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

ANNUAL REPORT
FY 2002-03

ENVIRONMENTAL HEALTH SERVICES
1131 HARBOR BAY PARKWAY, SUITE 166
ALAMEDA, CA 94502

MISSION

The mission of the Vector Control Services District is to prevent human disease, injury, and discomfort to the residents of the district by controlling insects, rodents and other vectors and eliminating causal environmental conditions through education, legal enforcement, and direct pesticide application.

DISTRICT SERVICES

Request for Service Investigations

- Conduct investigations in response to service requests concerning vectors, assess the extent of the problem, and take the appropriate action.
- Investigate reported problems concerning cockroaches, flies, fleas, lice, yellow jackets, and other insects, as well as, ticks, mites, and spiders, and render the appropriate service.
- Provide advice on insect, tick and spider identification and recommended methods of control.
- Conduct surveys of insects and arachnids of public health importance and maintain a reference collection.
- Survey and effect control of cockroaches in public sewers, utility boxes, and storm drains.
- Conduct yellow jacket and feral bee control in public areas or by contract with other agencies.

Wildlife Management, Domestic Animals and Rabies Control

- Oversees the administration of quarantine measures regarding animal bites.
- Conduct investigations of nuisances related to bats, skunks, opossums, raccoons, dogs, cats, rabbits, pigeons, chickens, and fowl.
- Trap biting or nuisance mammals when preventative alternatives are not possible or will probably be ineffective.
- Work cooperatively with local animal control agencies, and compile statistics for an annual report for the State Health Department.

Rodent Control

- Make recommendations on rodent proofing and suppression of rats and mice.
- Conduct rodent suppression during disease outbreaks or emergencies.
- Conduct surveys of rat populations to assess species prevalence and population control needs.
- Conduct district-wide inspection and baiting of sanitary sewers and waterfronts for rats.
- Inspect and test sewer laterals and mains to detect breaks, which may allow rats to expand

their range into neighborhoods.

Solid Waste Problems

- Investigate complaints regarding solid waste handling and storage problems involving refuse, human or animal waste, and odors at residential properties and businesses.

Vector Borne Disease Surveillance and Control

- Investigate reports of animal or human illness such as Lyme disease, Psittacosis, Scabies, head lice, Reptilian Salmonella, Ehrlichiosis, and Rabies to determine cause, and recommend preventative measures.

- Assist the public in submission of ticks to the public health laboratory for testing.

- Collect rat fleas and determine the potential risk of plague transmission.

Public Education and Information

- Make presentations to groups on vector control, and participate at public events.

- Provide educational information on vectors and vector borne diseases for individuals and groups.

- Staffs public displays at health fairs, special events, and the county fair.

- Post the annual shellfish harvesting quarantine notices on the Alameda County bay shoreline.

Legal Enforcement

- Enforce state laws, regulations, and local ordinances when necessary to protect the public from vectors and related problems.

INTRODUCTION

Alameda County Annual Report for County Service Area (CSA) VC 1984-1 for Vector Control is presented to the Alameda County Board of Supervisors in compliance with Section 25210,77a of the Government Code; County Service Area Law, and Chapters 5.24 and 6.32 et. Seq. of the Alameda County General Ordinance Code. The report, which includes the recommended benefit assessment for the fiscal year 2002-03, is submitted for review and public hearing.

This report gives the history of 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 tables of assessments since the CSA was formed in 1984 as well as the proposed 2002-03 assessments.

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

BACKGROUND & HISTORY

The County Service Area (CSA) 1984-1 for Vector Control was established in June 1984 in order to meet the public needs by providing a comprehensive vector control program. Environmental Health Services was experiencing dwindling financial resources causing severe cutbacks in vector control in Alameda County. In response, the Board of Supervisors created the County Service Area following confirming election for Measure A, in which over 70% of the voters approved formation of the CSA. The CSA now includes 12 of the 14 cities of Alameda County and the unincorporated county areas. The CSA excludes the cities of Emeryville and Fremont, which opted to seek alternative sources for administering vector programs. The City of Dublin was initially not included in the CSA but was annexed by the Board of Supervisors in 1992 at the request of the City Council of Dublin, which voted to join the District.

CITY OF OAKLAND

In 1987, it was recognized that the City of Oakland had a severe rat population, originating primarily from the sanitary sewers, which exceeded the capabilities of the district to cope with the problem. The City of Oakland approved a supplemental assessment, which was first levied in fiscal year 1988-89, and provided for two additional vector control officers.

CSA ALAMEDA COUNTY VECTOR CONTROL
2002 ANNUAL SUMMARY

Introduction

The district experienced critical staffing shortages in the current fiscal year. The civil service job specifications for the vector control officer series are being revised. The district will not be able to recruit new staff until the process is complete. The senior vector control officer position in charge of urban rodent control has been vacant since August of 2001. Three vector control officers were involved in accidents while driving county vehicles, resulting in approximately 1.5 years of staff time lost so far. A vacant vector ecologist position remains unfilled, because no qualified applicants have applied to fill the position. These vacancies have had a considerably impact on district initiated programs, but existing staff have been able to handle all demand services from the public. Since the district provides a variety of services in a wide range of program areas, seasonal and environmental conditions can influence work priorities. Typical services include identification of pest species and advice on exclusion, prevention and control. The key programs include Urban & Sylvatic Rodent Surveillance, Venomous Arthropod Suppression, Rabies Surveillance, Wildlife Management, Nuisance Abatement, and Public Education. In addition, the district enforces a variety of public health laws and regulations, primarily in the areas of public nuisances and the harborage of vectors. The district participates in public events, offering information on our services, new and emerging diseases, and introduced pests.

Urban Rodent Surveillance

The urban rodent surveillance program concentrates on the monitoring and control of domestic (old world) rats and mice of the rodent family Muridae. The program goals include dissemination of advice, and administration of a strategy to suppress populations of Norway Rats, Roof Rats, and House Mice. The District responds to service requests concerning rats and mice at single-family residences, apartments, and businesses. In 2002, the district received 1209 requests for service from the public concerning domestic rodents, representing 24% of all requests. Staff also performed an additional 27,617 field services concerning domestic rodents, including smoke tests, consultations, field surveys, follow up evaluations, and enforcement actions. When there is evidence that rats are surfacing near sewer laterals, field staff conduct inspections to locate broken sewer lines, and take appropriate action to insure those repairs are made. Introduction of smoke producing flares or dye into the sewers helps locate breaks in the lines, and document locations where rats can exit the sewers and infest neighborhoods. District staff performed 31 smoke tests and 4 dye tests in the process of investigating 59 broken sewer laterals. Staff work with the City of Oakland, and other municipalities, to facilitate repair of broken sewer lines and laterals.

There has been a long history of Norway Rats invading homes and neighborhoods from the sanitary sewers of Oakland, due to the age and cost of maintenance of the sanitary sewer system. Service requests for Norway Rats totaled 344 in 2002, representing 79% of all service requests for this species countywide. The property owners of Oakland are assessed an additional $ 1.28

over the standard rate of $ 5.92 per residence, to cover the cost of placing anticoagulant bait, when necessary, in to the sanitary sewers. A total of 7,008 inspections and treatments were made into the sewers of Oakland, and increase of 21 % over the 2001 level, and 56 % over the District goal. Two community college students were hired during the summer of 2002, to assist Vector Control Officers in the sewer-baiting program, and compensate for seasonal workload variations. Even though the summer help program was a success, the limitation of these staff not being able to operate a county vehicle reduced the effectiveness of the program. During the summer months of 2003, the two assistants from last year will be returning.

In 2002 the district continued an innovative pest management technique called pulse baiting, to enhance the efficiency of the sewer-baiting program, and reduce the amount of ineffective rodenticide applications. The Alameda County sewers are somewhat different than the Boston Sewers, where the program was developed, so some local modifications of the program were necessary. Only sewers with observable rat activity are targeted for treatment. These sewers are re-inspected and retreated only if necessary. It has been demonstrated that this method can result in a significant reduction in rodent expansion. The pulse-baiting program was initiated in Alameda County in 2001. The increased baiting in 2002 resulted in a similar number of service requests regarding rats from 2001.

The primary difference in 2002 was that areas with concentrations of rat activity in the sewers were contrasted to clusters of rat complaints in neighborhoods on the surface of the ground. Areas with evidence of rat activity on the surface were surveyed with crews of district staff. Residents were interviewed and properties were evaluated for sewer breaks. The number of broken laterals found this year was 59, over twice as many as the year before. Surveys were conducted at Grand Lake & Lake Shore, De Fremery Park and the Oakland Bart Station near the Coliseum, and resulted in evidence of moderate levels of infestation on the surface. The number of laterals repaired remains unreported, because the City of Oakland has not submitted a report to date. Staff worked with residents and businesses to improve environmental conditions, and treated active rodent burrows with rodenticidal dust. These areas will be revisited routinely to insure that the suppression of these rodents was effective. In addition, a total of 784 sewer inspections were conducted in the communities of Alameda, Albany, Piedmont and San Leandro. Surveys of the adjoining drainage courses are planned for the summer of 2003.

Vector Control Officers responded to 537 Service Requests for Roof Rats this year, representing 37 % of all rodent-related services. Roof rats are well established throughout the suburban and semi urban areas of Alameda County, and including the Oakland Hills. The District responds to requests by homeowners, businesses, and communities regarding roof rat activity. Even though live trap surveys indicate that this rat has insignificant numbers of fleas and other ecto-parasites, historical accounts of bubonic plague site this rat as the most significant species associated with Bubonic Plague Epidemics. This is probably the result of this species' ability to live in a variety of habitats. The District has established a high priority to ensure that these rodents do not enter homes, and expose occupants to potential diseases. Homeowners and landlords are advised on recommended structural modifications to prevent rodent ingress. The perimeter yard is also surveyed for conditions conducive to rodents, and recommendations to eliminate these conditions are given. Staff responsibilities during the inspection include consultation, recommendationd for habitat reduction, distribution of brochures (or fact sheets), and

enforcement of Environmental Health Laws when necessary. If evidence is found suggesting an infestation over a larger area than a single-family residence, neighbothood surveys are conducted.

Sylvatic Rodent Surveillance

Sylvatic rodents are native species to California and are confined to the rodent families Sciuridae, Cricetidae, and Arvicolidae. These animals are normally confined to the rural and semirural areas of Alameda County. Many of these animals are reservoirs of zoonotic diseases such as Bubonic Plague, Hantavirus Pulmonary Syndrome, Ehrlichiosis, Lyme disease, and Babesiosis. Occasionally Cricetids rodents, primarily deermice, will enter buildings and put occupants at risk. Since Alameda County has a history of bubonic plague, surveillance of the sylvatic plague reservoirs in this county is an on going program. In addition there is an ongoing surveillance of Sin Nombre Virus and White Water Arroyo Virus, in response to cases on human illness from a few years ago. The district conducts rodent surveys routinely, usually working cooperatively with the California Department of Health Services, in an effort to prevent outbreaks of these diseases. Sylvatic Rodent surveys also provide an opportunity to advise the public on the potential health risks and the necessity to avoid exposure to these animals. Surveys were performed near the Lawrence Livermore laboratory in February and March in an attempt to confirm the transmission of a Hantavirus Pulmonary Syndrome contracted by an employee of the facility. The Laboratory has been conducting extensive rodent suppression actions since the case. As a result only three mice were captured during the survey, and none were positive for Sin Nombre Virus. California ground squirrels were sampled from Parks Training Center in August and samples were tested for the Plague bacterium, *Yersinnia pestis* with negative results.

The Immuno-sterilization project on California ground squirrels at Shorebird Park in Berkeley was to immunize novel individuals and maintain population counts over the year. Staff from Alameda County Vector Control, and the City of Berkeley collaborated for the second year of the two year study. Sixty-nine squirrels were live trapped and treated with the immuno-sterilant at the onset. Attempts were initiated to recapture the marked animals (n = 126) over 10 trap days so that they could be physically evaluated. New captures were treated, marked and released. In all a total of 222 squirrels have been treated and 36 control specimens were treated with the adjuvant and marked as a control. The control area was on Alameda's Martin Luther King Junior Shoreline Regional Park. Recaptures were evaluated for reproductive status and released. An intense evaluation was conducted when juveniles were expected to emerge. The results indicated a reduction in the number of expected juveniles, but inconclusive for the efficacy of the immuno-sterilant. The USDA Research Laboratory in Colorado is evaluating the results in order to plan the next phase, which will lead to the development of an oral treatment that will be much easier to administer.

Rabies Surveillance

The District and the various animal control agencies administrate the rabies surveillance

programs in Alameda County. The Alameda County Animal Control and the thirteen municipal animal control agencies are responsible for monitoring rabies associated with cats and dogs. The District conducts surveillance over skunks, bats and occasionally other wildlife, by responding to service requests, and submitting specimens to the Alameda County Public Health Laboratory for rabies testing. Raccoon Rabies, a strain specific for this animal, is not present in California, and is confined to the Eastern United States and Canada. Raccoons can be exposed to bat or skunk rabies, but positive animals have been rare in recent years. The district also investigates animal bite incidents and prepares an annual report for the California Department of Health Services.

There was one reported human cases of rabies in the California from a resident of Glenn County during the year 2002 reporting period. We currently have 10 Alameda County Residents, who have taken the rabies vaccine as a precaution from exposure to animals, which is capable of transmitting rabies. A total of 173 animals including dogs, cats, raccoons, skunks and bats were submitted to the Public Health Laboratory for rabies testing. Five bats tested positive for the rabies virus. The number of rabies positive animals statewide was 248, a reduction of 25% over the previous year including 179 bats, 62 skunks, 3 foxes, 2 cats and 2 dogs.

Wildlife Management

The district responded to 1101 service requests concerning wildlife, and provided almost 3,615 hours of field support within or near residential areas. This represents a minimal drop in the number of service requests from the year 2001. The number of hours spent on each request increased by 19%, which may reflect an effort to follow up on these complaints to insure that structural improvements have been made to minimize reoccurrence of an infestation. Most of these activities involve responding to service requests about raccoons, skunks, squirrels, or opossums, and advising homeowners on how to exclude these animals from their residences, and making their property unattractive to them. When circumstances require direct action, Vector Control Officers may assist property owners by setting traps for these pests, and coordinate with the USDA-APHIS trapper or local animal control agencies to pick up and remove the animal. Staff are also communicating with local service agencies to assist the poor or elderly with making structural repairs.

The USDA-APHIS trapper destroyed 41 wild animals in county neighborhoods this year, which might have been prevented if people would not offer food to these animals. The problem of wildlife in residential areas is becoming an ever-increasing problem. USDA records show that wildlife caused property damages to domestic animals, grazing land and buildings amounting to over several thousand dollars. Coyotes and Mountain Lions have killed seven sheep. Five Coyotes have been killed in an effort to reduce the number of livestock killed. The District was not responsible for this program when it was formed, but animal control agencies struggling with continuously tight budgets, have been unable sustain the program. The only solution for this problem is to enact strict ordinances concerning the feeding of wildlife by animal fanciers. The lack of natural habitat in the urban areas results in the animals being forced to inhabit human structures, resulting in property damage, and increased risk of residents or pets being injured. Staff will consult with the public regarding other animals such as pest birds, carnivores and larger rodents such as squirrels, are provided on an ongoing basis, and give advice on exclusion and control.

City of Berkeley

The Berkeley Environmental Health Division's Vector Control Team cleared 859 properties of Berkeley Municipal Code (BMC) vector violations including abatements that cost $7584. The Vector Control Team also scheduled 44 hearings for BMC violations. The Marina area is routinely monitored for rodent activity and baited to control populations as needed. The Vector Control Team has conducted surveys of several areas of the city regarding rodent activity."

Mosquito Surveillance

Alameda County Vector Control currently performs mosquito surveillance for the City of Albany only. The Alameda County Mosquito Abatement District serves the remainder of the county. Staff have documented a number of mosquito sources in Albany, primarily in the drainage ditches close to the San Francisco Bay, and along the Southern Pacific Railroad Tracks. Mosquito breeding is occasionally found in the early spring when ditches do not completely drain after seasonal rainfall. The rapidly expanding West Nile Virus (WNV) epidemic has resulted in increased energy being devoted toward surveillance of mosquitoes in the Albany area, and preparation for the ultimate arrival of the virus. The Senior Vector Control Officer assigned as the Community Education Coordinator has done an outstanding job of getting the news out on WNV, including articles in the District's Newsletter and on the Webpage. He worked with the Public Health Officer to put on a seminar for public agencies on precautions and surveillance programs in place. In addition he has taken over the mosquito surveillance program for Albany, and has collected mosquito samples for identification. He placed EVS Traps baited with Carbon Dioxide in several sewer manholes in Oakland. One site, which also had rodent activity, resulted in the capture of seventy-two *Culex pipiens* mosquitoes, one of the possible vectors of WNV. The Vector ecologist has evaluated a large number of birds, primarily in the Family Corvidae, which died under suspicious circumstances, and shipped likely samples to UC Davis for WNV Testing. As of this date four birds have been shipped, but no WNV positive birds have been found in Alameda County.

Venomous Arthropods

The district provides advice and identification of spiders, scorpions, bees, and a wide variety of wasps, including yellow jackets. Recommendations are made for exclusion and control of these pests in order to help property owners to reduce their risk of exposure. In the case of yellow jackets and honey bees, the risk of stinging incidents increases the urgency for timely response. The District will destroy the nests of these insects, when they are located in close proximity to people, but outside of habitable structures. In addition, the district has a contract with the East Bay Regional Parks, to control ground nests within the county parks. In 2001 the District responded to 510 venomous wasp and 256 honeybee complaints. An additional yellow jacket nest was controlled within the East Bay Regional Parks. Yellow jacket populations increase when there are mild winters and the spring rains end in February. Most yellow jackets nest in the ground, and late rains tend to expose the developing nests to moisture and mold. Since the district is not licensed to make structural repairs to buildings, control of bees and wasp nests inside buildings are normally referred to structural pest control operators for abatement.

Miscellaneous Arthropods

The district responds to service requests regarding a variety of arthropod and insect pests such as spiders, ticks, mites, head lice, cockroaches, flies, fleas, or ants that infest homes and commercial facilities. A total of 404 service requests for identifications, consultations and inspections were responded to concerning these pests. In addition, the District worked cooperatively with city operated water districts in Pleasanton, Hayward, Newark and Union City, by placing cockroach bait stations in water meter boxes, which had been identified with infestations. At least 410 meter boxes were surveyed and 49 were treated during the reporting period. The storm drains in Newark also surveyed and baited on an "as needed" basis.

From time to time, the District will receive service requests concerning biting arthropods other than mosquitoes. There were three incidents concerning bedbugs that were investigated by the vector ecologist. Twenty-Four complaints of bites from small insects or mites were also investigated. In nine of the cases, Tropical Rat mites were identified as the cause, and advice on eliminating the mites and the rodent hosts was provided. In ten of the cases, no biting arthropods were found and it is assumed that the victims were exposed away from their residence or were possibly suffering from delusory parasitosis. Some people with skin conditions or unusual reactions to drugs may experience sensations of being bitten by minute arthropods. In these instances, they are referred to their physicians for further evaluation.

As part of the Lyme disease surveillance program, staff collect and identify ticks, and may recommend testing for tick borne disease when appropriate. Seventeen field surveys were conducted at nine locations, which resulted in the capture of 182 adult *Ixodes pacificus* ticks. Three of these ticks were confirmed to be Lyme disease positive by direct immuno-fluorescence (IFA). The three positive ticks represented about 1.6% positive for Lyme disease from the samples taken so far. This number is far below the two percent figure, which is the typical average for endemic Lyme disease areas in California. Alameda County continues to have a low incidence of locally acquired Lyme disease, mainly due to its' isolated number of suitable habitats for the reservoir and vector.

Twenty-seven residents of Alameda County were bitten by ticks, and submitted them to the Sonoma County Public Health Laboratory for Lyme disease testing. All of the twenty-seven ticks acquired in Alameda County tested negative for the Lyme disease spirochete. Two Lyme disease case histories from the previous year were completed in 2002. The areas where these victims had frequented were surveyed several times, but none of the tick samples yielded positive results for the Lyme disease spirochete, *Borrelia burgdorferi*.

Inventoried Sources

The District maintains an inventory of stables and kennels, and inspects them routinely to prevent nuisances such as odors, insects, or rodents. Animal hobbyist facilities are also evaluated when Alameda County Animal Control requests an inspection, at the time of their annual permit renewal. At the current time there is not any statutory requirement or authority to

conduct inspections of pet shops, animal grooming salons or livestock holding facilities, but we will inspect them when complaints are received regarding nuisances. A total of 37 inspections of these facilities were conducted, either in response to a use permit renewal or a service requests from the public.

Nuisance Abatement

Accumulations of garbage, rubbish, junk cars and stockpiles of animal manure can become public nuisances when left unattended prior to disposal. In addition, these nuisances can provide harborage and nourishment for rodents, flies and other pest arthropods that might result in human exposure and risk of disease. The District responds to complaints about these conditions and will follow up to assure compliance with applicable laws and regulations. The District responded to 423 service requests concerning nuisances, resulting in 2,509 services including investigations, progress assessments, correspondence, and compliance inspections. An additional 9 inspections were conducted in accordance with the Oakland and Hayward Beat Health Code Enforcement Program, which may include elements of substandard housing in addition to nuisances.

Public Education

Community Events: Staff participated at 29 health fairs, conducted 8 presentations at communities throughout the county, and participated in the public health week activities.

Public Health Week: We were the lead organization coordinating the "Public Health Week" Information Fair on April 6th located at New Park Mall in Newark. This was a stellar event that was held at one of the busiest shopping malls in Alameda County. Many Health Care Services Agency components had the opportunity to spotlight their services to the 18,000 shoppers who visited the mall on this date.

City of Fremont: In May of 1995, Mary Koory, a consultant on contract for Environmental Health, drafted a strategic marketing plan. One recommended goal for the Vector Control Services District was to make a concerted effort to encourage the City of Fremont to annex to the District. The City currently provides vector control services from their Animal Control Department. Even though their level of training in vector control is not extensive, there is a strong element within the City to be self-reliant. In 2001 and effort was made to get the word out on District Services. The Community Outreach Specialist set up two separate displays posted at the main library on the subject of rabies.

District Website: The districts website was completed in the fall of 2001. A new domain name has been incorporated to make it easier to find. It is located at acvcsd.org and contains all of the districts handouts and brochures, a recent copy of the current annual report, and allows users to E-mail service requests to the district.

San Francisco "Flower and Garden Show: The District assisted San Mateo MVCD to create a display for the San Francisco "Flower and Garden Show" at the Cow Palace that ran from March

19th thru March 31st. Our staff also helped with the staffing of this regional event. The event drew many Alameda County residents and was a complete success.

West Nile Virus Preparedness: In our Effort to mitigate the impact of West Nile Virus (WNV) in Alameda County we organized a seminar on WNV. We invited all the City Managers, Mayors, County Board of Supervisors, the Cities Public Works Directors and Community Development Directors, as well as many other organizations like the Port of Oakland and EBMUD. This was a well-attended event that had the intent of eliciting cooperation from those who manage large portions of property in Alameda County.

Environmental Health Power Point Presentation: The Districts Community Outreach Coordinator produced an extensive PowerPoint presentation describing Alameda County Environmental Health Services. This presentation was complete with narration, has been converted to video, and has been aired on Soul Beat public access television. The presentation was developed with staff talent at minimal costs. A consultant in a nearby county prepared an inferior Presentation for their Environmental Health Department at a cost of $ 6,000.

Public Outreach Customer Survey: The public outreach work plan can be described as a work in progress. Most of the projects will be completed within the budget year, but will not be summarized in the new budget proposal due to the submittal deadline. The revised Domain name for the web page of ACVCSD.org has been completed and is active. The newsletters were completed and mailed out to constituents. They were very popular and many agencies wanted to order additional copies. We are researching cost effective printing services to increase the number of documents offered next year. The revision of the brochures and inclusion of Spanish and Chinese versions is underway. We are securing the necessary software to allow staff to prepare the Chinese versions. Spanish speaking staff are working on the Spanish versions. Staff are currently distributing five hundred customer satisfaction surveys with pre-stamped return addresses. The focus of the survey concentrates satisfaction with district services rather than individual employees qualities. We were unable to secure a spot in the main exhibit hall last year. Traditionally the District has placed a display in one of the agricultural buildings, but have been reluctant to operate there because of the extended hours and the development costs of a booth that matches a theme.

Pesticide Usage

The District was formed with a goal of protecting the public health by utilization of an Integrated Pest Management (IPM) strategy, which applies various methods and techniques to reduce the risk of human disease from exposure to disease vectors. Most recommendations emphasize structural exclusion techniques, with physical control strategies utilizing barriers, traps and glue boards for control. The use of pesticides by the district is usually confined to the public sewers and storm drainage systems, but we also make applications at public buildings and recreational areas. In addition the district will control venomous insects on private property, with the understanding that this will reduce exposure to neighbors and visitors. The chemicals used by the district in the current year are listed in the table below.

In 2001 at the request of the Board of Supervisors all county agencies, which apply pesticides in the performance of their duties, convened in order to prepare IPM plans. Staff Various Agencies, including the Agricultural Commissioners Division, GSA, Public Works, Mosquito Abatement, and the Vector Control District met regularly and developed a plan for review by the Board of Supervisors. Individual plans were submitted and reviewed by participating agencies. The overall plan will be presented to the Board in the Spring of 2003.

In Keeping with the IPM Concept, staff began applying a new product called Poison Free for control of umbrella wasps, when their control is necessary. The product consists of aerosol application of mint oil. The product is not effective in many situations, but is the material of choice at public schools, where pesticide use is restricted by federal statutes. Five applications were made during the current reporting period.

Our main programs for accomplishing these goals include:

- Educate the public on the most current methods of prevention, exclusion, and suppression of disease reservoirs and vectors.
- Enforce public health laws and ordinances that pertain to vectors, when it is determined that the general public may be at risk.
- Maintain surveillance over disease reservoir species and vectors associated with them, and make recommendations for reduction of human risk.
- Suppress reservoir and vector species in the public domain when there is a risk of exposure to the public.

Pesticide Use Summary
2002

Pesticide	Manufacturer	Formulation	Target Pest	Amount Used	Applications
Delta Dust	AgrEvo	Insecticidal Dust	Yellow Jacket Wasp nests	-	-
Contrac Super Blox	Bell Labs	8oz or I lb blocks	Domestic Rodents	1078 lbs.	121
Ditrac Tracking Powder	Bell Labs	Dust	Domestic Rodents	16 oz-	1
Drione Dust	Roussel UCLA	Insecticidal Dust	Yellow Jacket Wasp nests	50.82 lbs.	146
Quintox Meal	Bell Labs	Meal	Domestic Rodents	-	-
Contrac Pellets	Bell Labs	Pellets	Domestic Rodents	2.63 lbs.	4
Contrac Blox	Bell Labs	1 ounce	Domestic Rodents	1.6 lbs	3
M-Pede	Mycogen Corporation	Liquid Concentration	Bees	5 gal	1
Maxforce Large bait stations	Clorox	Plastic Bait Stations	Cockroaches	4.15 oz	49
Wasp Freeze PT515	Whitmire	Aerosol Spray	Wasps	76.5	100
PT565	Whitmire	Aerosol Spray	Wasps	26	3
Drione Dust	Aventis	Dust	Yellow Jackets	50.8 lbs	146
BTI Briquette	Summit Chemical	10.0%	Mosquitoes	21 ounces	2

- **BENEFIT ASSESSMENT**

The Board of Supervisors reviews annually the proposed rate of assessment, holds public hearings, and then establishes the assessment for the fiscal year. Assessments are levied and collected at the same time and in the same manner as the general county taxes. They are subject to the same fines, penalties, and forfeiture as property taxes. The assessment charge levied against each parcel is available for review at the Vector Control Services District Office, and at the Clerk of the Board Office at 1221 Oak Street, Oakland, 5th floor.

Assessments are based on land use as classified by the Assessor's Office. A basic assessment rate is established as a single benefit unit (BU), which is applied to the schedule for assessments according to land use as follows:

LAND USE CATEGORIES

1. Single Family Residence/Condominium	1BU
2. Vacant Land Parcel	1BU
3. 2-4 Residential Units	2 BU's
4. Commercial and Industrial Property	2 BU's
5. Large Agricultural Rural Properties	2BU's
6. 5 Residential Apartments or more	5 BU's
7. Improved Commercial Property	5BU's

ASSESSMENT FOR ONE BENEFIT UNIT (BU)

(Single Family Residential and Vacant Land)
CSA Basic Rate and Oakland
1984-2002

FISCAL Year	CSA Basic Rate	OAKLAND Supplemental Rate	OAKLAND Total Rate*
84-85	$3.15	$0.00	$3.15
85-86	2.66	0.00	2.66
86-87	2.66	0.00	2.66
87-88	3.24	0.00	3.24
88-89	3.30	0.70	4.00
89-90	3.58	0.66	3.84
90-91	3.80	0.70	4.50
91-92	3.96	0.70	4.66
92-93	3.96	0.70	4.66
93-94	4.72	1.04	5.76
94-95	4.82	1.06	5.88
95-96	5.82	1.26	7.08
96-97	5.92	1.28	7.20
97-98	5.92	1.28	7.20
98-99	5.92	1.28	7.20
99-00	5.92	1.28	7.20
00-01	5.92	1.28	7.20
01-02	5.92	1.28	7.20
02-03	5.92	1.28	7.20

***Includes Oakland Supplemental initiated 1988-89**

CSA VECTOR CONTROL SERVICES

RECOMMENDED ASSESSMENTS
FY 2001-2002

Use/Size	Benefit Unit Assessment	
	Basic	**Oakland**
1. Single Family Residence/ Condominiums	**$ 5.92**	**$ 7.20**
2. Vacant Land	**5.92**	**7.20**
3. Multiple Residential small (2-4 Units)	**11.84**	**14.40**
4. Commercial, Industrial	**11.84**	**14.40**
5. Large Rural Property (More than 10 acres)	**11.84**	**14.40**
6. Multiple Residential	**29.60**	**36.00**
7. Large Commercial (Hotels, Motels, Mobile Home Parks)	**29.60**	**36.00**

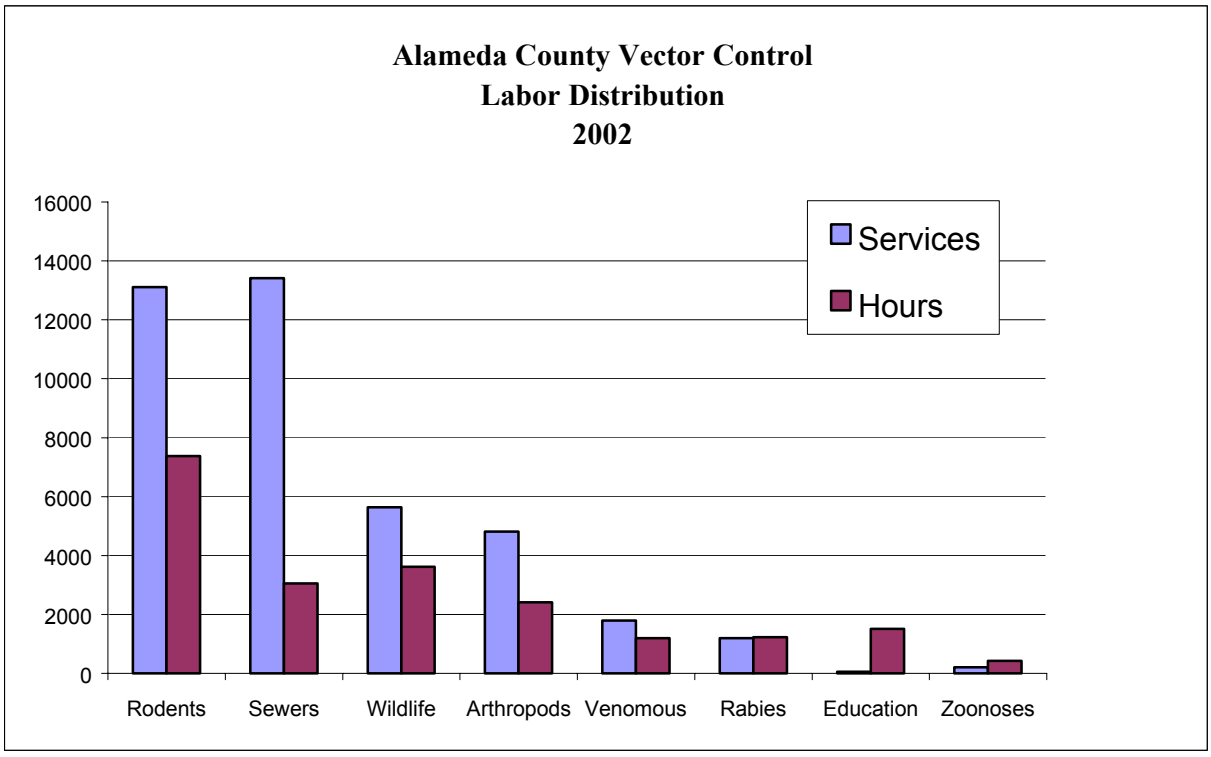

Table 1

The labor distribution by program is very similar to the statistics for 2001. The main difference is a noticeable rise in the number of sewer inspections and the hours in that program. As in 2001 the number of hours spent on wildlife problems is quite high when compared to the number of service requests. This is because wildlife problems are not very easy to solve.

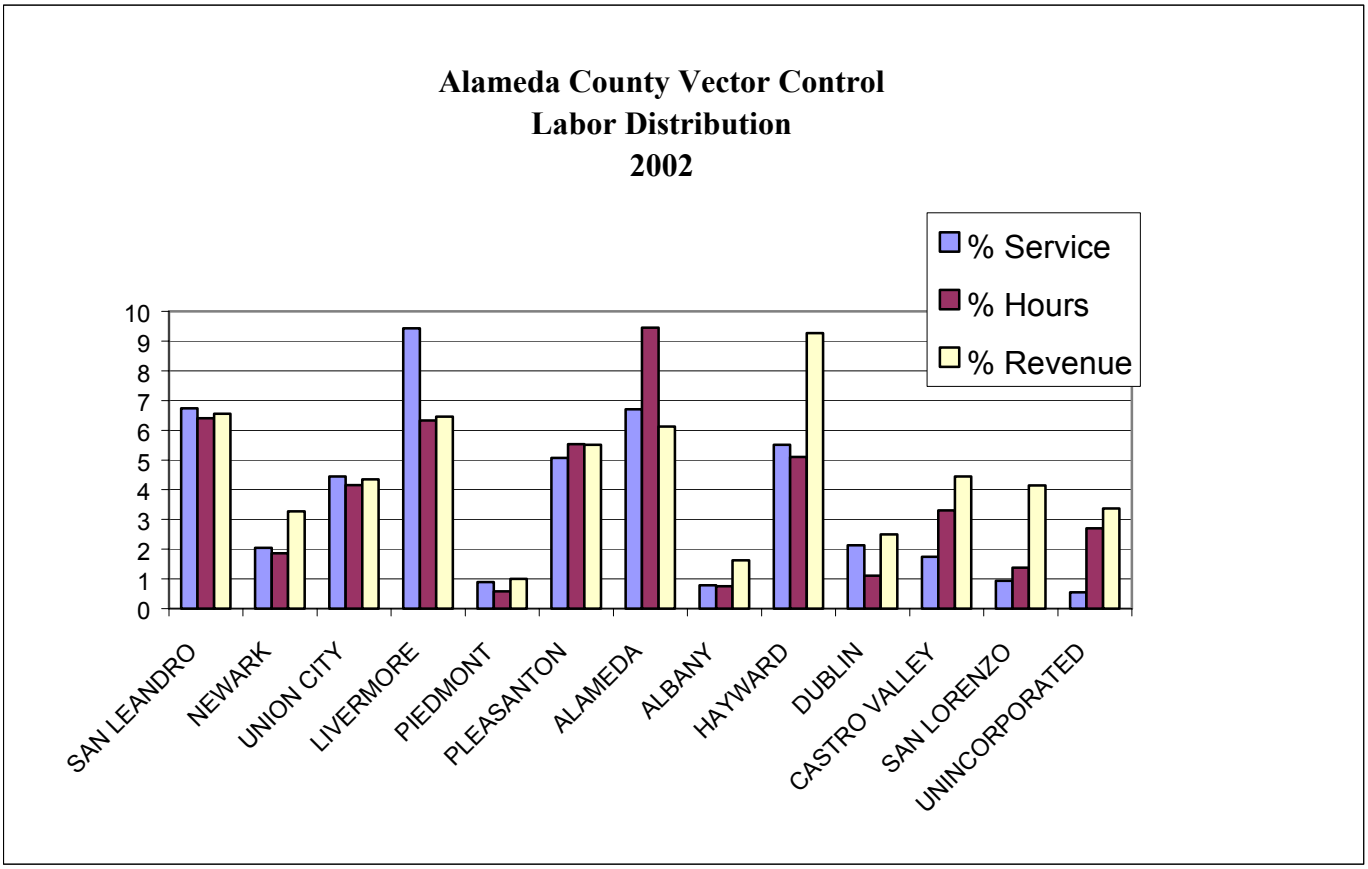

Table 2

In 2002 the department received 2,211 requests for service, which accounted for 14,600 hours of staff time (51.36%), compared to 41.37% of the districts revenue. Oakland is the largest city in terms of population and pays a higher assessment rate due to the Extra Sewer Assessment. The revenue/hours of service ration got out of balance as a result of almost three man-years of staff vacancy as described in the text. We were forced to shift our emphasis from district-initiated work to customer initiated service requests. The majority of district-initiated work is performed in areas other than Oakland and Alameda. The filling of vacant positions should reestablish the proper balance of hours relative to the assessment.