Item 5-9:
Opposition to the Local Agency LAFCO Regarding City of Albany Annexation by the Mosquito Abatement District
Good Morning Albany City Council Members and Mayor,

Attached is some background information describing the existing mosquito surveillance and control services provided to the City of Albany, and our Annual Report (hard copies of the A/R will be mailed).

We value the mosquito control program we created in Albany, which is state of the art, as a great training experience for our staff to keep up to date on mosquito control in the event of some unforeseen mosquito-borne disease outbreak in the County.

As you know, we are a full service vector control special district, and match our services to the individual needs of each City. In some cities we do a lot of work at homeless camps, and others we deal with a wider variety of wildlife, oriental cockroaches, meadow vole infestations, as well as disease surveillance, such as hantavirus, and tick-borne disease surveillance. This is to make clear that a statement that Albany is getting services that other jurisdictions are not, is only part of the picture; we do what is necessary. We do not perform hantavirus, or tick-borne disease surveillance in Albany, nor oriental or American cockroach control, as we do in other cities. We have an extensive sewer baiting program for the City of Oakland to control Norway rats, which is not done in other Cities.

Sincerely,

Daniel Wilson
Community Relations
Alameda County Environmental Health Department
Vector Control Division
1131 Harbor Bay Parkway
Alameda, CA 94502
510-567-6826
Albany Mosquito Surveillance Program

The Alameda County Vector Control Services District has conducted mosquito surveillance and control in the City of Albany since 1984.

During 2018, staff biologists received 17 mosquito related service requests from Alameda County residents, though only 5 from Albany residents. Staff biologists closely monitor the known mosquito breeding sites and suppress those mosquito larval populations before they mature into adult mosquitoes.

The mosquito surveillance program also includes the trapping of adult blood-seeking female mosquitoes with Encephalitis Virus Surveillance (EVS) traps, set every two weeks from spring through fall. Captured mosquitoes are identified, counted, and tested by the District biologists for West Nile virus (WNV), and reported to the California Vector-borne Disease Surveillance System, known as CalSurv. In 2018, we set a total of 97 trap-nights and 449 female mosquitoes were captured, or an average of about 4.6 per trap night’s. EVS trap sites with mosquitoes are followed up with source search and larval treatments.

![Graph showing Mosquito Related Requests for Service (RFS) from Albany 2010 to 2019](image)

Ten-year average of 5.3 mosquito related requests for service.
Three new permanent components were added to the program in 2015. The first was our *in-house* WNV dead bird testing program. Residents report dead birds to the State WNV hotline (1-877-968-2473) and the District staff biologist collect the dead birds and delivers them back to the District laboratory for genetic testing for WNV. Previously, we submitted our dead birds to the UC Davis Arbovirus Research and Training (DART) Laboratory for testing. In 2018, no dead birds were reported to the District from the City of Albany.

The second component involves using sentinel chickens at two separate locations within the City of Albany. Blood samples from the sentinel chickens are collected and delivered to the State arbovirus laboratory (DART) for testing. In 2018, all sentinel chickens in the City of Albany tested negative for WNV, and all of 2019 tests are negative as well.

The final component is directed at the invasive mosquitoes, *Aedes aegypti* and *Aedes albopictus*. These invasive mosquitoes are capable of transmitting Zika virus, Dengue virus, and Chikungunya virus. We deployed 10 ovipositional traps to detect eggs laid by the female *Aedes* mosquitoes and no *Aedes* eggs were found in 2018, or so far in 2019.

In 2018, WNV activity in Alameda County consisted of twenty positive dead birds and fifteen positive mosquito pools. There were no human cases. None of these WNV positive birds or mosquitoes occurred in the City of Albany.

As of September 6, 2019, no West Nile Virus activity has been detected in Alameda County, though statewide, there have been 62 human cases of WNV, with 2 fatalities. The most cases (27) have been reported from Fresno County.

1. A trap-night is given for each trap being deployed per night.
Mission

The mission of the Vector Control Services 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 (yellow jackets and bees), ticks, mites, and spiders, and render 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 (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 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 potential.

• 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 wastes, 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), Malaria, Dengue fever, Chikungunya virus, Zika virus, West Nile virus, 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.

• Mosquito-borne virus surveillance for the City of Albany. This includes monitoring and controlling immature and adult mosquito populations, testing mosquitoes, sentinel chickens, and dead birds for West Nile virus activity, and reporting results to the California Department of Public Health and the residents of Albany.

• Continue an invasive mosquito surveillance program for *Aedes aegypti* and *Aedes albopictus* for the City of Albany. These invasive mosquitoes are vectors of the Zika virus, Dengue fever, and Chikungunya virus.

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

• Collect rodent ectoparasites and determine Plague and flea-borne typhus (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.
Introduction

This 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) was formed, explains how the assessments are calculated, and includes assessment tables since the CSA was formed in 1984.

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

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% voter’s 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, 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-out balloting process. Currently, the CSA is a countywide District, providing the vector control services to all 14 cities in Alameda County, and 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 a benefit assessment (BA) charged to each property parcel. In 1997, California voters approved Proposition 218, requiring that all parcel owners receive a mailed ballot regarding any proposed change in an assessment prior to imposing an increase. Since then, the District (CSA 1984-1) has not been able to increase revenues without conducting a Proposition 218 Ballot Measure.

In 2007, the SCI Consulting Group was awarded the contract by the BOS to conduct a survey among the property owners to gauge their support for a new benefit assessment. The result was an overwhelming support for a BA of $4.08 to boost the existing annual assessment rate to $10 per single-family residence.
Assessment ballots were mailed to all property owners within the 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.

In May of 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 for 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 of 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 of 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 an approval of 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 of 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 in Emeryville and Fremont regarding the proposed New Vector and Disease Control Assessment of $10 for 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 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.

Vector Control Services in 2018

Urban Rodent Surveillance and Control Operations

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 2018, the District received 2,475 requests for service (1,971 rats and 504 mice) from the public for domestic rodents, representing 37.3% of all service requests. Those 2,475 rodent service requests lead to staff biologists performing 15,271 field services operations related to domestic rodents. The 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.

Staff biologists responding to a rodent service request will carry out thorough inspections of the exterior and interior premises of a property looking for rodent harborage or activity and will 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 with approval.
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 sources, 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 2018, staff biologists found 19 broken sewer laterals and performed dye tests or smoke tests to verify the breaks.

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 2018, a total of 8,260 sewer inspections were made in Oakland. Those sewers in Oakland that had active rodent activity totaled 1,887 and they were treated with a Contrac rodenticide bait.

The District also inspected underground sewers in the City of Hayward (103 sewers inspected), and the City of Alameda (123 sewers inspected). The sewers found with active sewer rats were treated with Contrac rodenticide bait. The City of Alameda (65 sewers were baited), and the City of Hayward (50 sewers were baited). The total number of sewers inspected and baited in the County for 2018 was 8,486.

**Ectoparasite Surveillance on Sylvatic and Commensal Rodents and Wildlife**

Sylvatic rodents such as deer mice, woodrats, ground squirrels, and meadow voles are commonly found in rural and semi-rural areas of Alameda County. Many of these animals serve as reservoir hosts of zoonotic diseases such as Plague, Hantavirus Cardiopulmonary Syndrome (HCPS), 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.
<table>
<thead>
<tr>
<th></th>
<th>2018 N</th>
<th># w/ Fleas</th>
<th># of Fleas</th>
<th>Flea Species</th>
<th>Flea Index</th>
<th>Tick Species</th>
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<td><strong>SYLVATIC RODENTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Pinon Mouse <em>Peromyscus truei</em></td>
<td>42</td>
<td>11</td>
<td>23</td>
<td>Opisodosys keeni Orchopeas leucopus Hystrichopsylla occidentalis</td>
<td>0.5</td>
<td>127 larval Dermacentor occidentalis*</td>
</tr>
<tr>
<td>Deer Mouse <em>P. maniculatus</em></td>
<td>11</td>
<td>0</td>
<td>0</td>
<td></td>
<td>0.0</td>
<td>Dermacentor occidentalis (43 larva + 16 nymph)</td>
</tr>
<tr>
<td>California Mouse <em>P. californicus</em></td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>Malaraeus telchins</td>
<td>0.25</td>
<td>No ticks found</td>
</tr>
<tr>
<td>Pocket mouse <em>Chaetodipus californicus</em></td>
<td>3</td>
<td>0</td>
<td>0</td>
<td></td>
<td>0.0</td>
<td>Ixodes pacificus (2 nymphs) D. occidentalis (10 larva +3 nymph)</td>
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<tr>
<td>Meadow Vole <em>Microtus californicus</em></td>
<td>17</td>
<td>13</td>
<td>15</td>
<td>Malaraeus telchinos Orchopeas leucopus Hystrichopsylla occidentalis</td>
<td>2.1</td>
<td>Dermacentor sp. (larvae and nymph)</td>
</tr>
<tr>
<td><strong>COMMENSAL RODENTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roof Rat <em>Rattus rattus</em></td>
<td>20</td>
<td>1</td>
<td>1</td>
<td>Nosopsyllus fasciatus</td>
<td>0.05</td>
<td>No ticks found</td>
</tr>
<tr>
<td>Norway Rat <em>Rattus norvegicus</em></td>
<td>13</td>
<td>2</td>
<td>2</td>
<td>Nosopsylla fasciatus</td>
<td>0.15</td>
<td>No ticks found</td>
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<tr>
<td>House Mouse <em>Mus musculus</em></td>
<td>9</td>
<td>3</td>
<td>3</td>
<td>Leptopsylla segnis</td>
<td>0.3</td>
<td>No ticks found</td>
</tr>
<tr>
<td><strong>WILDLIFE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raccoon <em>Procyon lotor</em></td>
<td>14</td>
<td>8</td>
<td>70</td>
<td>Ctenocephalides felis Pulex simulans</td>
<td>5.0</td>
<td>Ixodes augustus (nymph) D. variabilis (2 adults)</td>
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<tr>
<td>Opossum <em>Didelphis virginiana</em></td>
<td>34</td>
<td>32</td>
<td>1236</td>
<td>C. felis Pulex simulans Nosopsyllus fasciatus</td>
<td>36.4</td>
<td>Dermacentor variabilis (adult)</td>
</tr>
<tr>
<td>Striped skunk <em>Mephitis mephitis</em></td>
<td>9</td>
<td>8</td>
<td>129</td>
<td>C. felis and Pulex simulans Echidnophaga gallinacea Holopsylla anomalus</td>
<td>14.3</td>
<td>Dermacentor variabilis (adult)</td>
</tr>
<tr>
<td>Gray fox <em>Urocyon cinereoargenteus</em></td>
<td>1</td>
<td>1</td>
<td>21</td>
<td>C. felis Pulex simulans</td>
<td>21</td>
<td>Dermacentor variabilis (2 adults) Ixodes pacificus (adult)</td>
</tr>
<tr>
<td>Bobcat <em>Lynx rufus</em></td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>C. felis</td>
<td>7</td>
<td>Ixodes pacificus (adult)</td>
</tr>
<tr>
<td>Free tail bat</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>Myodopsylla gentilis</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Ectoparasites (fleas and ticks) collected from commensal and sylvatic rodents and wildlife in urban and sylvatic areas.

* 98 ticks found on one mouse.
Hantavirus Cardiopulmonary Syndrome (HCPS) Surveillance

Hantavirus was first recognized in 1993; it is a respiratory illness spread through airborne particles of rodent urine and feces contaminated with the *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 District conducts Hantavirus surveys in the East Bay Regional Parks to increase public awareness of the disease and to reduce exposure to deer mice and the structures they may inhabit.

Seven Hantavirus (SNV) surveys were conducted in 2018. Seven sites were surveyed which included three East Bay Regional Parks, three residential sites and one city park.

The 2018 sites surveyed were:

**East Bay Regional Parks**

1. Redwood Regional Park, Redwood Road, in Oakland: Two (2) Deer mice (*P. maniculatus*), twenty-two (22) Pinion mice (*P. truei*) and four (4) California mice (*P. californicus*) were collected and tested. All mice were negative for Hantavirus (SNV).

2. Sunol Regional Wilderness, 1895 Geary Road, Sunol: Ten (10) Pinion mice (*P. truei*) were trapped and tested for Hantavirus (SNV). All mice were negative for Hantavirus (SNV).

3. Del Valle Regional Park, 7000 Del Valle Road, Livermore: Three (3) Pinion mice (*P. truei*), and one (1) Deer mouse (*P. maniculatus*) were trapped and tested for Hantavirus (SNV). All mice were negative for Hantavirus (SNV).

**Risk Assessment Hantavirus Surveys**

1. Sycamore Grove Park, City of Livermore: One (1) Deer mouse (*P. maniculatus*), six (6) Pinion mice (*P. truei*) and two (2) Meadow voles (*Microtus californicus*) were trapped and tested for hantavirus (SNV). All mice were negative for Hantavirus (CNV).

2. 9600 Norris Canyon Road, Castro Valley: One (1) Deer mouse (*P. maniculatus*), and one (1) Pinion mouse (*P. truei*) were trapped and tested for Hantavirus (SNV). All mice were negative for Hantavirus (SNV).

3. 165 Mission Road, Fremont: Two (2) Meadow voles (*Microtus californicus*) were trapped and tested for Hantavirus (SNV). All voles were negative for Hantavirus (SNV).

4. Serenity Terrace, Pleasanton: One (1) Deer mouse (*P. maniculatus*) was trapped and tested for Hantavirus (SNV). All mice were negative for Hantavirus (SNV).

California Department of Public Health in Richmond tested the mice for Hantavirus (SNV).
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 and flea-borne typhus.

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 continued through all of 2018 and will continue indefinitely. Staff biologists conducted eleven (11) separate trapping events at five (5) different homeless encampments around the City of Oakland.

Staff biologists set out live-wire 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 (cat fleas, *Ctenocephalides felis* and Oriental rat fleas, *Xenopsylla cheopis*) are sorted by species and tested for pathogens, specifically *Rickettsia felis* and *Rickettsia typhi*.

Suppression was conducted during 2018 at two of the homeless encampments where Norway rat populations were determined to be extremely high. Burrows were baited with rodenticide and rat carcasses were 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 the encampments.

<table>
<thead>
<tr>
<th></th>
<th>Different Homeless Encampments Surveyed</th>
<th>Separate Trapping Events</th>
<th>Norway Rats Trapped</th>
<th>Fleas Collected for Disease Testing</th>
<th>Rodenticide Applications for Norway Rat Suppression</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017-2018</td>
<td>5</td>
<td>11</td>
<td>180</td>
<td>429</td>
<td>8</td>
</tr>
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</table>

*Table 2. Homeless encampment data.*
Commensal Rodent Surveillance and Control

The Alameda County Vector Control Services District conducts surveillance of commensal rodents throughout the County. Rodents are either trapped as part of on-going population monitoring and disease surveillance, or in conjunction with Requests for Service initiated by a resident or business owner. The following species were collected in 2018: House/field mouse (*Mus musculus*), Roof rat (*Rattus rattus*), Norway rat (*Rattus norvegicus*), fox squirrels (*Sciurus niger*) and ground squirrels (*Spermophilus beecheyi*). Animals were combed for ectoparasites and fleas were tested as part of the county-wide flea-borne typhus surveillance program.

<table>
<thead>
<tr>
<th>Species Collected</th>
<th># of Specimens Collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>House/field mouse (<em>Mus musculus</em>)</td>
<td>6</td>
</tr>
<tr>
<td>Roof rat (<em>Rattus rattus</em>)</td>
<td>20</td>
</tr>
<tr>
<td>Norway rat (<em>Rattus norvegicus</em>)</td>
<td>51</td>
</tr>
<tr>
<td>Fox squirrel (<em>Sciurus niger</em>)</td>
<td>4</td>
</tr>
<tr>
<td>Ground squirrel (<em>Spermophilus beecheyi</em>)</td>
<td>40</td>
</tr>
</tbody>
</table>

Table 3. Commensal rodents collected for ectoparasite surveillance.

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

The Alameda County Vector Control Services District began a surveillance program looking at the disease prevalence found within the cat flea (*Ctenocephalides felis*) and the Oriental rat flea (*Xenopsylla cheopis*) from different host animals throughout the County in 2018.

This work is in conjunction with our flea-borne typhus disease surveillance that began in earnest in 2018 with the completion and certification of our new Vector Control Laboratory. We are focusing on two flea species, the cat flea and the Oriental rat flea. The cat flea is cosmopolitan in nature and found worldwide. It is highly associated with people and pets and is a vector of flea-borne typhus, *Rickettsia typhi*, which causes cases of human pathogenicity. It is also a competent vector of *Rickettsia felis*, a newly described *Rickettsial* species that has been linked to human illness in other parts of the world. The Oriental rat flea is the main insect vector of plague and flea-borne typhus worldwide, and we have historical populations of both fleas and associated rodent hosts in Alameda County.

Flea-borne Typhus Surveillance

*Rickettsial* diseases are found worldwide and are transmitted to humans via an arthropod host, specifically fleas, lice, ticks and mites. Human cases of flea-borne typhus occur worldwide, but primarily in tropical and coastal regions. In the United States most cases occur in Texas, Hawaii and California, with approximately 300 human cases per year.

*Rickettsia typhi*, is a pathogen associated with the rat flea and *Rickettsia felis*, is a pathogen associated with the cat flea. These are responsible for most human flea-borne rickettsioses worldwide. Los Angeles and Orange counties are known endemic areas for flea-borne rickettsioses. Previous studies conducted in

<table>
<thead>
<tr>
<th>Species Combed for Fleas</th>
<th># of Animals Combed</th>
<th># with Fleas</th>
<th># of fleas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field/House Mouse (<em>Mus musculus</em>)</td>
<td>9</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Feral cats (<em>Felis silvestris</em>)</td>
<td>21</td>
<td>21</td>
<td>188</td>
</tr>
<tr>
<td>Fox squirrel (<em>Sciurus niger</em>)</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Grey fox (<em>Urocyon cinereoargenteus</em>)</td>
<td>1</td>
<td>1</td>
<td>21</td>
</tr>
<tr>
<td>Ground squirrel (<em>Spermophilus beecheyi</em>)</td>
<td>40</td>
<td>34</td>
<td>227</td>
</tr>
<tr>
<td>Norway rat (<em>Rattus norvegicus</em>)</td>
<td>19</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Opossum (<em>Dedelphis virginiana</em>)</td>
<td>34</td>
<td>16</td>
<td>416</td>
</tr>
<tr>
<td>Raccoon (<em>Procyon lotor</em>)</td>
<td>14</td>
<td>4</td>
<td>41</td>
</tr>
<tr>
<td>Roof rat (<em>Rattus rattus</em>)</td>
<td>20</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Striped skunk (<em>Mephitis mephitis</em>)</td>
<td>9</td>
<td>6</td>
<td>78</td>
</tr>
<tr>
<td>Vole (<em>Microtus californicus</em>)</td>
<td>5</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>176</td>
<td>93</td>
<td>989</td>
</tr>
</tbody>
</table>

Table 4. Flea surveillance data.
Sacramento and Contra Costa counties showed the presence of *Rickettsia felis* from fleas collected from cats. We collected cat fleas (*Ctenocephalides felis*), and Oriental rat fleas (*Xenopsylla cheopis*), from Norway rats trapped from homeless camps and tested them for the presence of *Rickettsia*. Additionally, fleas collected from feral cats, raccoons and opossums were tested for the presence of *Rickettsia*.

Sick, injured, or nuisance raccoons and opossums were trapped from several locations within the County and combed for ectoparasites. Feral cats obtained from animal shelters and veterinary clinics within Alameda County were combed for ectoparasites. Once the fleas are collected, they are sorted by species and then tested using standard molecular techniques for the presence of *Rickettsia*.

To date, we have found *Rickettsia felis* in fleas from animals collected from the following cities: Alameda, Oakland, Hayward, Union City, Fremont, Newark, San Leandro and Pleasanton. However, no recent reports of flea-borne rickettsioses are known from Alameda County.

<table>
<thead>
<tr>
<th>Host Animal</th>
<th>Number of Animals</th>
<th>Total Number of Cat Flea Pools (5 fleas/pool)</th>
<th>Number of Positive Cat Flea Pools</th>
<th>Infection Prevalence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feral Cat</td>
<td>14</td>
<td>57</td>
<td>10</td>
<td>17.5</td>
</tr>
<tr>
<td>Norway Rat</td>
<td>41</td>
<td>54</td>
<td>10</td>
<td>18.5</td>
</tr>
<tr>
<td>Opossum</td>
<td>20</td>
<td>111</td>
<td>30</td>
<td>27.0</td>
</tr>
<tr>
<td>Raccoon</td>
<td>5</td>
<td>7</td>
<td>3</td>
<td>42.8</td>
</tr>
</tbody>
</table>

*Table 5. Positive Cat Flea Pools from Feral Cats, Norway Rats, Opossums, and Raccoons for Rickettsia felis.*

<table>
<thead>
<tr>
<th>Host Animal</th>
<th>Number of Animals</th>
<th>Total Number of Oriental Rat Flea Pools (5 fleas/pool)</th>
<th>Number of Positive Oriental Rat Flea Pools</th>
<th>Infection Prevalence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway Rat</td>
<td>62</td>
<td>116</td>
<td>2</td>
<td>1.72</td>
</tr>
</tbody>
</table>

*Table 6. Positive Oriental Rat Flea pools from Norway rats for Rickettsia felis.*

**Ixodes pacificus** Tick Surveillance Program

Western blacklegged tick *Ixodes pacificus* (*I. pac.*) is the primary vector of *Borrelia burgdorferi* (Lyme disease) and most likely *Borrelia miyamotoi* (*B. miyamotoi* disease). Lyme disease is the most reported vector-borne disease in the United States and a number of cases are reported in Alameda County every year. The District established the tick surveillance program to provide information about the risk of tick-borne diseases to Alameda County residents.

In 2018, 23 sites in six East Bay Regional parks and two city parks were selected as sites of interest based on previous surveillance data, habitat types and human

<table>
<thead>
<tr>
<th>Park</th>
<th>Number of <em>I. pac</em> Nymphs Collected</th>
<th>Number of <em>I. pac</em> Adults Collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joaquin Miller Park, Oakland</td>
<td>579</td>
<td>31</td>
</tr>
<tr>
<td>Anthony Chabot Regional Park</td>
<td>155</td>
<td>121</td>
</tr>
<tr>
<td>Redwood Regional Park</td>
<td>102</td>
<td>534</td>
</tr>
<tr>
<td>Garin Regional Park</td>
<td>26</td>
<td>559</td>
</tr>
<tr>
<td>Pleasanton Ridge Regional Park</td>
<td>728</td>
<td>174</td>
</tr>
<tr>
<td>Augustin Bernal Park, Pleasanton</td>
<td>63</td>
<td>137</td>
</tr>
<tr>
<td>Del Valle Regional Park</td>
<td>33</td>
<td>93</td>
</tr>
<tr>
<td>Sunol Regional Parks</td>
<td>45</td>
<td>9</td>
</tr>
</tbody>
</table>
risk of vector exposure. These sites were monitored for abundances of nymphal and adult *I. pac.* ticks using a flagging method. In total, 1,731 *I. pac.* nymphs and 1,658 *I. pac.* adults were collected over the course of 93 collection events.

Tick densities varied between sites and time of year. The highest densities were found in Pleasanton Ridge Regional Park (59 nymphs per hour) and Redwood Regional Park (111 adults per hour).

The District continues surveillance of sites along trails where *Borrelia* spp. was found in ticks. 197 individual nymphs and 45 adults in nine pools were tested using real-time PCR for presence of *Borrelia sensu lato (Bbsl)* and *Borrelia miyamotoi (B.miy).* This was the first year using real-time PCR which is a rapid and high sensitive method for molecular testing. Five nymphs and one adult pool from Joaquin Miller Park were positive for *Bbsl*. In addition, one nymph from the same park was positive for *B.miy.*

*Bbsl* infection prevalence of 3-4% and *B.miy.* infection prevalence of 1% in *I.pac.* nymphs are typical for the county and do not indicate an elevated risk.

<table>
<thead>
<tr>
<th>Park (number of surveillance sites)</th>
<th>Number of <em>I.pac.</em> Nymphs Tested</th>
<th>Number of <em>Bbsl</em> Positives (Infection prevalence, %)</th>
<th>Number of <em>B.miy.</em> Positives (Infection prevalence, %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joaquin Miller Park (4)</td>
<td>133</td>
<td>5 (3.8%)</td>
<td>1 (0.8%)</td>
</tr>
<tr>
<td>Redwood Regional Park (1)</td>
<td>20</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Pleasanton Ridge Regional Park (3)</td>
<td>44</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

In 2018, the District concluded a study of adult tick movement using a “mark-release” method. 5.8% of marked female *I. pacificus* and 18.5% of marked *Dermacentor occidentalis* ticks were recaptured 30 meters from the release site indicating ticks do move considerable distances.

**Rabies Surveillance**

The authority for the Rabies Program is the responsibility of the County Health Officer at the Department of Public Health, 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 administrate 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 are euthanized, their heads removed and submitted to the Alameda County Public Health Laboratory (ACPHL) for rabies testing.

If requested, the District also investigates with Animal Control Agencies 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. The District submitted 141 animal heads, including bats, cats, dogs, foxes, opossums, raccoons, and skunks to the ACPHL for rabies testing in 2018. Two (2) bats collected from Piedmont and Livermore tested positive for the rabies virus. The ACPHL also reported that two skunks (**) sent in for testing had inconclusive results due to a deteriorated brain that had no tissue available for testing.

Wildlife Management Programs

In 2018, the District responded to 2,325 service requests concerning wildlife, and those service requests lead to staff performing 12,205 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 assist property owners by coordinating with the District’s USDA Wildlife Specialist (WS) who uses integrated pest management (IPM) techniques and offers a wide range of preventive (indirect control) and population reduction (direct control) methods. Below is a breakdown of the common wildlife nuisance species that account for the most service requests.

Raccoons

In 2018, the District responded to 773 service requests related to raccoon problems. Raccoons often den in backyards, beneath decks, under homes, or in attics; they feed on backyard fruits, insects, vegetables, garbage, and pet foods left outside overnight. At certain times of the year, they also dig for beetle grubs in lawns and can cause significant property damage. Raccoon “grubbing” on lawns was the leading reason 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 the lawn.

Young raccoons are generally born in April/May. Female raccoons readily nest and care for the young in attics and crawlspaces. This can result in urine and feces accumulating inside homes; creating an objectionable odor and a public health risk. These situations account for the second most common service requests we receive for raccoons. Eviction and exclusion are the keys to eliminating den sites in structures. Raccoon eviction fluid and one-way doors 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.

Skunks

Skunk problems were the second most common wildlife-related service request, totaling 567 service requests. 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 crawlspaces of homes. Additionally, skunks can be a carrier of rabies in California, creating a potential 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 an approved insecticide to control grubs and other insects, thus discouraging grubbing behavior.
Mosquito Surveillance Programs

The Alameda County Vector Control Services District conducts mosquito surveillance and suppression in the City of Albany.

In 2018, staff biologists received 17 mosquito related service requests from Albany residents. Staff biologists closely monitor the known mosquito breeding sites and suppress those mosquito larval populations before they mature into adult mosquitoes. The mosquito surveillance program also includes the trapping of adult blood-seeking female mosquitoes with Encephalitis Virus Surveillance (EVS) traps set every two weeks from spring through fall. Captured mosquitoes are identified, counted, and tested by the District biologists for West Nile virus (WNV), and reported to the State of California. In 2018, a total of 97 trap nights were performed and 449 female mosquitoes were captured.

Three new components were added to the program in 2015 and continued into 2018. The first was a WNV dead bird testing program. Residents report dead birds to the State WNV hotline and the District staff biologist collects the dead birds and delivers them back to the District laboratory for genetic testing for WNV. In 2018, no dead birds were reported to the District from the City of Albany. The second component involves using sentinel chickens at two separate locations within the City of Albany. Blood samples from the sentinel chickens are collected and delivered to the State arbovirus laboratory for testing. In 2018, all sentinel chickens in the City of Albany tested negative for WNV. The final component is directed at the invasive mosquitoes, Aedes aegypti and Aedes albopictus. These invasive mosquitoes are capable of transmitting Zika virus, Dengue virus, and Chikungunya virus. Ovipositional traps (10) were deployed to detect eggs laid by the female Aedes mosquitoes and no Aedes eggs were found in 2018.

In 2018, WNV activity in Alameda County consisted of twenty (20) positive dead birds and fifteen (15) positive mosquito pools. There were no human cases. None of these WNV positive birds or mosquitoes occurred in the City of Albany.

Venomous Arthropods Programs

Venomous arthropods include mites, ticks, spiders, wasps (and other insects) that can sting, bite, secrete venoms, and cause allergic reactions in humans and domestic pets. The District received 591 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 insect and advise residents on how best to control the insect while minimizing the risks of bites and stings.

Staff biologists treat yellowjacket and wasps nests located near residential and public areas because of the public health risk these insects may pose. Staff biologists may contact bee keepers to safely remove bee swarms and hives when possible. They also work quickly to treat wasp and yellowjacket nests. In addition, the District has an agreement with the East Bay Regional Park District (EBRPD) to control ground nesting yellowjackets within county parks. In 2018, the District responded to 329 venomous wasps and 128 honeybee complaints.

Miscellaneous Arthropod Programs

In 2018, the District responded to service requests on a variety of nuisance pests such as ants (10), cockroaches (248), flies (68) and fleas (76) infesting homes, yards, and commercial facilities. Our vector ecologist frequently identifies insect 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 their 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, was first recorded in Alameda County in 2013 and continues to be monitored by our staff.

Bed bugs continue to be a difficult nuisance pest problem in Alameda County. The District responded to 210 bed bug service requests in 2018. New community-based programs are being developed to educate and control the spread of bed bugs throughout low-income housing, multi-family units, rapid transit systems, recreational facilities, hotels and motels, and residential properties.

**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 2018, between May and June, two cases of alleged swimmer’s itch were reported at Robert W. Crown Memorial State Beach in Alameda. Cases at Crown Memorial Beach in Alameda typically occur during low or extremely low tides. This year there were twenty-eight (28) cases of swimmer’s itch reported at Shadow’s Cliff in Pleasanton from the end of July to mid-August. The facility is posted for swimmer’s itch. None of these cases were diagnosed, they were all 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.

**Inventoried Animal Holding Facilities Programs**

The District maintains an inventory of stables and kennels and inspect them occasionally to prevent nuisance problems such as odors, insects, or rodents. Upon request by the Alameda County Animal Control, animal hobbyist facilities are inspected during annual permit renewal. Currently, there is no statutory requirement or authority to inspect pet shops, animal grooming salons or livestock holding facilities; however, when there are nuisance complaints, we will conduct inspections.

**Nuisance Abatement Programs**

Garbage, rubbish, abandoned vehicles, furniture/appliances, and animal manure stockpiles can become public nuisances when left unattended prior to disposal. In addition, these nuisances provide harborage and food sources for rodents, flies, and other pests that might result in disease transmission to humans. In 2018, staff biologists responded to 149 nuisance service requests of furniture, garbage, abandoned vehicles, overgrown vegetation, or rubbish. This resulted in 551 field services that included investigations, progress assessments, correspondence, and compliance inspections. When necessary, staff biologists work with local code enforcement agencies to seek compliance to mediate problems.

**Public Information and Educational Activities**

We attract a large audience through our web site, social media such as Facebook, media contacts, group presentations, and event participations. Our District continues to expand its outreach program to the public and our ethnically diverse communities. In addition to issuing press releases, we 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, which it continued to enhance and
update during 2018. The public can access information on current vector and public health issues such as Zika virus, and the user-friendly on-line form simplifies service requests.

The District provides an on-going educational program aimed at “rental property management professionals” regarding bed bugs. Our goal is to be an educational resource to help the rental property owners, managers, tenants and the Alameda County public to effectively respond to the bed bug infestations in housing. Staff also provided a Bed Bug Occupational-Safety Workshop to Homeless Services providers and professionals, whom in their daily duties visiting clients, may encounter bed bugs or other ectoparasites.

The District provided twenty-three (23) vector management educational training sessions to other statewide and local organizations. Of these, district staff spoke about District research and projects at the Mosquito and Vector Control Association of California's (MVCAC) 2018 Annual Conference to five hundred attendees and gave three presentations at the California Environmental Health Association’s (CEHA) Annual Conference. Our staff also provided six presentations at the 28th Vertebrate Pest Conference, and one presentation at the 48th Annual Society of Vector Ecologists (SOVE) Annual Conference.

Mussel Quarantine (due to dangerous levels of paralytic shellfish poisoning (PSP) toxins) and “Bay Caught Fish” advisory signs were posted along the Alameda County shoreline to inform the public about the risks of consuming local shellfish and fish. Our Community Relations Coordinator designed a multi-language mussel quarantine sign for permanent posting from May 1st thru October 31st.

**Community Events Programs**

Staff biologists attended over forty-four (44) days of community events including city fairs, health events, schools, and organizations throughout the county. Among them were the Fremont Earth Day, Oakland and Eden Area Ag Day, San Leandro Cherry Festival, Peralta College Eco Fest, Alameda County sponsored Emergency Preparedness Information Fair in Castro Valley, Chinatown Lions Club Emergency Preparedness Fair, Fremont Festival of the Arts, Fremont India Festival, Hayward Zucchini Festival, Oakland Chinatown Street-Fest, Albany Solano Stroll, Dublin’s St. Patrick’s Day, Newark Days, Hayward Science in the Park, and many other local venues. The staff biologists also provided educational support at the District’s booth during the twenty (20) day Alameda County Fair. The events in which we participated attracted almost 1.5 million visitors.

**City of Berkeley Vector 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 field services within Berkeley to enhance their program.

In 2018, the City of Berkeley responded to and investigated a total of 576 service requests and complaints in the following categories: rodents (255), vegetation overgrowth (4), field services for sewer inspections and baiting (340), wildlife (30), venomous and miscellaneous arthropods (179), nuisance abatement (37), sewage (0) and general surveys (57). The City participated in no community
events. The District staff assisted in monitoring, surveillance and clean-up of three homeless encampments within the city that included the South Aquatic Park, Adeline and Fairview, and Shattuck Avenue Businesses.

**Integrated Pest Management**

The District participates in a countywide Integrated Pest Management policy set in place by the Board of Supervisors. Most of the 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.

**Pesticide Use Summary for ACVCSD, 2018**

<table>
<thead>
<tr>
<th>Pesticide</th>
<th>Manufacturer</th>
<th>Formulation</th>
<th>Target Pest</th>
<th>Amount Used</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contrac Super Blox</td>
<td>Bell Labs</td>
<td>8 oz Block</td>
<td>Domestic Rodents</td>
<td>987 lbs</td>
<td>146*</td>
</tr>
<tr>
<td>Contrac Pellets</td>
<td>Bell Labs</td>
<td>Pellet</td>
<td>Domestic Rodents</td>
<td>99.56 lbs</td>
<td>6</td>
</tr>
<tr>
<td>Delta Dust</td>
<td>Bayer Environmental Science</td>
<td>Insecticidal Dust</td>
<td>Fleas/ Yellowjackets/ Wasps</td>
<td>3.02 lbs</td>
<td>26</td>
</tr>
<tr>
<td>Ditrac Tracking Powder</td>
<td>Bell Labs</td>
<td>Insecticidal Dust</td>
<td>Domestic Rodents</td>
<td>2 lbs</td>
<td>1</td>
</tr>
<tr>
<td>Drione Dust</td>
<td>Bayer Environmental Science</td>
<td>Insecticidal Dust</td>
<td>Yellowjackets/ Wasps</td>
<td>19.33 lbs</td>
<td>134</td>
</tr>
<tr>
<td>Zoecon Altosid XR-G</td>
<td>Wellmark International</td>
<td>Granule</td>
<td>Mosquito Larvae</td>
<td>6.1 oz</td>
<td>2</td>
</tr>
<tr>
<td>LaForce Roach Gel Bait</td>
<td>Bayer Environmental Science</td>
<td>Gel</td>
<td>Cockroaches</td>
<td>10.44 lbs</td>
<td>58</td>
</tr>
<tr>
<td>Prescription Treatment Brand P. I.</td>
<td>Whitmire</td>
<td>Aerosol Spray</td>
<td>Yellowjackets/ Wasps</td>
<td>11.5 lbs</td>
<td>7</td>
</tr>
<tr>
<td>EcoEXEMPT Wasp &amp; Hornet Killer</td>
<td>Prentiss</td>
<td>Aerosol Spray</td>
<td>Yellowjackets/ Wasps</td>
<td>4.19 lbs</td>
<td>4</td>
</tr>
<tr>
<td>Victor Poison-free Wasp &amp; Hornet Killer</td>
<td>Woodstream</td>
<td>Aerosol Spray</td>
<td>Yellowjackets/ Wasps</td>
<td>2.56 lbs</td>
<td>5</td>
</tr>
<tr>
<td>Wasp Freeze</td>
<td>Whitmire</td>
<td>Aerosol Spray</td>
<td>Yellowjackets/ Wasps</td>
<td>1.33 lbs</td>
<td>5</td>
</tr>
<tr>
<td>Wasp-X</td>
<td>Wellmark International</td>
<td>Aerosol Spray</td>
<td>Yellowjackets/ Wasps</td>
<td>1.94 lbs</td>
<td>6</td>
</tr>
<tr>
<td>ProVerde Wasp &amp; Hornet Killer</td>
<td>Envance Technologies</td>
<td>Aerosol Spray</td>
<td>Yellowjackets/ Wasps</td>
<td>4 oz</td>
<td>3</td>
</tr>
<tr>
<td>Altosid XR Briquets</td>
<td>Wellmark International</td>
<td>Briquet</td>
<td>Mosquito Larvae</td>
<td>2 oz</td>
<td>2</td>
</tr>
<tr>
<td>PT Wasp Freeze II</td>
<td>BASF</td>
<td>Aerosol Spray</td>
<td>Yellowjackets/ Wasps</td>
<td>6.69 lbs</td>
<td>18</td>
</tr>
<tr>
<td>Fastrack Pellets</td>
<td>Bell Labs</td>
<td>Pellet</td>
<td>Domestic Rodents</td>
<td>14 oz</td>
<td>2</td>
</tr>
</tbody>
</table>

*One rodent application is one day of rodent sewer inspecting and baiting. The total number of sewers inspected in 2018 were 8,486.
Pesticide Use for Berkeley, 2018

<table>
<thead>
<tr>
<th>Pesticide</th>
<th>Manufacturer</th>
<th>Formulation</th>
<th>Target Pest</th>
<th>Amount Used</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talon</td>
<td>Syngenta</td>
<td>5 oz wax block</td>
<td>Norway rats</td>
<td>106 lbs</td>
<td>14</td>
</tr>
<tr>
<td>Drione Dust</td>
<td>Bayer</td>
<td>Insecticide Dust</td>
<td>Yellowjackets/Wasps</td>
<td>2 oz</td>
<td>38</td>
</tr>
</tbody>
</table>

1. Total number of sewers inspected and baited were 340.

1. District initiated includes disease surveillances and services to Sunol and Berkeley.
From 1984 to 2007, the CSA Vector Control Benefit Assessment (Initial Benefit Assessment) was based on land/property use as classified by the Assessor’s Office. A basic assessment rate was established as a single benefit unit (BU), which was applied to the schedule for assessments according to land/property use.

In the Post Proposition 218 (Secondary Benefit Assessment) formulas (approved by voters in 1997), the BU rate was established based on the number of people who potentially live on or work at the various types of property. The methodology determined by the ratio of population density factors in relation to the usage density for different types of property. In general, larger properties such as parking lots, self-storage, industrial properties and golf courses will be assessed.
in a lower BU under the Post Proposition 218 rate. The table below depicts some of the differences between the two rate calculation methods.

### Land/Property Use Categories

<table>
<thead>
<tr>
<th>Property Use Categories</th>
<th>CSA Vector Control Benefit Units/Per Property Type (Initial Benefit Assessment)</th>
<th>CSA Vector Control Benefit Units/Per Property Type (Secondary Benefit Assessment)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family Residence/Condominium</td>
<td>1 BU</td>
<td>1 BU/0.61 BUs</td>
</tr>
<tr>
<td>Vacant Land Parcel</td>
<td>1 BU</td>
<td>0.25 BUs</td>
</tr>
<tr>
<td>Multiple Residential Small (2-4 units)</td>
<td>2 BUs</td>
<td>0.46 BUs</td>
</tr>
<tr>
<td>Commercial, Industrial</td>
<td>2 BUs</td>
<td>0.5 BUs</td>
</tr>
<tr>
<td>Large Rural Property (10+ acres)</td>
<td>2 BUs</td>
<td>0.08 BUs (per 10 acres)</td>
</tr>
<tr>
<td>Multiple Residential (5+ units)</td>
<td>5 BUs</td>
<td>0.32 BUs</td>
</tr>
<tr>
<td>Large Commercial (Hotels, Mobile Home Parks)</td>
<td>5 BUs</td>
<td>0.5s BUs (per 1/4-acre increments)</td>
</tr>
</tbody>
</table>

### Benefit Assessments, FY 2017-2018

<table>
<thead>
<tr>
<th>Use/Size</th>
<th>CSA Vector Control Initial Benefit Assessment</th>
<th>Oakland (Residence Only) + Supplement Assessment ($1.28)</th>
<th>CSA Vector Control Secondary Benefit Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family Residence/Condominiums</td>
<td>$5.92</td>
<td>$7.20</td>
<td>$4.08/2.49</td>
</tr>
<tr>
<td>Vacant Land Parcel</td>
<td>5.92</td>
<td>7.20</td>
<td>1.02</td>
</tr>
<tr>
<td>Multiple Residential Small (2-4 units)</td>
<td>11.84</td>
<td>14.40</td>
<td>1.88¹</td>
</tr>
<tr>
<td>Commercial, Industrial</td>
<td>11.84</td>
<td>14.40</td>
<td>2.04⁴</td>
</tr>
<tr>
<td>Large Rural Property (10+ acres)</td>
<td>11.84</td>
<td>14.40</td>
<td>0.34³</td>
</tr>
<tr>
<td>Multiple Residential (5+ units)</td>
<td>29.60</td>
<td>36.00</td>
<td>1.30²</td>
</tr>
<tr>
<td>Large Commercial (Hotels, Mobile Home Parks)</td>
<td>29.60</td>
<td>36.00</td>
<td>2.04⁴</td>
</tr>
</tbody>
</table>

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. It would be $.34 for 10 acres.
4. These estimates are based on per 1/4-acre increments.
Assessment for One Benefit Unit (BU)
(Single-Family Residence – CSA Basic Rate and Oakland)
1984-2018

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>CSA Basic Rate</th>
<th>Oakland Supplement Rate</th>
<th>Oakland Total Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984-85</td>
<td>$3.15</td>
<td></td>
<td>$3.15</td>
</tr>
<tr>
<td>1985-86</td>
<td>2.66</td>
<td></td>
<td>2.66</td>
</tr>
<tr>
<td>1986-87</td>
<td>2.66</td>
<td></td>
<td>2.66</td>
</tr>
<tr>
<td>1987-88</td>
<td>3.24</td>
<td></td>
<td>3.24</td>
</tr>
<tr>
<td>1988-89*</td>
<td>3.30</td>
<td>0.70</td>
<td>4.00</td>
</tr>
<tr>
<td>1989-90</td>
<td>3.58</td>
<td>0.66</td>
<td>3.84</td>
</tr>
<tr>
<td>1990-91</td>
<td>3.80</td>
<td>0.70</td>
<td>4.50</td>
</tr>
<tr>
<td>1991-92</td>
<td>3.96</td>
<td>0.70</td>
<td>4.66</td>
</tr>
<tr>
<td>1992-93</td>
<td>3.96</td>
<td>0.70</td>
<td>4.66</td>
</tr>
<tr>
<td>1993-94</td>
<td>4.72</td>
<td>1.04</td>
<td>5.76</td>
</tr>
<tr>
<td>1994-95</td>
<td>4.82</td>
<td>1.06</td>
<td>5.88</td>
</tr>
<tr>
<td>1995-96</td>
<td>5.82</td>
<td>1.26</td>
<td>7.08</td>
</tr>
<tr>
<td>1996-97</td>
<td>5.92</td>
<td>1.28</td>
<td>7.20</td>
</tr>
<tr>
<td>1997-98</td>
<td>5.92</td>
<td>1.28</td>
<td>7.20</td>
</tr>
<tr>
<td>1998-99</td>
<td>5.92</td>
<td>1.28</td>
<td>7.20</td>
</tr>
<tr>
<td>1999-2000</td>
<td>5.92</td>
<td>1.28</td>
<td>7.20</td>
</tr>
<tr>
<td>2000-01</td>
<td>5.92</td>
<td>1.28</td>
<td>7.20</td>
</tr>
<tr>
<td>2001-02</td>
<td>5.92</td>
<td>1.28</td>
<td>7.20</td>
</tr>
<tr>
<td>2002-03</td>
<td>5.92</td>
<td>1.28</td>
<td>7.20</td>
</tr>
<tr>
<td>2003-04</td>
<td>5.92</td>
<td>1.28</td>
<td>7.20</td>
</tr>
<tr>
<td>2004-05</td>
<td>5.92</td>
<td>1.28</td>
<td>7.20</td>
</tr>
<tr>
<td>2005-06</td>
<td>5.92</td>
<td>1.28</td>
<td>7.20</td>
</tr>
<tr>
<td>2006-07</td>
<td>5.92</td>
<td>1.28</td>
<td>7.20</td>
</tr>
<tr>
<td>2007-08**</td>
<td>10.00</td>
<td>1.28</td>
<td>11.28</td>
</tr>
<tr>
<td>2008-09</td>
<td>10.00</td>
<td>1.28</td>
<td>11.28</td>
</tr>
<tr>
<td>2009-10***</td>
<td>10.00</td>
<td>1.28</td>
<td>11.28</td>
</tr>
<tr>
<td>2010-11</td>
<td>10.00</td>
<td>1.28</td>
<td>11.28</td>
</tr>
<tr>
<td>2011-12</td>
<td>10.00</td>
<td>1.28</td>
<td>11.28</td>
</tr>
<tr>
<td>2012-13</td>
<td>10.00</td>
<td>1.28</td>
<td>11.28</td>
</tr>
<tr>
<td>2013-14</td>
<td>10.00</td>
<td>1.28</td>
<td>11.28</td>
</tr>
<tr>
<td>2014-15</td>
<td>10.00</td>
<td>1.28</td>
<td>11.28</td>
</tr>
<tr>
<td>2015-16</td>
<td>10.00</td>
<td>1.28</td>
<td>11.28</td>
</tr>
<tr>
<td>2016-17</td>
<td>10.00</td>
<td>1.28</td>
<td>11.28</td>
</tr>
<tr>
<td>2017-18</td>
<td>10.00</td>
<td>1.28</td>
<td>11.28</td>
</tr>
</tbody>
</table>

*Includes Oakland Supplemental (initiated 1988-89)
**Includes Initial and Secondary Benefit Assessments
***Includes Emeryville and Fremont (annexed 2009-10)
Honorable Mayor Nason, Councilmembers, and Ms. Almaguer-

I will be attending the Council Meeting on Monday to provide my allotted 2-3 minutes of comments regarding agenda item 5-9: *Staff recommendation: that the Council authorize submittal of a letter to LAFCO expressing opposition to the proposed annexation of the City of Albany by the Mosquito Abatement District.*

I was unaware that this was going to be discussed until the meeting packet was posted on Wednesday, but I would like to share the presentation that I was *prepared* to give (which, I understand, loses much of its impact when not presented). I am also sharing our most recent biennial report.

I appreciate your thoughtful consideration on this matter.

Ryan Clausnitzer
General Manager
23187 Connecticut St., Hayward, CA 94545
Direct 510-925-1756 | Main 510-783-7744
ryan@mosquitoes.org
www.mosquitoes.org
Dear City of Albany:

As a resident of Berkeley, I have been very happy with the incredible service and responsiveness of Alameda County Vector Control in responding to reports of mosquitoes.

Alameda County Vector Control is extremely responsive and professional in responding to reports of mosquitoes.

Vector control staff have responded to my calls and have been very thorough in finding standing water and breeding mosquitoes in our neighborhood. Alameda County Vector Control have set traps next our home, and have placed non-toxic agents into standing water that naturally reduce the mosquito population.

Vector control staff have identified the exact types of mosquitoes I have captured, and helped educate me about them.

We read about many mosquito borne illnesses being transmitted. I am very happy with the services provided by Alameda County Vector Control. I have spoken with their staff on numerous occasions, and I have found them to be very knowledgeable, informed, and committed to doing a great job of protecting us from mosquito borne disease.

As you make decisions about what to do in Albany, I hope that my experience will provide you with reassurance that Alameda County's Vector Control is dedicated to professional service in the effort to reduce mosquitoes.

Independent of your decisions about who will provide mosquito abatement services in Albany, I urge you to work to educate Albany residents about the dangers of even small amounts of standing water with respect to mosquitoes, and the fact that even small unattended water receptacles can breed many mosquitoes.

Alameda County Vector Control found and old abandoned Christmas tree stand under my neighbor's deck that was full of breeding mosquitoes that were attacking us in our home.

Everyone needs to work together to keep even small amounts of stagnant water from breeding mosquitoes.

We are fortunate to have the dedicated public health professionals at
Alameda County Vector Control working to protect us from serious illness and disease. I hope that we can continue working together in Alameda County to fight mosquitoes.

Very truly yours,

David Lerman

Law Office of David A. Lerman
2600 Tenth Street, Suite 618
Berkeley, California 94710
(510) 665-8500 Telephone
(510) 665-8501 Facsimile
415Justice@att.net
Dear Council:

I need to make a correction to my previous e-mail.

The high quality services I have received have been from the Alameda County Mosquito Abatement District, not, Alameda County Vector Control, (though I support their efforts as well).

We all need to do our part to try to reduce the dangers from mosquitoes. Mosquitoes are able to fly many miles from their breeding grounds. Having uniform mosquito control throughout our area will protect all of us.

Even though Albany is often dry in the dry season, even small containers of water, including old tires in a back yard, can breed hundreds or thousands of mosquitoes. There are plenty of small places where mosquitoes breed, and we need a thorough plan of attack to find them.

Please bring the services of the Alameda County Mosquito Abatement District to Albany.

Very truly yours,

David Lerman

Law Office of David A. Lerman
2600 Tenth Street, Suite 618
Berkeley, California 94710
(510) 665-8500 Telephone
(510) 665-8501 Facsimile
415Justice@att.net
Dear Albany City Council:

Sorry about the confusion regarding the correction.

Note: Mosquito borne illnesses including West Nile, Eastern Equine/California Encephalitis, Zika, Dengue, Chikingunya, Malaria, and Dog Heartworm, have been spreading to more geographic regions.

Once these diseases are established they become endemic and are almost impossible to eradicate. With planes flying to the Bay Area from all over the world, we are only one flight away from an outbreak of diseases from other places.

The best time to work to prevent mosquito borne outbreaks of disease is before they have become epidemic.

I note that being directly adjacent to Alameda County ´s Mosquito Abatement District, Albany has been a beneficiary of the work done by the district.

**CDC - NIOSH - Mosquito-Borne Diseases**

An integrated approach is required to reduce the risk of mosquito borne illness.

**Success in Mosquito Control: An Integrated Approach | US EPA**
Currently there are no effective treatments for Zika, Eastern Equine Encephalitis, Chikingunya, or Dengue. An ounce of prevention is worth a pound of cure.

**Treatment for Zika Virus**

Treat Zikas symptoms by drinking fluids, getting rest, and taking acetaminophen for fever and pain. Talk to your...

**Frequently Asked Questions | Eastern Equine Encephalitis | CDC**

https://www.cdc.gov/easternequineencephalitis/gen/qa.html

**Chikungunya virus | CDC**

Information on Chikungunya virus. Provided by the U.S. Centers for Disease Control and Prevention.

https://www.cdc.gov/dengue/symptoms/index.html

Treatment of malaria is difficult and complicated.

**CDC - Malaria - Diagnosis & Treatment (United States) - Treatment (U.S.)**

CDC - Malaria - Diagnosis & Treatment (United States)
$5 is a very small price to pay to protect the lives of the citizens of Albany (and neighboring cities). If more than one person lives at a parcel the cost per person would be even less. If you save one person from getting a horrible disease it would be worth the effort.

The time to act is before you have a problem, not after.

Best regards,

David Lerman

Law Office of David A. Lerman
2600 Tenth Street, Suite 618
Berkeley, California 94710
(510) 665-8500 Telephone
(510) 665-8501 Facsimile
415Justice@att.net
Hello Nicole-

I am not sure you have these reports from LAFCo, but this is what encouraged us to take action (the most recent report was in 2017 which we discussed on 3/23/18). Here are the excerpts I will be referring to:

**To all Alameda County Cities (2017):**

> While no specific SOI changes are recommended for these cities, this report recommends that LAFCo encourage the City of Albany to take the necessary steps to annex into the Alameda County Mosquito Abatement District, as well as encourage the cities of Berkeley and Oakland to reorganize the territory in the Panoramic Hill area.

**To the City of Albany (2017):**

<table>
<thead>
<tr>
<th>City of Albany</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Encourage the Alameda County Mosquito Abatement District to initiate annexation of the territory within the Albany City limits.</td>
<td>Annexation has not been initiated. The District and the City have periodically held annexation discussions.</td>
</tr>
<tr>
<td>Encourage the Alameda County Flood Control Water Conservation District to work with the City of Albany to discuss potential benefits of inclusion within a service zone.</td>
<td>Service zones have not been created. Creation of a service zone cannot be initiated by Alameda LAFCo.</td>
</tr>
</tbody>
</table>

**Alameda County Vector Control Services District (2013):**

**Accountability for Community Services, Including Governmental Structure and Operational Efficiencies**

- VOCSA is governed by the Alameda County Board of Supervisors. The Board updates constituents, broadcasts its meetings, solicits constituent input, discloses its finances, and posts public documents on its website.
- The agency demonstrated accountability in its cooperation with LAFCo requests for information.
- A governance structure option is for VOCSA to discontinue mosquito abatement services in the City of Albany and Alameda County Mosquito Abatement District to annex the City. VOCSA would continue providing vector control services countywide. At present, ACMAD’s sphere of influence is countywide, indicating

**Alameda County Mosquito Abatement District (2013)**

LAFCo’s anticipation that ACMAD will eventually take on services in Albany. This option would be beneficial to VOCSA, as it is presently substituting these services in the City.

Another potential governance structure option is consolidation with ACMAD. Such a consolidation may offer savings by eliminating some administration costs. A challenge to consolidation may be the differing revenue levels and sources of each of the agencies.
Recommended Sphere of Influence Boundary

Alameda County Mosquito Abatement District provides mosquito abatement services throughout the entire territory of Alameda County with the exception of the City of Albany. Mosquito abatement services within the City of Albany are provided by Vector Control County Service Area.

As it is likely that ACMAD will pursue adding the City of Albany within its boundaries, it is recommended that the Commission reaffirm a countywide SOI. Annexing the territory of the City of Albany into ACMAD would lessen the fiscal burden on other residents in the County, who are presently subsidizing additional services for the residents of Albany. Additionally, annexation by ACMAD would allow for more clearly delineated service areas for both ACMAD and VCSCA. It is recommended that the Commission continue to encourage annexation of the City of Albany to ACMAD, as it did during the 2006 SOI updates.

Thank you and I look to seeing you tonight.

Ryan Clausnitzer
General Manager
23187 Connecticut St., Hayward, CA 94545
Direct 510-925-1756 | Main 510-783-7744
ryan@mosquitoes.org
www.mosquitoes.org
VECTOR CONTROL
COUNTY SERVICE AREA
MUNICIPAL SERVICE REVIEW
PUBLIC REVIEW DRAFT

September 17, 2012

Prepared for the
Local Agency Formation Commission of Alameda County
by
Baracco and Associates, Kim Hudson,
Policy Consulting Associates, LLC
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1. AGENCY OVERVIEW

Vector Control County Service Area (VCCSA) provides vector control services, including responding to requests for service investigations, nuisance wildlife management, rabies surveillance, rodent control, solid waste problems investigations, vector borne disease surveillance and control, public education and information, and assistance to the local agencies to enforce state laws, regulations and local ordinances throughout Alameda County.

The most recent municipal service review for VCCSA was adopted in May 2006.

FORMATION

VCCSA was formed on January 18, 1984 as a dependent special district to serve the public need for a comprehensive vector control program. The County's Environmental Health Department was experiencing fiscal shortfalls, and had to reduce vector control services in Alameda County. In response, the Alameda County Board of Supervisors created VCCSA after the passage of Measure A, which received over 70 percent voter approval for the formation of the CSA.

The principal act that governs VCCSA is the County Service Area (CSA) law.¹ The principal act authorizes CSAs to provide a wide variety of municipal services, including street maintenance, fire protection, extended police protection, water and sewer services.² A CSA may only provide those services authorized in its formation resolution unless the Board of Supervisors adopts a resolution authorizing additional services. All districts must apply and obtain LAFCo approval to exercise latent powers or, in other words, those services authorized by the principal act but not provided by the district at the end of 2000.³

BOUNDARY

VCCSA’s boundary area includes all of Alameda County. Initially, Dublin, Emeryville and Fremont were not included in VCCSA and opted to seek alternative sources for providing a vector program. In 1992, at the request of the Dublin City Council, Dublin was annexed by VCCSA. In 2009, both Emeryville and Fremont were annexed to VCCSA after a successful Proposition 218 mail-out balloting process. Currently, VCCSA is a countywide district that

¹ California Government Code §25210 et seq
² California Government Code §25213.
³ Government Code §56824.10.
provides vector control services to all 14 cities in Alameda County and the unincorporated county area.

The total boundary area of VCCSA is 821 square miles—737 square miles of land and 84 square miles of water. VCCSA’s boundaries are shown in Figure 1-1.

**Extra-territorial Services**

Vector control services are provided throughout the unincorporated area and in all of the cities of Alameda County. VCCSA does not typically provide vector control services outside its bounds, although it is allowed to go outside of its boundaries in order to prevent vectors from spreading into VCCSA’s bounds.

**Unserved Areas**

There are no areas within VCCSA bounds that lack vector control services. As was mentioned in the previous section, VCCSA does not provide mosquito abatement services anywhere in the County except for the City of Albany; however, the Alameda County Mosquito Abatement District (ACMAD) offers these services elsewhere in the County.

**Sphere of Influence**

The Sphere of Influence (SOI) was established on September 20, 1984 as coterminous with the Alameda County limits. No SOI amendments have been made since the SOI was first created. During the 2006 SOI updates, the Commission elected to retain the VCCSA countywide SOI to encourage the annexation of the cities of Emeryville and Fremont by VCCSA. VCCSA’s SOI is shown in Figure 1-1.
Figure 1-1: Vector Control CSA Boundaries and SOI

Alameda County Vector Control CSA Boundary and SOI*
July 2012

*Agency sphere equals the service area boundary
ACCOUNTABILITY AND GOVERNANCE

Accountability of a governing body is signified by a combination of several indicators. The indicators chosen here are limited to 1) agency efforts to engage and educate constituents through outreach activities, in addition to legally required activities such as agenda posting and public meetings, 2) a defined complaint process designed to handle all issues to resolution, and 3) transparency of the agency as indicated by cooperation with the MSR process and information disclosure.

VCCSA was formed as a dependent special district with the Alameda County Board of Supervisors as its governing body. There are five members of the governing body of VCCSA. The five supervisors are elected to four-year terms of office. Current board member names, positions, and term expiration dates are shown in Figure 1-2.

The Board of Supervisors meets weekly. Agendas for each weekly meeting are posted by the Board Clerk on the internet and at the County Administration Building. The Board Clerk provides notices for meetings and disseminates minutes. Board actions and meeting minutes are available on the internet. Through the County website, the public has access to live audio/visual webcasts and archived audio and/or visual webcasts of regular board meetings for viewing online at their convenience. The County also discloses finances, plans and other public documents via the internet.

Figure 1-2: Vector Control CSA Governing Body

<table>
<thead>
<tr>
<th>Member Name</th>
<th>Position</th>
<th>Term Expiration</th>
<th>Manner of Selection</th>
<th>Length of Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scott Haggerty</td>
<td>Supervisor, Dist. 1</td>
<td>January 2013</td>
<td>Elected</td>
<td>4 years</td>
</tr>
<tr>
<td>Vacant</td>
<td>Supervisor, Dist. 2</td>
<td>January 2015</td>
<td>Elected</td>
<td>4 years</td>
</tr>
<tr>
<td>Wilma Chan</td>
<td>Supervisor, Dist. 3</td>
<td>January 2015</td>
<td>Elected</td>
<td>4 years</td>
</tr>
<tr>
<td>Nate Miley, President</td>
<td>Supervisor, Dist. 4</td>
<td>January 2013</td>
<td>Elected</td>
<td>4 years</td>
</tr>
<tr>
<td>Keith Carson, Vice President</td>
<td>Supervisor, Dist. 5</td>
<td>January 2013</td>
<td>Elected</td>
<td>4 years</td>
</tr>
</tbody>
</table>

Meetings

Date: Every Tuesday at 9:30am.
Location: Meetings are held in the Board Chambers at 1221 Oak Street, 5th floor in Oakland.
Agenda Distribution: Posted on internet and County Administration Building.
Minutes Distribution: Available on County website.

To inform constituents of its activities, VCCSA makes copies of its annual report available to the public at its office, sends copies to interested parties, and posts a copy on its website. VCCSA prepares newsletters, which are submitted to participating cities and available on the CSA’s website. VCCSA participates in county fairs and public venues.
including the Alameda County Fair, the Fremont Festival of the Arts, the Hayward Zucchini Festival, the Boy Scouts of America Jamboree, and the Oakland Chinatown Lunar New Year Festival. VCCSA continues to expand outreach to the public and ethnically diversified populations. VCCSA has had several media contacts, press releases and interviews on Lyme Disease and ticks, wildlife and rabies. At the VCCSA office, the vector ecologist, community relations coordinator and management provide phone consultations on vector related questions and onsite identification of insects, ticks and others. In 2011, VCCSA reorganized its website to make it more user friendly.

Customer complaints about VCCSA services or personnel may be reported by telephone, email, or in writing. VCCSA reports that it documents complaints to resolution. Complaints involving personnel are kept confidential. It was reported that there were no complaints in 2011. In the same year, VCCSA received over 4,800 service requests.

VCCSA demonstrated accountability in its disclosure of information and cooperation with LAFCo questionnaires and other requests for information and review.

**Management and Staffing**

While public sector management standards vary depending on the size and scope of the organization, there are minimum standards. Well-managed organizations evaluate employees annually, track employee and agency productivity, periodically review agency performance, prepare a budget before the beginning of the fiscal year, conduct periodic financial audits to safeguard the public trust, maintain relatively current financial records, conduct advanced planning for future service needs, and plan and budget for capital needs.

VCCSA’s staff consists of 35 positions, which include management, supervisory, field, clerical, and four trainee positions. Additional administrative and technical support is provided by the Alameda County Environmental Health Department.

VCCSA conducts staff performance evaluations annually. VCCSA reviews and evaluates overall district performance regularly in its annual report. VCCSA does not conduct any benchmarking of its services with other similar providers.

VCCSA indicated that it monitored productivity by review of workload statistics from daily reports and by maintaining a database. These workload data sets are accumulated into VCCSA’s annual report.

Other management practices conducted by VCCSA include performance-based budgeting (where budgets are determined by annual performance goals) and annual financial audits.

The mission of VCCSA is to prevent the spread of vector-borne diseases, injury and discomfort to the residents of VCCSA by controlling insects, rodents, and other vectors and eliminating causal environmental conditions through education, and integrated pest management practices.
Neither VCCSA nor the Environmental Health Department has a strategic plan. However, the Board of Supervisors adopted Alameda County’s Strategic Vision in 2008 to provide a multi-year, comprehensive, and far-reaching roadmap with high-level strategic direction for the County’s agencies and departments, who are responsible for implementation through their own strategic plans and activities. VCCSA does not have a capital improvement plan or master plan. VCCSA presents an annual report to the Alameda County Board of Supervisors in compliance with County Service Area law and the Alameda County Ordinance code.

VCCSA’s finances are managed by the County. While County finances are audited annually, the VCCSA finances are not isolated in the audited financial statements but are grouped with other health and sanitation finances. All special districts are required to submit annual audits to the County within 12 months of the completion of the fiscal year, unless the Board of Supervisors has approved a biennial or five-year schedule. In the case of VCCSA, the CSA does not have to submit its own audits; it is included in the County’s financial statements which are audited annually.

GROWTH AND POPULATION PROJECTIONS

This section discusses the factors affecting service demand, such as land uses, and historical and anticipated population growth.

Land Use

VCCSA’s boundary area is 821 square miles. The County is the land use authority for the unincorporated areas. Cities are the land use authorities within the respective city boundaries. VCCSA encompasses every land use designated by the County and the incorporated cities within its bounds.

Existing Population

As of 2010, VCCSA’s boundary population was 1,510,271, with population density of 1,840 people per square mile.

Projected Growth and Development

Based on Association of Bay Area Governments (ABAG) growth projections and VCCSA’s estimated population from the 2010 Census, the population of the area within VCCSA is anticipated to reach 1,966,300 by 2035, with an average annual growth rate of one percent,

4 Government Code §26909.
which is equivalent to the growth projected countywide. From 2010 to 2035 the population of VCCSA is estimated to grow by 27 percent.

In the past decade, the growth within VCCSA has been occurring in the east county cities of Dublin, Pleasanton and Livermore. According to ABAG growth projections, future growth is anticipated to be concentrated in the cities of Dublin, Emeryville and Livermore over the next 25 years.

VCCSA reports population growth in the County affects its service demand. As any land develops into residential or commercial use it will increase the parcel numbers to be served. According to VCCSA, growth in demand for vector services is concentrated in the City of Fremont area.

FINANCING

The financial ability of agencies to provide services is affected by available financing sources and financing constraints. This section discusses the major financing constraints faced by VCCSA and identifies the revenue sources currently available to the CSA.

VCCSA reported that current financial levels are adequate to deliver services. No challenges to financing were identified.

Revenues

The revenues for VCCSA for FY 10-11 were $4,829,908. The revenue sources included benefit assessments (91 percent) and interest, unclaimed money and operating transfers (nine percent).

VCCSA charges the basic initial benefit assessment rate of $5.92 per benefit unit and the secondary benefit assessment rate of $4.08 per benefit unit for Albany, Alameda, Berkeley, Castro Valley, Dublin, Hayward, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro, San Lorenzo, Sunol, Union City, and unincorporated areas, and a benefit assessment of $10 per benefit unit for the newly annexed cities of Emeryville and Fremont. Residents of the City of Oakland are charged a supplemental fee of $1.28 per benefit unit for special sewer inspections and a rodent population reduction program within the City. In the City of Albany, where VCCSA provides supplemental mosquito abatement services, residents are charged the same assessments as other cities, in other words they are not charged an separate fees for the extra service.

Based on the cities that are within each of the benefit assessment rate areas as discussed above, in FY 10-11, the number of benefit units meeting the criteria established by the Assessor’s office for the initial $5.92 benefit unit rate was 456,387. The number of single family equivalents meeting the criteria for the secondary $4.08 benefit unit rate in FY 10-11 was 378,235. The single-family residence units in FY 11-12 in Emeryville were 3,704 and 62,397 in Fremont.
Expenditures

Expenditures in FY 10-11 for VCCSA were $3,821,997, which consisted of salaries and benefits (60 percent), services and supplies (30 percent), and other services, charges and financing uses (10 percent). Total revenues exceeded total expenditures by $1,007,910.

Liabilities and Assets

VCCSA does not have any long-term debt.

VCCSA had a fund balance of $2,989,120 million at the end of FY 10-11.

VCCSA’s capital financing approach is pay-as-you-go, meaning the CSA relies on current revenues and reserves to finance capital projects.

Financing Efficiencies

VCCSA engages in joint financing arrangements related to insurance. The County receives excess workers compensation and liability coverage through the California State Association of Counties Excess Insurance Authority—a joint powers authority.
2. MUNICIPAL SERVICES

VECTOR CONTROL SERVICES

Service Overview

VCCSA is responsible for providing vector control services, including controlling public health nuisances carried by rats, fleas, ticks, mites, flies, and other insects. VCCSA investigates public concerns and provides educational information regarding vectors and vector-borne diseases. The agency oversees the administration of quarantine measures regarding animal bites, investigates nuisances, and removes nuisance wildlife (skunks and raccoons) when preventative alternatives are infeasible or likely to be ineffective. VCCSA conducts rodent suppression, surveys of rat populations, and inspection and baiting of sewers for rats.\(^5\) Supplemental services for the City of Oakland involve surveillance and control of a severe rat population originating in the City's sewer system.

Staff responding to a rodent service request conduct an extensive survey of the exterior and interior premises looking for conditions conducive to rodent entry to structure. They hand out brochures, and when necessary, VCCSA works with the local code enforcement agencies to seek compliance to mitigate the problem. If evidence is found suggesting an infestation over a larger area than a single-family residence, neighborhood surveys are conducted.

Mosquito abatement services are provided by VCCSA only within the City of Albany by resolution of the City Council.\(^6\) Alameda County Mosquito Abatement District (ACMAD) provides mosquito abatement services for the remainder of the County. When ACMAD was originally formed in 1930, the City of Albany chose not to join. The City chose to receive mosquito monitoring/control from VCCSA when it was established in 1984. Although the categories of services provided by the two districts' (VCCSA and ACMAD) are similar, their services appear to complement each other. ACMAD provides only mosquito abatement services to the entire County, with the exception of the City of Albany. VCCSA on the other hand provides other vector control services to all of Alameda County and mosquito abatement services only in the City of Albany. These differing service areas are clearly delineated to mitigate any potential for duplication of services by the two districts. There have been discussions between the districts on the potential of transferring responsibility for mosquito abatement in the City of Albany to ACMAD. While LAFCo could extend

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\(^5\) Since 2006, VCCSA has stopped applying rodenticides on waterfronts, due to the secondary poisoning of other wildlife.

\(^6\) It is unknown if there is a formal agreement/contract between the City of Albany and VCCSA for these services.
ACMAD’s assessment to the residents of Albany as a condition of annexation, ACMAD has stated that it would give property owners the opportunity to vote on the ACMAD benefit assessment that is levied in all other areas of the County. Transferring the mosquito abatement services to ACMAD would be beneficial to VCCSA, which is presently subsidizing these services in the City.

The City of Berkeley Department of Health and Human Services continues to receive funds via contractual agreement from VCCSA to operate the vector control program in Berkeley. 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 a part of VCCSA. Since the Berkeley Division of Environmental Health already had a vector control program that contains enforceable regulations for controlling rodents and other vectors, VCCSA authorizes a contract each fiscal year to fund the City vector program through the benefit assessment.

VCCSA also has a contract with the East Bay Regional Park District (EBRPD) to control yellow jacket ground nests within the county parks owned and/or operated by EBRPD.

Demand for Services

In 2010, the highest percentage of all vector control service requests was received in the City of Oakland. The cities of Hayward, Alameda, Livermore, Pleasanton and San Leandro were among other high demand areas. Albany, Emeryville and Piedmont were on the other side of the spectrum with the lowest demand for services.

Urban Rodent Surveillance

In 2010, VCCSA received 1,219 requests for service from the public on domestic rats, representing 24 percent of all requests. Additionally, staff performed 8,483 field services related to domestic rodents, including smoke and dye tests of sewer lines, field surveys, follow-up evaluations, and enforcement actions. Of the total field service requests, 95 percent were made in Albany, Emeryville, Oakland, Piedmont, and San Leandro.

Roof rats are established throughout the suburban and semi-urban areas in Alameda County. Vector control officers responded to 520 roof rat service requests from homeowners, businesses, and municipalities.
Diseased Vector Surveillance

In 2010, VCCSA staff surveyed four parks in the East Bay Regional Park District: Anthony Chabot, Del Valle, Mission Peak, and Sunol. Only Anthony Chabot and Sunol yielded rodents for testing. Additionally, VCCSA surveyed four other areas—Villareal Drive and East Castro Valley Boulevard, Castro Valley, Vallejo Mill Historical Park and Scott Creek Road, and Fremont. One property risk assessment was conducted on a property near Lakeridge Park, Hayward.

A total of 1,813 ticks (adults and nymphs) were collected; only 926 adults and 419 nymphs were dissected and cultured for Lyme Disease.

VCCSA submitted 119 animal heads, including dogs, cats, raccoons, skunks and bats to the Alameda County Public Health Laboratory for rabies testing in 2010.

Wildlife Management

In 2010, VCCSA responded to 1,887 service requests concerning wildlife, and provided almost 3,806 hours of field support within or near residential areas. Of these service requests, 940 were related to raccoons, 463 for skunks, 37 for feral pigs, 74 for wild turkeys, 47 for gray foxes, 28 for coyotes, 20 for opossums; and five for mountain lions.

Mosquito Surveillance

A total of 71 trap nights were performed, and 130 female mosquitoes were captured in 2010. Due to the low mosquito catches, no mosquito pools were submitted to U.C. Davis for West Nile Virus (WNV) virus isolation. In 2010, positive WNV activities detected in Alameda County included one human case and one dead bird.

Venomous Arthropods

In 2010, VCCSA responded to 179 venomous wasp and 279 honeybee complaints.

Miscellaneous Arthropods

VVCSCA responded to 234 bedbug service requests in 2010.

Nuisance Abatement

VCCSA responded to 396 service requests concerning nuisances that may create vector-friendly environments, primarily garbage and rubbish, resulting in 2,165 field services including investigations, progress assessments, correspondence, and compliance inspections.

Public Information and Education Activities

The re-vamped District website received a total of 542,349 hits in 2010—averaging about 45,195 hits per month.
Infrastructure and Facilities

The VCCSA’s key infrastructure includes office space, dry pesticide storage, equipment storage, and lab facilities located in the County Environmental Health Department building. Equipment used by VCCSA includes 22 field vehicles, one van, two mechanical manhole lifters, and various devices for pesticide application.

Since 2005, VCCSA has purchased three new vehicles, two smoke detectors to test sewer breaks, two microscopes, and updated all information technology equipment (computers, field tablets, and digital cameras).

Infrastructure Needs or Deficiencies

VCCSA reported that at present there are no infrastructure needs or deficiencies in its facilities, vehicles and equipment.

Shared Facilities and Regional Collaboration

VCCSA manages statistical data, and works cooperatively with the 14 local animal control agencies (the County Sheriff’s Office and the city departments, with the exception of the City of Dublin) to administrate the rabies surveillance program in Alameda County.

VCCSA participates in a countywide integrated pest management policy set by the Board of Supervisors.

A governance structure alternative may be consolidation with ACMAD. Many other counties have districts that offer both mosquito and vector abatement services. Offering these services through a single entity may enhance efficiency and reduce administrative costs. ACMAD and VCCSA have not considered consolidation to date.

Service Adequacy

This section reviews indicators of service adequacy, including success rate in reducing the outbreak of illnesses and response time to service requests.

There are no present or recent public health advisories concerning mosquito or vectorborne illnesses in the areas served by VCCSA. VCCSA has been successful in reducing the outbreak of illnesses including plague and encephalitis.

Response times are another indicator of service adequacy. VCCSA reported that it responds to its service calls within three business days, although responses typically occur in less than 24 hours. By comparison ACMAD generally responds to requests within one business day.
3. MSR DETERMINATIONS

Growth and Population Projections

- As of 2010, the population within Vector Control County Service Area (VCCSA) was 1,510,271.
- Based on ABAG growth projections the population of VCCSA is anticipated to be 1,966,300 by 2035.
- Future growth is anticipated to be concentrated in the cities of Dublin, Emeryville and Livermore over the next 25 years. According to VCCSA, growth in demand for services is concentrated in the City of Fremont area.

Location and Characteristics of Any Disadvantaged Unincorporated Communities Within or Contiguous to the Sphere of Influence

- Based on Census Designated Places, Alameda LAFCo determines that there are no disadvantaged unincorporated communities that meet the basic state-mandated criteria. Alameda LAFCo recognizes, however, that there are communities in the county that experience disparities related to socio-economic, health, and crime issues, but the subject of this review is municipal services such as water, sewer, and fire protection services to which these communities, for the most part, have access.

Present and Planned Capacity of Public Facilities and Adequacy of Public Services, Including Infrastructure Needs and Deficiencies

- Demand for vector control services is driven by growth of both human and vector populations.
- Based on the response time of typically within 24 hours that VCCSA is able to maintain with approximately 13 requests per day, it appears that the CSA has sufficient capacity to continue to serve existing and anticipated demand.
- There are no present or recent public health advisories concerning mosquito or vector-borne illnesses in the areas served by VCCSA. VCCSA has been successful in eliminating the outbreak of illnesses including plague and encephalitis.
- Since 2005, VCCSA has purchased three new vehicles, two smoke detectors to test sewer breaks, two microscopes, and updated all information technology equipment.
No infrastructure needs or deficiencies were identified for VCCSA.

**Financial Ability of Agency to Provide Services**

- VCCSA reported that its financing levels were adequate to deliver services. No challenges to financing were identified.
- VCCSA had just over nine months of expenditures in unrestricted reserves at the end of FY 10-11, which is sufficient to weather any short-term financial challenges.
- VCCSA is subsidizing mosquito abatement services in the City of Albany, where residents are charged the same assessment as elsewhere in the County.
- VCCSA does not have any long-term debt.
- VCCSA uses a pay-as-you-go approach to capital improvement financing.

**Status and Opportunities for Shared Facilities**

- VCCSA engages in joint financing arrangements related to insurance and workers compensation.
- VCCSA manages statistical data, and works cooperatively with the 13 local animal control agencies to administrate the rabies surveillance program in Alameda County.
- VCCSA participates in a countywide integrated pest management policy set by the Board of Supervisors.
- There may be an opportunity for VCCSA to share specialized equipment and vehicles with ACMAD.

**Accountability for Community Services, Including Governmental Structure and Operational Efficiencies**

- VCCSA is governed by the Alameda County Board of Supervisors. The Board updates constituents, broadcasts its meetings, solicits constituent input, discloses its finances, and posts public documents on its website.
- The agency demonstrated accountability in its cooperation with LAFCo requests for information.
- A governance structure option is for VCCSA to discontinue mosquito abatement services in the City of Albany and Alameda County Mosquito Abatement District to annex the City. VCCSA would continue providing vector control services countywide. At present, ACMAD's sphere of influence is countywide, indicating
LAFCo’s anticipation that ACMAD will eventually take on services in Albany. This option would be beneficial to VCCSA, as it is presently subsidizing these services in the City.

- Another potential governance structure option is consolidation with ACMAD. Such a consolidation may offer savings by eliminating some administration costs. A challenge to consolidation may be the differing revenue levels and sources of each of the agencies.
4. SPHERE OF INFLUENCE UPDATE

Existing Sphere of Influence Boundary

VCCSA’s SOI is coterminous with its boundaries and includes the entire County of Alameda. The SOI was first established in 1984 as countywide. There have been no SOI changes since then. During the 2006 SOI updates, the Commission elected to retain a coterminous SOI.

SOI Options

Two options were identified with respect to VCCSA’s SOI.

Option #1 – Maintain existing coterminous SOI

Should the Commission wish to continue to reflect the existing service boundary, then a coterminous SOI would be appropriate.

Option #2 – Adopt a zero SOI

If LAFCo wants to indicate that VCCSA and ACMAD should consolidate, a zero SOI may be appropriate.

Recommended Sphere of Influence Boundary

Given the fact that the boundary area includes the entire territory of Alameda County and no reduction in service area or boundary area is proposed, it is recommended that the Commission maintain a coterminous SOI for the VCCSA.

In light of the fact that consolidation has not been proposed by the affected agencies and sufficient analysis has not been completed to identify what (if any) efficiencies could be gained from this consolidation, it appears that a zero SOI would be premature. For example, should it be determined that ACMAD would be the successor agency taking on the functions of both districts, the VCCSA would have a zero SOI and ACMAD’s SOI would remain unchanged. It is recommended that the two districts work cooperatively to determine what the benefits of consolidation would be.

While there is the potential for ACMAD to take on mosquito abatement in the City of Albany, VCCSA would continue to provide vector control services there and the area would remain within VCCSA’s boundaries. Consequently, no change would need to be made to VCCSA’s SOI.
Proposed Sphere of Influence Determinations

Nature, location, extent, functions, and classes of services provided

- Vector Control County Service Area (VCCSA) is responsible for providing vector control services, including controlling public health dangers carried by rats, fleas, ticks, mites, flies, and other insects. VCCSA investigates public concerns and provides educational information regarding vectors and vector-borne diseases. The agency oversees the administration of quarantine measures regarding animal bites, investigates nuisances, and removes nuisance wildlife (skunks and raccoons) when preventative alternatives are infeasible or likely to be ineffective. VCCSA conducts rodent suppression, surveys of rat populations, and inspection and baiting of sewers for rats. Supplemental services for the City of Oakland involve surveillance and control of a severe rat population originating in the City's sewer system. VCCSA also provides mosquito control services in the City of Albany.

Present and planned land uses, including agricultural and open-space lands

- VCCSA encompasses every land use designated by the County and the incorporated cities within its bounds, including agricultural and open-space lands. The SOI is consistent with planned land uses.

- While there are agricultural and open-space lands within VCCSA, no impacts on agricultural resources, open space or Williamson Act contracts will occur as no service changes are proposed.

Present and probable need for public facilities and services

- Given that VCCSA averaged 13 requests for service per day in FY 10-11, there is a present need for VCCSA’s services.

- The population in VCCSA is expected to continue to grow, which will require an ongoing need for VCCSA’s services.

- Vector Control CSA will continue to monitor other vector borne illnesses as well, such as Lyme disease, Hantavirus pulmonary syndrome and plague.

Present capacity of public facilities and adequacy of public services that the agency provides or is authorized to provide

- Based on the response time of typically within 24 hours that VCCSA is able to maintain with approximately 13 requests per day, it appears that the CSA has sufficient capacity to continue to serve existing and anticipated demand.

- There are no present or recent public health advisories concerning mosquito or vector-borne illnesses in the areas served by VCCSA. VCCSA has been successful in reducing the outbreak of illnesses including plague and encephalitis.
Existence of any social or economic communities of interest

- VCCSA was formed to provide countywide vector control services and serve the residents of Alameda County. All County residents benefit from services provided by VCCSA. Property owners that pay a benefit assessment to VCCSA have a particular economic interest in the activities of the CSA.
ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT
MUNICIPAL SERVICE REVIEW FINAL

January 10, 2013

Prepared for the
Local Agency Formation Commission of Alameda County
by
Baracco and Associates,
Policy Consulting Associates, LLC
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1. AGENCY OVERVIEW

The Alameda County Mosquito Abatement District (ACMAD) provides mosquito abatement services in Alameda County.

The most recent municipal service review for ACMAD was adopted in May 2006.

FORMATION

ACMAD was formed on March 11, 1930 as an independent special district. ACMAD was created to provide mosquito abatement in Alameda County.

The principal act that governs ACMAD is the Mosquito Abatement and Vector Control District Law, originally called Mosquito Abatement Act of California of 1915, that was revised in 2003 (SB 1588).1 The principal act empowers such districts to conduct surveillance programs and other studies of vectors and vector-borne diseases, take appropriate actions to prevent the occurrence of vectors and vector-borne diseases, and take necessary actions to abate or control vectors and vector-borne diseases.2 All districts must apply and obtain LAFCo approval to exercise latent powers or, in other words, those services authorized by the principal act but not provided by the district at the end of 2000.3

BOUNDARY

ACMAD’s boundary area includes all of Alameda County except for the City of Albany. The total land area within the boundary of ACMAD is 736 square miles. There have been no boundary changes since district formation.

Extra-territorial Services

Mosquito abatement services are provided throughout the unincorporated area and in all of the cities of Alameda County except for the City of Albany, which is provided mosquito abatement services by Alameda County Vector Control County Service Area (VCCSA). ACMAD does not typically provide mosquito abatement service outside its bounds, although it is allowed to cross agency boundaries in order to prevent mosquito populations

1 California Health and Safety Code § 2000-2093
3 Government Code §56824.10.
from dispersing into the District. ACMAD also supplies mosquito fish to the Alameda County Vector Control CSA for use in the City of Albany as needed, although no requests for mosquito fish have been made since 2005.

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**Unserved Areas**

There are no areas within ACMAD’s bounds that lack mosquito abatement services.

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**Sphere of Influence**

ACMAD’s SOI was established on April 19, 1984 as coterminous with the County of Alameda. No changes have been made to the SOI since its creation. During the 2006 SOI updates the Commission elected to reaffirm ACMAD’s countywide SOI. Consequently, as the SOI exists now, it extends outside of the ACMAD’s bounds to include the City of Albany. During the last round of SOI updates, the Commission also adopted a policy encouraging ACMAD to initiate annexation of the City of Albany.
Figure 1-1: AC Mosquito Abatement District Boundaries and SOI
ACCOUNTABILITY AND GOVERNANCE

Accountability of a governing body is signified by a combination of several indicators. The indicators chosen here are limited to 1) agency efforts to engage and educate constituents through outreach activities, in addition to legally required activities such as agenda posting and public meetings, 2) a defined complaint process designed to handle all issues to resolution, and 3) transparency of the agency as indicated by cooperation with the MSR process and information disclosure.

ACMAD is governed by a 14-member Board of Trustees. Each city, except Albany, and the County Board of Supervisors appoint a member to the Board to a two-year term. Each member appointed by the cities represents their respective constituency, and the County appointee represents the County at large and traditionally has been the County Agricultural Commissioner. Board members do not receive any compensation, but get an in-lieu of travel expense of $100 per month for attending business meetings of the Board. Current board member names, positions, and term expiration dates are shown in Figure 1-2.

The Board of Trustees meets once a month on the second Wednesday of the month at five in the afternoon at the district office in Hayward. The meetings are not broadcast on local television. Agendas and minutes for each meeting are available on ACMAD’s website and upon request. The agency also discloses plans and other documents via the internet.

<table>
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<tr>
<th>Member Name</th>
<th>Position</th>
<th>Term Expiration</th>
<th>Manner of Selection</th>
<th>Length of Term</th>
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<td>William M. Spinola</td>
<td>Newark</td>
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<td>Appointed</td>
<td>2 years</td>
</tr>
<tr>
<td>Jan Washburn, President</td>
<td>Berkeley</td>
<td>January 2015</td>
<td>Appointed</td>
<td>2 years</td>
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</table>

Meetings
Date: Second Wednesday of each month at 5pm.
Location: ACMAD administrative office at 23187 Connecticut St. Hayward
Agenda Distribution: Posted on website and upon request
Minutes Distribution: Posted on website and upon request
ACMAD provides extensive public education including representation at the Alameda County Fair, Home and Garden Shows, school presentations, presentations to city councils and specific service groups. ACMAD prints and distributes thousands of brochures annually and publishes stories in local media. Informational brochures and other educational materials are provided on the ACMAD website.

ACMAD receives few complaints regarding its abatement services or staff in any given year. When a complaint is received, it is reviewed by the district manager and referred to the operations supervisor. Complaints are accepted via phone and in writing. ACMAD strives to respond to all service calls and complaints within one business day. In FY 10-11, ACMAD received 1,112 service requests and no formal complaints. The public is encouraged to call the district if they are experiencing mosquito bites, observe standing water, or would like information.

ACMAD demonstrated full accountability and transparency in its disclosure of information and cooperation with Alameda LAFCo during the MSR process. ACMAD responded to questionnaires and cooperated with document requests.

**Management and Staffing**

While public sector management standards vary depending on the size and scope of the organization, there are minimum standards. Well-managed organizations evaluate employees annually, track employee and agency productivity, periodically review agency performance, prepare a budget before the beginning of the fiscal year, conduct periodic financial audits to safeguard the public trust, maintain relatively current financial records, conduct advanced planning for future service needs, and plan and budget for capital needs.

ACMAD currently employs a full-time staff of 14. Managerial positions include the the district manager. Support staff employed by ACMAD consists of an administrative/financial manager, an entomologist, environmental specialist, mechanical specialist, systems specialist, and field operations supervisor. Control personnel consist of two mosquito control technicians and five vector biologist.

The district manager is accountable to the Board of Trustees and oversees the rest of the staff. Support staff report to the district manager. Control staff report to the district manager, administrative and financial manager and field operations supervisor.

Field employees are certified by the California Department of Public Health in mosquito and vector control. The certification requires a minimum of 40 hours of continuing education every two years. Five ACMAD staff have degrees in Entomology (two with Ph.D. degrees), four others have biology degrees (one with a masters), and one has an M.B.A. District personnel also receive training in First Aid, driving safety, cardiopulmonary resuscitation (CPR), equipment and maintenance and operation of district shop equipment. ACMAD also sends employees to special training that is of immediate operational use or long-term skill development such as GIS mapping, environmental impact analysis, special equipment maintenance, welding, computer programing, etc.
All of ACMAD’s field personnel have assigned zones and also team up to share efforts when needed or to serve as a substitute when the primary assigned person is not available. Thus, the work load on each person is kept more balanced. Zone assignments occasionally change, and many of ACMAD’s personnel have worked in different zones, giving them a broader knowledge of the whole District. In addition to zone assignments, many district personnel have specialized skills for serving the whole District. These skills include operation of specialized treatment equipment, making public presentations, repairing equipment, welding, working on data systems, doing needed research, maintaining reference insect collections, maintaining disease monitoring chicken flocks and creating maps or graphic and photographic work.

ACMAD’s management practices include performance measures, such as number of sources checked and trap results, and annual financial audits. The District does not conduct benchmarking or performance-based budgeting.

ACMAD evaluates its performance by annually reviewing the number of service requests received for various species of mosquitoes. ACMAD sets a goal each year on the number of service requests received based on rainfall level (a strong determinant of mosquito population levels).

ACMAD monitors productivity by tracking the number of service calls received. Mosquito abatement is seasonal (different species are active at different times of the year), and up-to-date District monitoring allows informed decisions to be made on the required amount of work needed in the various areas of the County. ACMAD’s workload is divided into 10 zones, and each reflects the amount of work necessary to provide adequate services with available zone staff. Productivity is also measured by number of sources of standing water inspected and number of adult mosquitos found in traps. Because the District focuses on controlling mosquitoes in the immature stages, good performance/productivity is indicated by a high number of sources checked and/or treated and fewer adult mosquitoes captured in traps. Because service requests will increase following the publication of news articles or press releases on West Nile Virus cases, they do not always indicate the presence of biting mosquitoes.

ACMAD has adopted a mission statement, a Pesticide Application Plan and control program. ACMAD’s financial statements are audited annually. ACMAD does not have a formal Capital Improvement Plan (CIP). Instead, future capital needs are addressed by a long-range planning committee.

ACMAD has received numerous awards for its public education displays at the County Fair and for having the lowest injury rate among other vector control agencies in its workers compensation insurance group.
All special districts are required to submit annual audits to the County within 12 months of the completion of the fiscal year, unless the Board of Supervisors has approved a biennial or five-year schedule. In the case of ACMAD, the District must submit audits annually. ACMAD has submitted its audit to the County for FY 10-11 within the required 12-month period.

GROWTH AND POPULATION PROJECTIONS

This section discusses the factors affecting service demand, such as land uses, and historical and anticipated population growth.

Land Use

ACMAD’s boundary area is approximately 736 square miles. The County is the land use authority for the unincorporated areas. Cities are the land use authorities within the respective city boundaries. ACMAD encompasses every land use designated by the County and cities.

Existing Population

As of 2010, the population of the area in ACMAD was 1,491,618. Its population density—2,027 residents per square mile—is higher than the countywide density of 1,840 people per square mile.

Projected Growth and Development

Based on Association of Bay Area Governments (ABAG) growth projections, the population of the area within ACMAD is anticipated to grow by 27 percent and reach 1,894,355 by 2035, with an average annual growth rate of one percent. Per ABAG population projections, the rate of growth in ACMAD is expected to be similar to the countywide growth rate through 2035. From 2010 to 2035, the population of the County as a whole is anticipated to grow by 27 percent while the unincorporated area of Alameda County is estimated to grow by 21.6 percent.

ACMAD’s requests for services usually parallel the growth of the human population and the vector populations (fleas, flies, mosquitoes, rodents, ticks, etc.). ACMAD reported that growth patterns have not affected service demand for the District’s services in the last few years, as there has been a general lack of population growth within the County. Similarly,

4 Government Code §26909.
in recent years, demand for ACMAD’s services has remained relatively stable. ACMAD pays close attention to population growth in each city and forecasts the future level of demand.

The vector population depends upon the existence of food, water and harborage. Any major changes in weather, food supplies or habitat modifications have an impact on the local vector populations (increase or decrease). ACMAD routinely monitors and surveys the mosquitoes in the County, and places control measures accordingly on an as-needed basis.

According to ABAG growth projections, future growth is anticipated to be concentrated in the cities of Dublin, Emeryville and Livermore over the next 25 years. While Dublin, Emeryville and Livermore are considered high growth areas, those cities with the highest demand for ACMAD’s services with the most request for services include Oakland, Fremont and Berkeley.

**FINANCING**

The financial ability of agencies to provide services is affected by available financing sources and financing constraints. This section discusses the major financing constraints faced by ACMAD and identifies the revenue sources currently available to the District.

ACMAD reported that the current financing levels were adequate to deliver services. According to ACMAD, foreclosures and declining property values have resulted in uncollected benefit assessments and reduced property tax revenue, which has lessened ACMAD’s overall revenue by five percent over the past few years. However, this decrease in funding has not had a significant impact on ACMAD’s budget yet. In FY 10-11, expenditures exceeded revenues as ACMAD made a substantial deposit into its OPEB fund for which it had been saving over the past few years. ACMAD continues to maintain a healthy fund balance to cover any excess expenditures over the next few years, if necessary. After some reserves have been depleted, ACMAD will need to begin making cost cuts to stay within budget, should revenues continue to decline.

**Revenues**

The District received $3.5 million in revenue in FY 10-11. ACMAD relies primarily on property tax revenues (45 percent) and special taxes and benefit assessments (54 percent). The remainder of income comes from governmental aid, interest and miscellaneous sources.

ACMAD has three primary sources of revenue. The first is a share of the ad valorem property taxes. The second source of revenue is from a special tax passed by more than two-thirds of the voters in 1982 (Measure K). This special tax allows ACMAD to assess a tax on each parcel in the County. The maximum allowable rates are $1.75 per parcel, $3.50 per multiple unit (2-4 units), and $8.75 per multiple unit (5 or more units) or mobile home park. The third is from a benefit assessment passed by more than two-thirds of the voters in 2008. This assessment has a built in cost of living adjustment that can change the assessed fee overtime. The maximum allowable rates (including cost of living adjustments) of the original assessment are $5 per single family residence, and $1.60 for multiple
dwelling units for the first 20 units then $0.50 a unit thereafter. Agricultural properties may be assessed up to $.01 per 1/4 acre and dry pasture and timberlands were assessed at $.0021 per 1/4 acre. In 2010, single family residences were assessed at a rate of $1.74 for the special tax plus $2.50 for the benefit assessment.

Expenditures

ACMAD expenditures in FY 10-11 were about $4 million and consisted mostly of salaries and benefits (84 percent). Other expenses included materials, supplies and services, debt service and capital outlay.

In FY 10-11, total expenditures exceeded total revenues by $546,407, because ACMAD made a substantial deposit into its OPEB fund. ACMAD makes use of its reserve balance to cover this excess in expenditures.

Liabilities and Assets

ACMAD operates on a relatively high level of reserve funds and a relatively low level of long-term debt. By the way of reserves, ACMAD had $2,680,932 of unrestricted net assets at the end of FY 10-11, which is equivalent to about eight months of district operations.

ACMAD obtained a $1,000,000 loan with an annual interest rate of 3.9 percent, from Municipal Finance Corporation in Calabasas, California on July 13, 2005. Proceeds from this loan were used for the remodeling of ACMAD’s building. ACMAD committed to making ten principal and interest payments of $111,035 each, on March 26 and December 31 of each year, starting on March 26, 2006. The debt has been paid in full as of June 30, 2011.

Additionally, ACMAD carries a defined benefit post-employment healthcare plan. The District has created an Other Post-Employment Benefits (OPEB) Trust, which it plans to fund at a rate of $500,000 per fiscal year until the actuary determines that it is adequate to fund future OPEB liability. According to ACMAD, this should be accomplished in about five years.

Financing Efficiencies

ACMAD engages in joint financing arrangements related to insurance. As a member of the Vector Control Joint Powers Agency, ACMAD receives workers compensation and excess liability insurance coverage. Employees are eligible to participate in pension plans offered by the California Public Employees Retirement System—a multiple-employer defined benefit pension plan. ACMAD relies on the County for accounting and investment services, and is not charged for these County services.
2. MUNICIPAL SERVICES

MOSQUITO ABATEMENT SERVICES

Service Overview

ACMAD provides monitoring, control and treatment of mosquito sources and infection levels (specifically for West Nile Virus, Western Equine Encephalitis and St. Louis Encephalitis) in mosquitoes and birds, coordinates activities with other public health agencies, and distributes educational materials on mosquito biology and control to the public.

ACMAD coordinates its activities with a number of outside agencies. The California Department of Health Services Vector-borne Disease Section (VBDS) provides laboratory testing of mosquitoes, blood samples and bird carcasses. VBDS distributes virus and mosquito information to county health agencies and mosquito abatement districts throughout the state. The Center for Vector-borne Disease Research and the Arbovirus Research Unit at the University of California Davis help ACMAD monitor pesticide resistance levels and assist the District in determining the most effective pesticide use.

Control of mosquito larval breeding is conducted through identification and inventory of larval sources and treatment of sources including catch basins, utility vaults, untended swimming pools, and freshwater marshes.

Mosquito monitoring and assessment of virus infection transmission potential to humans is conducted through environmental and biological surveillance. Environmental measuring includes rainfall and temperature patterns. Biological monitoring consists of measuring mosquito population density and monitoring virus incidence in wild birds, sentinel chicken flocks and water bodies with high mosquito populations.

Mosquito abatement services are provided by Vector Control County Service Area (VCCSA) only within the City of Albany by resolution of the City Council. There does not appear to be any records of a formal agreement between VCCSA and the City to provide these services. VCCSA also provides vector control services to the entire County of Alameda. ACMAD provides mosquito abatement services for the remainder of the County. When ACMAD was originally formed in 1930, the City of Albany chose not to join. The City chose to receive mosquito monitoring/control from VCCSA when it was established in 1984. Although the two districts’ (VCCSA and ACMAD) category of services are alike, services provided by VCCSA and ACMAD do not appear to duplicate each other, but instead complement one another. These differing service areas are clearly delineated to mitigate any potential for duplication of services by the two districts—ACMAD focuses entirely on mosquito populations and the monitoring of diseases in that population, while VCCSA addresses illnesses transmitted in other vector species. There have been discussions between the districts on the potential of transferring responsibility for mosquito
abatement in the City of Albany to ACMAD. Such a transfer would require property owners to approve the ACMAD benefit assessment that is levied in all other areas of the County.

East Bay Regional Park District also conducts a pest management program throughout the parks within its boundaries in Contra Costa and Alameda Counties. EBRPD’s pest control services target only certain vectors—the California ground squirrel, yellowjackets, gophers, black legged ticks and aquatic snails.5

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**Demand for Services**

A major factor influencing service demand is the presence of vectors (in particular mosquitoes) and vector-borne disease agents within the County and neighboring areas. Although there have been no recent public health advisories for vector-borne diseases in Alameda County, ACMAD monitors for vector-borne viruses known to exist within the County. The demand for surveillance and control efforts increases as a result of vector-borne virus detection within the State of California and neighboring counties.

ACMAD had 1,112 service requests from Alameda County residents in FY 10-11. Most of the requests for services were from the cities of Oakland, Fremont, Berkeley, and Livermore. The number of service requests for each area is shown in Figure 1-3.

The most frequently requested service was to supply mosquito fish to ponds and other water bodies; these made up 50 percent of service requests. Other service requests included reports of standing water (30 percent), reports of mosquito biting activity (17 percent), requests for information about other insects (one percent), and other requests for information (two percent).

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Since the last municipal service review, the number of service requests fell from 3,106 in FY 04-05 to 1,112 in FY 10-11, which equates to a 64 percent decline in requests. At the time of the last review, West Nile Virus was widely reported on in the media and ACMAD experienced a peak in preventative calls during that period, due to enhanced public awareness. The number of service requests reported in FY 10-11 is more consistent with what ACMAD experiences on a regular basis.

It should be noted that ACMAD runs a preventative program, which controls larval mosquitoes before they emerge. When the program runs efficiently, the public rarely sees biting adult mosquitoes and few cases of vector borne disease occur. Consequently, service requests alone are not a good indicator of the level of demand for the District’s services. The preventative work that ACMAD does helps keep the number of calls related to mosquito biting activity low and prevents cases of disease.

Infrastructure and Facilities

ACMAD has a fleet of specialized mosquito control vehicles including four Argo All-Terrain Vehicles for marsh inspections and treatments, two right-side-steering vehicles for treating stormdrains, and one six-wheeled Polaris All-Terrain Vehicle for inspections and treatments.

In 1984, ACMAD relocated to a centralized facility and sold three smaller branch facilities. The new facility had an office, laboratory, shop for maintenance, parking for District vehicles, pesticide storage building, employee and guest parking and fish holding tanks. In 2007, the building was remodeled and 3,700 square feet were added. The addition included a new laboratory, technician room, library, wood shop, and additional support staff offices.

Infrastructure Needs or Deficiencies

ACMAD recently remodeled its building and expanded its laboratory and offices. The current building should fulfill the District’s needs for the next 30 to 40 years. ACMAD reports that it does not have any additional major building projects planned for the near future. ACMAD will be upgrading its computerized database system used in tracking mosquito control activities.

Shared Facilities and Regional Collaboration

ACMAD is one of 63 agencies that conduct mosquito control in California and belong to the Mosquito and Vector Control Association of California (MVCAC). ACMAD participates in the activities of the MVCAC, the Society of Vector Ecologists (SOVE) and the American Mosquito Control Association (AMCA) to promote coordination of common activities and to increase ACMAD knowledge of mosquito control.
ACMAD collaborates with eight other mosquito and vector control agencies in the coastal region and 65 districts in the State, as well as the California Department of Public Health, Vector-borne Disease Division on NPDES permitting. MVCAC members have pooled resources and an environmental consulting firm to assist in complying with NPDES permit requirements. MVCAC appointed a statewide committee, which includes members from a number of different mosquito and vector control districts, as well as the California Department of Public Health. In addition, ACMAD is currently pooling resources with other mosquito and vector control agencies in the coastal region to pay the firm for compilation of a programmatic environmental impact report.

As ACMAD is the primary provider of mosquito control services countywide, governance structure options are limited. One alternative identified may be consolidation with the Contra Costa Mosquito and Vector Control District (CCMVCD). CCMVCD is a countywide district, which provides both mosquito abatement and vector control services.

A study was conducted in 1995 to analyze the efficiencies of CCMVCD consolidating with ACMAD. The study found that a consolidation could result in a combined savings of $135,000 annually, or two percent of the two districts’ combined expenditures. According to the report, the two agencies must come to an agreement on the following issues in order to successfully consolidate: 1) the size and composition of the new board, 2) reserves for known liabilities, and 3) notable differences in employee benefits.

Potential positive impacts of a consolidation may include the ability to share and exchange personnel, a uniform bi-county program, reduced personnel and operating costs, improved reserves, and greater public visibility, which could create an improved image of program accountability. Such a consolidation may also have negative impacts such as increased operational complexities, particularly in light of the difference in services provided by each agency, and a potentially oversized Board.

In response to the report, the ACMAD Board voted against consolidation, while the CCMVCD Board did not take action but indicated that they are willing to review the matter again at a later date if needed. The two agencies have not had any further discussions on the potential to consolidate.

Another governance structure alternative may be consolidation with VCCSA. Many other counties have districts that offer both mosquito and vector abatement services. Offering these services through a single entity may enhance efficiency and reduce administrative costs. ACMAD and VCCSA have not considered consolidation to date. When asked, ACMAD indicated that it was not interested in joining with VCCSA becoming a dependent special district of the County; however, the District would be amenable to taking on additional vector control services with appropriate financing.

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Service Adequacy

This section reviews indicators of service adequacy, including success rate in reducing the outbreak of illnesses and response time to service requests.

As of the drafting of this report in early 2012, there had been no present or recent public health advisories concerning mosquito or vector-borne illnesses in the areas served by ACMAD. ACMAD, like those in most other areas of the country, has been successful in reducing the outbreak of illnesses, including plague and encephalitis. However, more recently, in 2012, there have been two cases of West Nile Virus in humans and several birds that have tested positive for the virus.

Response times are another indicator of service adequacy. ACMAD reported that it responds to its service calls within one business day. Exact response times were not available.
3. MSR DETERMINATIONS

Growth and Population Projections

- As of 2010, the population within Alameda County Mosquito Abatement District (ACMAD) was 1,491,618.
- Based on ABAG growth projections, the population of ACMAD is anticipated to be 1,894,355 by 2035.
- Most growth within ACMAD's boundaries is anticipated in the Tri Valley area in the cities of Livermore, Dublin and Pleasanton.

Location and Characteristics of Any Disadvantaged Unincorporated Communities Within or Contiguous to the Sphere of Influence

- Based on Census Designated Places, Alameda LAFCo determines that there are no disadvantaged unincorporated communities that meet the basic state-mandated criteria. Alameda LAFCo recognizes, however, that there are communities in the county that experience disparities related to socio-economic, health, and crime issues, but the subject of this review is municipal services such as water, sewer, and fire protection services to which these communities, for the most part, have access.

Present and Planned Capacity of Public Facilities and Adequacy of Public Services, Including Infrastructure Needs and Deficiencies

- Demand for mosquito abatement services is driven by growth of the human and vector populations. ACMAD routinely monitors human and vector populations in the County, and places control measures accordingly on an as-needed basis.
- ACMAD experienced a 64 percent decline in the number of service requests between fiscal years 2005 and 2011.
- Based on ACMAD’s reported speed of response to requests and its success in keeping mosquito-borne illnesses at bay, the District’s services appear to be adequate.
- In 2007, the ACMAD building was significantly remodeled. Renovations included an addition of 3,700 square feet, which added a new laboratory, technician room, library, wood shop, and additional support staff offices. No existing infrastructure needs related to ACMAD’s building and vehicle fleet were identified.
Capital improvement projects are planned by the long-range planning committee. Infrastructure needs include upgrading ACMAD’s computerized database system used in tracking mosquito control activities.

**Financial Ability of Agency to Provide Services**

- ACMAD reported that its financing levels were adequate to deliver services. According to the District, the recession has not had a major impact on ACMAD’s budget; although there has been a reduction in funding due to foreclosures and lower property assessments.

- At the end of FY 10-11, ACMAD had $2,680,932 of unrestricted net assets, which is equivalent to about eight months of district operations.

- In FY 10-11, ACMAD expenses exceeded revenues by about half a million dollars. The District is able to finance this deficit from its reserve.

**Status and Opportunities for Shared Facilities**

- As a member of the Vector Control Joint Powers Agency, ACMAD receives workers compensation and excess liability insurance coverage. Additionally, ACMAD employees are eligible to participate in pension plans offered by California Public Employees Retirement System.

- ACMAD collaborates with eight other mosquito and vector control agencies in the coastal region and 65 districts in the State, as well as the California Department of Public Health, Vector-borne Disease Division on NPDES permitting.

- ACMAD relies on the County for accounting and investment services.

- ACMAD belongs to the Mosquito and Vector Control Association of California (MVCAC), the Society of Vector Ecologists (SOVE) and the American Mosquito Control Association (AMCA).

**Accountability for Community Services, Including Governmental Structure and Operational Efficiencies**

- ACMAD demonstrates accountability by updating its constituents on district activities, broadcasting its meetings, soliciting constituent input, disclosing its finances and other public documents on the ACMAD website, and cooperating with LAFCo information requests during the course of this MSR process.

- During the 2006 SOI updates, the Commission adopted a policy to encourage ACMAD to initiate annexation of the territory within the City of Albany. ACMAD has recently expressed strong interest in the annexation. Should ACMAD decide to start the annexation process it would anticipate funding comparable to the special tax.
and benefit assessment to be approved prior to the initiation of service. Approving an assessment within the City could present a challenge, as city residents currently receive mosquito abatement services from VCCSA without paying any additional fees.

- A study was conducted in 1995 to analyze the efficiencies of ACMAD consolidating with Contra Costa Mosquito and Vector Control District (CCMVCD). The study found that a consolidation could result in a combined savings of $135,000 annually. In response to the report, the ACMAD Board voted against consolidation, while the CCMVCD Board did not take action but indicated that they are willing to review the matter again at a later date if needed. The two agencies have not had any further discussions on the potential to consolidate.

- Another potential governance structure option is consolidation with VCCSA. Such a consolidation may offer savings by eliminating some administration costs. A challenge to consolidation may be the differing revenue levels and sources of each of the agencies.

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7 ACMAD Audited Financial Statements FY 10-11, Management Discussion and Analysis, p. 6.
4. SPHERE OF INFLUENCE UPDATE

Existing Sphere of Influence Boundary

ACMAD’s existing SOI is larger than its boundaries and is coterminous with the boundaries of Alameda County.

SOI Options

Three options were identified with respect to ACMAD’s SOI.

Option #1 – Maintain existing countywide SOI

If the Commission determines that ACMAD should ultimately serve the entire County and include the City of Albany, retention of the existing countywide SOI is appropriate.

Option #2 – Reduce SOI to be coterminous with district boundaries

If the Commission elects for the SOI to reflect ACMAD’s current service area, reducing the SOI to exclude Albany and be coterminous with the existing boundaries would be appropriate. This option would remove the City of Albany from the sphere of influence.

Option #3 – Adopt a zero SOI

If LAFCo wants to indicate that ACMAD and VCCSA should consolidate, a zero SOI may be appropriate.

Recommended Sphere of Influence Boundary

Alameda County Mosquito Abatement District provides mosquito abatement services throughout the entire territory of Alameda County with the exception of the City of Albany. Mosquito abatement services within the City of Albany are provided by Vector Control County Service Area.

As it is likely that ACMAD will pursue adding the City of Albany within its boundaries, it is recommended that the Commission reaffirm a countywide SOI. Annexing the territory of the City of Albany into ACMAD would lessen the fiscal burden on other residents in the County, who are presently subsidizing additional services for the residents of Albany. Additionally, annexation by ACMAD would allow for more clearly delineated service areas for both ACMAD and VCCSA. It is recommended that the Commission continue to encourage annexation of the City of Albany to ACMAD, as it did during the 2006 SOI updates.
The potential for consolidation of ACMAD with VCCSA has been identified as an option that may provide efficiencies and reduce administration costs. In light of the fact that consolidation has not been proposed by the affected agencies and sufficient analysis has not been completed to identify what (if any) efficiencies could be gained from this consolidation, it appears that a zero SOI would be premature. Additionally, the SOI would depend on which agency LAFCo determines should be the successor agency following consolidation. For example, should it be determined that ACMAD would be the successor agency taking on the functions of both districts, the VCCSA would have a zero SOI and ACMAD’s SOI would remain unchanged. It is recommended that the two districts work cooperatively to determine what the benefits of consolidation would be.
Proposed Sphere of Influence Determinations

**Nature, location, extent, functions, and classes of services provided**

- Alameda County Mosquito Abatement District provides monitoring, control and treatment of mosquito sources and infection levels in mosquitos and birds, coordinates activities with other public health agencies, and distributes educational materials on mosquito biology and control to the public within the district boundaries which encompass all of Alameda County, except for the City of Albany.

**Present and planned land uses, including agricultural and open-space lands**

- County policies support the provision of adequate mosquito abatement services for County residents.
- Land use plans in the County and its cities include land uses and population growth, which will require continued mosquito abatement services. The recommended SOI does not conflict with planned land uses.
- Mosquito abatement services are needed in all areas, and do not, by themselves, induce or encourage growth on agricultural or open space lands. No impacts upon Williamson Act protected land will occur.

**Present and probable need for public facilities and services**

- Demand for ACMAD’s services is generally correlated with the growth of the human population and vector populations.
- Any major changes in weather, food supplies or habitat modifications have an impact on the local vector populations.

**Present capacity of public facilities and adequacy of public services that the agency provides or is authorized to provide**

- ACMAD’s service capacity is not limited by infrastructure but more so by staffing, which appears to be sufficient to provide services to the existing level of demand.
- Based on ACMAD’s reported speed of response to requests and its success in keeping mosquito-borne illnesses at bay, the District’s services appear to be adequate.
- ACMAD conducts performance evaluations and monitors productivity to improve service efficiency.
Existence of any social or economic communities of interest

- ACMAD serves residents countywide, with the exception of Albany; however, the City of Albany is also considered a community of interest, as it has a strong possibility of becoming a part of ACMAD.
Dear Albany City Council:

Heartworms are a terrible problem that afflicts dogs (and people) throughout California. They are only spread by mosquitoes.

Dog Heartworm Disease: Education, Public Health, Mosquito Management

Alert! Heartworm Disease Increasing in Dogs and Cats in LA ... Wildlife and Humans Also at Risk
Albany does not want to be ground zero for the emergence of mosquito borne disease that could spread to neighboring cities, and eventually require aerial spraying of pesticides to kill adult mosquitoes. It is much better to be proactive and use safe larvacides to kill dangerous mosquitoes before they cause an epidemic.

The City of Albany should join your neighbors to the South and the North
in a united and uniform integrated pest management plan against mosquitoes by joining the Alameda County Mosquito Abatement District to protect dogs and humans, in Albany, and throughout the Alameda and Contra Costa counties.

Please join your neighboring cities by improving your response to these important public health issues.

Very truly yours,

David Lerman

Law Office of David A. Lerman
2600 Tenth Street, Suite 618
Berkeley, California 94710
(510) 665-8500 Telephone
(510) 665-8501 Facsimile
415Justice@att.net
I have served on the Board of Trustees of the Alameda County Mosquito Abatement District (ACMAD) for more than twenty two years, representing both the cities of Berkeley and Oakland (current). Twice during the past four years I also served as Interim Manager of ACMAD. My professional background is in medical entomology, and for twelve years, while on the faculty of UC Berkeley, I supervised a mosquito research laboratory. My knowledge of mosquitoes and mosquito control comes from decades of experience in both academia and the public sector.

ACMAD's mission is to protect all residents of Alameda County from mosquitoes, and this is best accomplished with the entire county serviced by a single government agency. Albany's exclusion from ACMAD's jurisdiction is an administrative, historical artifact dating back to the District's formation in 1930. The County of Alameda encompasses 739 square miles, the City of Albany encompasses 5.5 square miles (0.7% of the area of Alameda County). From this perspective alone, there is a compelling reason for annexing Albany as recommended by both ACMAD and LAFCO. This is particularly important now as the invasive Yellow Fever Mosquito (Aedes aegypti) and Asian Tiger Mosquito (Aedes albopictus) are spreading throughout California; it recent months the Yellow Fever Mosquito was found in Sacramento. These are two of the most dangerous vectors of human diseases, making mosquito control efforts in California far different than they were in 1984. ACMAD is fully prepared to deal with these new challenges by conducting field research in already-infested areas, employing an aggressive county-wide detection trapping program, and improving on existing technologies for surveillance. Since West Nile virus arrived in California nearly twenty years ago, there hasn't been a single human case acquired in Alameda County - a strong testimonial to ACMAD's control efficiency and ability to respond to new health threats.

Notably, the City of Albany has few ongoing mosquito problems based on the number of service requests submitted to Alameda County Vector Control (ACVC), the agency that currently provides mosquito services. The paucity of mosquito problems in Albany is certainly due in part to effective mosquito control in the surrounding areas under the jurisdictions of ACMAD and the Contra Costa Mosquito and Vector Control Abatement District. The annexation of Albany into ACMAD's jurisdiction would be a more efficient use of public funds and improve mosquito control within the County. ACVC field staff staff currently assigned to Albany could better serve the public if they focused on other public health matters. The City of Oakland that I represent, and other cities as well, for example are facing a rising population of homeless creating significant vector problems, particularly with rats.
To Whom It May Concern

Re: Alameda County Mosquito Abatement District & proposed annexation
Date: Sept. 16, 2019

I would like to encourage the City of Albany to participate in the Alameda County Mosquito Abatement District's services. Since I found out about their services, I have and my neighbors have benefited from their free services and they have always responded quickly, thoroughly, and most helpfully. Their technicians most often locate and take care of problems with mosquitoes breeding in local storm drains during all months of the year. In addition, they have worked with many of my neighbors in a very kind and helpful way to locate and eliminate mosquito breeding sites. We have hosted mosquito traps on our property and also benefited greatly from their educational services. Through their very helpful and knowledgeable technicians, I have learned about the many species of mosquitoes that live and breed in my area year-round, and how to also recognize non-mosquitoes.

I think that anyone within their service area would benefit from their help, especially considering mosquito-born health hazards.

Sincerely,
Heather Hernandez
1825 Vine St., Apt. 5
Berkeley, CA 94703-1161
To whom it may concern:

My wife and I recently contacted the Alameda County Mosquito Abatement District about mosquitos in our backyard in Rockridge. Sarah Erspamer responded to our request for help the next day and was extremely competent and professional. She already had a detailed map of potential trouble spots in our neighborhood and tailored her responses to each potential source of mosquitos. We can happily report that after her visit we have noticed a substantial decline in the number of mosquitos in our yard. She gave us outdoor dining back!! We cannot say enough good things about the ACMAD’s response to our request and would highly recommend them as an agency.

Mark Sisson and Corie Calfee
65 Roble Road
Berkeley CA 94705

Mark 510-407-3295
Corie 510-501-0202
My name is P. Robert Beatty and I am the City of Berkeley representative on the Board of Directors for the Alameda County Mosquito Abatement District. I have a PhD in Immunology and my research work has focused on the immune responses to dengue and Zika viruses for the last 20 years. I am a Senior Lecturer at UC Berkeley and have been teaching there for 21 years.

I want to speak in support of the annexation of Albany into ACMAD. I come to you as someone who represents the City of Berkeley in ACMAD for the past 3 years and feels that this Special District is run efficiently and will do great service for the City of Albany. Because ACMAD has targeted goals of focusing on controlling mosquitoes, the results are consistently strong and the district has strong ties all over the state of CA. The staff provide strong unity in working together and have great scientific knowledge in biology and chemistry. By including Albany in the remainder of the county, I believe ACMAD will provide improved mosquito control through the use of the latest technology as well as better connections with the other mosquito districts around the state. This combining of services is far more efficient for fighting mosquitoes and will provide much better resources for fighting the spread of *Aedes aegypti* and *Aedes albopictus* in CA. These are the mosquitoes that spread dengue, Zika and chikungunya viruses and they are in Southern California and the Central Valley. Only through targeted mosquito control efforts and collaborative work will we be able to limit the spread of these mosquitoes and the diseases they spread.

Best,
Robert Beatty
Dear Mayor Nason, City Council, and City Manager,

I would like to thank you again for allowing me to speak at last night’s council meeting. I know you had a full agenda and I appreciate the time you gave me and the consideration given to our agenda item (5-9). Last night was not the only opportunity for you to learn more about the history, process, and reasoning for the inclusion of Albany in the Mosquito Abatement District. I want to reassure you that the cost to Albany residents is not beyond the $4.24 paid by the residents throughout the rest of the County. The reference in the meeting last night about the possibility of us asking for more taxes was a misrepresentation of our Board meeting discussion regarding the County Ad Valorem taxes. I commend your desire to gather more information regarding the annexation and I am available to provide any information you need to assist in the process.

Sincerely,

Erika Castillo
Regulatory & Public Affairs Director
23187 Connecticut St., Hayward, CA 94545
Direct 510-925-1747 | Main 510-783-7744
erika@mosquitoes.org | www.mosquitoes.org
Rachel Jones, Executive Officer
Alameda Agency Formation Commission
1221 Oak Street, Suite 555
Oakland, CA 94612

September 18, 2019

Dear Ms. Jones:

It has come to my attention that the Alameda County Mosquito Abatement District has made an application to LAFCo for Annexation of the City of Albany.

I am writing to you today to express my opposition to the proposed annexation. As the County Supervisor elected to represent Albany, I agree with the City Council’s September 16th vote to oppose the proposed annexation. Albany feels they have been receiving adequate service from Alameda County Vector Control since 1984 and they do not require any additions or changes to service as they do not have a significant source of mosquitos.

Alameda County Vector Control averages 9 calls per year from Albany and Albany residents do not need to be levied an additional parcel tax for this level of service and it is not anticipated that their service needs will increase as they do not have a major mosquito issue due to their unique geography and climate, as well as few sources of standing water.

Thank you very much for your consideration, please let me know if there is additional information I can provide.

Sincerely,

Keith Carson
Supervisor, Fifth District

cc: City of Albany
Alameda County Vector Control