However, future assessments for these traditional purposes are covered."*[3]

Therefore, the drafters of Proposition 218 acknowledged that vector control assessments were a "traditional" and therefore acknowledged and accepted use.

Since all assessments, existing before or after Proposition 218 must be based on special benefit to property, the drafters of Proposition 218 inherently found that vector and disease control services confer special benefit on property. Moreover, the statement of drafter's intent also acknowledges that any new or increased vector control assessments after the effective date of Proposition 218 would need to comply with the voter approval requirements it established. This is an acknowledgement that additional assessments for such "traditional" purposes would be established after Proposition 218 was in effect. Therefore, the drafters of Proposition 218 clearly recognized vector and disease control assessments as a "traditional" use of assessments, acknowledged that new vector and disease assessments may be formed after Proposition 218 and inherently were satisfied that vector control services confer special benefit to properties.

[3] Howard Jarvis Taxpayers Association, "Statement of Drafter's Intent", January 1997.

The Legislature also made a specific determination after Proposition 218 was enacted that vector control services constitute a proper subject for special assessment. Health and Safety Code section 2082, which was signed into law in 2002, provides that a district may levy special assessments consistent with the requirements of Article XIIID of the California Constitution to finance vector and disease control projects and programs. The intent of the Legislature to allow and authorize benefit assessments for vector and disease control services after Proposition 218 is shown in the Assembly and Senate analysis of the Mosquito Abatement and Vector Control District Law where it states that the law:

> *Allows special benefit assessments to finance vector control projects and programs, consistent with Proposition 218.* [4]

Therefore, the State Legislature unanimously found that vector and disease control services are a valuable and important public service that can be funded by benefit assessments. To be funded by assessments, vector and disease control services must confer special benefit to property.

Vector and Disease Control Is a Special Benefit to Properties

As described below, this Engineer's Report concludes that vector and disease control is a special benefit that provides direct advantages to property in the Service Area. For example, the assessment provides reduced levels of vectors on property throughout the Service Area. Moreover, the assessment will reduce the risk of the presence of diseases on property throughout the Service Area, which is another direct advantage received by property in the Service Area. Moreover, the assessment funds Services that improve the use of property and reduce the nuisance and harm created by vectors on property throughout the Service Area. These are tangible and direct special benefits that are received by property throughout the specific area covered by the Assessment.

The following section, Benefit Factors, describes how and why vector control services specially benefit properties in the Service Area. These benefits are particular and distinct from its effect on property in general or the public at large.

[4] Senate Bill 1588, Mosquito Abatement and Vector Control District Law, Legislative bill analysis

Benefit Factors

In order to allocate the assessments, the Engineer identified the types of special benefit arising from the aforementioned vector and disease control services and that would be provided to property within the Service Area. The following benefit factors have been established that represent the types of special benefit to parcels resulting from the Services financed with the assessment proceeds. These types of special benefit are as follows:

Reduced vector populations on property and as a result, enhanced desirability, utility, usability and functionality of property in Fremont.

The assessments provide enhanced services for the control and abatement of nuisance and disease-carrying vectors. These Services will materially reduce the number of vectors on properties throughout the Service Area. The lower vector populations on property in the Service Area is a direct advantage to property that will serve to increase the desirability and "usability" of property. Clearly, properties are more desirable and usable in areas with lower vector populations and with a reduced risk of vector-borne disease. This is a special benefit to residential, commercial, agricultural, industrial and other types of properties because all such properties will directly benefit from reduced vector populations and properties with lower vector populations are more usable, functional and desirable.

Excessive vectors in the area can materially diminish the utility and usability of property. For example, prior to the commencement of vector control and abatement services, properties in many areas in the State were considered to be nearly uninhabitable during the times of year when the vector populations were high.[5] The prevention or reduction of such diminished utility and usability of property caused by vectors is a clear and direct advantage and special benefit to property in Service Area.

The State Legislature made the following finding on this issue:

> *"Excess numbers of mosquitoes and other vectors spread diseases of humans, livestock, and wildlife, reduce enjoyment of outdoor living spaces, both public and private, reduce property values, hinder outdoor work, reduce livestock productivity; and mosquitoes and other vectors can disperse or be transported long distances from their sources and are, therefore, a health*

[5] Prior to the commencement of modern mosquito control services, areas in the State of California such as the Alameda County, San Mateo Peninsula, , Lake County and areas in Marin and Sonoma Counties had such high mosquito populations that they were considered to be nearly unlivable during certain times of the year and were largely used for part-time vacation cottages that were occupied primarily during the months when the natural mosquito populations were lower.

risk and a public nuisance; and professional mosquito and vector control based on scientific research has made great advances in reducing mosquito and vector populations and the diseases they transmit." [6]

Rodents and other vectors emerge from sources throughout the District. Norway Rats, for example, travel up to 300 feet from known sources and can reach multiple properties. These sources include sewers, garbage dumps, lower floors of multi-story buildings, and homeless encampments. By controlling vectors at known and new sources, the Services will materially reduce vector populations on property throughout the Service Area.

Homeless encampments are a recent and increasing source of vectors. In 2018, the District began conducting surveillance of commensal rodent and ectoparasite populations in homeless encampments within the City of Oakland. In 2025, staff biologists conducted 14 separate trapping events at seven different homeless encampments in the City of Oakland, collecting 189 Norway rats. Five Norway rat suppression applications were also conducted during 2025. The Norway rat surveillance and control operations are expected to be continued indefinitely.

Increased safety of property in Fremont.

The Assessments result in improved year-round proactive Services to control and abate vectors that otherwise would occupy properties throughout the Service Area. Vectors are transmitters of diseases, so the reduction of vector populations makes property safer for use and enjoyment. In absence of the assessments, these Services would not be provided, so the Services funded by the assessments make properties in the Service Area safer, which is a distinct special benefit to property in Fremont.[7] This is not a general benefit to property in the Service Area or the public at large because the Services are tangible vector and disease control services that are provided directly to the properties in the Service Area and the Services are over and above what otherwise would be provided by the District or any other agency.

This finding was confirmed in 2003 by the State Legislature:

"Mosquitoes and other vectors, including but not limited to, ticks, Africanized honey bees, rats, fleas, and flies, continue to be a source of human suffering, illness, death, and a public nuisance in California and around the world. Adequately funded mosquito and vector control, monitoring and public awareness programs are the best way to prevent

[6] Assembly Concurrent Resolution 52, chaptered April 1, 2003

[7] By reducing the risk of disease and increasing the safety of property, the Services will materially increase the usefulness and desirability of certain properties in the Assessment Area.

outbreaks of West Nile Virus and other diseases borne by mosquitoes and other vectors." [8]

Also, the Legislature, in Health and Safety Code Section 2001, finds that:

"The protection of Californians and their communities against the discomforts and economic effects of vector-borne diseases is an essential public service that is vital to public health, safety, and welfare."

Reductions in the risk of new diseases and infections on property in Fremont.

Some vector populations are highly mobile and may introduce new vector-borne diseases into previously unexposed areas:

"Distribution of vector-borne diseases is determined by complex demographic, environmental and social factors. Global travel and trade, unplanned urbanization and environmental challenges such as climate change can impact on pathogen transmission, making transmission season longer or more intense or causing diseases to emerge in countries where they were previously unknown."[9]

Vectors, including ticks, have proven to be a major contributor to the spread of new diseases such as Lyme disease, among others.

"In 2017, state and local health departments reported a record number of cases of tickborne disease to CDC. Cases of Lyme disease, anaplasmosis/ehrlichiosis, spotted fever rickettsiosis (including Rocky Mountain spotted fever), babesiosis, tularemia, and Powassan virus disease all increased—from 48,610 cases in 2016 to 59,349 cases in 2017. These 2017 data capture only a fraction of the number of people with tickborne illnesses. Under-reporting of all tickborne diseases is common, so the number of people actually infected is much higher.

This increase follows an accelerating trend of tickborne diseases reported in the United States. Between 2004 and 2016, the number of reported cases of tickborne disease doubled, and researchers discovered seven new tickborne pathogens that infect people. [10]

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[8] Assembly Concurrent Resolution 52, chaptered April 1, 2003.
[9] Vector-borne Diseases. World Health Organization. October 2017. https://www.who.int/news-room/fact-sheets/detail/vector-borne-diseases
[10] Record Number Of Tickborne Diseases Reported in U.S. in 2017 | Cdc Online Newsroom | Cdc https://www.cdc.gov/media/releases/2018/s1114-record-number-tickborne-diseases.html

A study of the effect of aerial spraying conducted by the Sacramento-Yolo Mosquito and Vector Control District (SYMVCD) to control a West Nile Virus disease outbreak found that the SYMVCD's mosquito control efforts materially decreased the risk of new diseases in the treated areas:

> *After spraying, infection rates decreased from 8.2 (95% CI 3.1–18.0) to 4.3 (95% CI 0.3–20.3) per 1,000 females in the spray area and increased from 2.0 (95% CI 0.1–9.7) to 8.7 (95% CI 3.3–18.9) per 1,000 females in the untreated area. Furthermore, no additional positive pools were detected in the northern treatment area during the remainder of the year, whereas positive pools were detected in the untreated area until the end of September (D.-E.A Elnaiem, unpub. data). These independent lines of evidence corroborate our conclusion that actions taken by SYMVCD were effective in disrupting the WNV transmission cycle and reducing human illness and potential deaths associated with WNV.* [11]

The Services funded by the assessments help prevent on a year-round basis the presence of vector-borne diseases on property in the Service Area. This is another tangible and direct special benefit to property in the Service Area that would not be received in absence of the assessments.

Protection of economic activity on property in Fremont.

As recently demonstrated by the SARS outbreak in China and outbreaks of Avian Flu, outbreaks of pathogens can materially and negatively impact economic activity in the affected area. Such outbreaks and other public health threats can have a drastic negative effect on tourism, business and residential activities in the affected area. The assessments help to prevent the likelihood of such outbreaks in the Fremont.

Vectors hinder, annoy and harm residents, guests, visitors, farm workers, and employees. A vector-borne disease outbreak and other related public health threats would have a drastic negative effect on agricultural, business and residential activities in Fremont.

The economic impact of diseases is well documented. According to a study prepared for the Centers for Disease Control and Prevention, economic losses due to the transmission of West Nile Virus in Louisiana was estimated to cost over $20 million over approximately one year:

> *The estimated cost of the Louisiana epidemic was $20.1 million from June 2002 to February 2003, including a $10.9 million cost of illness ($4.4 million medical and $6.5 million nonmedical costs) and a $9.2 million cost of public*

[11] Carney, Ryan. (2008), Efficiency of Aerial Spraying of Mosquito Adulticide in Reducing the Incidence of West Nile Virus, California, 2005. Emerging Infectious Diseases, Vol 14(5)

health response. These data indicate a substantial short-term cost of the WNV disease epidemic in Louisiana. [12]

Moreover, research from John Hopkins Bloomberg School of Public Health found that Lyme Disease costs the United States healthcare system an average of $3,000 per patient or between $712 million to $1.3 billion a year for the tick-borne illness. The disease significantly impacted lifestyles of those who were infected including those patients with persistent symptoms after treatment called post-treatment Lyme disease Syndrome or (PTLDS).[13]

The Services funded by the assessments help prevent the likelihood of such outbreaks on property in the Service Area and will reduce the harm to economic activity on property caused by existing vector populations. This is another direct advantage received by property in the Service Area that would not be received in absence of the assessments.

Protection of Service Area's agriculture, tourism, and business industries.

The agriculture, tourism and business industries will benefit from reduced levels of harmful or nuisance vectors. Conversely, any outbreaks of emerging vector-borne pathogens such as Plague, Hantavirus, Lyme disease, Flea-borne Typhus, and West Nile Virus could also materially negatively affect these industries. Diseases transmitted by vectors can adversely impact business and recreational functions.

A study prepared for the United States Department of Agriculture in 2003 found that over 1,400 horses died from West Nile Virus in Colorado and Nebraska and that these fatal disease cases created over $1.2 million in costs and lost revenues. In addition, horse owners in these two states spent over $2.75 million to vaccinate their horses for this disease. The study states that "Clearly, WNV has had a marked impact on the Colorado and Nebraska equine industry." [14]

Pesticides for mosquito control impart economic benefits to agriculture in general. Anecdotal reports from farmers and ranchers indicate that cattle,

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[12] Zohrabian A, Meltzer MI, Ratard R, Billah K, Molinari NA, Roy K, et al. West Nile Virus economic impact, Louisiana, 2002. Emerging Infectious Disease, 2004 Oct. Available from http://www.cdc.gov/ncidod/EID/vol10no10/03-0925.htm

[13] Lyme Disease Costs Up To $1.3 Billion Per Year To Treat, Study Finds
Barbara Benham- JH Bloomberg School of Public Health - https://www.jhsph.edu/news/news-releases/2015/lyme-disease-costs-more-than-one-billion-dollars-per-year-to-treat-study-finds.html

[14] S. Geiser, A. Seitzinger, P. Salazar, J. Traub-Dargatz, P. Morley, M. Salman, D. Wilmot, D. Steffen, W. Cunningham, Economic Impact of West Nile Virus on the Colorado and Nebraska Equine Industries: 2002, April 2003, Available from http://www.aphis.usda.gov/vs/ceah/cnahs/nahms/equine/wnv2002_CO_NB.pdf

if left unprotected, can be exsanguinated by mosquitoes, especially in Florida and other southeast coastal areas. Dairy cattle produce less milk when bitten frequently by mosquitoes [15]

The assessments serve to protect the businesses and industries and the employees and residents that benefit from these businesses and industries. This is a direct advantage and special benefit to property in the Service Area.

Reduced risk of nuisance and liability on property in Fremont

In addition to vector-borne disease risks, uncontrolled vector populations create a nuisance for the occupants of property in the Service Area. Properties in the Service Area, therefore, benefit from the reduced nuisance factor that is created by the Services.

Agricultural, range, golf course, cemetery, open space and other such lands in the Service Area contain large areas of vector habitat and are therefore a significant source of vector populations. In addition, residential and business properties in the Service Area can also contain significant sources.[16] It is conceivable that sources of vectors could be held liable for the transmission of diseases or other harm. For example, in August 2004, the City of Los Angeles approved new fines of up to $1,000 per day for property owners who don't remove standing water sources of mosquitoes on their property.

The Services serve to protect the businesses and industries in the Service Area. This is a direct advantage and a special benefit to property in the Service Area.

Improved marketability of property.

As described previously, the Services specially benefit properties in the Service Area by making them more usable, livable and functional. The Services also make properties in the Service Area more desirable, and more desirable properties also benefit from improved marketability. This is another tangible and direct special benefit to property which will not be enjoyed in absence of the Services.[17]

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[15] Jennings, Allen. (2001). USDA Letter to EPA on Fenthion IRED. United States Department of Agriculture, Office of Pest Management Policy. March 8, 2001.

[16] Sources of mosquitoes on residential, business, agricultural, range and other types of properties include removable sources such as containers that hold standing water.

[17] If one were to compare two hypothetical properties with similar characteristics, the property with lower mosquito infestation and reduced risk of mosquito-borne disease will clearly be more desirable, marketable and usable.

Benefit Finding

In summary, the special benefits described in this Report and the expansion of Services in the Fremont Annexation directly benefit and protect the real properties in the District in excess of the assessments for these properties. Therefore, the assessment engineer finds that the cumulative special benefits to property from the Services are reasonably equal to or greater than the annual assessment amount per benefit unit.

General vs. Special Benefit

Article XIIIC of the California Constitution requires any local agency proposing to increase or impose a benefit assessment to "separate the general benefits from the special benefits conferred on a parcel." The rationale for separating special and general benefits is to ensure that property owners subject to the benefit assessment are not paying for general benefits. The assessment can fund the special benefits to property in the Service Area but cannot fund any general benefits. Accordingly, a separate estimate of the special and general benefit is given in this section.

In other words:

Total Benefit	=	General Benefit	+	Special Benefit

There is no widely-accepted or statutory formula for general benefit from vector and disease control services. General benefits are benefits from improvements or services that are not special in nature, are not "particular and distinct" and are not "over and above" benefits received by other properties. General benefits are conferred to properties located "in the district,[18]" but outside the narrowly-drawn Service Area and to "the public at large." *SVTA vs. SCCOSA* provides some clarification by indicating that general benefits provide "an indirect, derivative advantage" and are not necessarily proximate to the improvements and services funded by the assessments.

[18] SVTA vs. SCCOSA explains as follows:
OSA observes that Proposition 218's definition of "special benefit" presents a paradox when considered with its definition of "district." Section 2, subdivision (i) defines a "special benefit" as "a particular and distinct benefit over and above general benefits conferred on real property located in the district or to the public at large." (Art. XIII D, § 2, subd. (i), italics added.) Section 2, subdivision (d) defines "district" as "an area determined by an agency to contains all parcels which will receive a special benefit from a proposed public improvement or property-related service." (Art. XIII D, § 2, subd. (d), italics added.) In a well-drawn

A formula to estimate the general benefit is listed below:

General Benefit	=	Benefit to Real Property Outside the Service Area	+	Benefit to Real Property Inside the Service Area that is Indirect and Derivative	+	Benefit to the Public at Large

Special benefit, on the other hand, is defined in the state constitution as "a particular and distinct benefit over and above general benefits conferred on real property located in the district or to the public at large." The *SVTA v. SCCOSA* decision indicates that a special benefit is conferred to a property if it "receives a direct advantage from the improvement (e.g., proximity to a park)." In this assessment, the overwhelming proportion of the benefits conferred to property is special, since the advantages from the vector and disease control/protection funded by the Assessments are directly received by the properties in the Service Area and are only minimally received by property outside the Service Area or the public at large.

Proposition 218 twice uses the phrase "over and above" general benefits in describing special benefit. (Art. XIIID, sections 2(i) & 4(f).) Prior to 2009, the Service Area did not receive vector and disease control related services. Today, there are vector control related benefits being provided to the Service Area the District that is over and above this baseline. Arguably, all of the Services funded by the assessment therefore are a special benefit because the additional Services would particularly and distinctly benefit and protect the Service Area over and above the previous baseline benefits and service.

Nevertheless, arguably some of the Services would benefit the public at large and properties outside the Service Area. In this report, the general benefit is conservatively estimated and described, and then budgeted so that it is funded by sources other than the assessment.

district — limited to only parcels receiving special benefits from the improvement — every parcel within that district receives a shared special benefit. Under section 2, subdivision (i), these benefits can be construed as being general benefits since they are not "particular and distinct" and are not "over and above" the benefits received by other properties "located in the district."

In the 2009 *Dahms* case, the court upheld an assessment that was 100% special benefit on the rationale that the services funded by the assessments were directly provided to property in the assessment district. Similar to the assessments in Pomona that were validated by *Dahms*, the Assessments described in this Engineer's Report fund vector and disease control services directly provided to property in the assessment area. Moreover, as noted in this Report, the Services directly reduce mosquito and vector populations on all property in the assessment area. Therefore, *Dahms* establishes a basis for minimal or zero general benefits from the Assessments. However, in this report, the general benefit is more conservatively estimated and described, and then budgeted so that it is funded by sources other than the assessment.

Calculating General Benefit

Without this assessment the City of Fremont would lack the funds to receive the Services from the District. The only service that is being provided is the vector control program assessment-funded Services. Consistent with footnote 8 of *SVTA v. SCCOSA*, and for the reasons described above, the District has determined that all parcels in the Service Area receive a shared direct advantage and special benefit from the Services. The Services directly and particularly serve and benefit each parcel, and are not a mere indirect, derivative advantage. As explained above, Proposition 218 relies on the concept of "over and above" in distinguishing special benefits from general benefits. As applied to an assessment proceeding concurrent with the annexation this concept means that all vector and disease control services, which provide direct advantage to property in the Service Area, are over and above the baseline and therefore are special.

Nevertheless, the Services provide a degree of general benefit, in addition to the predominant special benefit. This section provides a conservative measure of the general benefits from the Assessments.

Benefit to Property Outside the District

Properties within the Service Area receive almost all of the special benefits from the Services because the Services funded by the Assessments are provided directly to protect property within the Service Area from vectors and vector-borne diseases. However, properties adjacent to, but just outside of, the District boundaries may receive some benefit from the Services in the form of reduced vector populations on property outside the Service Area. Since this benefit, is conferred to properties outside the district boundaries, it contributes to the overall general benefit calculation and will not be funded by the assessment.

A measure of this general benefit is the proportion of Services that would affect properties outside of the Service Area. Each year, the District will provide some of its Services in areas near the boundaries of the City of Fremont. By abating vector populations near the borders of the Service Area, the Services could provide benefits in the form of reduced vector populations and reduced risk of disease transmission to properties outside the Service Area. If vectors were not controlled inside the Service Area, more of them would migrate from the Service Area. Therefore, control of vectors within the Service Area provides some benefit to properties outside the Service Area but within the travel range of vectors, in the form of reduced vector populations and vector-borne disease transmission.

Since domestic rodents (rats and mice) are the primary vectors that are controlled and easily travel from their source location to properties in the area, typical rodent destination ranges will be used to measure the extent that the Services will create reduced vector populations on property outside the Service Area. This is a measure of the general benefits to property outside the Service Area because this is a benefit from the Services that is not specially conferred upon property in the assessment area.

The vector potential outside the Service Area is based on studies of rodent dispersion concentrations. Domestic rodents can travel up to 300 feet, on average, so this destination range is used. A 50% reduction factor is applied to this number to better model the likelihood of vector travelling, breeding, and causing property damage outside of Fremont. This number of parcels outside the Service Area and within the destination range to measure this general benefit is calculated as follows:

CRITERIA:

Rats may travel an average of up to 300 feet from their breeding source.

840 parcels within 300 feet of, but outside of the District, with a 50% reduction factor

MAY receive some vector and disease protection benefit

62,371 Parcels in the District

Calculations:

Percentage of overall parcel equivalents = (840*.5) / 62,371 = **0.67%**

Therefore, for the overall benefits provided by the Services to the Service Area, it is determined that 0.67% of the benefits would be received by the parcels within 300 feet of the Service Area boundaries.

Benefit to Property *Inside* the District that is *Indirect and Derivative*

The "indirect and derivative" benefit to property within the Service Area is particularly difficult to calculate. As explained above, all benefit within the Service Area is special because the vector and disease control services in the Service Area would provide direct service and protection that is clearly "over and above" and "particular and distinct" when compared with the level of such protection under current conditions. Further the properties are within the Service Area boundaries and this Engineer's Report demonstrates the direct benefits received by individual properties from vector and disease control services.

In determining the Service Area area, the District was careful to limit it to an area of parcels that will directly receive the Services. All parcels directly benefit from the surveillance, monitoring and treatment provided on an equivalent basis throughout the Service Area in order to maintain the same improved level of protection against vectors and reduced vector populations throughout the area. The surveillance and monitoring sites are spread on a balanced basis throughout the area. Vector and disease control and treatment is provided as needed throughout the area based on the surveillance and monitoring results. The shared special benefit - reduced vector levels and reduced presence of vector-borne diseases - are received on an equivalent basis by all parcels in the Service Area. Furthermore, all parcels in the Service Area directly benefit from the ability to request service from the District and to have a District field technician promptly respond directly to the parcel and address the owner's or resident's service need.

The *SVTA vs. SCCOSA* decision indicates that the fact that a benefit is conferred throughout the Service Area does not make the benefit general rather than special, so long as the Service Area is narrowly drawn and limited to the parcels directly receiving shared special benefits from the service. This concept is particularly applicable in situations involving a landowner-approved assessment-funded extension of a local government service to benefit lands previously not receiving that particular service. The District therefore concludes that, other than the small general benefit to properties outside the Service Area (discussed above) and to the public at large (discussed below), all of the benefits of the Services to the parcels within the Service Area are special benefits and it is not possible or appropriate to separate any general benefits from the benefits conferred on parcels in the Service Area.

Benefit To The Public At Large

With the type and scope of Services provided to the Service Area, it is very difficult to calculate and quantify the scope of the general benefit conferred on the public at large. Because the Services directly serve and benefit all of the property in the Assessment Area, any general benefit conferred on the public at large is small. Nevertheless, there is some indirect general benefit to the public at large.

The public at large uses the public highways, streets and sidewalks, and when traveling in and through the Assessment Area they will benefit from the Services. A fair and appropriate measure of the general benefit to the public at large therefore is the amount of highway, street and sidewalk area within the Assessment Area relative to the overall land area. An analysis of maps of the Assessment Area shows that approximately 2.5% of the land area in the Assessment Area is covered by highways, streets and sidewalks. This 2.5% therefore is a fair and appropriate measure of the general benefit to the public at large within the Assessment Area

Summary of General Benefits

Using a sum of the measures of general benefit for the public at large and land outside the Assessment Area, we find that approximately 3.2% of the benefits conferred by the Vector and Disease Control Assessment may be general in nature and should be funded by sources other than the Assessment.

General Benefit Calculation

	0.67%	(Outside the Service Area)
+	0.00%	(Property within the Service Area)
+	2.50%	(Public at Large)
=	**3.17%**	**(Total General Benefit)**

This amount allocated to general benefit also covers general benefit to parcels in the Assessment Area if it is later determined that there is some general benefit conferred on those parcels.

The Vector and Disease Control Assessment total vector abatement, disease control, and capital improvement is $8,865,002. Of this total budget amount, the District contributes greater than 4% from sources other than the Vector and Disease Control Assessment. This contribution offsets any general benefits from the Vector and Disease Control Assessment Services.

Zones of Benefit

The District's vector and disease control programs, projects and Services that are funded by the Vector and Disease Control Assessment are provided in all areas within the District. Parcels of similar type in the District would receive similar vector abatement benefits on a per parcel and land area basis. Therefore, zones of benefit are not justified.

The *SVTA vs. SCCOSA* decision indicates:

> *In a well-drawn district — limited to only parcels receiving special benefits from the improvement — every parcel within that district receives a shared special benefit. Under section 2, subdivision (i), these benefits can be construed as being general benefits since they are not "particular and distinct" and are not "over and above" the benefits received by other properties "located in the district."*
>
> *We do not believe that the voters intended to invalidate an assessment district that is narrowly drawn to include only properties directly benefiting from an improvement. Indeed, the ballot materials reflect otherwise. Thus, if an assessment district is narrowly drawn, the fact that a benefit is conferred throughout the district does not make it general rather than special. In that circumstance, the characterization of a benefit may depend on whether the parcel receives a direct advantage from the improvement (e.g., proximity to park) or receives an indirect, derivative advantage resulting from the overall public benefits of the improvement (e.g., general enhancement of the district's property values).*

In the Assessment Area, the advantage that each parcel receives from the Services is direct and the boundary for the Service Area is narrowly drawn so the Service Area includes parcels that receive the similar levels of benefit from the Services. Therefore, the even spread of assessment for similar properties in the narrowly drawn Service Area within the Program is indeed consistent with the OSA decision.

Method of Assessment

As previously discussed, the Assessments fund enhanced, comprehensive, year-round vector control, disease surveillance and control Services that will reduce vector populations on property and will clearly confer special benefits to properties in the Assessment Area. These benefits can also partially be measured by the occupants on property in the Improvement District because such parcel population density is a measure of the relative benefit a parcel receives from the Improvements. Therefore, the apportionment of benefit is partially based on the population density of parcels. It should be noted that many other types of "traditional" assessments also use parcel population densities to apportion the assessments. For example, the assessments for sewer systems, roads and water systems are typically allocated based on the population density of the parcels assessed.

Moreover, assessments have a long history of use in California and are in large part based on the principle that any benefits from a service or improvement funded by assessments that is enjoyed by tenants and other non-property owners ultimately is conferred directly to the underlying property.[19]

With regard to benefits and source locations, the assessment engineer determined that since vectors may move from their breeding locations to all properties in their travel range and since many vectors are actually attracted to properties occupied by people or animals, the benefits from vector control extend beyond the source locations to all properties that are a "destination" for vectors. In other words, the control and abatement of vector populations ultimately confers benefits to all properties that are a destination of vectors, rather than just those that are source habitats of vectors.

[19] For example, in *Federal Construction Co. v. Ensign (1922) 59 Cal.App. 200 at 211*, the appellate court determined that a sewer system specially benefited property even though the direct benefit was to the people who used the sewers: "Practically every inhabitant of a city either is the owner of the land on which he resides or on which he pursues his vocation, or he is the tenant of the owner, or is the agent or servant of such owner or of such tenant. And since it is the inhabitants who make by far the greater use of a city's sewer system, it is to them, as lot owners or as tenants, or as the servants or agents of such lot owners or tenants, that the advantages of actual use will redound. But this advantage of use means that, in the final analysis, it is the lot owners themselves who will be especially benefited in a financial sense."

Although some primary vector habitats may be located outside of residential areas, residential properties can and do generate their own, often significant, populations of vector organisms. For example, broken sewer pipes in residential areas in the Service Area are a common source of rats. Since rats can travel over 300 feet, most homes in the Service Area are within the travel zone of rat habitats or could become a future vector habitat. Moreover, there are many other common residential potential breeding sources of vectors, such as miscellaneous areas under and around homes. Clearly, there is a potential for vector breeding habitats on virtually all property.

Because the Services are provided throughout the Service Area with the same level of control objective, vectors can rapidly and readily travel from their breeding locations to other properties over a large area and because there are current or potential breeding habitats literally everywhere in the Service Area, the assessment engineer determined that all similar properties have generally equivalent vector "destination" potential and, therefore, receive equivalent levels of benefit.

In the process of determining the appropriate method of assessment, the Engineer considered various alternatives. For example, a fixed assessment amount per parcel for all residential improved property was considered but was determined to be inappropriate because agricultural lands, commercial property and other property also receive benefits from the assessments. Likewise, an assessment exclusively for agricultural land was considered but deemed inappropriate because other types of property, such as residential and commercial, also receive the special benefit factors described previously.

A fixed or flat assessment was deemed to be inappropriate because larger residential, commercial and industrial properties receive a higher degree of benefit than other similarly used properties that are significantly smaller. (For two properties used for commercial purposes, there is clearly a higher benefit provided to a property that covers several acres in comparison to a smaller commercial property that is on a 0.25 acre site. The larger property generally has a larger coverage area and higher usage by employees, customers, tourists and guests that benefit from reduced vector populations, as well as the reduced threat from diseases carried by vectors. This benefit ultimately flows to the property.) Larger commercial, industrial and apartment parcels, therefore, receive an increased benefit from the assessments.

In conclusion, the assessment engineer determined that the appropriate method of assessment apportionment should be based on the type and use of property, the relative size of the property, its relative population and usage potential, and its destination potential for vectors. This method is further described below.

Assessment Apportionment

The special benefits derived from the Vector and Disease Control Assessment are conferred on property and are not based on a specific property owner's occupancy of property or the property owner's demographic status, such as age or number of dependents. However, it is ultimately people who do or could use the property and who enjoy the special benefits described above. Therefore, the opportunity to use and enjoy the region within the Service Area without the excessive nuisance, diminished "livability" or the potential health hazards brought by vectors and the diseases they carry is a special benefit to properties in the Service Area. This benefit can be in part measured by the number of people who potentially live on, work at, visit or otherwise use the property, because people ultimately determine the value of the benefits by choosing to live, work and/or recreate in the area, and by choosing to purchase property in the area.[20]

In order to apportion the cost of the Services to property, each property in the Service Area is assigned a relative special benefit factor. This process involves determining the relative benefit received by each property in relation to a single-family home, or, in other words, on the basis of Single-Family Equivalents (SFE). This SFE methodology is commonly used to distribute assessments in proportion to estimated special benefit. For the purposes of this Engineer's Report, all properties are designated a SFE value, which is each property's relative benefit in relation to a "benchmark" parcel in the Service Area. The "benchmark" property is the single-family detached dwelling on a parcel of less than one acre. This benchmark parcel is assigned one Single-Family Equivalent benefit unit or one SFE.

The calculation of the special benefit apportionment and relative benefit to properties in the Assessment Area from the Services is summarized in the following equation:

Special Benefit $_{\text{(per parcel)}}$	=	$\sum \int$ (Special Benefits, Property Specific Attributes[1])$_{\text{(per parcel)}}$

1. Such as use, property type, size, as well as vector-specific attributes such as destination potential and population potential

[20] It should be noted that the benefits conferred upon property are related to the average number of people who could potentially live on, work at or otherwise could use a property, not how the property is currently used by the present owner.

Residential Properties

Certain residential properties in the Abatement District that contain a single residential dwelling unit and are on a lot of less than or equal to one acre are assigned one Single-Family Equivalent or 1.0 SFE. Traditional houses, zero-lot line houses, and town homes are included in this category of single-family residential property.

Single-family residential properties in excess of one acre receive additional benefit relative to a single-family home on up to one acre, because the larger parcels provide more area for vector breeding sources and the District's vector and disease control Services. Therefore, such larger parcels receive additional benefits relative to a single-family home on less than one acre and are assigned 1.0 SFE for the residential unit and an additional rate equal to the agricultural rate described below of 0.0021 SFE per one-fourth acre of land area in excess of one acre. Mobile home parcels on a separate parcel and in excess of one acre also receive this additional acreage rate.

Other types of properties with residential units, such as agricultural properties, are assigned the residential SFE rates for the dwelling units on the property and are assigned additional SFE benefit units for the agricultural-use land area on the property.

Properties with more than one residential unit are designated as multi-family residential properties. These properties, along with condominiums, benefit from the Services in proportion to the number of dwelling units that occupy each property, the average number of people who reside in each property and the average size of each property in relation to a single-family home in the District. This Report analyzed Alameda County population density factors from the 2000 US Census as well as average dwelling unit size for each property type. After determining the Population Density Factor and Square Footage Factor for each property type, an SFE rate is generated for each residential property structure, as indicated in Figure 2 below.

The SFE factor of 0.46 per dwelling unit for multifamily residential properties applies to such properties with two to four units (duplex, triplex, fourplex). Properties in excess of 5 units typically offer on-site management, monitoring and other control services that tend to offset some of the benefits provided by the District. Therefore, the benefit for properties in excess of 5 units is determined to be .32 SFE per unit for the first 20 units and 0.10 SFE per each additional unit in excess of 20 dwelling units.

Figure 2 – Residential Assessment Factors

Type of Residential Property	Total Population	Occupied Households	Persons per Household	Pop. Density Equivalent	SqFt Factor	Proposed Rate
Single Family Residential	866,596	284,662	3.04	1.00	1.00	**1.00**
Condominium	103,373	37,417	2.76	0.91	0.66	**0.60**
Duplex, Triplex, Fourplex	144,626	57,815	2.50	0.82	0.56	**0.46**
Multi-Family Residential (5+ Units)	286,957	136,173	2.11	0.69	0.47	**0.32**
Mobile Home on Separate Lot	13,464	6,660	2.02	0.66	0.41	**0.27**

Source: 2000 Census, Alameda County, and property dwelling size information from the Alameda County Assessor data and other sources.

Commercial/Industrial Properties

Commercial and industrial properties receive relatively lower levels of benefit in comparison to a single-family home because they are generally open and operated for more limited times and employees of indoor businesses tend to spend less time outdoors. Since the hours of operation and the potential exposure to vectors are measures of relative benefit, commercial and industrial properties receive lower relative levels of benefit. Therefore, commercial and industrial properties are determined to receive 0.50 SFE of benefit per one-quarter acre (10,890 square feet) of land area.

The SFE values for various commercial and industrial land uses are further defined by using average employee densities because the special benefit factors described previously are also related to the average number of people who work at commercial/industrial properties.

To determine employee density factors, this Report utilizes the findings from the San Diego County Association of Governments Traffic Generators Study (the "SANDAG Study") because these findings were approved by the State Legislature which determined the SANDAG Study to be a good representation of the average number of employees per acre of land area for commercial and industrial properties. As determined by the SANDAG Study, the average number of employees per acre for commercial and industrial property is 24. As presented in Figure 3, the SFE factors for other types of businesses are determined relative to their typical employee density in relation to the average of 24 employees per acre of commercial property.

Self-storage and golf course property benefit factors are similarly based on average usage densities. Figure 3 below lists the benefit assessment factors for such business properties.

Agricultural, Rangeland, and Cemetery Properties

Utilizing research and agricultural employment reports from UC Davis and the California Employment Development Department and other sources, this Report calculated an average usage density of 0.05 people per acre for agriculture property, 0.01 for rangelands and timber and .10 for cemeteries. Since these properties typically are a source of vectors and/or are typically closest to other sources of vectors, it is reasonable to determine that the benefit to these properties is twice the usage density ratio of commercial and industrial properties. The SFE factors per 0.25 acres of land area are shown in the following Figure 3.

Figure 3 – Commercial/Industrial Benefit Assessment Factors

Type of Commercial/ Industrial Land Use	*Average Employees Per Acre [1]*	*SFE Units per Fraction Acre [2]*	*SFE Units per Acre After 5*
Commercial	24	0.500	0.500
Office	68	1.420	1.420
Shopping Center	24	0.500	0.500
Industrial	24	0.500	0.500

1. Source: San Diego Association of Governments Traffic Generators Study, University of California, Davis and other studies and sources.
2. The SFE factors for commercial and industrial parcels indicated above are applied to each fourth acre of building area or portion thereof. (Therefore, the SFE rate for any assessable parcel with 10,890 square feet or less in these categories is the SFE Units listed above.)

Figure 4 – Other Land Benefit Assessment Factors

Other Types of Land Use	*Average Employees Per Acre [1]*	*SFE Units per 1/4 Acre [2]*
Self-Storage or Parking Lot	1.00	0.021
Wineries	12.00	0.250
Golf Course	3.00	0.063
Cemeteries	1.20	0.050
Agriculture / Vineyards	0.05	0.0021
Timberland / Dry Rangeland	0.01	0.00042

1. Source: San Diego Association of Governments Traffic Generators Study, University of California, Davis and other studies and sources.
2. The SFE factors for commercial and industrial parcels indicated above are applied to each fourth acre of land area or portion thereof. (Therefore, the minimum assessment for any assessable parcel in these categories is the SFE Units listed herein.)

Vacant Properties

The benefit to vacant properties is determined to be proportional to the corresponding benefits for similar type developed properties. However, vacant properties are assessed at a lower rate due to the lack of active benefits, as measured by use by residents, employees, customers and guests. A measure of the benefits accruing to the underlying land is the average value of land in relation to improvements for developed property. An analysis of the assessed valuation data from Alameda County found that 50% of the assessed value of improved properties is classified as land value. Since vacant properties have very low to zero population/use densities until they are developed, a 50% benefit discount is applied to the valuation factor of 0.50 to account for the current low use density and potential for harm or nuisance to the property owner or his residents, employees, customers and guests. The combination of these measures results in a 0.25 factor. It is reasonable to assume, therefore, that approximately 25% of the benefits are related to the underlying land and 75% are related to the day-to-day use of the property. Using this ratio, the SFE factor for vacant parcels is 0.25 per parcel.

Other Properties

Article XIIID stipulates that publicly owned properties must be assessed unless those properties are reasonably determined to receive no special benefit from the assessment. All properties that are specially benefited are assessed. Publicly owned property that is used for purposes similar to private residential, commercial, industrial or institutional uses is benefited and assessed at the same rate as such privately owned property.

Other public properties such as watershed parcels, parks, open space parcels are determined to, on average, receive similar benefits as a single-family home. Therefore such parcels are assessed an SFE benefit factor of 1. Miscellaneous, small and other parcels such as roads, right-of-way parcels, and common areas typically do not generate significant numbers of employees, residents, customers or guests and have limited economic value. These miscellaneous parcels receive minimal benefit from the Services and are assessed an SFE benefit factor of 0.

Church parcels, institutional properties, and property used for educational purposes typically generate employees on a less consistent basis than other non-residential parcels. Many of these properties with higher population factors provide on-site management, monitoring and other control services that tend to offset some of the benefits provided by the District. Therefore, these parcels are determined to, on average, receive similar benefits as a single-family home. Therefore such parcels are assessed an SFE benefit factor of 1.

Miscellaneous, small and other parcels such as roads, right-of-way parcels, and common areas typically do not generate significant numbers of employees, residents, customers or guests and have limited economic value. These miscellaneous parcels receive minimal benefit from the Services and are assessed an SFE benefit factor of 0.

Duration of Assessment

It is proposed that the Assessment be levied for fiscal year 2026-27 and continued every year thereafter, so long as vectors remain in existence and the Alameda County Vector Control District requires funding from the Assessment for its Services in the District. As noted previously, if the Assessment and the duration of the Assessment were approved by property owners in an assessment ballot proceeding, the Assessment can continue to be levied annually after the Alameda County Board of Supervisors approves an annually updated Engineer's Report, budget for the Assessment, Services to be provided, and other specifics of the Assessment, if the assessment rate is increased. In addition, the Alameda County Board of Supervisors must hold an annual public hearing to continue the Assessment.

Appeals and Interpretation

Any property owner who feels that the assessment levied on the subject property is in error as a result of incorrect information being used to apply the foregoing method of assessment, may file a written appeal with the District Manager of the Alameda County Vector Control District or his or her designee. Any such appeal is limited to correction of an assessment during the then current fiscal year or, if before July 1, the upcoming fiscal year. Upon the filing of any such appeal, the District Manager or his or her designee will promptly review the appeal and any information provided by the property owner. If the District Manager or his or her designee finds that the assessment should be modified, the appropriate changes shall be made to the assessment roll. If any such changes are approved after the assessment roll has been filed with Alameda County for collection, the District Manager or his or her designee is authorized to refund to the property owner the amount of any approved reduction. Any dispute over the decision of the District Manager, or his or her designee, shall be referred to the Alameda County Board of Supervisors. The decision of the County Board of Supervisors shall be final.

Assessment

Whereas, the Alameda County Board of Supervisors contracted with the undersigned Engineer of Work to prepare and file a report presenting an estimate of costs of Services, a diagram for the benefit assessment area, an assessment of the estimated costs of Services, and the special and general benefits conferred thereby upon all assessable parcels within the Alameda County Vector Control District - Vector and Disease Control Assessment;

Now, **therefore**, the undersigned, by virtue of the power vested in me under Article XIIID of the California Constitution, the Government Code and the Health and Safety Code and the order of the Alameda County Board of Supervisors, hereby make the following determination of an assessment to cover the portion of the estimated cost of the Services, and the costs and expenses incidental thereto to be paid by the Vector and Disease Control Assessment.

The District has evaluated and estimated the costs of extending and providing the Services to the Service Area. The estimated costs are summarized in Figure 1 and detailed in Figure 5, below.

The amount to be paid for the Services and the expenses incidental thereto, to be paid by the Alameda County Vector Control District for fiscal year 2026-27 is generally as follows:

Figure 5 – Summary Cost Estimate – FY 2026-27

Vector Abatement & Disease Control Services	$5,588,293
Materials, Utilities and Supplies	$3,517,969
Contingency	$133,234
Total Vector Control Services and Related Expenditures	**$9,239,496**
Incidentals	$160,917
Total Budget	**$9,400,413**
Less Contributions from Other Sources:	
Revenue from other sources	($8,548,431)
Net Amount To Assessments	**$851,982**
General Contribution to Total Vector Control Services and Relate Expenditures	90.94%

An Assessment Diagram is hereto attached and made a part hereof showing the exterior boundaries of the assessment area. The distinctive number of each parcel or lot of land in the Vector and Disease Control Assessment is its Assessor Parcel Number appearing on the Assessment Roll.

I do hereby determine and apportion the net amount of the cost and expenses of the Services, including the costs and expenses incidental thereto, upon the parcels and lots of land within the Vector and Disease Control Assessment, in accordance with the special benefits to be received by each parcel or lot, from the Services, and more particularly set forth in this Engineer's Report.

The assessment determination is made upon the parcels or lots of land within the assessment area in proportion to the special benefits to be received by the parcels or lots of land, from the Services.

The assessment is subject to an annual increase tied to the Consumer Price Index-U for the San Francisco Bay Area as of December of each succeeding year (the "CPI"), with a maximum annual increase not to exceed 3%. Any change in the CPI in excess of 3% shall be cumulatively reserved as the "Unused CPI" and shall be used to increase the maximum authorized assessment rate in years in which the CPI is less than 3%. The maximum authorized assessment rate is equal to the maximum assessment rate in the first fiscal year the assessment was levied adjusted annually by the minimum of 1) 3% or 2) the change in the CPI plus any Unused CPI as described above.

The change in the CPI from December 2024 to December 2025 was 3.0365%. Therefore, the maximum assessment rate for fiscal year 2026-27 is $15.97, which is the maximum rate for fiscal year 2025-26 ($15.51) plus 3% for fiscal year 2026-27. The estimate of cost and budget in this Engineer's Report proposes assessments for fiscal year 2026-27 at the rate of $12.69, which is below the maximum authorized assessment rate.

Each parcel or lot of land is described in the Assessment Roll by reference to its parcel number as shown on the Assessor's Maps of the County of Alameda for the fiscal year 2026-27. For a more particular description of the property, reference is hereby made to the deeds and maps on file and of record in the office of the County Assessor of the County of Alameda.

I hereby place opposite the Assessor Parcel Number for each parcel or lot within the Assessment Roll, the proposed amount of the assessment for the fiscal year 2026-27 for each parcel or lot of land within the Alameda County Vector Control District- Vector and Disease Control Assessment.[21]

[21] Each parcel has a uniquely calculated assessment based on the estimated level of special benefit to the property as determined in accordance with this Engineer's Report.

Dated: April 15, 2026



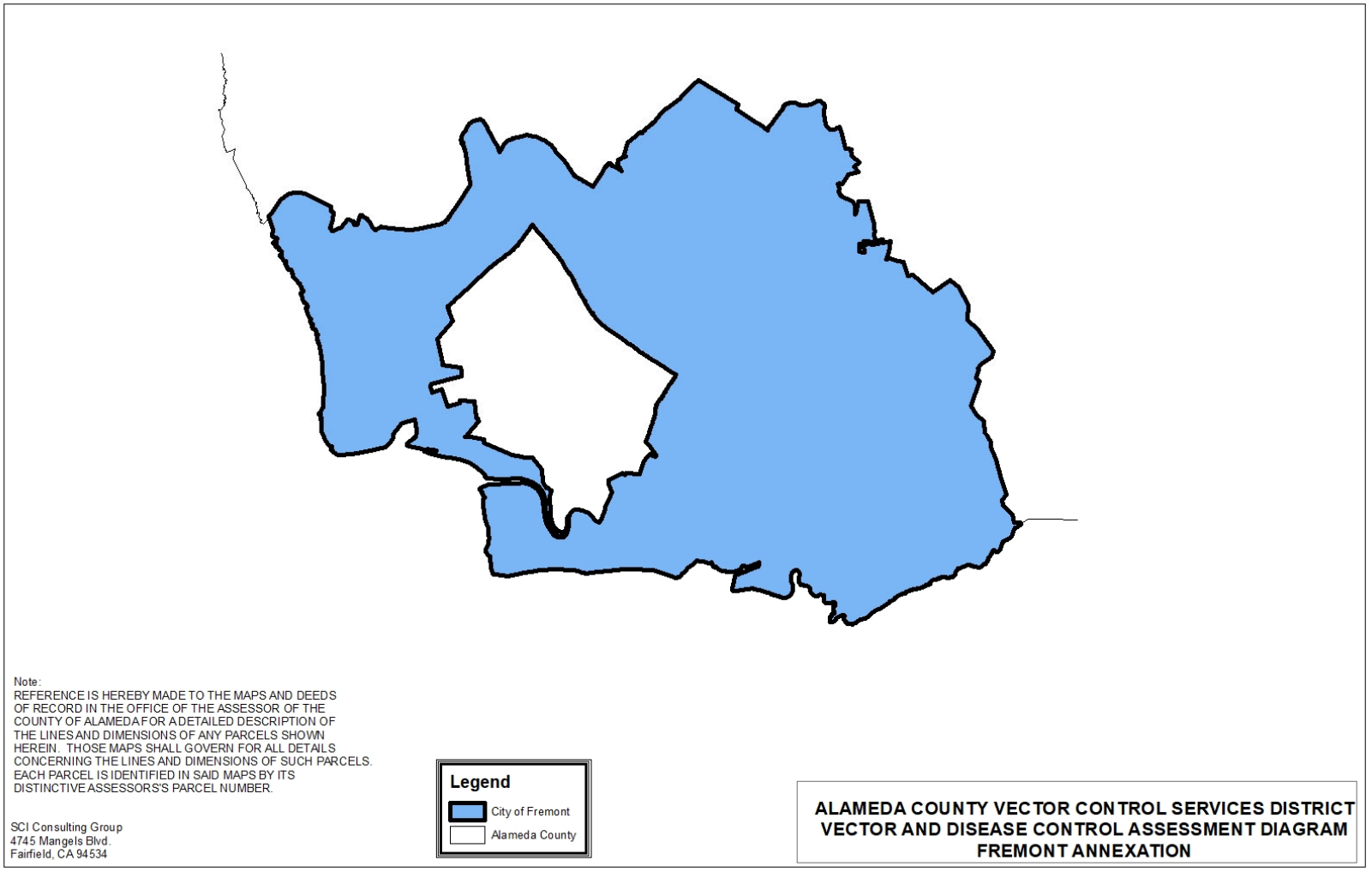
Engineer of Work

By _____

John W. Bliss, License No. C0

Assessment Diagram

The boundaries of the Vector and Disease Control Assessment Area are displayed on the following Assessment Diagram.


Note:
REFERENCE IS HEREBY MADE TO THE MAPS AND DEEDS OF RECORD IN THE OFFICE OF THE ASSESSOR OF THE COUNTY OF ALAMEDA FOR A DETAILED DESCRIPTION OF THE LINES AND DIMENSIONS OF ANY PARCELS SHOWN HEREIN. THOSE MAPS SHALL GOVERN FOR ALL DETAILS CONCERNING THE LINES AND DIMENSIONS OF SUCH PARCELS. EACH PARCEL IS IDENTIFIED IN SAID MAPS BY ITS DISTINCTIVE ASSESSORS'S PARCEL NUMBER.
SCI Consulting Group
4745 Mangels Blvd.
Fairfield, CA 94534
Legend
City of Fremont
Alameda County
ALAMEDA COUNTY VECTOR CONTROL SERVICES DISTRICT
VECTOR AND DISEASE CONTROL ASSESSMENT DIAGRAM
FREMONT ANNEXATION

Assessment Roll

Reference is hereby made to the Assessment Roll in and for the assessment proceedings on file in the office of the Alameda County Vector Control District, as the Assessment Roll is too voluminous to be bound with this Report.