CITY COUNCIL MEETING

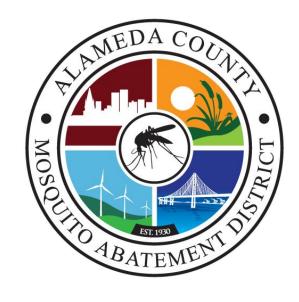
JANUARY 24, 2023

PRESENTATIONS

PRESENTATION:

Alameda County Abatement District:
Presentation by General Manager Clausnitzer

Alameda County Mosquito Abatement District City of Hayward 2023 update



Ryan Clausnitzer, MPA, REHS General Manager

www.mosquitoes.org

1.24.2023

Overview

- Formation & authority of Alameda County MAD
- Organization & funding
- Mosquitoes of Alameda County and where they grow
- Integrated vector management
 - Requests for service from the public
 - Community engagement & research
 - Monitoring and reporting mosquito abundance
 - Current mosquito control practices
 - Upcoming technologies





Tax-funded mosquito control in SF Bay Area because of...





Aedes dorsalis



Aedes squamiger



120 years ago

Civic, scientific, and business leaders organized mosquito districts



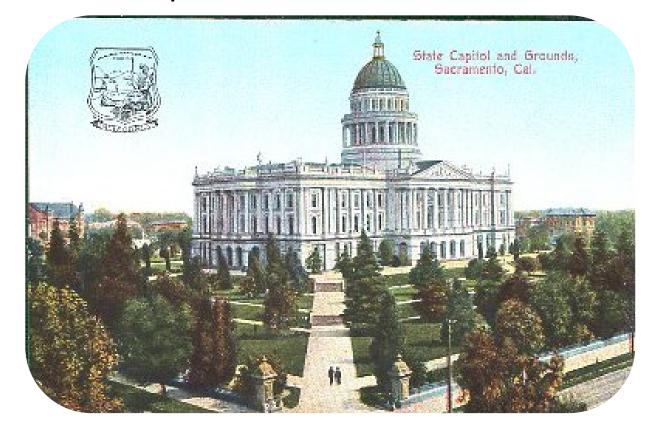
Eliza A. Neale, the first President, served for 12 years

Women in the San Rafael Improvement Club were foundational in organizing their mosquito control district during 1902



107 years ago:

1915 Mosquito Abatement Act of California





Governor Hiram Johnson



1915 Mosquito Abatement Act of California

Authorized government agencies to "Take any and all necessary or proper actions to prevent the occurrence of vectors and vectorborne diseases."

 Gave power to tax, form boards, and abate (impose fines for mosquito control)

California Health and Safety Code

2063. In addition to abating the public nuisance and taking any necessary actions to prevent the recurrence of the public nuisance, a board of trustees may impose a civil penalty on the owner of the property for failure to comply with the requirements of Section 2061. The civil penalty may not exceed one thousand dollars (\$1,000) per day for each day that the owner of the property fails to comply with the district's requirements.



We have never charged or fined

Independent Special District of Alameda County MAD was formed 92 years ago

MEDA COUNTY

Farm tractors
repurposed by civil
engineers to modify
marsh habitat and limit
mosquito growth





ACMAD Board of Trustees

14 appointed by their City Council + 1 County-at-Large Trustee



Victor Aguilar, Vice-President Newark



Subru Bhat, President Union City



Cathy Roache, Secretary County-at-Large



Dr. Robert Beatty Berkeley



Tyler Savage Alameda



Preston Jordan Albany



Shawn Kumagai Dublin



Courtney Welch Emeryville



George Young Fremont



Elisa Márquez Hayward



Steven Cox Livermore



Dr. Jan O. Washburn Oakland



Eric Hentschke Newark



Julie Testa Pleasanton



Hope Salzer Piedmont



STRATEGIC PLAN

ALAMEDA COUNTY
MOSQUITO ABATEMENT DISTRICT



ENSURE ACMAD HAS THE TRAINING, EQUIPMENT, PERSONNEL, PARTNERSHIPS, AND FINANCIAL SUPPORT TO LIMIT THE INTRODUCTION OF INVASIVE AEDES MOSQUITOES

LEVERAGE ACMAD ASSETS TOWARDS EFFICIENT APPROACHES TO MOSQUITO CONTROL

EMPLOY THE BEST PRACTICES FOR MOSQUITO CONTROL DISTRICTS AND LOCAL GOVERNMENTS



Fixed Charges and/or Special Assessments						
Description	Phone	Amount				
CSA ST LIGHTING	510-670-5212	21.80				
CV SAN SEWER SVC	510-537-0757	439.00				
MOSQ MSR K 1982	800-273-5167	1.74				
CSA PARAMEDIC	925-867-3400	35.00				
VEC CNTRL MSR A 84	800-273-5167	5.92				
PARAMEDIC SUPPLMNT	925-867-3400	18.54				
ALA CO CLEAN WATER	510-670-5212	7.10				
HAYWARD USD MAINT	800-273-5167	28.00				
SFBRA MEASURE AA	888-508-8157	12.00				
FLOOD BENEFIT 2	510-670-5212	26.66				
HAZ WASTE PROGRAM	800-273-5167	6.64				
VECTOR CNTRL ASMT MOSQUITO ASMT 2008	800-273-5167 800-273-5167	5.08 2.50				
AC TRANSIT MEAS VV * HUSD MSR A 2017 * EAST BAY TRAIL LLD HARD - PARK MAINT	800-2/3-516/ 844-332-0549 888-512-0316 510-881-6727	96.00 88.00 5.44 28.54				

interest earned

OPEB

special tax & benefit assessment

\$4.9 million *ad valorum* property tax

0.0009% of assessed property value

Funding mosquito control





18 full-time employees with 2-5 seasonal employees and/or interns



Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Alameda County Mosquito Abatement California

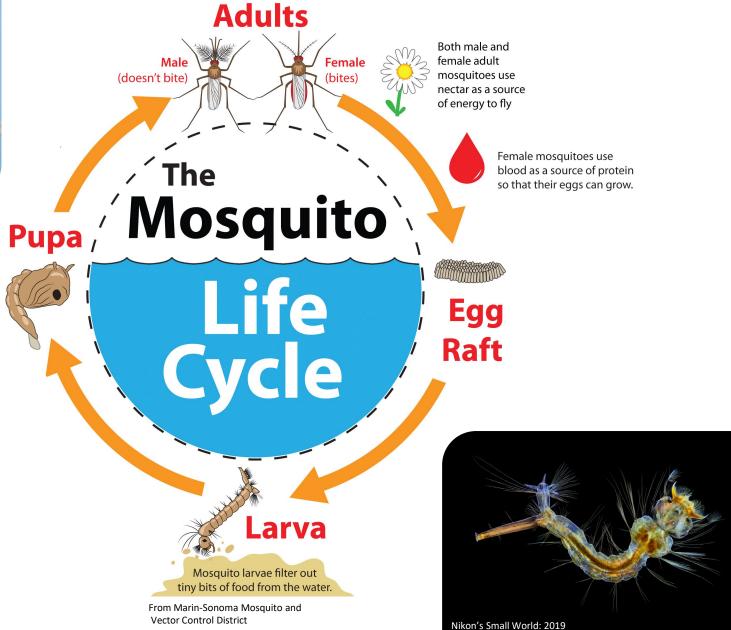
For its Annual Comprehensive Financial Report For the Fiscal Year Ended



		Year to year				
		% budget				
REVENUES	Budget 22/23	change	Budget 21/22	Actual 20/21	A vs B	Budget 20/21
Ad Valoreum Property Taxes	\$ 2,755,397	7%	\$ 2,580,814	\$ 2,624,188	14%	\$ 2,300,000
Special Tax & Benefit Assessment	\$ 1,981,814	0%	\$ 1,981,959	\$ 1,962,192	8%	\$ 1,821,600
Interest earned (restricted fund interest NOT included as revenue)	\$ 20,000	-33%	\$ 30,000	\$ 19,208	-36%	\$ 30,000
Sale of Property and Equipment & Misc.	\$ 2,500	-50%	\$ 5,000	\$ 1,038	-79%	\$ 5,000
Reimburese Retiree Health Benefits and fees from OPEB	\$ 140,946	-16%	\$ 168,091	\$ 163,355	-1%	\$ 164,913
Total Revenue	\$ 4,900,658	3%	\$ 4,765,864	\$ 4,769,981	10%	\$ 4,321,513
<u>EXPENDITURES</u>						
Salaries (including deferred comp.)	\$ 2,371,703	6%		\$ 2,037,043	-4%	-,,
CalPERS Retirement	\$ 534,559	13%		\$ 423,110	0%	+,
Medicare & Social Security	\$ 38,763	17%			-11%	
Fringe Benefits	\$ 564,969	-3%	+	\$ 502,898	-5%	
Total Salaries, Retirement, & Benefits (pgs. 2,3)	\$ 3,509,995	6%	-,,	- 1 1	-3%	-,,
Service & Supplies (Clothing & Personal supplies)	\$ 9,000	-10%	+,	\$ 4,859	-51%	+,
Service & Supplies (Laundry services & supplies)	\$ 13,000	-13%	,	\$ 9,125	-39%	,
Utilities	\$ 21,700	28%	+,	\$ 15,422	29%	
Small tools and instruments	\$ 3,000	0%	-1	\$ 2,189	-27%	-1
Maintenance (Landscaping & Facility)	\$ 30,000	-14%		\$ 20,262	-19%	,
Maintenance (Equipment)	\$ 30,000	-14%	,	\$ 22,290	-36%	,
Transportation, travel, training, & board	\$ 119,840	-6%	,	\$ 74,653	-39%	+,
Professional services	\$ 152,200	-25%	+,	\$ 91,623	-48%	+,
Memberships, dues, & insurance	\$ 37,000	54%		\$ 22,906	-2%	
Insurance - VCJPA & EAP	\$ 179,436	19%	+,	\$ 141,650	3%	+,
Community education	\$ 55,000	39%	\$ 39,500	\$ 26,317	-32%	\$ 38,575
Operations	\$ 227,500	-5%		\$ 223,362	-7%	
Household expenses	\$ 19,950	15%		\$ 15,881	-5%	+,
Office expenses	\$ 12,000	0%		\$ 9,748	-19%	
Information Technology/ Communication	\$ 107,400	-4%	\$ 112,400	\$ 71,771	-36%	\$ 111,400
Laboratory	\$ 132,500	-8%		\$ 64,136	-54%	
Total Staff Budget (pg. 4)	\$ 1,149,526	-3%	4 1,101,011	\$ 816,194	-27%	* -,,
Contingency	\$ 46,000	-8%		\$ -	440/	\$ 50,000
Total Expenditures	\$ 4,705,521	3%	\$ 4,557,832	\$ 3,807,112	-11%	\$ 4,266,022
CURRILLE (DEFICIT)	e 40E 42C		e 200.022	s 962.869		\$ 55,491
SURPLUS (DEFICIT)	\$ 195,136 \$ 882,264		\$ 208,032 \$ 1,530,673	\$ 962,869		
CASH CARRIED OVER (pg. 5)			\$ 1,530,673 \$ 1,738,705			\$ 161,656 \$ 217,147
SURPLUS (DEFICIT) AFTER OPERATIONAL CASH NEEDS	\$ 1,077,400		\$ 1,730,705			\$ 217,147
RESERVE ACCOUNT ALLOCATIONS			Transfers			Transfers
VCJPA Contingency Fund	\$ (43,103)		\$ -			\$ -
PARS: Pension Rate Stabililzation	\$ 269,350		\$ 434.676			s -
CAMP: Public Health Emergency	\$ (26,732)		\$ 454,070			\$ -
CAMP: Repair and Replace (pq. 6)	\$ 537,912		\$ 1,311,625			\$ 314,315
CAMP: Operating reserve	\$ -		\$ -			\$ (25,000
CAMP: Capital reserve	\$ 339,974		\$ (7,596)			\$ (72,168
Total reserve allocations (pg. 7)	\$ 1,077,400		\$ 1,738,705			\$ 217,147
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
SURPLUS (DEFICIT) AFTER RESERVE ALLOCATIONS	\$ -	<u> </u>	\$ -			\$ -



Obligate aquatic phase of mosquito life cycle





only female mosquitoes bite

males have feathery antenna

female antenna are thinner



Mosquito producing habitats in Alameda County

Native mosquitoes

Salt marsh







Tule marsh



Unmaintained swimming pools





Storm water canals

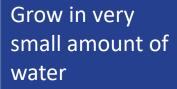
Creeks and seepages

Ornamental ponds

Mosquito producing habitats of concern

Invasive mosquitoes











Utility vaults

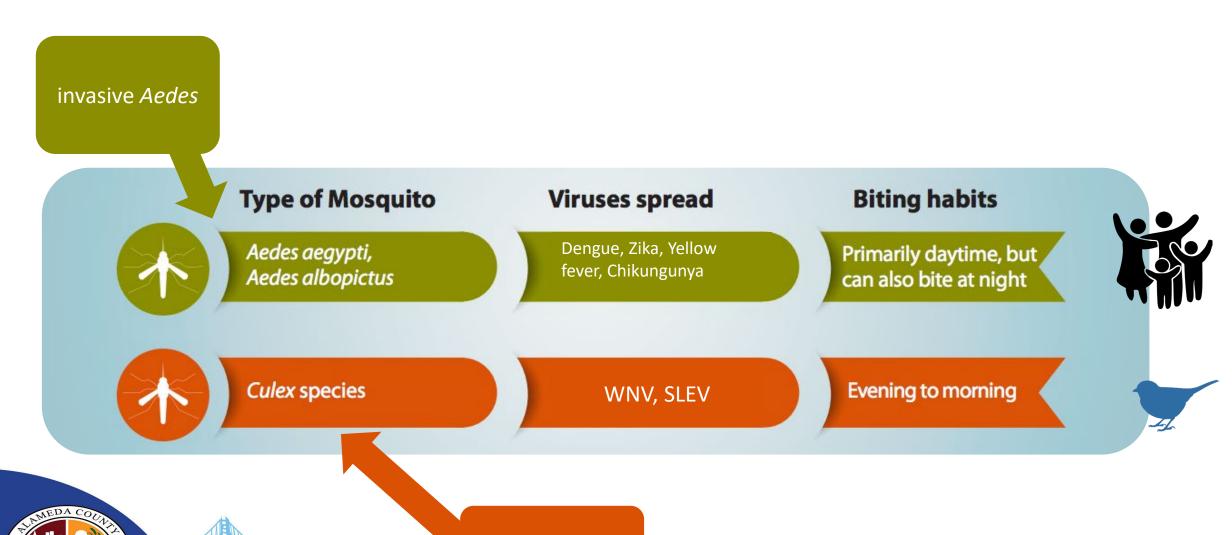




Plant saucers

Bromeliad plants

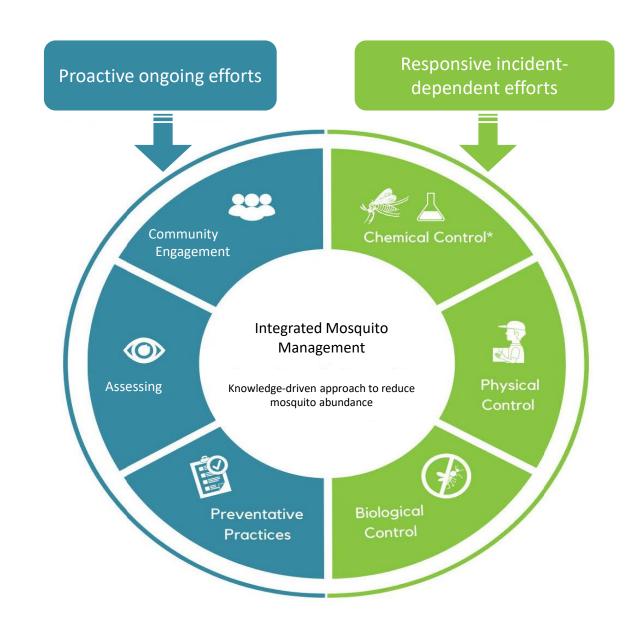
Arboviruses spread by mosquitoes in CA



native to CA

Integrated mosquito management

- Data and institutional knowledge used to enact effective & sustainable mosquito control
- Proactive and responsive actions





Maintain water circulation channels in marsh habitats



Mosquito fish: Gambusia affinis



- We deliver them for free
- Love to eat mosquito larvae!
- Relatively small
 - 1.5 3 inches
- Live in shallow fresh water
- Can live in low oxygen water
 - Small ornamental ponds

Controlling mosquito larvae



Insect-specific toxin from bacteria

Bacillus thuringiensis israelensis (Bti)

Insect growth hormone

Methoprene

Surfactant

BVA-2



Larvicide application methods

















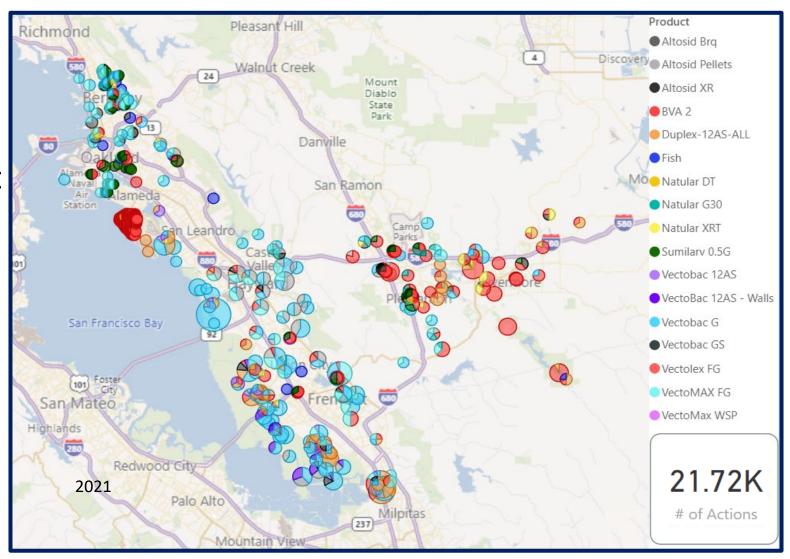
Larvicide applications by drone





Where larvicide is applied in Alameda County

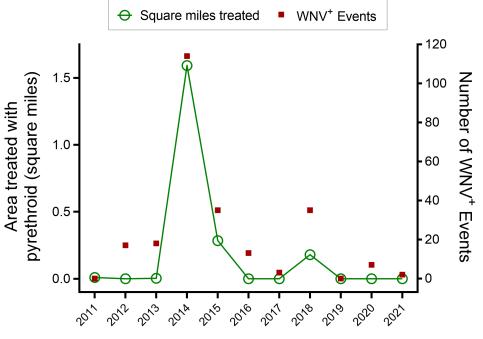
Most larvicide applications occur in marsh habitats that abut the SF Bay





Our very last resort for controlling infected adult mosquitoes





Ultralow volume pyrethroid insecticide

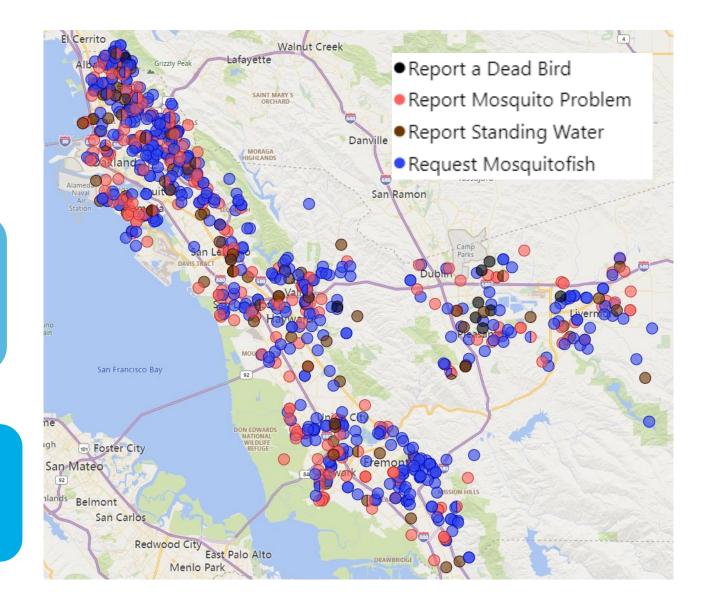
4 grams / square mile



Requests for service

830 Service Requests during 2021

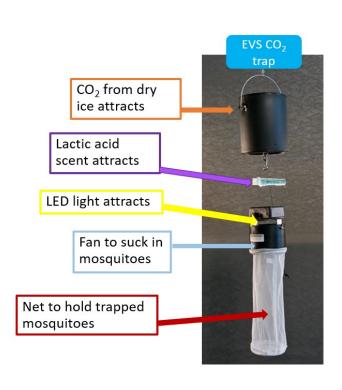
In-person response within a day

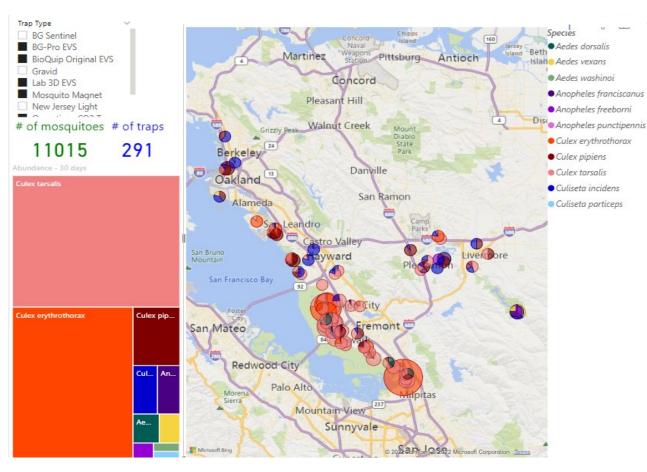




Assessing mosquito abundance & arbovirus prevalence

Adult mosquito abundance monitoring







Power BI dashboard for 15 days (auto-updated)

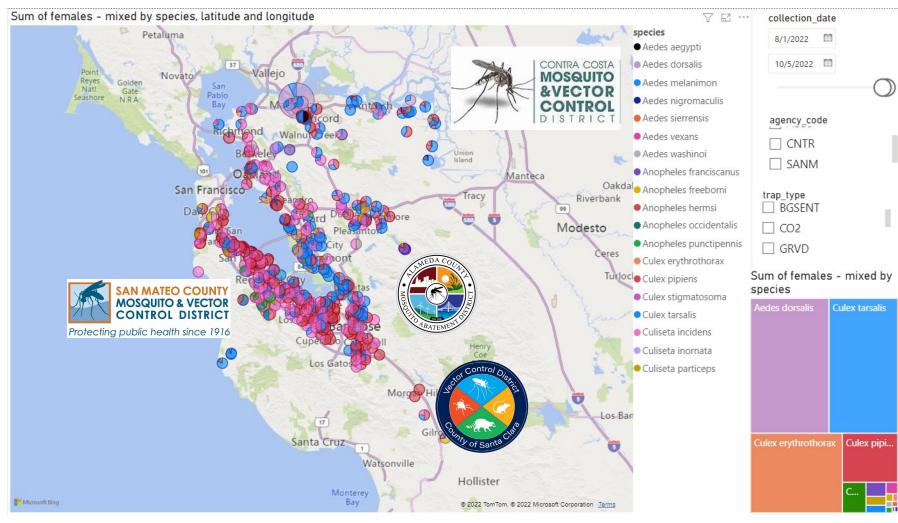
Testing trapped mosquitoes for arboviruses in our lab using quantitative RT-PCR







Multi-agency dashboard to view high resolution data



Community engagement with the public

- Leverages a "show me" & discovery mindset
- Motivates an involved public



Cal State East Bay Students



Oakland Garden Preschool



Alameda Watershed Symposium

Community engagement with the public

















Community engagement with partner agencies & facilities

- Coordinate with land and facility managers
 - MOU with US FWS and EBRPD
- Engage public agencies
 - Cooperative agreement with CDPH
- Public & private lands
 - Mosquito Abatement and Vector
 Control Districts Principle Enabling
 Act (Health and Safety Code §2000 et seq.)













Engaging with universities & research institutes







Culex erythrothorax (Diptera: Culicidae): Activity periods, insecticide susceptibility and control in California (USA)

Allen T. Esterly, Dereje Alemayehu, Benjamin Rusmisel, John Busam, Theresa L. Shelton, Tina Sebay, Nayer Zahiri, Joseph W. Huston, Ryan J. Clausnitzer, Eric J. Haas-Stapleton

Published: July 10, 2020 • https://doi.org/10.1371/journal.pone.0228835



Quantitative reverse transcription PCR assay to detect a genetic marker of pyrethroid resistance in *Culex* mosquitoes

Kelli M. Hager, Erick Gaona, Amy Kistler, Kalani Ratnasiri, Hanna Retallack, Miguel Barretto, Sarah S. Wheeler, Christopher M. Hoover, Eric J. Haas-Stapleton

☐

Published: August 8, 2022 • https://doi.org/10.1371/journal.pone.0252498





Assessing Mosquito Breeding Sites and Abundance Using An Unmanned Aircraft

Eric J. Haas-Stapleton; Miguel C. Barretto; Erika B. Castillo; Ryan J. Clausnitzer; Robert L. Ferdan J. Am Mosq Control Assoc (2019) 35 (3): 228–232. Toys or Tools? Utilization of Unmanned Aerial Systems in Mosquito and Vector Control Programs

Ary Faraji 🗷, Eric Haas-Stapleton, Brad Sorensen, Marty Scholl, Gary Goodman, Joel Buettner, Scott Schon, Nicholas Lefkow, Colin Lewis, Bradley Fritz, Clint Hoffman, Greg Williams

Journal of Economic Entomology, Volume 114, Issue 5, October 2021, Pages 1896–1909

MR. MISTER: ROCKIN' THE AEDES OF THE SAN FRANCISCO BAY SALT MARSHES 8

MARK WIELAND; JOSEPH HUSTON; RYAN CLAUSNITZER; ERIC J. HAAS-STAPLETON

J Am Mosq Control Assoc (2022)

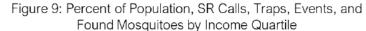
ADVANCED POLICY ANALYSIS

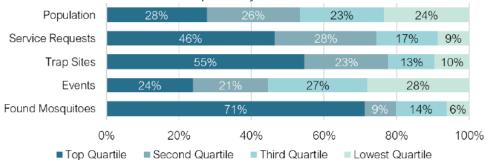
Work Distribution Analysis for Alameda County Mosquito Abatement

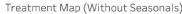
Study conducted for Alameda County Mosquito Abatement District

Equitable, Effective Practices for Mosquito Abatement in Alameda County: Challenges and Solutions

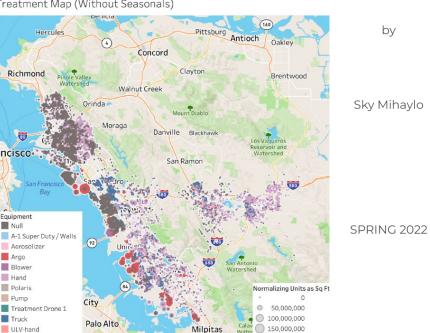
Emily Estus, MPP/MPH Candidate 2021 University of California, Berkeley May 2020







ULV-truck



202,554,000



sterile insects for Aedes control

non-biting males are released to mate with invasive female mosquitoes

no new female mosquitoes are produced

3 sterile insect techniques (SIT) to reduce abundance of biting & disease-spreading female mosquitoes

sterile insects for Aedes control

irradiated

bacteria-infected

genetically engineered

Invasive Aedes mosquitoes are not yet in Alameda County





Irradiate male mosquitoes

Medfly and Mexfly - USDA APHIS

Jun 2, 2020 — APHIS-International Programs Action Programs Staff m breeding facilities for the **Medfly** and Mexfly. Flies are **irradiated** (ma

X-Rays sterilize male mosquitoes

25,000 sterilized at a time

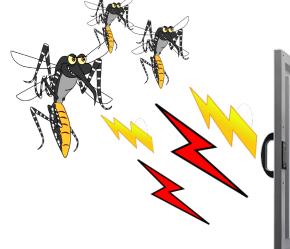
Use for any species (unpatented method)

One-time equipment purchase

Grow 100,000s of mosquitoes

Must separate male from females

Reduced mosquito health







Wolbachia bacteria infection

Male mosquitoes naturally spread bacteria

Multi-generation impact

Reduced mosquito reproduction and virus growth

EPA-registered non-GMO option

Must separate male from females

PLOS NEGLECTED TROPICAL DISEASES

⑥ OPEN ACCESS
Ø PEER-REVIEWED

Open Release of Male Mosquitoes Infected with a Wolbachia Biopesticide: Field Performance and Infection Containment

Linda O'Connor, Catherine Plichart, Ayo Cheong Sang, Corey L. Brelsfoard, Hervé C. Bossin, Stephen L. Dobson March 1988 (1998)





Commercial provider = recurring cost



3

Genetically modified

Female mosquitoes eliminated as immatures

EPA approved & monitored trial in Florida

Eggs-in-a-box simplifies adult release

Public hesitancy to GMO

Recurring cost



Angela F Harris, Andrew R McKemey, Derric Nimmo, Zoe Curtis, Isaac Black, Siân A Morgan, Marco Neira Oviedo, Renaud Lacroix, Neil Naish, Neil I Morrison, Amandine Collado, Jessica Stevenson, Sarah Scaife, Tarig Dafa'alla, Guoliang Fu, Caroline Phillips, Andrea Miles, Norzahira Raduan, Nick Kelly, Camilla Beech, Christl A Donnelly, William D Petrie & Luke Alphey

Nature Biotechnology 30, 828–830(2012) Cite this article





Thank you.

23187 Connecticut Street Hayward, CA 94545

www.mosquitoes.org 510.783.7744

Ryan Clausnitzer, MPA, REHS General Manager ryan@mosquitoes.org

HAYWARD RESIDENTIAL DESIGN STUDY

ITEM #10

WS 23-002



The City was awarded SB 2 grant in 2020

✓ Zoning/General Plan Consistency

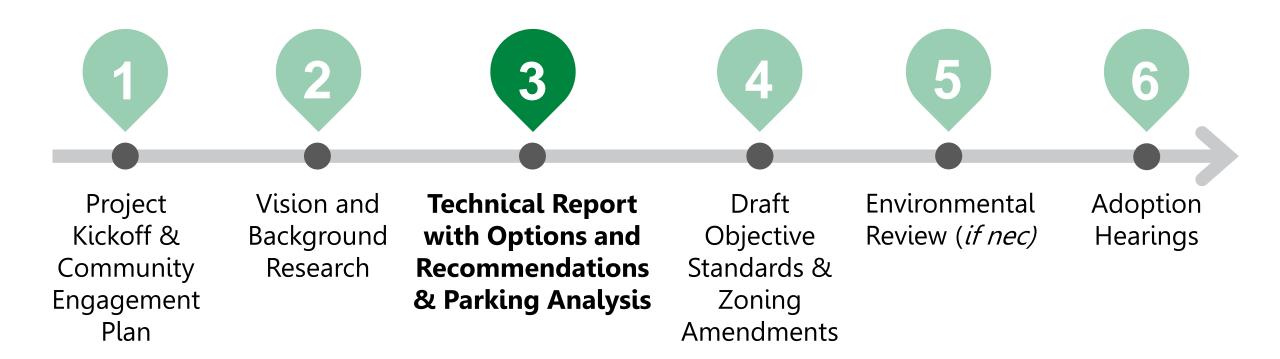
- 1,500+ parcels that are zoned RS have GP designations that allow/require higher densities.
- Through rezoning or zoning overlay, these parcels will be brought into conformance with the GP.

✓ Residential Objective Standards

 Development of more detailed objective residential standards in response to SB 330 and other recent legislation.



Project Scope



Process





✓ Project Kickoff

✓ Joint session of Planning Commission and Council on February 1, 2022

√ Feedback on Parking

- Project should address community parking concerns
- Evaluate current regulations for areas of improvement
- Identify strategies to reduce parking necessity (shuttles, bike infrastructure, car sharing programs, unbundled parking)

Planning Commission and Council Feedback



Public Outreach

✓ Outreach Efforts to Date

- Online survey
- Online interactive mapping tool
- Neighborhood "walkshops"
- Pop-ups at community events

√ Feedback on Parking

- Reduce "spillover" parking adjacent to Downtown/Mission Boulevard
- Allow unbundled parking
- Ensure front setbacks can accommodate driveway parking
- Increase protected bike lanes, shuttles, other alternatives to driving

Bedroom Count	Number of Required Parking Spaces	
Studios	1 Per Dwelling Unit	
One-Bedrooms	1 Per Dwelling Unit	
Two Bedrooms	1.5 Per Dwelling Unit	
Three Bedrooms	1.5 Per Dwelling Unit	
Four Bedrooms	2.5 Per Dwelling Unit	

- Prohibits jurisdictions from requiring more offstreet parking than outlined within the law
- Developers can request a concession to further reduce their off-street parking requirements

Density Bonus Law





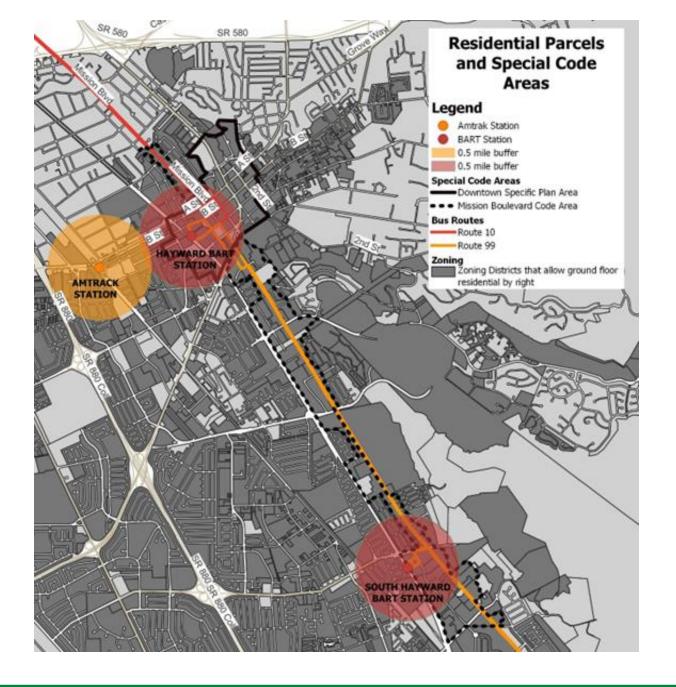


 Prohibits jurisdictions from adopting development standards, including minimum off-street parking requirements, that would effectively reduce the overall residential development potential that is currently allowed

SB 330

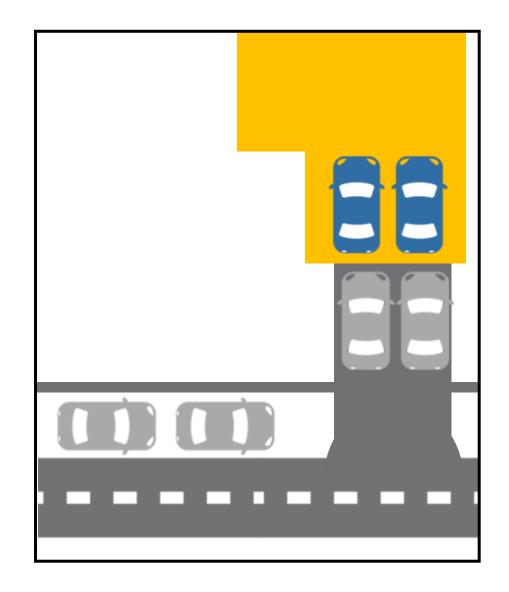
 Prohibits jurisdictions from imposing any minimum parking requirements for residential, commercial, or other development projects that are located within one half mile of a major transit stop.

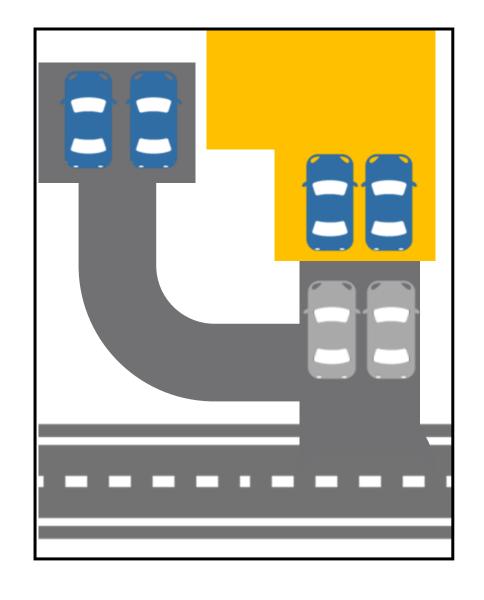
AB 2097



Use	Number of Required Parking Spaces
Single-Family Dwellings	2 Covered per Dwelling Unit
Single-Family Dwellings that are abutting a street with no permitted parking on both sides of the street	2 Covered <u>AND</u> 2 Uncovered per Dwelling Unit (spaces cannot block the covered spaces)
Single-Family Dwellings built prior to March 24, 1959	1 Covered per Dwelling Unit

Current Regulations – Single Family Dwellings





Current Regulations – Single Family Dwellings

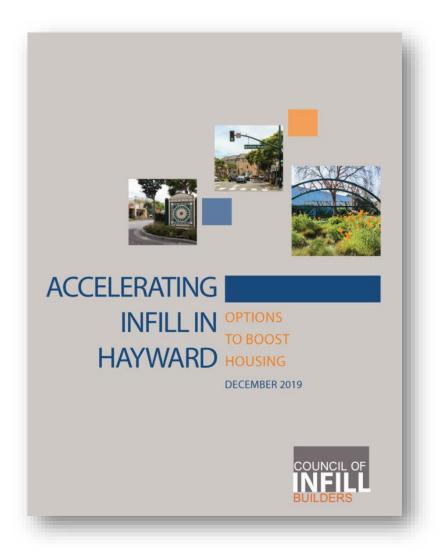
Use	Number of Required Parking Spaces	ITE Parking Generation Manual
Multi-Family Dwellings: Studios	1 Covered <u>AND</u> 0.5 Uncovered Per Dwelling Unit	1.0 to 1.3 per Dwelling Unit
Multi-Family Dwellings: One- Bedrooms	1 Covered <u>AND</u> 0.7 Uncovered Per Dwelling Unit	1.0 to 1.3 per Dwelling Unit
Multi-Family Dwellings: Two or More Bedrooms	1 Covered <u>AND</u> 1.10 Uncovered Per Dwelling Unit	1.0 to 1.3 per Dwelling Unit

Current Regulations – Multi-Family Dwellings



Use	Number of Required Parking Spaces
All Residential Developments in Downtown Specific Plan (DTSP) Area	1 Per Dwelling Unit, No Parking Maximums
All Residential Developments in Mission Boulevard Code (MBC) Area	No Parking Minimums, A Maximum of 1 Per Dwelling Unit within ½ Mile of BART Station and A Maximum of 2 Per Dwelling Unit Elsewhere

Current Regulations – MBC & DTSP



- Recommends parking regulations that encourage market-driven supply
- Lenders will not finance new projects without sufficient parking

Infill Housing Report



- Senior Citizen Housing and Housing for People with Disabilities
- Two-Wheel Vehicle Parking Spaces
- Tandem Parking
- Off-Site Parking

Current Regulations- Credits

ATTACHMENT II

HAYWARD COMPARATIVE PARKING STUDY MEMO

DATE: December 6, 2022

TO: Elizabeth Blanton | City of Hayward

FROM: Josh Pilachowski, Alexandra Haag | DKS Associates

SUBJECT: Hayward Residential Design Study Project # 22049-000

INTRODUCTION

The Hayward Residential Design Study is an update to the City's zoning regulations to support the development of quality housing. Currently, the City of Hayward's (City) Municipal Code provides minimum off-street parking requirements for various land uses, with the purpose of providing off-street parking and loading facilities in developments that are in proportion to the demand created by the use. The purpose of this memorandum is to provide an overview of recent State legislation that impacts residential parking requirements, summarize the City's residential Off-Street Parking Regulations as required by the Municipal Code, compare the requirements to parking generation rates published in the Institute of Transportation Engineer's (ITE) Parking Generation Manual, 5th Edition (ITE Manual), and determine if any changes are necessary either at a city-wide or location/land-use specific level to manage parking demand and community needs.

This review focuses on the quantity of off-street parking and loading spaces required by the Municipal Code and does not cover specific design considerations such as the location of parking spaces on-site. Development standards and specific design options will be considered in the forthcoming Option and Recommendations Report.

SUMMARY OF STATE LEGISLATION

SB 330 HOUSING CRISIS ACT

SB 330 strengthens the Housing Accountability Act and Permit Streamlining Act to address California's housing crisis by removing barriers to residential development, protecting existing housing inventory, and expediting permit processing. It prohibits local jurisdictions from enacting new laws that would have the effect of reducing the capacity for new housing or delaying housing development via administrative or other regulatory barriers. Specifically, SB 330 prohibits local jurisdictions from adopting development standards, including minimum off-street parking

DKS

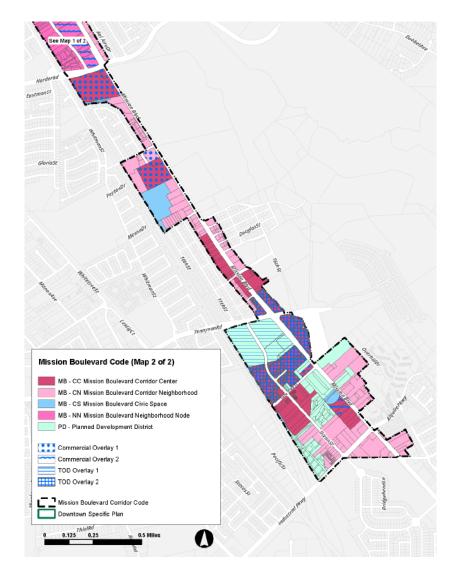
CITY OF HAYWARD • COMPARATIVE PARKING STUDY • DECEMBER 6, 2022

ITY OF HAVINARD - COMPARATIVE BARKING STUDY - DECEMBER 6, 2022

✓ Parking Analysis Memo prepared by DKS Associates (Transportation Engineers)

- Reviewed State legislation
- Compared current off-street parking regulations to ITE Manual
- Reviewed current credits/exceptions
- Considered best practices from other jurisdictions
- Considered input from staff, decisionmakers, and community members

Methods



Recommendations

- ✓ Maintain parking requirements within the Mission Boulevard Code area.
 - State legislation (AB 2097, SB 330) limit the ability to require/increase parking
 - Upcoming AC Transit network redesign
- ✓ Do not increase parking requirements for multi-family developments outside of Mission Boulevard Code and Downtown Specific Plan areas.
 - Existing parking regulations are higher than ITE Manual rates



- ✓ Develop Transportation Demand Management (TDM) strategies for multifamily developments.
 - Consider parking reduction/credits under certain conditions
 - Proximity to transit
 - Provision of active transportation amenities
 - Car-share on site
 - Provision of subsidized transit passes

Recommendations





Recommendations

✓ Allow for unbundling of parking.

- Separate the cost of housing units from the cost of parking spaces
- Purchase/rent spaces as needed
- ✓ Revise parking requirements for singlefamily dwellings that are abutting a street with no on-street parking.
 - Allow driveway spaces to count for the extra two required parking spaces.



Questions for Discussion

- Which of the recommendations do you think are right for Hayward?
- Do you support the development of TDM requirements or credits for multifamily development?
 - If so, which TDM strategies should be included?
 - Are there specific areas of the city, such as Downtown, along Mission Boulevard, and/or around major transit stops where TDM requirements or credits should apply?
 - Would you be supportive of differentiating TDM requirements or credits based on project size, location, level of affordability and/or tenure (rental vs. ownership)?
- Are there any other parking design issues (i.e., setbacks, visibility, etc.) that should be addressed as part of the Hayward Residential Design Study?