

**ALAMEDA COUNTY VECTOR CONTROL SERVICES
DISTRICT
EMERYVILLE ANNEXATION
VECTOR AND DISEASE CONTROL ASSESSMENT**

ENGINEER'S REPORT

SEPTEMBER 2008

FISCAL YEAR 2009-10

PURSUANT TO THE HEALTH AND SAFETY CODE, GOVERNMENT CODE AND
ARTICLE XIID OF THE CALIFORNIA CONSTITUTION

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ALAMEDA COUNTY VECTOR CONTROL SERVICES DISTRICT

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INTRODUCTION

The Alameda County Vector Control Services District (the "District") also known as County Service Area VC 1984-1 currently provides vector control services throughout Alameda County excluding the Cities of Fremont and Emeryville. The District desires to provide vector and disease surveillance services to the currently unprotected City of Emeryville and is proposing a new assessment on all specially benefiting properties within this unserved area. The District is proposing to annex the City of Emeryville into its boundaries (referred to in this report as the "Emeryville Annexation" or "Service Area.") Neither the District, nor any other public agency, currently provides comprehensive vector control or vector borne disease protection and surveillance services in Emeryville. *(Please note that the term "vector" is used throughout this report to include all non-mosquito vectors. Mosquito control is provided in Emeryville by an existing special district).*

The Mission Statement of the District is:

The mission of the Vector Control 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.

If this measure is approved, the District will be able to provide vector and disease control services to all properties within the City of Emeryville accommodating approximately 5,000 parcels, and over 9,163 citizens.

The proposed Service Area's main services are summarized as follows¹:

- Early detection of emerging or existing public health threats through comprehensive vector and disease surveillance.
- Elimination and/or control of vectors to protect public health and to diminish the nuisance and harm caused by insects and rodents.

¹ The proposed vector control and disease prevention services would materially increase the usefulness, utility, livability and desirability of properties in Emeryville.

- Appropriate, timely response to resident requests concerning the prevention and control of vectors and the diseases they can transmit.
- Provision of public outreach and education concerning vectors and vector diseases.

This report defines a proposed benefit assessment, which will provide funding for vector and disease control services in the City of Emeryville, as well as related costs for equipment, capital improvements and services, and facilities necessary and incidental to vector and disease control programs.

The following is an outline of the primary services and programs that would be funded by a new vector and disease control assessment:

- Request for Service Investigations
- Rat and Rodent Control
- Garbage Management & Animal Waste Problems
- Legal Enforcement
- Vectorborne Disease Surveillance and Prevention
- Public Education & Information
- Insect, Spider Control & Identification
- Wildlife Management & Rabies Control

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

“Vector” means any animal capable of transmitting the causative agent of human disease or capable of producing human discomfort or injury, including, but not limited to, mosquitoes, flies, mites, ticks, other arthropods, and rodents and other vertebrates (Health and Safety Code Section 2002(k)) except that as the services that will be provided and benefit assessment that has been completed for this report, mosquitoes and mosquito abatement is not included.

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

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

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

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

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

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

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

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

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

(b) The Legislature further finds and declares:

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

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

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

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

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

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

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

Following submittal of this Report to the Alameda County Board of Supervisors ("Board") for preliminary approval, the Board may, by Resolution, call for an assessment ballot proceeding and public hearing on the proposed establishment of the Vector and Disease Control Assessment ("Assessment").

If the Board approves such Resolution and calls for the mailing of notices and ballots, a notice of assessment and assessment ballot will be mailed to property owners at least 45 days prior to the date of the Public Hearing set by the Board. Such notice would include a description of the proposed assessments as well as an explanation of the method of voting on the assessments. Each notice would include a ballot on which the property owner could mark his or her approval or disapproval of the proposed assessments and a postage-prepaid ballot return envelope.

After the ballots are mailed to property owners within the proposed Emeryville Annexation area, a minimum 45-day time period must be provided for the return of the assessment ballots. Following this 45-day time period, a public hearing must be held for the purpose of allowing public testimony regarding the proposed assessments and services. At this hearing, the public would have the opportunity to provide input on this issue and would have a final opportunity to submit ballots. After the conclusion of the public input portion of the hearing, the hearing may be continued to a future date to allow time for the tabulation of ballots.

With the passage of Proposition 218 on November 6, 1996, The Right to Vote on Taxes Act, now Article XIII C and XIII D of the California Constitution, the proposed assessments can be levied for fiscal year 2009-10, and future years, only if the ballots submitted in favor of the assessments are greater than the ballots submitted in opposition to the assessments. (Each ballot is weighted by the amount of proposed assessment for the property that it represents).

If it is determined, when the tabulation results are announced, that the assessment ballots submitted in opposition to the proposed assessments do not exceed the assessment ballots submitted in favor of the assessments (weighted by the proportional financial obligation of the property for which ballots are submitted) the Board may take action, by resolution, to approve the levy of the assessments within the proposed Emeryville Annexation for fiscal year 2009-10 and future fiscal years. If the assessments are so confirmed and approved, the levies would be submitted to the Alameda County Auditor for inclusion on the property tax rolls for fiscal year 2009-10.

If the assessments are so confirmed and approved, the District would commence in fiscal year 2009-10 to establish the services described in this report. The fiscal year 2009-10 assessment budget includes outlays for vector control, supplies and disease testing programs.

If the assessments are so confirmed and approved, they may be continued in future years and may be increased in future years by an annual adjustment tied to the San Francisco Bay Area Consumer Price Index, with a maximum annual adjustment not to exceed 3%. The procedures for the levy of the assessments in future years commence with the creation of a budget for the upcoming fiscal year's costs and services, an updated assessment roll listing all parcels and their proposed assessments for the upcoming fiscal year and the preparation of an updated Engineer's Report. After these documents are prepared and submitted, they can be reviewed and preliminarily approved by the Alameda County Board of Supervisors at a public meeting. At this meeting, the Board may also call for the publication in a local newspaper of the intent to continue the assessment and set the date for a noticed public hearing. At the annual public hearing, members of the public may provide input to the Board prior to the Board's decision on continuing the services and assessments for the next fiscal year.

CERTIFICATES

1. The undersigned respectfully submits the enclosed Engineer's Report and does hereby certify that I have prepared this Engineer's Report, and the Assessment and Assessment Diagram herein, have been prepared by me in accordance with the order of the Alameda County Board of Supervisors.

Engineer of Work, License No. C52091

2. I, the Clerk of Board of Supervisors of the Alameda County, hereby certify that the enclosed Engineer's Report, together with the Assessment and Assessment Diagram thereto attached, was filed and recorded with me on _____, 2008.

Clerk of the Board

3. I, the Clerk of Board of Supervisors of the Alameda County, hereby certify that the Assessment in this Engineer's Report was approved and confirmed by the Board of Supervisors on _____, 2008 by Resolution No. _____.

Clerk of the Board

4. I, the Clerk of Board of Supervisors of the Alameda County, hereby certify that a Copy of the Assessment and Assessment Diagram was filed in the office of the County Auditor of the County of Alameda, California, on _____, 2008.

Clerk of the Board

5. I, the County Auditor of the County of Alameda, California, hereby certify that Assessment Roll and Assessment Diagram for fiscal year 2009-10 were filed with me on _____, 2008.

County Auditor, County of Alameda

GENERAL DESCRIPTION OF THE DISTRICT AND SERVICES

ABOUT THE VECTOR CONTROL DISTRICT

The Alameda County Vector Control Services District provides vector control services throughout Alameda County, excluding the City of Emeryville and the City of Fremont, that protect the usefulness, utility, desirability and livability of property and the inhabitants of property within its jurisdictional area by controlling and monitoring disease-carrying and pest vectors. If property owners approve this proposal, the District would extend its vector control services to the currently unserved City of Emeryville. The District would control and monitor disease-carrying vectors such as rodents, insects and ticks, as well as nuisance wildlife and insects.

SUMMARY OF SERVICES

The assessment would provide funding for the provision of comprehensive vector control services, surveillance, disease prevention, abatement, and control of vectors for certain properties within the proposed Emeryville Annexation area. Such vector control and disease prevention projects and programs include, but are not limited to, environmental modifications, biological control, disease monitoring, public education, reporting, accountability, research and interagency cooperative activities, as well as capital costs, maintenance, and operation expenses (collectively "Services"). The cost of these Services also includes capital costs comprised of equipment, capital improvements and facilities and other expenses necessary and incidental to the vector control program.

SCOPE OF SERVICES - VECTORS AND VECTORBORNE DISEASES IN THE SERVICE AREA

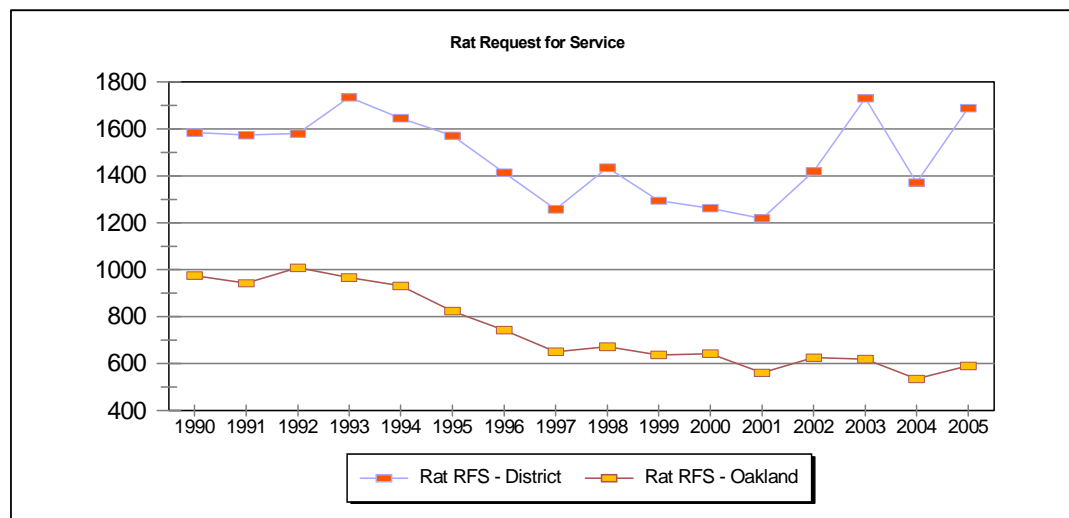
INTRODUCTION

The overall goals of the Alameda County Vector Control Services District are to reduce or eliminate human encounters with pests and disease vectors and to use the least toxic pesticides and environmentally sound methods to control pests. The District has provided these services within its current boundaries for many years. The proposed Emeryville Annexation assessment would allow the District to expand these services, at the same level, to Emeryville. A detailed description of the services is provided below:

REQUEST FOR SERVICE INVESTIGATIONS

The District would conduct investigations as requested by Emeryville residents, businesses, and other property owners; assess the severity of the problem, and develop a remedial strategy and action plan. Service requests would include vector and nuisance issues pertaining to rats and other rodents, cockroaches, flies, fleas, lice, yellow jackets, and other insects, as well as, ticks, mites, and spiders. In this capacity, District staff would assist with the identification and recommend control of insects and arachnids. Also, the District would survey and control cockroach populations in public sewers, utility boxes and storm drains, as well as control bees and yellowjackets, particularly when there is a public health risk.

As an example, the graph below shows the Service Requests for rats from 1990 to 2005.



RAT AND RODENT CONTROL

District staff would educate homeowners to make environmental and structural modifications (also known as “rodent-proofing”) that will make their property less attractive and exclude these unwanted pests. In addition, the District would monitor rodent-related problems. Field service calls would include sanitary sewer inspections, dye testing to detect breaks in the sewer lines, field and neighborhood surveys, follow up evaluations, and enforcement actions.

The District would conduct year-round monitoring of local rat populations to find out where they live and feed, how many there are, how much and what kind of damage they are causing, and which methods to use to suppress them. This monitoring and control would be targeted against commensal (Norway and roof) rats and house mice. In particular, the District would focus on sanitary sewers, including making inspections to locate breaks, because the breaks offer opportunities for the rats to invade new neighborhoods.

In the event of a disease outbreak or emergency, the District would deploy rodent suppression to lower the rodent populations and disrupt the disease transmission cycle. As part of the District’s Integrated Pest Management policy, only least toxic pesticides and trapping would be used when feasible.

The District would establish a high priority to ensure that these rodents do not enter homes and expose occupants to potential disease pathogens. Staff responsibilities during the inspection would include a thorough survey of interior and exterior premises to determine the extent and severity of rodent infestations and their causative conditions. They would look for active rodent signs (droppings or rub marks), rodent entries to the house, and environmental deficiencies that provide food, water, and harborage. When rat infestations present a health risk to the occupants, District staff would recommend a combination of tactics including removing food sources and debris, repairing deteriorated structures, “rat proofing” structures, trapping and treating with least-toxic rodenticides. Additionally, District staff would distribute brochures (or fact sheets), and enforce local ordinances when property owners fail to comply with the necessary repairs and garbage removal. Neighborhood surveys would also be conducted. Neighbors would be informed about the conditions that sustain and harbor rats. In 2005, the District trapped 37 commensal rodents from urban areas and removed 231 fleas. The results are summarized in Table 1, on the following page.

TABLE 1 - FLEAS COLLECTED FROM COMMENSAL RODENTS

2005 Commensal rodents - ectoparasite		<u>Flea species</u>	Norway rats	Roof rats
# of Norway rats	31	<i>Nosopsyllus fasciatus</i>	23	1
# w/ fleas	19	* <i>Xenopsylla cheopis</i>	184	
# of fleas	230	<i>Leptosyllus segnis</i>	3	
# of Roof rats	6	<i>Holopsylla anomalus</i>	2	
# w/ fleas	1			
# of fleas	1			
FLEA INDEX				
Norway rats	7.42	* From 14 rats (one location)		
Roof Rats	0.17			
Total	6.24	Total	212	1

TABLE 1 : Fleas collected from commensal rodents

The District would conduct ongoing surveillance among sylvatic rodents for plague and other rodent-borne diseases. In addition to bubonic plague, sylvatic rodents may be reservoir hosts to zoonotic diseases such as hantavirus pulmonary syndrome, tularemia, rat bite fever, and murine typhus. Test results from 2005 for these sylvatic rodents and their parasitic fleas are summarized in Table 2, below.

TABLE 2 - FLEAS COLLECTED FROM SYLVATIC RODENTS AND ONE LAGOMORPH

2005	N=	# w/ fleas	# of fleas	Flea species	Flea Index
<i>Microtus californicus</i>	4	3	15	<i>Malariaeus telchinis</i>	3.75
<i>Neotoma fuscipes</i>	3	1	1	<i>Opisodasys keeni</i>	0.33
<i>N. lepida</i>	6	3	8	<i>O. sexdentatus</i>	1.33
<i>Peromyscus maniculatus</i>	31	9	13	<i>O. keeni, M. telchinis, O. sexdentatis</i>	0.42
<i>Spermophilus beecheyi</i>	32	16	673	<i>Oropsylla montanus, E. gallinacea, H. anomalus</i>	21.03
<i>S. audubonii</i>	1	1	16	<i>Echidnophagus gallinacea</i>	16.00

TABLE 2: Fleas collected from sylvatic rodents and one lagomorph

WILDLIFE MANAGEMENT AND RABIES CONTROL

Working with local animal control agencies, the District is responsible for surveillance, result notifications, and oversight of the rabies program in Alameda County. The District is in charge of overseeing quarantine and release of suspected animals after they have bitten

someone or have been in contact with wild animals. District staff would respond to service requests on raccoons, skunks, and bats (recently, lab test results have shown bats have overtaken skunks as being the animals most infected with rabies in Alameda County) as well as opossums, dogs, cats, and other wild animals. The District would provide rabies testing on wild animals when public health would be at risk. District staff would inform homeowners about exclusion techniques that would make their property unattractive to these wild animals. When prevention alternatives would not be possible or effective, the District would trap biting or nuisance animals. The District also contracts with an USDA Wildlife Services Specialist who would evaluate potentially hazardous situations and offers consultations.

The District's Wildlife Services Specialist would respond to service requests for raccoons, skunks, coyotes, wild turkeys or opossums, and would advise homeowners on how to exclude these animals from coming onto their properties and causing landscape damage (and killing livestock). If required, District Vector Control Officers would assist property owners by coordinating with the USDA to set traps, pick up and remove the animal. On occasion, staff would assist elderly or low-income occupants to gain assistance from local service agencies with making structural repairs. The District would also responds to requests concerning other wildlife such a bobcats and mountain lions.

SOLID WASTE AND NUISANCE PROBLEMS

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

DISEASE SURVEILLANCE AND CONTROL

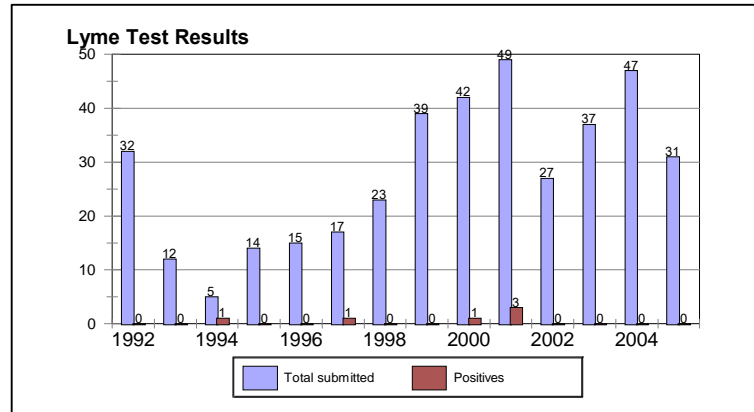
Services would include arthropod sampling, field surveillance, data collection, investigation, determination of cause, and preventative recommendations to lower the risk and exposures to animal or human diseases such as hantavirus, plague, psittacosis, scabies, tularemia, Lyme disease, anaplasmosis and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

CONTROL OF SPIDERS AND INSECTS

The District would provide control and prevention guidelines and identification of spiders, ticks, bed bugs, cockroaches, bees, wasps, and yellow jackets. Homeowners would be given exclusion advice to keep these pests out of their houses and personal protection tips to avoid being bitten or stung by these pests. Upon request, the District would destroy active bees and wasp nests at private residences, schools and parks. In 2006, the District responded to over 600 venomous wasp and bee complaints.

For the Lyme disease and tick borne disease surveillance programs, District staff would collect and identify ticks, and submit ticks to test for pathogens when appropriate. For the public, the District would provide tick identification, personal protection advice, educational materials, and testing facilities with regard to Lyme disease. Table 3 below illustrates the results of ticks submitted for testing of Lyme disease from 1992 to 2005.

TABLE 3 – LYME DISEASE RESULTS



PUBLIC EDUCATION AND INFORMATION

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

LEGAL ENFORCEMENT

The District enforces state laws, regulations, and local ordinances when necessary to protect the public from vectors and nuisance related problems.

INTEGRATED PEST MANAGEMENT

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

methods, and direct educational outreach to inform residents, businesses, and appropriate government agencies.

The District has engaged in urban pest management for over 20 years. Unlike the other vector abatement districts that concentrate mainly on mosquito control, the Alameda County Vector Control Services District focuses primarily on rodent control, and medical and veterinary important insect and arachnid pests. The District staff has demonstrated extensive knowledge and expertise in these areas. To ensure that the District staff is kept informed and trained, they attend continuing education workshops and in-house training to learn about emerging diseases such as West Nile virus as well as new products, equipment, and safety techniques. All of the District Vector Control Officers are certified by the State Public Health Department to perform safe and effective pest control.

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

ASSESSMENT

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

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

The amount to be paid for said Services and the expenses incidental thereto within the proposed Emeryville Annexation, to be paid by the Alameda County Vector Control Services District for fiscal year 2009-10 is generally as follows:

FIGURE 1 – SUMMARY COST ESTIMATE – FY 2009-10 BUDGET

Vector Control Operation	\$37,110
Capital Equipment & Fixed Assets (remodeling, cars, computers)	\$0
Contingency	<u>\$655</u>
Services Subtotal	<u>\$37,765</u>
Less:	
Contribution from other sources	<u><u>(\$2,000)</u></u>
Net Amount To Assessments	\$35,765

An Assessment Diagram is hereto attached and made a part hereof showing the exterior boundaries of the proposed Emeryville Annexation (Assessment Service Area). The distinctive number of each parcel or lot of land in the said Assessment Service Area is its Assessor Parcel Number appearing on the Assessment Roll.

I do hereby determine and apportion said net amount of the cost and expenses of said Services, including the costs and expenses incidental thereto, upon the parcels and lots of land within said Vector and Disease Control Assessment, in accordance with the special benefits to be received by each parcel or lot, from the Services, and more particularly set forth in the Cost Estimate hereto attached and by reference made a part hereof.

Said assessment determination is made upon the parcels or lots of land within said Assessment Service Area in proportion to the special benefits to be received by said parcels or lots of land, from said Services.

The assessment is subject to an annual adjustment tied to the Consumer Price Index for the San Francisco Bay Area as of December of each succeeding year (the "CPI"), with a maximum annual CPI adjustment not to exceed 3%. The maximum authorized assessment rate per single family equivalent benefit unit for the Vector and Disease Control Assessment will increase in future years by an amount equal to the annual change in the CPI, not to exceed 3% per year. The calculation of the change in the CPI shall use December 2008 as the base year CPI. In the event that the annual change in the CPI exceeds 3%, any percentage change in excess of 3% can be cumulatively reserved and can be added to the annual change in the CPI for years in which the CPI change is less than 3%. If the actual assessment rate for any given year is not increased by an amount equal to the minimum of 3% or the yearly CPI change plus any CPI change in previous years that was in excess of 3%, the maximum authorized assessment shall increase by this amount. In such event, the maximum authorized assessment shall be equal to the base year assessment as adjusted by the increase to the CPI, plus any and all CPI adjustments deferred in any and all prior years.

If property owners in the Assessment Service Area, in an assessment ballot proceeding, approve the initial fiscal year benefit assessment for special benefits to their property including the CPI adjustment schedule, the assessment may be levied annually and may be adjusted by up to the maximum annual CPI adjustment without any additional assessment ballot proceeding. In the event that in future years the assessments are levied at a rate less than the maximum authorized assessment rate, the assessment rate in a subsequent year may be increased up to the maximum authorized assessment rate without any additional assessment ballot proceeding.

Each parcel or lot of land is described in the Assessment Roll by reference to its parcel number as shown on the Assessor's Maps of the County of Alameda for the fiscal year 2009-10. For a more particular description of said property, reference is hereby made to

the deeds and maps on file and of record in the office of the County Assessor of the County of Alameda.

I hereby place opposite the Assessor Parcel Number for each parcel or lot within the Assessment Roll, the proposed amount of the assessment for the fiscal year 2009-10 for each parcel or lot of land within the Vector and Disease Control Assessment Service Area².

Dated: Sept 10, 2008

Engineer of Work

By _____
John W. Bliss, License No. C52091

² Each parcel has a uniquely calculated assessment based on the estimated level of special benefits to the property.

COST ESTIMATE

FIGURE 2 – COST ESTIMATE – FY 2009-10 BUDGET

Alameda County Vector Control District Emeryville Annexation Vector and Disease Control Assessment			<i>Total Budget</i>
Vector Control Services and Related Expenditures			
Vector Control Operation ⁶			\$34,836
Capital Equipment & Fixed Assets (remodeling, cars, computers)			\$0
Building Cost			\$0
Indirect County Cost			\$448
Internal Services Funds			\$1,826
Contingency			\$655
Total Vector Control Services and Related Expenditures			\$37,765
Less:			
Contributions from other sources ¹			(\$2,000)
Interest on Investments			\$0
Other Revenue			\$0
Net Cost of Vector Control, Fixed Asset Equipment, Operation			\$35,765
Total Mosquito, Vector & Disease Control Services and Incidentals⁵ (Net Amount to be Assessed)			\$35,765
Budget Allocation to Property			
	Total SFE Units ²	Assessment per SFE ³	Total Assessment ⁴
	3,577	\$10.00	\$35,765

Notes:

1. Contribution from other sources to cover the costs of any general benefits and special benefits not funded by these proposed assessments. This includes \$2,000.00 from existing funding sources. Note: There are other contributions toward general benefits, such as vector-borne disease public health outreach to be conducted by other government entities that are not included in this amount.
2. SFE Units means Single Family Equivalent benefit units. See method of assessment in the following Section for further definition.
3. The assessment rate per SFE is the total amount of assessment per Single Family Equivalent benefit unit.

4. The proceeds from the assessments will be deposited into a special fund for the Assessment. Funds raised by the assessment shall be used only for Services in the Emeryville Annexation area and assessment costs. Any balance remaining at the end of the fiscal year, June 30, must be carried over to the next fiscal year. The assessment amounts are rounded down to the even penny for purposes of complying with the collection requirements from the County Auditor. Therefore, the total assessment amount for all parcels subject to the assessments may vary slightly from the net amount to be assessed.
5. The assessment amounts are rounded down to the even penny for purposes of complying with the collection requirements from the County Auditor. Therefore, the total assessment amount for all parcels subject to the assessments may vary slightly from the net amount to be assessed.
6. Vector Control Allowance includes allowance for uncollectible assessments from assessments on public agency parcels, County collection charges and assessment administration costs. For fiscal year 2009-10, the first fiscal year the assessments are levied, this amount also includes the benefit assessment initial costs, such as initial assessment engineering services and balloting costs.

METHOD OF ASSESSMENT

This section of the Report includes an explanation of the benefits to be derived from the Services to be provided to property in Emeryville by the District, and the methodology used to apportion the total assessment to properties within the Vector and Disease Control Assessment Service Area.

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

The method used for apportioning the assessment is based upon the proportional special benefits to be derived by the properties in the proposed Assessment Service Area over and above general benefits conferred on real property in Emeryville or to the public at large. The apportionment of special benefit is a multi step process: the first step is to identify the types of special benefit arising from the Services, the second step is to estimate the general and special benefits, and the third step is to allocate the assessments to property based on the estimated relative special benefit for each type of property.

DISCUSSION OF BENEFIT

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

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

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

BENEFIT FACTORS

In order to allocate the proposed assessments, the Engineer begins by identifying the types of special benefit arising from the aforementioned vector control services and that would be provided to property within the Assessment Service Area. These types of special benefit are as follows:

- Enhanced desirability, utility, livability and functionality of property in the Unserved Areas.

The proposed assessments will provide new and enhanced services in Emeryville for the control and abatement of nuisance and disease-carrying vectors. This will serve to increase the desirability and “livability” of property in the Unserved Areas. Clearly, properties are more desirable and usable in areas with vector populations and with a reduced risk of vector-borne disease. This is a special benefit to residential, commercial, and industrial properties in the Unserved Areas.

In addition to health related factors, uncontrolled vector populations create a nuisance for residents, employees, customers, tourists, farm workers and guests in the Unserved Areas. Properties in the Unprotected Areas benefit from the reduced nuisance factor that will be created by the Services.

Excessive vectors in the area can materially diminish the utility and usability of property. For example, prior to the commencement of mosquito and vector control and abatement services, many areas in the State were considered to be nearly uninhabitable during the times of year when the mosquito populations were high.³ The prevention or reduction of such diminished utility and usability of property caused by mosquitoes is clearly a special benefit to property in the Unprotected Areas.

The State Legislature made the following finding on this issue:

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

³ Prior to the commencement of modern mosquito control services, areas in the State of California such as the San Mateo Peninsula, Napa County and areas in Marin and Sonoma Counties had such high mosquito populations that they were considered to be nearly unlivable during certain times of the year and were largely used for part-time vacation cottages that were occupied primarily during the months when the natural mosquito populations were lower.

therefore, a health risk and a public nuisance; and professional mosquito and vector control based on scientific research has made great advances in reducing mosquito and vector populations and the diseases they transmit.”⁴

- Increased public safety, welfare and protection of health for property in Emeryville.

The proposed assessments will result in new, year-round proactive Services to control and abate vectors. In addition, the proposed assessments will fund public health education and disease prevention Services. Further, the proposed assessments will fund disease testing and monitoring services. In the absence of the proposed assessments, these Services would not be provided, so the Services funded by the assessments are a distinct special benefit to property in Emeryville.

Such Services have proven to decrease the likelihood of the transmission of infectious diseases by vectors, such as hantavirus, plague, and other infectious diseases.

This finding was confirmed in 2003 by the State Legislature:

“Mosquitoes and other vectors, including but not limited to, ticks, Africanized honey bees, rats, fleas, and flies, continue to be a source of human suffering, illness, death, and a public nuisance in California and around the world. Adequately funded mosquito and vector control, monitoring and public awareness programs are the best way to prevent outbreaks of West Nile Virus and other diseases borne by mosquitoes and other vectors.”⁵

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

“The protection of Californians and their communities against the discomforts and economic effects of vectorborne diseases is an essential public service that is vital to public health, safety, and welfare.”

The likelihood of the introduction of new vectors and vectorborne disease into the Service Area has increased in conjunction with the increased mobility and travel for both current

⁴ Assembly Concurrent Resolution 52, chaptered April 1, 2003

⁵ Assembly Concurrent Resolution 52, chaptered April 1, 2003

residents and visitors from other areas and countries⁶. The volume of trade using sea-land cargo transport has also created conditions favorable for the importation of many invasive species into many areas of the State.

Property in areas with higher disease risk and/or lower public health and safety factors is less desirable and has lower utility. Therefore, the proposed Services improve the public health, welfare and safety of residents, employees, customers, tourists, guests, pets, animals and livestock in the Service Area, which is a special or specific benefit ultimately to property in the Service Area⁷.

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

Rats and other rodents, and their attached fleas and other insects have proven to be a major contributor to the spread of new diseases. A highly mobile population can introduce new vectorborne diseases into previously unexposed areas.

"Vector-borne diseases (including a number that are mosquito-borne) are a major public health problem internationally. In the United States, dengue and malaria are frequently brought back from tropical and subtropical countries by travelers or migrant laborers, and autochthonous transmission of malaria and dengue occasionally occurs. In 1998, 90 confirmed cases of dengue and 1,611 cases of malaria were reported in the USA and dengue transmission has occurred in Texas."⁸

The Services funded by the proposed assessments will help prevent, in Emeryville, on a year-round basis, new diseases and the vectors that transmit diseases. Therefore, the proposed assessments will fund a very important public health service that ultimately benefits property in the Service Area by making property more useable, livable and desirable.

- Increased public awareness and understanding in Emeryville of how to protect property; and people, pets and livestock, on property in Emeryville from diseases carried by insects and small mammals.

⁶ As an example of how travel can introduce new vectors and diseases, health officials think that the first human case of West Nile Virus in California (in 2002) was from a mosquito that was transported by car or plane from another state with proven West Nile Virus activity.

⁷ By reducing the risk of diseases and increasing the safety of property, the proposed Services will materially increase the usefulness and desirability of certain properties in Emeryville.

⁸ Rose, Robert. (2001). Pesticides and Public Health: Integrated Methods of Mosquito Management. Emerging Infectious Diseases. Vol. 7(1); 17-23.

The proposed assessments will fund public education and awareness programs in Emeryville designed to better protect residents, employees, customers, tourists, guests and their pets and livestock from the risk, harm and nuisance created by vectors and other harmful insects and small mammals. This is a special benefit ultimately to property in the Emeryville because these services, which would not be provided in absence of the assessments, clearly help to reduce the nuisance and harm caused by vectors, and as such, properties with a reduced nuisance factor and lower risk of harm to occupants are more desirable and useful.

The State Legislature has also made a finding in this regard:

“Public awareness can result in reduced production of mosquitoes and other vectors on private, commercial, and public lands by responsible parties, avoidance of the bites of mosquitoes and other vectors when the risk of West Nile Virus and other disease transmission is high, detection of human cases of mosquito and vector-borne diseases that may otherwise be misdiagnosed for lack of appropriate laboratory testing.”⁹

- Protection of economic activity in Emeryville.

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

- Reduced risk of nuisance and liability in Emeryville.

Agricultural, range, golf course, cemetery, open space and other such lands in Emeryville contain large areas of vector habitat and are therefore a significant source of vector populations in the Service Area. In addition, residential and business properties in Emeryville can also contain significant vector habitats. It is conceivable that known vector habitats could be held liable for the transmission of diseases or other harm. For example, in August 2004, the City of Los Angeles approved new fines of up to \$1,000 per day for

⁹ Ibid

property owners who don't remove standing water sources of mosquitoes on their property.

The proposed Services to be provided by the District will reduce the vector related nuisance and health liability to properties in the Service Area. The reduction of that risk of liability constitutes a special benefit to property in Emeryville and this special benefit would not be received in absence of the Services funded by the assessments.

SUMMARY OF BENEFIT FACTORS

The above benefit factors, when applied to property in the Service Area, confer special benefits to property and ultimately improve the desirability, usability, functionality and safety of property in Emeryville. These are special benefits to each parcel of property in Emeryville in much the same way that storm drainage, sewer service, water service, sidewalks and paved streets enhance the utility and attractiveness of each parcel of property providing them with more utility of use and making them safer for occupants, easier to market, and, ultimately, more valuable.

It should also be noted that Proposition 218 included a requirement that existing assessments in effect upon its effective date were required to be confirmed by either a majority vote of registered voters in the assessment area, or by weighted majority property owner approval using the new ballot proceeding requirements. However, certain assessments were excluded from these voter approval requirements. Of note is that in California Constitution Article XIID Section 5(a) this special exemption was granted to assessments for sidewalks, streets, sewers, water, flood control, drainage systems and vector control. The Howard Jarvis Taxpayers Association explained this exemption in their Statement of Drafter's Intent: "This is the 'traditional purposes' exception. These existing assessments do not need property owner approval to continue. However, future assessments for these traditional purposes are covered."¹⁰ Therefore, the drafters of Proposition 218 acknowledged that vector control assessments were a "traditional" and therefore acknowledged as an accepted use.

Since all assessments existing before or after Proposition 218 must be based on special benefit to property, the drafters of Proposition 218 inherently found that vector control services confer special benefit to property. Moreover, the statement of drafter's intent also acknowledges that any new or increased vector control assessments after the effective date of Proposition 218 would need to comply with the voter approval requirements it

¹⁰ Howard Jarvis Taxpayers Association, "Statement of Drafter's Intent", January 1997.

established. This is as an acknowledgement that additional assessments for such “traditional” purposes would be established after Proposition 218 was in effect. Therefore, the drafters of Proposition 218 clearly recognized vector assessments as a “traditional” use of assessments, acknowledged that new vector assessments may be formed after Proposition 218 and inherently found that vector control services confer special benefit to properties.

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

Allows special benefit assessments to finance vector control projects and programs, consistent with Proposition 218.¹¹

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

BENEFIT FINDING

In summary, the direct special benefits described in this Report ultimately enhance the desirability, utility, livability, and functionality of all benefiting real properties in Emeryville in excess of the proposed assessments for these properties. Therefore, the assessment engineer finds that the cumulative benefits to property from the Services are reasonably equal or greater than the proposed assessment of only \$10.00 per home and benefit unit.

GENERAL VS. SPECIAL BENEFIT

The proposed Services would provide a degree of general benefit to properties in Emeryville and the public at large. A measure of this benefit is the proportion of its Services that would affect properties outside of Emeryville. Each year, the District will provide some of its Services in areas near the boundaries of Emeryville. By controlling

¹¹ Senate Bill 1588, Mosquito Abatement and Vector Control District Law, Legislative bill analysis

vector populations near the borders of the Service Area, the Services could provide benefits in the form of reduced vector populations and reduced risk of disease transmission to properties outside of Emeryville. This is a measure of the general benefits to property in Emeryville because this is a benefit from the Services that is not specially conferred upon property in Emeryville. An analysis of the number of parcels within 300 feet (the typical outer range for a Norwegian rat) indicates that there are approximately 400 parcels outside of Emeryville that could receive this general benefit. A 50% reduction factor is applied to this number to better model the likelihood of vector travelling, breeding, and causing property damage outside of Emeryville. A comparison of the number of these "general benefit parcels" to the "special benefit parcels" shows that less than 4% of the District's operating budget is allocated towards providing Services that may, in part, benefit surrounding areas not within the Service Area ($(400 \cdot .5) / 5029 = 4\%$). Although it can be argued that such services near the Emeryville boundaries are offset by similar vector control services provided outside of Emeryville, we use a more conservative approach and establish that 4.0% of the Services may be of some general benefit.

Another measure of general benefit is those people who visit the Service Area but do not live, shop or work within the proposed assessment area. SCI estimates that less than 2.5% of the people who visit the Service Area do not live, shop or work within the Service Area during their visit or time in the Service Area. Therefore, 2.5% of potential benefits to the greater public that visit the Service Area but do not live, work or shop there is another measure of the general benefits from the Vector and Disease Control Assessment.¹²

Using a sum of these two measures of general benefit, we find that approximately 6.5% of the benefits conferred by the proposed Vector and Disease Control Assessment may be general in nature and should be funded by sources other than the assessment.

The proposed Service Area total budget for vector abatement, disease control, and capital improvement is \$35,765.00. Of this total budget amount, the District will contribute \$2,400.00, or over 6.5%, of the total budget from sources other than the Emeryville Annexation Vector and Disease Control assessment. This contribution more than offsets any general benefits from the Vector and Disease Control Assessment Services.

ZONES OF BENEFIT

The boundaries of the proposed assessment have been narrowly drawn to include the properties in Emeryville because these properties currently do not receive vector and

¹² It should be noted that this measure of general benefits is also a conservative measure because many special benefit factors are not related to usage by the greater public.

disease control services and these properties would specially benefit from the Services. Such parcels are in areas with a material population of people, pets and livestock on the property. The current and future population of property is a conduit of benefit to property because people, pets and livestock are ultimately affected by vectors and vector-borne diseases and the special benefit factors of desirability, utility, usability, livability and marketability are ultimately determined by the population and usage potential of property.

Within Emeryville, zones of benefit are not justified or needed because the Services will be provided across this narrowly drawn area to all properties within Emeryville.

METHOD OF ASSESSMENT

As previously discussed, the proposed assessments will fund comprehensive, year-round vector control and disease surveillance and control services that will clearly confer special benefits to the underlying properties in Emeryville. These benefits can be partially measured by the property owners, guests, employees, tenants, pets and animals who will enjoy a more habitable, safer and more desirable place to live, work or visit. As noted, these benefits ultimately flow to the underlying property.

Therefore, the apportionment of benefit is partially based on people who potentially live on, work at, or otherwise use the property. This methodology of determining benefit to property through the extent of use by people is a commonly used method of apportionment of benefits from assessments.

Moreover, assessments have a long history of use in California and are in large part based on the principle that any benefits from a service or improvement funded by assessments that is enjoyed by tenants and other non-property owners ultimately is conferred to the underlying property.¹³

¹³ For example, in *Federal Construction Co. v. Ensign* (1922) 59 Cal.App. 200 at 211, the appellate court determined that a sewer system specially benefited property even though the direct benefit was to the people who used the sewers: "Practically every inhabitant of a city either is the owner of the land on which he resides or on which he pursues his vocation, or he is the tenant of the owner, or is the agent or servant of such owner or of such tenant. And since it is the inhabitants who make by far the greater use of a city's sewer system, it is to them, as lot owners or as tenants, or as the servants or agents of such lot owners or tenants, that the advantages of actual use will redound. But this advantage of use means that, in the final analysis, it is the lot owners themselves who will be especially benefited in a financial sense."

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

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

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

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

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

reduced threat from diseases carried by vectors. This benefit ultimately flows to the property.) Larger commercial, industrial and apartment parcels, therefore, receive an increased benefit from the assessments.

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

ASSESSMENT APPORTIONMENT

The special benefits derived from the Vector and Disease Control Assessment are conferred on property and are not based on a specific property owner's occupancy of property or the property owner's demographic status, such as age or number of dependents. The opportunity to use and enjoy property within Emeryville without the excessive nuisance, diminished "livability" or the potential health hazards brought by vectors and the diseases they carry is a special benefit to properties in Emeryville. This benefit can be in part measured by the number of people who potentially live on, work at, visit or otherwise use the property, because people ultimately determine the value of the benefits by choosing to live, work and/or recreate in the area, and by choosing to purchase property in the area.¹⁴

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

The calculation of the special benefit apportionment and relative benefit to properties in the Unprotected Areas from the Services is summarized in the following equations:

¹⁴ It should be noted that the benefits conferred upon property are related to the average number of people who could potentially live on, work at or otherwise could use a property, not how the property is currently used by the present owner.

EQUATION 1 – SPECIAL BENEFIT APPORTIONMENT FACTORS

$$\text{Special Benefit} \approx \frac{\sum \text{(Special Benefits)}}{\sum \text{(Property-specific attributes such as use, property type, size, as well as vector-specific attributes such as destination potential, and population potential)}}$$

EQUATION 2 – RELATIVE SPECIAL BENEFIT (SFE)

$$\text{Relative Special Benefit} \approx \frac{\text{Special Benefit for a Specific Parcel}}{\text{Special Benefit for the Benchmark Parcel (single family home)}}$$

RESIDENTIAL PROPERTIES

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

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

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

Properties with more than one residential unit are designated as multi-family residential properties. These properties, along with condominiums, benefit from the Services in proportion to the number of dwelling units that occupy each property, the average number

of people who reside in each property and the average size of each property in relation to a single family home in the Service Area. This Report analyzed Alameda County population density factors from the 2000 US Census as well as average dwelling unit size for each property type. After determining the Population Density Factor and Square Footage Factor for each property type, an SFE rate is generated for each residential property structure, as indicated in Figure 3 below.

The SFE factor of 0.32 per dwelling unit for multifamily residential properties applies to such properties with 20 or fewer units. Properties in excess of 20 units typically offer on-site management, monitoring and other control services that tend to offset some of the benefits provided by the Vector Control District. Therefore the benefit for properties in excess of 20 units is determined to be 0.32 SFE per unit for the first 20 units and 0.10 SFE per each additional unit in excess of 20 dwelling units.

FIGURE 3 – RESIDENTIAL ASSESSMENT FACTORS

Type of Residential Property	Total Population	Occupied Households	Persons per Household	Pop. Density Equivalent	SqFt Factor	Proposed Rate
Single Family Residential	866,596	284,662	3.04	1.00	1.00	1.00
Condominium	103,373	37,417	2.76	0.91	0.67	0.61
Duplex, Triplex, Fourplex	144,626	57,815	2.50	0.82	0.56	0.46
Multi-Family Residential (5+ Units)	286,957	136,173	2.11	0.69	0.46	0.32
Mobile Home on Separate Lot	13,464	6,660	2.02	0.66	0.41	0.27

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

COMMERCIAL/INDUSTRIAL PROPERTIES

Commercial and industrial properties are generally open and operated for more limited times, relative to residential properties. Therefore, the relative hours of operation can be used as a measure of benefits, since employee density also provides a measure of the relative benefit to property. Since commercial and industrial properties are typically open and occupied by employees approximately one-half the time of residential properties, it is reasonable to assume that commercial land uses receive one-half of the special benefit on a land area basis relative to single family residential property.

The average size of a single family home with 1.0 SFE factor in the Service Area is 0.25 acres. Therefore, a commercial property with 0.25 acres receives one-half the relative benefit, or a 0.50 SFE factor.

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

To determine employee density factors, this Report utilizes the findings from the San Diego County Association of Governments Traffic Generators Study (the "SANDAG Study") because these findings were approved by the State Legislature which determined the SANDAG Study to be a good representation of the average number of employees per acre of land area for commercial and industrial properties. As determined by the SANDAG Study, the average number of employees per acre for commercial and industrial property is 24. As presented in Figure 4, the SFE factors for other types of businesses are determined relative to their typical employee density in relation to the average of 24 employees per acre of commercial property.

Commercial and industrial properties in excess of 5 acres generally involve uses that are more land intensive relative to building areas and number of employees (lower coverage ratios). As a result, the benefit factors for commercial and industrial property land area in excess of 5 acres is determined to be the SFE rate per fourth acre for the first 5 acres and the relevant SFE rate per each additional acre over 5 acres. Institutional properties that are used for residential, commercial or industrial purposes are also assessed at the appropriate residential, commercial or industrial rate.

Self storage and golf course property benefit factors are similarly based on average usage densities. Figure 4 below lists the benefit assessment factors for such business properties.

FIGURE 4 – COMMERCIAL/INDUSTRIAL BENEFIT ASSESSMENT FACTORS

Type of Commercial/Industrial Land Use	Average Usage Per Acre ¹	SFE Units per Fraction Acre ²	SFE Units per Acre After 5
Commercial	24	0.500	0.50
Office	68	1.420	1.42
Shopping Center	24	0.500	0.50
Industrial	24	0.500	0.50
Self Storage or Parking Lot	1	0.021	
Wineries	12	0.250	
Golf Course	3.0	0.063	
Cemeteries	1.20	0.050	
Agriculture/Vineyard	0.050	0.0021	
Timber/Dry Rangelands	0.010	0.00042	

* SFE rate shown is for the first 5 acres of parcel size. Additional acreage is benefited at the rate shown above per acre.

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

VACANT PROPERTIES

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

OTHER PROPERTIES

Article XIIID stipulates that publicly owned properties must be assessed unless those properties are reasonably determined to receive no special benefit from the assessment.

All properties that are specially benefited are assessed. Publicly owned property that is used for purposes similar to private residential, commercial, industrial agricultural, or institutional uses is benefited and assessed at the same rate as such privately owned property.

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

DURATION OF ASSESSMENT

It is proposed that the Assessment be levied for fiscal year 2009-10 and every year thereafter, so long as vectors remain in existence and the Alameda County Vector Control Services District requires funding from the Assessment for its Services in the Service Area. As noted previously, if the Assessment and the duration of the Assessment are approved by property owners in an assessment ballot proceeding, the Assessment can be levied annually after the Alameda County Board of Supervisors approves an annually updated Engineer's Report, budget for the Assessment, Services to be provided, and other specifics of the Assessment. In addition, the Alameda County Board of Supervisors must hold an annual public hearing to continue the Assessment.

APPEALS AND INTERPRETATION

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

designee is authorized to refund to the property owner the amount of any approved reduction. Any dispute over the decision of the Chief, or his or her designee, shall be referred to the Alameda County Board of Supervisors. The decision of the County Board of Supervisors shall be final.

ASSESSMENT DIAGRAM

The proposed Alameda County Vector Control Services District, Vector and Disease Control Assessment area includes all properties within the boundaries of the City of Emeryville.

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

Assessment Diagram goes here

ASSESSMENT ROLL

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