

**PMVCD**  
**July 15, 2019**  
**Attachment A**

**This page was intentionally left blank.**



# **PLACER MOSQUITO AND VECTOR CONTROL DISTRICT**

**MOSQUITO CONTROL DISTRICT (WEST COUNTY) &  
EAST COUNTY MOSQUITO CONTROL AND DISEASE PREVENTION  
ASSESSMENT DISTRICT (EAST COUNTY)**

## **FINAL ENGINEER'S REPORT**

JULY, 2019

FISCAL YEAR 2019-20

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

ENGINEER OF WORK:

**SCI**ConsultingGroup  
4745 MANGELS BOULEVARD  
FAIRFIELD, CALIFORNIA 94534  
PHONE 707.430.4300  
FAX 707.430.4319  
[www.sci-cg.com](http://www.sci-cg.com)

(THIS PAGE INTENTIONALLY LEFT BLANK)

## **PLACER MOSQUITO AND VECTOR CONTROL DISTRICT**

---

### **GOVERNING BOARD**

Jill Gayaldo	City of Rocklin
Peter Gilbert	City of Lincoln
Merry Holliday-Hanson, Ph.D. , Vice President	Placer County
Russ Kelley, President	Town of Loomis
Colin Roe	City of Roseville
Robert Snyder	City of Auburn
Will Stockwin	City of Colfax

### **GENERAL MANAGER**

Joel Buettner

### **DISTRICT LEGAL COUNSEL**

Richard Shanahan, Esq.

### **ENGINEER OF WORK**

SCI Consulting Group

## TABLE OF CONTENTS

---

<b>INTRODUCTION.....</b>	<b>1</b>
OVERVIEW .....	1
MOSQUITO CONTROL DISTRICT (“WEST COUNTY”).....	1
EAST COUNTY MOSQUITO CONTROL AND DISEASE PREVENTION ASSESSMENT DISTRICT (“EAST COUNTY”).....	2
CONTINUATION OF EAST AND WEST ASSESSMENTS.....	3
DEFINITIONS .....	3
LEGISLATIVE ANALYSIS .....	5
<b>GENERAL DESCRIPTION OF THE DISTRICT AND SERVICES .....</b>	<b>8</b>
INTRODUCTION .....	8
ABOUT THE DISTRICT .....	8
SUMMARY OF SERVICES.....	8
<b>ASSESSMENT .....</b>	<b>12</b>
<b>ESTIMATE OF COST.....</b>	<b>14</b>
<b>METHOD OF ASSESSMENT .....</b>	<b>15</b>
OVERVIEW .....	15
DISCUSSION OF BENEFIT.....	15
BENEFIT FACTORS.....	16
MOSQUITO CONTROL IS A SPECIAL BENEFIT TO PROPERTIES .....	16
BENEFIT FINDINGS.....	22
GENERAL VS. SPECIAL BENEFIT.....	22
CALCULATING GENERAL BENEFIT .....	24
METHOD OF ASSESSMENT.....	27
ZONES OF BENEFIT.....	29
METHODOLOGY - MOSQUITO CONTROL DISTRICT (WEST COUNTY) .....	30
METHODOLOGY - MOSQUITO CONTROL AND DISEASE PREVENTION ASSESSMENT DISTRICT (EAST COUNTY) .....	33
APPEALS AND INTERPRETATION .....	36
DURATION OF ASSESSMENT .....	37
<b>ASSESSMENT DIAGRAM.....</b>	<b>38</b>
<b>ASSESSMENT ROLL .....</b>	<b>39</b>

**LIST OF TABLES**

---

TABLE 1 - SUMMARY COST ESTIMATE – FY 2019-20 BUDGET ..... 12

TABLE 2 - COST ESTIMATE – FY 2019-20 BUDGET..... 14

TABLE 3 - RESIDENTIAL ASSESSMENT FACTORS – WEST COUNTY ..... 31

TABLE 4 - COMMERCIAL/INDUSTRIAL ASSESSMENT FACTORS – WEST COUNTY ..... 32

TABLE 5 - RESIDENTIAL ASSESSMENT FACTORS - EAST COUNTY ..... 34

TABLE 6 - COMMERCIAL/INDUSTRIAL BENEFIT ASSESSMENT FACTORS – EAST COUNTY..... 35

## INTRODUCTION

---

### OVERVIEW

The Placer Mosquito and Vector Control District (“District”) provides services throughout all of Placer County and receives funding for operations via four distinct funding sources in four distinct geographic areas. In the area known as Sheridan, the funding is provided by a post-Proposition 13 defined portion of the 1% property tax and was annexed into the District in 2004. Within the city limits of the City of Lincoln, funding is provided by a 1998 voter-approved special tax. In the Western area of the County (West of Auburn and not including Sheridan nor Lincoln), funding is provided by a 2000 property-owner-approved assessment known as the “Mosquito Control District” and in the remaining, eastern portion of the County, funding is provided by a 2004 property-owner approved assessment known as the “East County Mosquito Control and Disease Prevention Assessment District.”

Prior to the creation of the Mosquito Control District in 2000 and the East County Mosquito Control and Disease Prevention Assessment District in 2004, neither the District, nor any other public agency, provided mosquito control and vector-borne disease protection and prevention services in Placer County. In other words, the “baseline” level of services in the County was essentially zero. These two assessment districts are narrowly drawn to only include properties that may request and receive direct service, that are located within the scope of the mosquito and vector surveillance area, that are located within flying or traveling distance of mosquitoes from potential vector sources monitored by the District, and that benefit from a reduction in the amount of mosquitoes and vectors reaching and impacting the property and its residents as a result of the vector surveillance and control. The two Assessments Districts (the Mosquito Control District and the East County Mosquito Control and Disease Prevention Assessment District) are often referred to as the “Assessment Districts” or the “assessment areas” throughout this report and include all of Placer County except for Lincoln and Sheridan.

In order to more efficiently provide all necessary information to support the two assessment districts, the individual Engineer’s Reports for the two districts were combined into this one report beginning in 2006.

### MOSQUITO CONTROL DISTRICT (“WEST COUNTY”)

The original Placer Mosquito and Vector Control District (then known as the “Placer Mosquito Abatement District”) was formed in 1996 as a special services agency with the mission of performing mosquito abatement services within the western portions of Placer County that were not receiving vector control services. However, the District was formed without a provision for funding these services. Therefore, mosquito abatement services were not being performed in the areas covered by the District, with the exception of Lincoln, which passed a special tax measure to fund mosquito control abatement services and Sheridan, which was served by the Sutter Yuba Mosquito and Vector Control District at the time.

In response to requests from the community for the establishment of a funding source for mosquito abatement, the Board of Trustees directed the initiation of proceedings for a proposed special assessment. In July of 2000, the County conducted an assessment ballot proceeding pursuant to the requirements of Article XIID of the California Constitution ("The Taxpayer's Right to Vote on Taxes Act") and the Health and Safety Code. During this ballot proceeding, property owners in the County were provided with a notice and ballot for the proposed special assessment. A 45-day period was provided for balloting and a public hearing was conducted on July 10, 2000. At the public hearing, all ballots returned within the 45-day balloting period were tabulated.

It was determined at the public hearing that 72.7% of the weighted ballots returned were in support of the assessment. Since the assessment ballots submitted in opposition to the proposed assessments did not exceed the assessment ballots submitted in favor of the assessments (with each ballot weighted by the proportional financial obligation of the property for which ballot was submitted), the District gained the authority to approve the levy of the assessments for fiscal year 2000-01 and future years. The authority granted by the ballot proceeding includes an annual adjustment in the maximum authorized assessment rate equal to the annual change in the Consumer Price Index for the San Francisco Area, not to exceed 3%.

### **EAST COUNTY MOSQUITO CONTROL AND DISEASE PREVENTION ASSESSMENT DISTRICT ("EAST COUNTY")**

In 2005, the Placer Mosquito and Vector Control District ("District") increased its service area by completing the annexation of the areas in Placer County that previously did not receive any mosquito abatement or insect/rodent disease surveillance and abatement services (the "un-served areas"). This report defines a benefit assessment district which provides funding for the services in the previously un-served (prior to 2005), eastern areas of Placer County. Although this assessment was approved for 2004-05, the District did not impose any levies as the LAFCo process was not yet completed. The District did, however, begin preliminary work for services in the East County. (Technically speaking, The East County Mosquito Control and Disease Prevention Assessment District imposed a zero assessment for the first year in 2004-05, and imposed its first positive assessment in 2005-06.)

The East County area includes all property within Placer County that was previously outside of the District's jurisdictional boundaries. This area includes the incorporated cities of Auburn and Colfax, as well as the communities of Alpine Meadows, Applegate, Blue Canyon, Bowman, Cisco Grove, Carnelian Bay, Dutch Flat, Emigrant Gap, Foresthill, Gold Run, Homewood, Kings Beach, Meadow Vista, Northstar at Tahoe, Soda Springs, Squaw Valley, Tahoe City, Tahoma, and Yuba Gap; and other unincorporated communities and lands. This annexation brought over 100,000 additional residents into the District.

In 2004, the Board of Trustees directed the initiation of proceedings for a proposed special assessment for the East County "Annexation Area." In July of 2004, the District conducted an assessment ballot proceeding pursuant to the requirements of Article XIID of the

California Constitution ("The Taxpayer's Right to Vote on Taxes Act") and the Health and Safety Code. During this ballot proceeding, property owners in the Annexation Area were provided with a notice and ballot for the proposed special assessment. A 45-day period was provided for balloting and a public hearing was conducted on July 12, 2004. At the public hearing, all ballots returned within the 45-day balloting period were tabulated.

It was determined at the public hearing that 66.1% of the weighted ballots returned were in support of the assessment. Since the assessment ballots submitted in opposition to the proposed assessments did not exceed the assessment ballots submitted in favor of the assessments (with each ballot weighted by the proportional financial obligation of the property for which ballot was submitted), the District gained the authority to approve the levy of the assessments for fiscal year 2004-05 and future years. The authority granted by the ballot proceeding includes an annual adjustment in the maximum authorized assessment rate equal to the annual change in the Consumer Price Index for the San Francisco Area, not to exceed 3%.

### **CONTINUATION OF EAST AND WEST ASSESSMENTS**

In each subsequent year for which the assessments are continued, the District must direct the preparation of an Engineer's Report, budgets and proposed assessments for the upcoming fiscal year. This Report was prepared pursuant to the direction of the District adopted by resolution 2019-01 on March 18, 2019, and includes both the East County and West County Assessments.

The District proposes to impose the assessment again for 2019-20 and proposes a CPI adjustment of 3.00% to the assessment rate for fiscal year 2019-20. A public hearing will be held on July 15, 2019. If the District approves this Engineer's Report and the proposed assessments on July 15, 2019, the assessments will be submitted to the County Auditor/Controller for inclusion on the property tax rolls for Fiscal Year 2019-20.

### **DEFINITIONS**

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

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

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

The following is an outline of the primary services that are provided:

- Mosquito control
- Surveillance for vector-borne diseases
- Mosquito inspections
- Response to service requests
- Mosquitofish for backyard fish ponds and other appropriate habitats
- Presentations to schools and civic groups
- Identification of mosquitoes, ticks and other arthropods

The District is controlled by Mosquito Abatement and Vector Control District Law of the State of California law. 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 mosquito abatement and other 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.*

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

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

## LEGISLATIVE ANALYSIS

### PROPOSITION 218

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

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

Beginning July 1, 1997, all existing, new, or increased assessments shall comply with this article. Notwithstanding the foregoing, the following assessments existing on the effective date of this article shall be exempt from the procedures and approval process set forth in Section 4:

*(a) Any assessment imposed exclusively to finance the capital costs or maintenance and operation expenses for sidewalks, streets, sewers, water, flood control, drainage systems or vector control.*

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

### **SILICON VALLEY TAXPAYERS ASSOCIATION, INC. V. SANTA CLARA COUNTY OPEN SPACE AUTHORITY**

In July of 2008, the California Supreme Court issued its ruling on the Silicon Valley Taxpayers Association, Inc. v. Santa Clara County Open Space Authority. This ruling is the most significant court case in further legally clarifying the substantive assessment requirements of Proposition 218. Several of the most important elements of the ruling included further emphasis that:

- Benefit assessments are for special benefits to property, not general benefits.<sup>1</sup>
- The services and/or improvements funded by assessments must be clearly defined.
- Special benefits are directly received by and provide a direct advantage to property in the assessment district.

This Engineer's Report, and the process used to establish this assessment are consistent with the Silicon Valley Taxpayers Association, Inc. v. Santa Clara County Open Space Authority decision.

### **DAHMS V. DOWNTOWN POMONA PROPERTY**

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

### **BONANDER V. TOWN OF TIBURON**

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

### **BEUTZ V. COUNTY OF RIVERSIDE**

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

---

<sup>1</sup> Article XIII D, § 2, subdivision (d) of the California Constitution states defines "district" as "an area determined by an agency to contain all parcels which will receive a special benefit from the proposed public improvement or property-related service."

**COMPLIANCE WITH CURRENT LAW**

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

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

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

## GENERAL DESCRIPTION OF THE DISTRICT AND SERVICES

---

### INTRODUCTION

Following are the Services, and corresponding level of service, for the east and west assessments. As noted, there was previously no regular mosquito control services provided in these areas of Placer County. These Services are over and above the previous (prior to 2000 in the west and prior to 2004 in the east) zero-level baseline level of service. The formula below describes the relationship between the final level of service, the existing baseline level of service, and the enhanced level of service to be funded by the assessment.

<b>Final Level of Service</b>	=	<b>Baseline Level of Service</b>	+	<b>Enhanced Level of Service</b>
-----------------------------------	---	--------------------------------------	---	--------------------------------------

In this case, the baseline level of service was nil, and the final level of service is precisely the enhanced level of service funded by the assessment.

### ABOUT THE DISTRICT

The Placer Mosquito and Vector Control District is an independent special district (not part of the County or any city) that controls and monitors disease-carrying insects such as mosquitoes and ticks, and other harmful pests such as yellowjackets. In addition, the District regularly tests for diseases carried by insects and small mammals and educates the public about how to protect themselves from diseases transmitted by insects and small mammals.

Community efforts were started in western Placer County to form a mosquito abatement district in 1996. After several unsuccessful voter ballot attempts, the current district was formed with the passage of Measure M and assessment ballot in 2000. The Placer Mosquito and Vector Control District opened its temporary facility in September 2001. At the present time the District has seventeen (17) regular employees and up to five (5) seasonal employees, and is providing mosquito and vector control services within its current jurisdictional areas as well as organizing and mapping service areas.

In addition to its mosquito abatement and vector control services, the District provides education programs on vectors and disease abatement at school and civic group meetings. The District distributes printed material and brochures that describe what citizens can do to keep their homes and property free of mosquitoes, and other vectors.

### SUMMARY OF SERVICES

The assessments provide funding for projects and programs for the surveillance, abatement, and control of mosquitoes and other vectors. Such mosquito abatement and vector control projects and programs include, but are not limited to, source reduction, larvicide and

adulticide applications, disease monitoring, property owner and resident 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 necessary and incidental to vector control programs.

The Services are further defined as follows:

- Response to mosquito problems and other vectors on properties in the District.
- Control of mosquito larvae on properties throughout the District including in catch basins, ditches, drain lines, vaults, wastewater treatment plants, under buildings, residences, water troughs, freshwater marshes, creeks and other sources.
- Control of adult mosquitoes where necessary and possible on properties in the District.
- Survey and data analysis of mosquito populations to assess health risks and allocate control efforts to properties.
- Monitoring of mosquito populations using carbon dioxide baited traps, gravid traps, and other collection methods.
- Testing and monitoring for diseases carried and transmitted by mosquitoes and other arthropods, such as West Nile, St. Louis, and Western equine encephalitis viruses, Malaria, and Dog Heartworm.
- Sampling of sentinel chicken flocks or other birds.
- Virus tested mosquito pools and blood analytical studies for State and local agencies.
- Testing of new insecticidal materials and investigation of their efficacy.
- Sampling and identification of ticks in parks, trails, and other locations frequented by the property owners and residents.
- Testing of ticks for tick-borne diseases such as Lyme disease, Ehrlichiosis, and Babesiosis.
- Conduct workshops on the management and control of ground nesting stinging insects including yellowjackets, Africanized honey bees and wasps for park and school maintenance personnel.
- Monitoring of other nuisance and potentially hazardous organisms and vectors such as ticks, mites, and fleas. (Only vectors found outside of structures will be monitored and controlled)
- Education of property owners and residents about the risks of diseases carried by insects and small mammals and how to better protect themselves and their pets.
- Monitoring of new and emerging vectors such as the Asian tiger mosquito and Yellow fever mosquito at entry points.

- Testing for and control of the vectors of endemic pathogens such as West Nile virus, and new and emerging pathogens such as Dengue, Chikungunya and Zika.

Mosquito-breeding sources such as wetlands, vernal pools and other naturally occurring habitats, along with man-made sources, are inspected by the District for mosquito production. Agricultural, industrial, and residential sources are also routinely checked and monitored.

Carbon dioxide baited traps, along with other means of gathering information on adult mosquito populations in the area, are used. Sentinel chicken flocks are used throughout the District from May through October to detect disease activity such as Western Equine, West Nile, and St. Louis encephalitis. The objectives of the District's program are to control or eliminate existing mosquito breeding sources and to prevent new ones to protect health and comfort of property owners and residents.

#### **GENERAL SURVEILLANCE AND CONTROL PROCEDURES**

Surveillance: There was previously no surveillance in the assessment areas. The assessments provide for the surveillance program within and proximate to the properties in the assessment areas. Surveillance is conducted in a manner based upon equal spread of resources throughout the District boundaries, focusing on areas of likely sources. Treatment strategies are based upon the results of the surveillance programs, and are specifically designed for individual areas.

The District provides an assessment area-wide level of consistent vector control such that all properties benefit from equivalent reduced levels of vectors such as mosquitoes, ticks and yellowjackets. Surveillance and monitoring are provided to the assessment areas on an area-wide basis. The District, though, cannot predict where control measures are applied because the type and location of control depends on the surveillance and monitoring results. However, the control thresholds and objectives are comparable throughout the assessment areas. The materials used to control the mosquito larvae and adults are the safest and least toxic materials available, and are EPA-approved. Larvicides are used to kill mosquito larvae. Larvicides include biorational control products, such as *Bacillus thuringiensis israelensis* and *Bacillus sphaericus* which are naturally occurring bacteria. Only aquatic dipterans, such as mosquitoes, black flies and some midges, are susceptible to *B.t.i.* Other aquatic invertebrates and non-target insects are not affected by these products. Larviciding oils and monomolecular films are used to drown the mosquito larvae in their later aquatic stages when they do not breathe by forming a thin coating on the surface of the water. Methoprene is an insect growth regulator which is a target specific material that does not affect mammals, waterfowl, or beneficial predatory insects. The District uses pyrethrins and pyrethroids for our adult mosquito fogging program in and around populated areas. Pyrethrins are insecticides that are derived from the extract of chrysanthemum flowers and pyrethroids are synthetic forms of pyrethrins. Pyrethrins and pyrethroids are generally applied by truck mounted or hand held foggers. Trumpet is a product used in the agricultural areas of the

District for adult mosquito control and is applied by aircraft as an ultra-low volume (ULV) spray.

There are more than 30 different species of mosquitoes in the county with about a dozen species that are quite common. Here is a list of them, but not limited to:

- **Aedes:** *Ae. bicristatus*, *Ae. cataphylla*, *Ae. clivis*, *Ae. fitchii*, *Ae. hemiteleus*, *Ae. hexodontus*, *Ae. increpitus*, *Ae. melanimon*, *Ae. nigromaculis*, *Ae. schizopinax*, *Ae. sierrensis*, *Ae. tahoensis*, *Ae. ventrovittis*, *Ae. vexans*, *Ae. washinoi*;
- **Anopheles:** *An. franciscanus*, *An. freeborni*, *An. occidentalis*, *An. punctipennis*;
- **Culex:** *Cx. apicalis*, *Cx. boharti*, *Cx. erythrothorax*, *Cx. pipiens*, *Cx. stigmatosoma*, *Cx. tarsalis*, *Cx. territans*, *Cx. thriambus*;
- **Culiseta:** *Cs. incidens*, *Cs. inornata*, *Cs. particeps*.

### SERVICE REQUESTS

The District responds to service requests within its boundaries. Any property owner, business or resident in the assessment areas can contact the District to request vector control related service or inspection and a District field technician responds promptly to the particular property to evaluate the property and situation and to perform appropriate surveillance and control services. The District responds to all service requests in a timely manner, regardless of location, within its boundaries.

## ASSESSMENT

---

WHEREAS, the Board contracted with the undersigned Engineer of Work to prepare and file a report presenting an estimate of costs of Services, a diagram for the assessment district and an assessment of the estimated costs of Services, and the special benefit conferred thereby, upon all assessable parcels within the Mosquito Control District (West County) and the East County Mosquito Control and Disease Prevention Assessment District (East County);

NOW, THEREFORE, the undersigned, by virtue of the power vested in me under Article XIID of the California Constitution, the Government Code and the Health and Safety Code and the order of the Board of said Placer Mosquito and Vector Control District, hereby make 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 Mosquito Control District (West County) and the East County Mosquito Control and Disease Prevention Assessment District (East County).

The amount to be paid for said services and improvements and the expenses incidental thereto, to be paid by the Placer Mosquito and Vector Control District for the fiscal year 2019-20 is generally as follows:

**TABLE 1 - SUMMARY COST ESTIMATE – FY 2019-20 BUDGET**

<b>Mosquito Abatement Services and Improvements</b>	\$2,798,670
<b>Incidentals Expenses</b>	\$34,911
<b>Totoal Budget</b>	<u>\$2,833,581</u>
<b>Less:</b>	
<b>Other Revenue</b>	<u>(\$148,138)</u>
<b>Net Amount To Assessments</b>	<b>\$2,685,443</b>

An Assessment Diagram is hereto attached and made a part hereof showing the exterior boundaries of said District. The distinctive number of each parcel or lot of land in the said District 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 Mosquito Control District (West County) and the East County Mosquito Control and Disease Prevention Assessment District, 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 District 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 adjustment not to exceed 3.00%. The annual increase in CPI for fiscal year 2018-19, based on the yearly CPI change from December, 2017 is 4.49%. An adjustment of 3.00% and there is 2.19% CPI "banked" from previous years for potential use with future adjustments. The rate, adjusted by 3.00% for 2019-20 is \$19.26 per Single Family Equivalent.

The District may finance the cost of acquiring or constructing capital facilities over time and pledge a portion of assessment revenues received in any fiscal year towards the repayment of the principal amount of such borrowed funds together with interest over the repayment period.

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 Placer for the fiscal year 2019-20. 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 Recorder of the County of Placer.

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 2019-20 for each parcel or lot of land within the said Mosquito Control District (West County) and the East County Mosquito Control and Disease Prevention Assessment District;

July 15, 2019

Engineer of Work

By \_\_\_\_\_  
John W. Bliss, License No. C052091



## ESTIMATE OF COST

TABLE 2 - COST ESTIMATE – FY 2019-20 BUDGET

<b>PLACER MOSQUITO and VECTOR CONTROL DISTRICT</b>			
<b>Mosquito Control District (West County) &amp;</b>			
<b>East County Mosquito Control &amp; Disease Prevention Assessment District</b>			
			<i><b>Total Budget</b></i>
<b>Costs</b>			
Salaries and Benefits			\$2,060,452
Services and Supplies			\$738,218
Subtotal of Base Costs			<u><b>\$2,798,670</b></u>
<b>Less:</b>			
Contributions from other Sources <sup>1</sup>			(\$148,138)
Subtotal Costs of Vector Control, Fixed Asset Equipment, Operation			<u><b>\$2,650,532</b></u>
<b>Plus:</b>			
Incidental Costs			
Allowance for Uncollectable Assessments			\$2,500
County Collection, Levy Administration, and Other Incidentals			\$32,411
Subtotal of Incidental Costs			<u><b>\$34,911</b></u>
<b>Total Vector Control Services and Incidental Expenses</b>			<b>\$2,685,443</b>
<b>(Net Amount to be Assessed)</b>			
<b>Budget Allocation to Property</b>			
	Total SFE Units <sup>2</sup>	Assessment per SFE	Total Assessment
Mosquito Control District (West County)	93351	\$19.26	\$1,797,940
East County	45658	\$19.26	\$879,373
East County - Zone B	452	\$17.99	<u><b>\$8,130</b></u>
			<u><b>\$2,685,443</b></u>

## Notes:

1. Pursuant to Proposition 218, benefited property owned by Governmental agencies is assessed. However, many Governmental agencies, particularly Federal agencies, are under no obligation to pay assessments; and, therefore, assessments levied against these governmental agencies may not be collected. This allowance is to account for any uncollectible assessments.
2. Please see "Method of Assessment" on page 31 for definition of SFE Units.

## METHOD OF ASSESSMENT

---

### OVERVIEW

This section of the Report includes an explanation of the benefits to be derived from the Services provided the District and the methodology used to apportion the total assessment to properties within the Mosquito Control District (West County) and the East County Mosquito Control and Disease Prevention Assessment District.

The Mosquito Control District (West County) and the East County Mosquito Control and Disease Prevention Assessment District consist of all Assessor Parcels within the boundaries of the Mosquito Control District (West County) and the East County Mosquito Control and Disease Prevention Assessment District as defined by the approved boundary description for such District (boundary is coterminous with Placer County). The assessments allow the District to continue providing its mosquito abatement and disease control services.

The method used for apportioning the assessment is based upon the proportional special benefits to be derived by the properties over and above general benefits conferred on real property or to the public at large.

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

### DISCUSSION OF BENEFIT

In summary, the assessments can only be levied based on the special benefit to property. This benefit is received by property over and above any general benefits from the 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 benefit received by property as a result of the improvements or services provided by a local agency. That special benefit is determined in relation to the total cost to that local entity of providing the service and/or improvements.

Proposition 218 as described in Article XIID 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."

Since assessments are levied on the basis of special benefit, they are not a tax and are not governed by Article XIII A of the California Constitution.

### **BENEFIT FACTORS**

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

### **MOSQUITO CONTROL IS A SPECIAL BENEFIT TO PROPERTIES**

As described below, this Engineer's Report concludes that mosquito control is a special benefit that provides direct advantages to property in the assessment areas. For example, the assessment provides for 1) surveillance throughout the assessment areas to measure and track the levels and sources of mosquitoes impacting property in the area and the people who live and work on the property, 2) mosquito and mosquito source control, treatment and abatement throughout the assessment areas such that all property in the area benefits from a comparable reduction of mosquito levels, 3) monitoring throughout the assessment areas to evaluate the effectiveness of District treatment and control and to ensure that all properties are receiving the equivalent level of mosquito reduction benefits, and 4) properties in the assessment areas are eligible for service requests which result in District staff directly visiting, inspecting and treating property. Moreover, the Services funded by the assessments reduce the level of mosquitoes and vectors arriving at and negatively impacting properties within the assessment area.

In order to allocate the assessments, the Engineer identified the types of special benefit arising from the Services and that are provided to property within the assessment areas. These types of special benefit are as follows:

#### **REDUCED MOSQUITO AND VECTOR POPULATIONS ON PROPERTY AND AS A RESULT, ENHANCED DESIRABILITY, UTILITY, USABILITY AND FUNCTIONALITY OF PROPERTY IN THE ASSESSMENT AREAS**

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

Excessive mosquitoes and other vectors in the area materially diminish the utility and usability of property. For example, prior to the commencement of mosquito control and abatement services, properties in many areas in the State were considered to be nearly uninhabitable during the times of year when the mosquito populations were high.<sup>2</sup> The prevention or reduction of such diminished utility and usability of property caused by mosquitoes is a clear and direct advantage and special benefit to property in the assessment 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, 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.”<sup>3</sup>*

Mosquitoes and other vectors emerge from sources throughout the assessment areas, and with an average flight range of two miles, mosquitoes from known sources can reach all properties in the assessment areas. These sources include standing water in rural areas, such as marshes, pools, wetlands, ponds, drainage ditches, drainage systems, tree holes and other removable sources such as old tires and containers. The sources of mosquitoes also include numerous locations throughout the urban areas in the Assessment District. These sources include underground drainage systems, containers, unattended swimming pools, leaks in water pipes, tree holes, flower cups in cemeteries, over-watered landscaping and lawns and many other sources. By controlling mosquitoes at known and new sources, the Services materially reduce mosquito populations on property throughout the Assessment District.

A recently increasing source of mosquitoes is unattended swimming pools:

*“Anthropogenic landscape change historically has facilitated outbreaks of pathogens amplified by peridomestic vectors such as Culex pipiens*

<sup>2</sup> 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.

<sup>3</sup> Assembly Concurrent Resolution 52, chaptered April 1, 2003

*complex mosquitoes and associated commensals such as house sparrows. The recent widespread downturn in the housing market and increase in adjustable rate mortgages have combined to force a dramatic increase in home foreclosures and abandoned homes and produced urban landscapes dotted with an expanded number of new mosquito habitats. These new larval habitats may have contributed to the unexpected early season increase in WNV cases in Bakersfield during 2007 and subsequently have enabled invasion of urban areas by the highly competent rural vector Culex tarsalis. These factors can increase the spectrum of competent avian hosts, the efficiency of enzootic amplification, and the risk for urban epidemics.”<sup>4</sup>*

The services include monitoring and treatment of neglected pools throughout the assessment area.

#### **INCREASED SAFETY OF PROPERTY IN THE ASSESSMENT AREAS**

The assessments result in new year-round proactive Services to control and abate mosquitoes and other vectors that otherwise would occupy properties throughout the assessment areas. Mosquitoes and other vectors are transmitters of diseases, so the reduction of mosquito populations makes property in the assessment areas safer for use and enjoyment. In absence of the assessments, these Services would not be provided, so the Services funded by the assessments make properties in the assessment areas safer, which is a distinct special benefit to property in the assessment areas.<sup>5</sup> This is not a general benefit to property in the assessment areas or the public at large because the Services are tangible mosquito and disease control services that are provided directly to the properties in the assessment areas and the Services are over and above what otherwise would be provided by the District or any other agency.

This finding was confirmed in 2003 by the State Legislature:

*“Mosquitoes and other vectors, including but not limited to, ticks, Africanized honey bees, rats, fleas, and flies, continue to be a source of human suffering, illness, death, and a public nuisance in California and around the world. Adequately funded mosquito and vector control, monitoring and public awareness programs are the best way to prevent outbreaks of West Nile Virus and other diseases borne by mosquitoes and other vectors.”<sup>6</sup>*

---

<sup>4</sup> Riesen William K. (2008). Delinquent Mortgages, Neglected Swimming Pools, and West Nile Virus, California. Emerging Infectious Diseases. Vol. 14(11).

<sup>5</sup> By reducing the risk of disease and increasing the safety of property, the proposed Services will materially increase the usefulness and desirability of certain properties in the assessment areas.

<sup>6</sup> Assembly Concurrent Resolution 52, chaptered April 1, 2003

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.”*

#### **REDUCTIONS IN THE RISK OF NEW DISEASES AND INFECTIONS ON PROPERTY IN THE ASSESSMENT AREAS**

Mosquitoes have proven to be a major contributor to the spread of new diseases such as West Nile Virus, among others. A highly mobile population combined with migratory bird patterns can introduce new mosquito-borne 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.”<sup>7</sup>*

*“During 2004, 40 states and the District of Columbia (DC) have reported 2,313 cases of human WNV illness to CDC through ArboNET. Of these, 737 (32%) cases were reported in California, 390 (17%) in Arizona, and 276 (12%) in Colorado. A total of 1,339 (59%) of the 2,282 cases for which such data were available occurred in males; the median age of patients was 52 years (range: 1 month--99 years). Date of illness onset ranged from April 23 to November 4; a total of 79 cases were fatal.”<sup>8</sup> (According to the Centers for Disease Control and Prevention on January 19, 2004, a total of 2,470 human cases and 88 human fatalities from WNV have been confirmed).*

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

---

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

<sup>8</sup> Center for Disease Control. (2004). West Nile Virus Activity --- United States, November 9--16, 2004. Morbidity and Mortality Weekly Report. 53(45); 1071-1072.

### PROTECTION OF ECONOMIC ACTIVITY ON PROPERTY IN THE ASSESSMENT AREAS

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

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

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

*The estimated cost of the Louisiana epidemic was \$20.1 million from June 2002 to February 2003, including a \$10.9 million cost of illness (\$4.4 million medical and \$6.5 million nonmedical costs) and a \$9.2 million cost of public health response. These data indicate a substantial short-term cost of the WNV disease epidemic in Louisiana.*<sup>9</sup>

Moreover, a study conducted in 1996-97 of La Crosse Encephalitis (LACE), a human illness caused by a mosquito-transmitted virus, found a lifetime cost per human case at \$48,000 to \$3,000,000 and found that the disease significantly impacted lifespans of those who were infected. Following is a quote from the study which references the importance and value of active vector control services of the type that would be funded by the assessments:

*The socioeconomic burden resulting from LACE is substantial, which highlights the importance of the illness in western North Carolina, as well as the need for active surveillance, reporting, and prevention programs for the infection.*<sup>10</sup>

The Services funded by the assessments prevent the likelihood of such outbreaks on property in the assessment areas and reduce the harm to economic activity on property

---

<sup>9</sup> Zohrabian A, Meltzer MI, Ratard R, Billah K, Molinari NA, Roy K, et al. West Nile Virus economic impact, Louisiana, 2002. Emerging Infectious Disease, 2004 Oct. Available from <http://www.cdc.gov/ncidod/EID/vol10no10/03-0925.htm>

<sup>10</sup> Utz, J. Todd, Apperson, Charles S., Maccormack, J. Newton, Salyers, Martha, Dietz, E. Jacquelin, Mcpherson, J. Todd, Economic And Social Impacts Of La Crosse Encephalitis In Western North Carolina, Am J Trop Med Hyg 2003 69: 509-518

caused by existing mosquito populations. This is another direct advantage in the assessment areas that would not be received in absence of the assessments.

#### **PROTECTION OF THE ASSESSMENT AREAS' AGRICULTURE, TOURISM, AND BUSINESS INDUSTRIES**

The agriculture, tourism and business industries in the assessment areas benefit from reduced levels of harmful or nuisance mosquitoes and other vectors. Conversely, any outbreaks of emerging vector-borne pathogens such as West Nile Virus could also materially negatively affect these industries. Diseases transmitted by mosquitoes and other vectors can adversely impact business and recreational functions.

*A study prepared for the United States Department of Agriculture in 2003 found that over 1,400 horses died from West Nile Virus in Colorado and Nebraska and that these fatal disease cases created over \$1.2 million in costs and lost revenues. In addition, horse owners in these two states spent over \$2.75 million to vaccinate their horses for this disease. The study states that "Clearly, WNV has had a marked impact on the Colorado and Nebraska equine industry."*<sup>11</sup>

*Pesticides for mosquito control impart economic benefits to agriculture in general. Anecdotal reports from farmers and ranchers indicate that cattle, if left unprotected, can be exsanguinated by mosquitoes, especially in Florida and other southeast coastal areas. Dairy cattle produce less milk when bitten frequently by mosquitoes.*<sup>12</sup>

The assessments serve to protect the businesses and industries in the assessment areas. This is a direct advantage and special benefit to property in the assessment areas.

#### **REDUCED RISK OF NUISANCE AND LIABILITY ON PROPERTY IN THE ASSESSMENT AREAS**

In addition to health related factors, uncontrolled mosquito and vector populations create a nuisance for residents, employees, customers, tourists, farm workers and guests in the assessment areas. Properties in the assessment areas benefit from the reduced nuisance factor that is created by the Services. Agricultural and rangeland properties also benefit from the reduced nuisance factor and harm to livestock and employees from lower mosquito and vector populations.

---

<sup>11</sup> S. Geiser, A. Seitzinger, P. Salazar, J. Traub-Dargatz, P. Morley, M. Salman, D. Wilmot, D. Steffen, W. Cunningham, Economic Impact of West Nile Virus on the Colorado and Nebraska Equine Industries: 2002, April 2003, Available from

[http://www.aphis.usda.gov/vs/ceah/cnahs/nahms/equine/wnv2002\\_CO\\_NB.pdf](http://www.aphis.usda.gov/vs/ceah/cnahs/nahms/equine/wnv2002_CO_NB.pdf)

<sup>12</sup> Jennings, Allen. (2001). USDA Letter to EPA on Fenthion IRED. United States Department of Agriculture, Office of Pest Management Policy. March 8, 2001.

Agricultural, range, golf course, cemetery, open space and other such lands in the assessment areas contain large areas of mosquito and vector habitat and are therefore a significant source of mosquito and vector populations. In addition, residential and business properties in the assessment areas can also contain significant sources.<sup>13</sup> It is conceivable that sources of mosquitoes could be held liable for the transmission of diseases or other harm. For example, in August 2004, the City of Los Angeles approved new fines of up to \$1,000 per day for property owners who don't remove standing water sources of mosquitoes on their property.

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

#### **IMPROVED MARKETABILITY OF PROPERTY.**

As described previously, the Services specially benefit properties in the assessment areas by making them more useable, livable and functional. The Services also make properties in the assessment areas more desirable, and more desirable properties also benefit from improved marketability. This is another tangible special benefit to certain property in the assessment areas which will not be enjoyed in absence of the Services.<sup>14</sup>

### **BENEFIT FINDINGS**

In summary, the direct special benefits described in this Report ultimately enhance the economic values of all benefiting real properties in excess of the 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 assessment of only \$19.26 per single family equivalent.

### **GENERAL VS. SPECIAL BENEFIT**

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

---

<sup>13</sup> Sources of mosquitoes on residential, business, agricultural, range and other types of properties include removable sources such as containers that hold standing water.

<sup>14</sup> If one were to compare two hypothetical properties with similar characteristics, the property with lower mosquito infestation and reduced risk of vector-borne disease will clearly be more desirable, marketable and usable.

In other words:

<b>Total Benefit</b>	<b>=</b>	<b>General Benefit</b>	<b>+</b>	<b>Special Benefit</b>
--------------------------	----------	----------------------------	----------	----------------------------

There is no widely-accepted or statutory formula for general benefit from vector control services. General benefits are benefits from improvements or services that are not special in nature, are not “particular and distinct” and are not “over and above” benefits received by other properties. General benefits are conferred to properties located “in the district,<sup>15</sup>” but outside the narrowly-drawn Assessment District and to “the public at large.” Silicon Valley Taxpayers Association, Inc. v. Santa Clara County Open Space Authority provides some clarification by indicating that general benefits provide “an indirect, derivative advantage” and are not necessarily proximate to the improvements and services funded by the assessments.

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

---

<sup>15</sup> Silicon Valley Taxpayers Association, Inc. v. Santa Clara County Open Space Authority explains as follows:

Silicon Valley Taxpayers Association, Inc. v. Santa Clara County Open Space Authority observes that Proposition 218’s definition of “special benefit” presents a paradox when considered with its definition of “district.” Section 2, subdivision (i) defines a “special benefit” as “a particular and distinct benefit over and above general benefits conferred on real property located in the district or to the public at large.” (Art. XIII D, § 2, subd. (i), italics added.) Section 2, subdivision (d) defines “district” as “an area determined by an agency to contain all parcels which will receive a special benefit from a proposed public improvement or property-related service.” (Art. XIII D, § 2, subd. (d), italics added.) In a well-drawn district — limited to only parcels receiving special benefits from the improvement — every parcel within that district receives a shared special benefit. Under section 2, subdivision (i), these benefits can be construed as being general benefits since they are not “particular and distinct” and are not “over and above” the benefits received by other properties “located in the district.”

We do not believe that the voters intended to invalidate an assessment district that is narrowly drawn to include only properties directly benefiting from an improvement. Indeed, the ballot materials reflect otherwise. Thus, if an assessment district is narrowly drawn, the fact that a benefit is conferred throughout the district does not make it general rather than special.

conservatively estimated and described, and then budgeted so that it is funded by sources other than the assessment.

A formula to estimate the general benefit is listed below:

<b>General Benefit</b>	=	<b>Benefit to real property outside of improvement district</b>	+	<b>Benefit to real property inside of improvement district</b>	+	<b>Benefit to public at large</b>
----------------------------	---	---	---	--	---	---

Special benefit, on the other hand, is defined in the state constitution as “a particular and distinct benefit over and above general benefits conferred on real property located in the district or to the public at large.” The Silicon Valley Taxpayers Association, Inc. v. Santa Clara County Open Space Authority decision indicates that a special benefit is conferred to a property if it “receives a direct advantage from the improvement (e.g., proximity to a park).” In these assessments, the overwhelming proportion of the benefits conferred to property is special, since the services and related improvements funded by the Assessments are directly received by the properties in the Assessment District and are only minimally received by property outside the Assessment District or the public at large<sup>16</sup>. Arguably, all of the Services funded by the assessment therefore are special benefit because the Services particularly and distinctly benefit and protect the assessment areas over and above the baseline benefits and service which were previously zero.

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

## **CALCULATING GENERAL BENEFIT**

### **BENEFIT TO PROPERTY OUTSIDE THE DISTRICT**

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

---

<sup>16</sup> The assessment funds both Services and the related improvements described above. The Improvements are essential in order to enable the District to perform the Services. Therefore, in this section, the discussion about the services includes the related benefits from the improvements.

A measure of this general benefit is the proportion of Services that would affect properties outside of the assessment areas. Each year, the District provides some of its Services in areas near the boundaries of the assessment areas. By abating mosquito populations near the borders of the assessment areas, the Services could provide benefits in the form of reduced mosquito populations and reduced risk of disease transmission to properties just outside the assessment areas. If mosquitoes were not controlled inside the assessment areas, more of them would fly from the assessment areas. Therefore, control of mosquitoes within the assessment areas provides some benefit to properties outside the assessment areas but within the normal flight range of mosquitoes, in the form of reduced mosquito populations and reduced vector-borne disease transmission. This is a measure of the general benefits to property outside the assessment areas because this is a benefit from the Services that is not specially conferred upon property in the assessment area.

The mosquito potential outside the assessment areas is based on studies of mosquito dispersion concentrations. Mosquitoes can travel up to two miles, on average, so this destination range is used. Based on studies of mosquito destinations, relative to parcels in the assessment areas, average concentration of mosquitoes from the assessment areas on properties within two miles of the assessment areas is calculated to be 6%.<sup>17</sup> This relative vector population reduction factor within the destination range is combined with the number of parcels outside the assessment areas and within the destination range to measure this general benefit and is calculated as follows:

**Criteria:**

Mosquitoes may fly up to 2 miles from their breeding source.

42,960 parcels within 2 miles of, but outside of the District, may receive some mosquito and disease protection benefit

6% portion of relative benefit that is received

150,864 assessable parcels in the Assessment District

**Calculations:**

Total Benefit = 42,960 parcels \* 6% = 2,578 parcels equivalents

Percentage of overall parcel equivalents =  $2,578 / (2,578 + 150,864) = 1.7 \%$

---

<sup>17</sup> Tietze, Noor S., Stephenson, Mike F., Sidhom, Nader T. and Binding, Paul L., "Mark-Recapture of *Culex erythrothorax* in Santa Cruz County, California", Journal of the American Mosquito Control Association, 19(2):134-138, 2003.

Therefore, for the overall benefits provided by the Services to the assessment areas, it is determined that 1.7% of the benefits would be received by the parcels within two miles of the assessment areas boundaries.

#### **BENEFIT TO PROPERTY *INSIDE* THE DISTRICT THAT IS *INDIRECT AND DERIVATIVE***

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

In determining the Assessment Districts’ areas, the District has been careful to limit it to an area of parcels that directly receive the Services. All parcels directly benefit from the surveillance, monitoring and treatment that are provided on an equivalent basis throughout the assessment areas in order to maintain the same improved level of protection against mosquitoes and reduced mosquito populations throughout the area. The surveillance and monitoring sites are spread on a balanced basis throughout the area. Mosquito control and treatment would be provided as needed throughout the area based on the surveillance and monitoring results. The shared special benefit - reduced mosquito levels and reduced presence of vector-borne diseases - is received on an equivalent basis by all parcels in the assessment areas. Furthermore, all parcels in the Assessment District would directly benefit from the ability to request service from the District and to have a District field technician promptly respond directly to the parcel and address the owner’s or resident’s service need. The Silicon Valley Taxpayers Association, Inc. v. Santa Clara County Open Space Authority decision indicates that the fact that a benefit is conferred throughout the assessment district area does not make the benefit general rather than special, so long as the assessment district is narrowly drawn and limited to the parcels directly receiving shared special benefits from the service. This concept is particularly applicable in situations involving a landowner-approved assessment-funded extension of a local government service to benefit lands previously not receiving that particular service. The District therefore concludes that, other than the small general benefit to properties outside the Assessment District (discussed above) and to the public at large (discussed below), all of the benefits of the Services to the parcels within the Assessment District are special benefits and it is not possible or appropriate to separate any general benefits from the benefits conferred on parcels in the assessment areas.

#### **BENEFIT TO THE PUBLIC AT LARGE**

With the type and scope of Services provided to the assessment area, it is very difficult to calculate and quantify the scope of the general benefit conferred on the public at large. Because the Services directly serve and benefit all of the property in the assessment area,

any general benefit conferred on the public at large would be small. Nevertheless, there would be some indirect general benefit to the public at large.

The public at large uses the public highways and other regional facilities, and when traveling in and through the assessment area they benefit from the Services. A fair and appropriate measure of the general benefit to the public at large therefore is the amount of highway and other regional facilities area within the assessment areas relative to the overall land area. An analysis of maps of the assessment area shows that approximately 1% of the land area in the assessment areas is covered by highways and other regional facilities. This 1% therefore is a fair and appropriate measure of the general benefit to the public at large within the assessment areas.

### **SUMMARY OF GENERAL BENEFITS**

Using a sum of the measures of general benefit for the public at large and land outside the assessment area, we find that approximately 2.7% of the benefits conferred by the Mosquito Control and Disease Prevention Assessment may be general in nature and should be funded by sources other than the assessment.

#### **General Benefit Calculation**

	<b>1.7%</b>	<b>(Outside the Assessment District)</b>
<b>+</b>	<b>0.0%</b>	<b>(Property within the Assessment District)</b>
<b>+</b>	<b>1.0%</b>	<b>(Public at Large)</b>
<b>=</b>	<b>2.7%</b>	<b>(Total General Benefit)</b>

Although this analysis supports the finding that 2.7% of the assessment may provide general benefit only, this number is increased by the Assessment Engineer to 5% to more conservatively ensure that no assessment revenue is used to support general benefit. This additional amount allocated to general benefit also covers general benefit to parcels in the assessment area if it is later determined that there is some general benefit conferred on those parcels.

The estimated cost of the Services is \$2,797,425. Of this total amount, the existing District will effectively contribute \$140,169, or over 5% of the total budget from sources other than these Mosquito Control and Disease Prevention assessments. This contribution offsets any general benefits from the Mosquito Control and Disease Prevention Assessment Services.

### **METHOD OF ASSESSMENT**

As previously discussed, the assessments fund comprehensive, year-round mosquito control and disease surveillance and control Services that clearly confer special benefits to properties in the assessment areas. These benefits can partially be measured by the property owners, residents, guests, employees, tenants, pets and animals who enjoy a more

habitable, safer and more desirable place to live, work or visit. As noted, these benefits ultimately flow to the underlying property.

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

$$\text{Special Benefit (per property)} = \frac{\sum f(\text{Special Benefits})}{\sum(\text{Benefit Units(SFEs)})}$$

Total special benefit is calculated from property specific attributes such as use, property types, size as well as vector-specific attributes such as destination potential and population potential.

The process to apportion benefits 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 and is generally recognized as providing the basis for a fair and appropriate distribution of assessments. 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 single family home on an average sized residential parcel. The "benchmark" property is the single family detached dwelling which is one Single Family Equivalent or one SFE.

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 because the sources of mosquitoes and vectors are generally located on such property. However, other types of property, such as residential and commercial, also receive the special benefit factors listed above from reduced mosquito and vector populations that would otherwise fly or migrate to these properties and/or to the inhabited community areas. Furthermore, residential properties can and do generate their own populations of mosquito and vector organisms.

A fixed or flat assessment was deemed to be inappropriate because larger 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 because the larger property generally has a larger coverage area and higher usage by employees, customers, tourists and guests that would benefit from reduced mosquito and vector populations as well as the reduced threat from diseases carried by mosquitoes and other vectors. This benefit ultimately flows to the property. Larger parcels, therefore, receive an increased benefit from the assessments.

Therefore, the Engineer determined that the appropriate method of assessment should be based on the type and potential use of property, the relative size of the property and its location. This method is further described below.

## ZONES OF BENEFIT

The boundaries of the assessment areas have been carefully drawn to include the properties in Placer County that previously did not receive mosquito and disease control services and that would materially 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 mosquitoes 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. The boundaries of the assessment areas have been narrowly drawn to include only properties that specially benefit from the mosquito control services, and previously did not receive services from the District.

The Silicon Valley Taxpayers Association, Inc. v. Santa Clara County Open Space Authority decision indicates:

*In a well-drawn district — limited to only parcels receiving special benefits from the improvement — every parcel within that district receives a shared special benefit. Under section 2, subdivision (i), these benefits can be construed as being general benefits since they are not “particular and distinct” and are not “over and above” the benefits received by other properties “located in the district.”*

*We do not believe that the voters intended to invalidate an assessment district that is narrowly drawn to include only properties directly benefitting from an improvement. Indeed, the ballot materials reflect otherwise. Thus, if an assessment district is narrowly drawn, the fact that a benefit is conferred throughout the district does not make it general rather than special. In that circumstance, the characterization of a benefit may depend on whether the parcel receives a direct advantage from the improvement (e.g., proximity to park) or receives an indirect, derivative advantage resulting from the overall public benefits of the improvement (e.g., general enhancement of the district’s property values).*

In the assessment, the advantage that each parcel receives from the mosquito control services is direct, and the boundaries are narrowly drawn to include only parcels that benefit from the assessment. Therefore, the even spread of assessment throughout the narrowly drawn district is indeed consistent with the Silicon Valley Taxpayers Association, Inc. v. Santa Clara County Open Space Authority decision.

*“In 2009, the District completed an analysis of service levels throughout the District boundaries. In particular, the District evaluated service levels in regards to its core services including surveillance, larviciding and service requests; and confirmed that service levels and benefits are essentially equivalent across all parcels (except as noted below and described as Zone B). Regarding service requests,*

*the District will respond to any parcel located within the District, regardless of how remote, and provide mosquito control services appropriate to the situation. Larvicide applications generally are applied throughout the District. Mountainous areas suffer from significant levels of “snow melt mosquitoes” during the spring, which require substantial larvicide applications for adequate control. Other lower elevation areas suffer from other mosquito types primarily during the summer and early fall that likewise require substantial larvicide applications for adequate control.*

*However, the District’s evaluation showed that some mountainous areas of the District located in rural south-central Placer County do not receive the same service level for District surveillance services. These areas are described as Zone B, and are indicated in the Assessment Diagram.*

*The District uses mosquito traps to collect and then quantify species, quantities, concentrations, viral loads, etc. of mosquitoes. The selection of the locations of these traps requires a multi-attribute evaluation, with trap locations changing seasonally and when high concentrations of mosquitoes are identified. The District places mosquito traps at 10 mile radii, primarily throughout the more populated areas of the County, as part of this routine adult trapping program. Zone B parcels largely fall outside of the 10 mile radii of these routine adult mosquito traps and they do not typically receive the same level of routine surveillance as compared to the areas outside Zone B.*

*The Zone B parcels therefore will be subject to a reduced assessment, commensurate with the different benefit level. (If in the future, the routine adult mosquito trapping service is extended into part or all of Zone B, the Zone B boundaries will be modified accordingly.)*

*The District analyzed its overall budget and determined that 6.61% of the budget is allocated to routine adult mosquito trapping. Therefore Zone B Parcels will be subjected to a 6.61% assessment reduction.”*

## **METHODOLOGY - MOSQUITO CONTROL DISTRICT (WEST COUNTY)**

### **RESIDENTIAL PROPERTIES**

All improved residential properties that represent a single residential dwelling unit are assigned 1.0 SFE. Traditional houses, zero-lot line houses, and townhomes are included in this category.

As stated previously, the special benefits derived from the Mosquito Control District are conferred on property and are not based on a specific property owner’s occupancy of property or the property owner’s demographic status such as age or number of dependents. However, it is ultimately people who do or could use the property, and who enjoy the special benefits described above. Therefore, the opportunity to use and enjoy the area within the District without the excessive bother or the potential health hazards brought by mosquitoes is a special benefit to properties in the District. This benefit is related to the number of people who potentially live on, work at 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. In addition, 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.

Properties with more than one residential unit are designated as multi-family residential properties. These properties benefit from the services and improvements in proportion to the number of dwelling units that occupy each property and the average number of people who reside in multi-family residential units versus the average number of people who reside in a single-family home. These demographic factors for the County of Placer are depicted in Table 3. Using the average population density as basis for determining relative special benefit, Table 3 below lists the SFE factors for multi-family units and mobile home parcels. These benefit factors are deemed to be appropriate on a per unit basis.

**TABLE 3 - RESIDENTIAL ASSESSMENT FACTORS – WEST COUNTY**

	Total Population	Occupied Households	Persons per Household	SFE Factor*
Single Family Residential	135,563	47,529	2.85	1.00
Condominium	6,438	2,656	2.42	0.85
Multi-Family Residential	18,597	8,957	2.08	0.73
Mobile Home on Separate Lot	8,770	4,473	1.96	0.69

Source: 1990 Census, Placer County

\* The SFE factor for each type of parcel is based on the ratio of average persons per household for the property type versus the average persons per household for a single family residential home.

### COMMERCIAL/INDUSTRIAL PROPERTIES

SFE values for commercial and industrial land uses are based on the equivalence of special benefit between single-family residential property and the average commercial/industrial property. The average size of a parcel for a single-family home in this District area is approximately 0.50 acre. Such residential property has an SFE value of 1.0. Using the equivalence of benefit between the average single-family residential property and commercial property, improved commercial and industrial parcels of 1/2 acre would also receive an SFE benefit factor of 1.0. Therefore, commercial and industrial parcels of less than one acre in size are assigned 0.50 SFE per one-half acre or portion thereof.

The SFE values for other types of business and industrial land uses are established 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.

In order to determine employee density factors, the findings from the San Diego Association of Governments Traffic Generators Study (the “SANDAG Study”) are used because these

findings were approved by the State Legislature for use in justifying commercial and industrial school facilities fees and are considered to be an accurate survey 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 property is 24.

In comparison, the average number of people residing in a single-family home in the area is 2.85. Since the average lot size for a single-family home in the District is approximately 0.50 acres, the average number of residents per acre of residential property is 5.70.

The employee density per acre is generally 4.2 times the population density of single-family residential property per acre (24 employees per acre / 5.70 residents per acre). Therefore, the average employee density can be used as the basis for allocating benefit to commercial or industrial property since a property with 4.2 employees receives generally similar special benefit to a residential property with one resident. This factor of equivalence of benefit between one resident to 4.20 employees is the basis for allocating commercial/industrial benefit. Table 4 shows the average employees per acre of land area or portion thereof for commercial and industrial properties and lists the relative SFE factors per 0.50 acre for properties in each land use category.

Institutional properties that are used for residential, commercial or industrial purposes are also assessed at the appropriate residential, commercial or industrial rate.

The maximum benefit for residential, commercial and industrial properties is deemed to be five SFE's.

**TABLE 4 - COMMERCIAL/INDUSTRIAL ASSESSMENT FACTORS – WEST COUNTY**

Type of Commercial/Industrial Land Use	Average Employees Per Acre	SFE Units per 1/2 Acre *
Commercial	24	1.00
Office	68	2.83
Shopping Center	24	1.00
Industrial	24	1.00
Self Storage or Parking Lot	1	0.04

\* Maximum SFE rate for any parcel is 5

#### **AGRICULTURAL AND OTHER LAND PROPERTIES**

The benefits to be received from the mosquito control services include active benefits, which are related to the use and enjoyment of the property, and passive benefits, which are related to the underlying land. An example of a passive benefit is enhancement of property value that will accrue to the land from reduced mosquito populations in the area. Examples of an

active benefit factors are enhanced environment for residents, employees and guests, reduced nuisance value to livestock and reduced health risk to employees, residents, guests and livestock.

Properties used for agriculture, mining, utility services, recreational purposes and other such land uses generally have a lower employee and resident density than residential and commercial properties. These parcels, therefore, receive lower benefits on a land area basis than residential or commercial property.

It was estimated that 1/5 of the benefits accrue to land and the remainder accrue to the improved use of the property. Since most residential properties are one acre or less in size, the benefit factor for agricultural and other land use-type properties is deemed to be 0.20 SFE per acre of land area (0.10 per one-half acre). (One-fifth of the SFE rate for a single-family property.) Moreover, agricultural and other land properties of large size typically do not have a population density from employees and guests that increases in correlation to property size. Therefore, the benefits to such properties are deemed to reach a maximum benefit of 2.0 SFE. Included in this category are recreational properties that are generally accessible to the public and are regularly used by customers and guests.

Golf course properties are unique in that they are land intensive, but have higher population use factors than agricultural properties. Their property use-type is generally equivalent to commercial properties. Given that their land intensive nature that is similar to agricultural properties, the appropriate benefit factor is deemed to be 0.10 SFE per one-half acre, up to a maximum of five SFE.

#### **OTHER PROPERTIES**

All properties that are specially benefited are assessed. Public right-of-way parcels, well, reservoir or other water rights parcels, limited access open space parcels, watershed parcels and common area parcels typically do not generate employees, residents, customers or guests. Moreover, many of these parcels have limited economic value and, therefore, do not benefit from specific enhancement of property value. Such parcels are, therefore, not specially benefited and are not assessed.

#### **METHODOLOGY - MOSQUITO CONTROL AND DISEASE PREVENTION ASSESSMENT DISTRICT (EAST COUNTY)**

The special benefits derived from the East County Mosquito Control and Disease Prevention Assessment District are conferred on property and are not based on a specific property owner's occupancy of property or the property owner's demographic status such as age or number of dependents. However, it is ultimately people who do or could use the property and who enjoy the special benefits described above. Therefore, the opportunity to use and enjoy the region without the excessive nuisance, diminished "livability" or the potential health hazards brought by mosquitoes, vectors, and the diseases they carry is a special benefit to properties. This benefit is related to 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.

### RESIDENTIAL PROPERTIES

All improved residential properties that represent a single residential dwelling unit are assigned one Single Family Equivalent or 1.0 SFE. Traditional houses, zero-lot line houses, and townhomes are included in this category.

Properties with more than one residential unit are designated as multi-family residential properties. These properties, along with condominiums, benefit from the services and improvements 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 Placer County. This report analyzed Placer 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 Table 5 below.

The SFE factor of 0.30 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 mosquito abatement district. Therefore, the benefit for properties in excess of 20 units is determined to be 0.30 SFE per unit for the first 20 units and 0.10 SFE per each additional unit in excess of 20 dwelling units.

**TABLE 5 - RESIDENTIAL ASSESSMENT FACTORS - EAST COUNTY**

	Total Population	Occupied Households	Persons per Household	Pop. Density Equivalent	SqFt Factor	Proposed Rate
Single Family Residential	201,288	72,138	2.79	1.00	1.00	<b>1.00</b>
Condominium	7,614	3,069	2.48	0.89	0.81	<b>0.72</b>
Multi-Family Residential	27,796	13,748	2.02	0.72	0.41	<b>0.30</b>
Mobile Home on Separate Lot	8,607	4,319	1.99	0.71	0.65	<b>0.46</b>

Source: 2000 Census, Placer County and property dwelling size information from the Placer County Assessor

### COMMERCIAL/INDUSTRIAL PROPERTIES

The 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 residents and employees also provide 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 East Placer County is 0.20 acres. Therefore, a commercial property with 0.20 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 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 Table 6, 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 fifth 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.

Table 6 below lists the benefit assessment factors for business properties.

**TABLE 6 - COMMERCIAL/INDUSTRIAL BENEFIT ASSESSMENT FACTORS – EAST COUNTY**

Type of Commercial/Industrial Land Use	Average Employees Per Acre <sup>1</sup>	SFE Units per Fraction Acre <sup>2</sup>	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	0.02
Agriculture	0.05	0.002	0.002

1. Source: San Diego Association of Governments Traffic Generators Study.

2. The SFE factors for commercial and industrial parcels indicated above are applied to each fifth acre of land area or portion thereof. (Therefore, the minimum assessment for any assessable parcel in these categories is the SFE Units listed herein.)

### **VACANT PROPERTIES**

The benefit to vacant properties is determined to be proportional to the corresponding benefits for similar type developed properties. However, vacant properties are assessed at a lower rate due to the lack of active benefits. 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 the County of Placer 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. 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 XIID stipulates that publicly owned properties must be assessed unless there is clear and convincing evidence that those properties receive no special benefit from the assessment.

All properties that are specially benefited are assessed. Public right-of-way parcels, well, reservoir or other water rights parcels that cannot be developed into other improved uses, limited access open space parcels, watershed parcels and common area parcels typically do not generate employees, residents, customers or guests. Moreover, many of these parcels have limited economic value and, therefore, do not benefit from specific enhancement of property value. Such parcels are, therefore, not specially benefited and are not assessed.

Other publicly owned property that is used for purposes similar to private residential, commercial, industrial or institutional uses is benefited and assessed at the same rate as such privately owned property.

Church parcels, institutional properties, and property used for educational purposes typically generate employees on a less consistent basis than other non-residential parcels. Therefore, these parcels receive minimal benefit and are assessed an SFE factor of 1.

### **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 General Manager of the Placer Mosquito and Vector Control District or his or her designee. Any such appeal is limited to correction of an assessment during the then current Fiscal Year or, if before July 1, the upcoming fiscal year. Upon the filing of any such appeal, the General Manager or his or her designee will promptly review the appeal and any information provided by the property owner. If the General

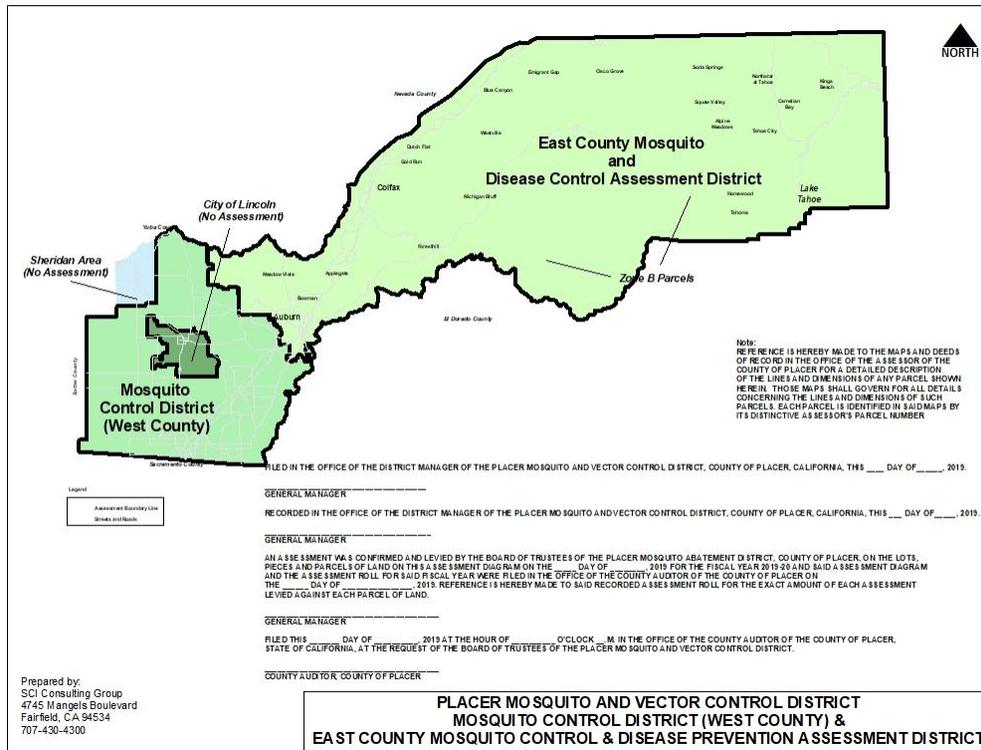
Manager or his or her designee finds that the assessment should be modified, the appropriate changes shall be made to the assessment roll. If any such changes are approved after the assessment roll has been filed with the County of Placer for collection, the General Manager or his or her designee is authorized to refund to the property owner the amount of any approved reduction. Any dispute over the decision of the General Manager, or his or her designee, shall be referred to the Board. The decision of the Board shall be final.

#### **DURATION OF ASSESSMENT**

It is proposed that the assessments be levied for fiscal year 2019-20 and every year thereafter, so long as mosquitoes remain in existence and the Placer Mosquito and Vector Control District requires funding from the assessments for its Services in the assessment areas. 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 Placer Mosquito and Vector Control District Board of Trustees approves an annually updated Engineer's Report, budget for the Assessment, Services to be provided, and other specifics of the Assessment. In addition, the District Board of Trustees must hold an annual public hearing to continue the Assessment.

# ASSESSMENT DIAGRAM

The boundaries of the Mosquito Control District (West County) and the East County Mosquito Control and Disease Prevention Assessment District are displayed on the following Assessment Diagram.



## ASSESSMENT ROLL

---

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