

AGENDA

1037th MEETING OF THE BOARD OF TRUSTEES OF THE ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT

SEPTEMBER 14TH, 2016

TIME: 5:00 P.M.
PLACE: Office of the District, 23187 Connecticut Street, Hayward
TRUSTEES: Richard Guarienti, President, City of Dublin
Kathy Narum, Vice-President, City of Pleasanton
Robert Dickinson, Secretary, City of Piedmont
Humberto Izquierdo, County-at-Large
Wendi Poulson, City of Alameda
P. Robert Beatty, City of Berkeley
Scott Donahue, City of Emeryville
George Young, City of Fremont
Elisa Marquez, City of Hayward
James N. Doggett, City of Livermore
Eric Hentschke, City of Newark
Jan O. Washburn, City of Oakland
Ursula Reed, City of San Leandro
Ronald Quinn, City of Union City

1. Call to order.
2. Roll call.
3. President Guarienti invites any member of the public to speak at this time on any issue relevant to the District. (Each individual is limited to five minutes).
4. Approval of the minutes of the 1036th meeting held August 10th, 2016 (**Board action required**).
5. District job description revisions (**Board action required**):
 - a. Phase one (of two): Field Operations Supervisor, Lab Director, Regulatory and Public Affairs Director, IT Director, Biologist Specialist
6. Rescheduling or cancelling the October 12th board meeting to accommodate the CSDA annual conference (**Board action required**).
7. Review of bids and awarding of contract for a reporting, mapping, and database solution (**Board action required**).
8. Resolution 1037-1: Expanding workers' compensation coverage to District volunteers assisting in mosquito research (**Board action required**).

9. Financial Reports:

- a. Review of warrants dated August 15, 2016 numbering 006717 through 009117 amounting to \$121,409.93 and warrants dated August 31, 2016 numbering 009217 through 012417 amounting to \$139,607.89 (Information only).
- b. Review of Budget as of August 31, 2016 (Information only).
- c. Investments, Reserves, and Cash Statement (Information only).

10. Presentation of the Monthly Staff Report for August 2016 (Information only).

11. Presentation of the Manager's Report for August 2016. (Information only).

- a. CSDA Annual Conference: San Diego, October 10-13; MVCAC Quarterly Meeting: Monterey, October 26-27.
- b. City Council Presentations to schedule
- c. Staff training August 24th: Heat Illness, back injury prevention, workplace violence, CPR & AED certifications
- d. WNV Update and Response Plan
- e. Invasive *Aedes* surveillance research trip to Madera, CA.

12. Board President asks for reports on conferences and seminars attended by Trustees.

13. Board President asks for announcements from members of the Board.

14. Board President asks trustees for items to be added to the agenda for the next Board meeting.

15. Adjournment.

RESIDENTS ATTENDING THE MEETING MAY SPEAK ON ANY AGENDA ITEM AT THEIR REQUEST.

Please Note: A copy of this agenda is also available at the District website, www.mosquitoes.org or via email by request. Alternative formats of this agenda can be made available for persons with disabilities. Please contact the district office at (510) 783-7744, via FAX (510) 783-3903 or email at acmad@mosquitoes.org to request an alternative format.

Agenda item: 1037.4

MINUTES

1036th MEETING OF THE BOARD OF TRUSTEES
OF THE ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT

AUGUST 10TH, 2016

TIME: 5:00 P.M.
PLACE: Office of the District, 23187 Connecticut Street, Hayward
TRUSTEES: Richard Guarienti, President, City of Dublin
Kathy Narum, Vice-President, City of Pleasanton
Robert Dickinson, Secretary, City of Piedmont
Humberto Izquierdo, County-at-Large
P. Robert Beatty, City of Berkeley
Wendi Poulson, City of Alameda
Scott Donahue, City of Emeryville
George Young, City of Fremont
Elisa Marquez, City of Hayward
James N. Doggett, City of Livermore
Eric Hentschke, City of Newark
Jan O. Washburn, City of Oakland
Ursula Reed, City of San Leandro
Ronald Quinn, City of Union City

Board President Guarienti called the regularly scheduled Board meeting to order at 5:01 P.M. Trustee Young arrived at 5:03 P.M.

Trustees, Guarienti, Dickinson, Narum, Izquierdo, Poulson, Young, Marquez, Hentschke, and Quinn were present; Trustees, Beatty, Donahue, Doggett, Washburn, and Reed were absent.

Board President Guarienti invited members of the public to speak on any issue relevant to the District, there were none.

The board approved the minutes of the 1035th meeting held July 13th, 2016. (Quinn, Marquez)– unanimous; Trustees Narum, Izquierdo -abstained.

After a request by Trustee Narum to amend one line of policy chapter 100, the board approved the amended version of 100 and chapters 200, 300, 400, 800 of the ACMAD policy manual (Narum, Marquez)– unanimous

After a presentation of the *Aedes* response plan by the District Manager, the board asked the following questions. Board President Guarienti, along with Trustee Dickinson, requested that the action language (e.g. shall, will) be further reviewed before the finalized draft is prepared. Trustee Narum asked if the cities will be notified of an introduction of an invasive

Aedes (yes). Trustee Quinn requested clarity on the source of the District's 2015 invasive *Aedes* detection (lab colony escapee).

The Board reviewed warrants dated July 15, 2016 numbering 000117 through 003217 amounting to \$393,613.26 and warrants dated July 31, 2016 numbering 003317 through 006617 amounting to \$286,491.47. Trustees Narum and Dickinson requested more information on payments to the VCJPA and if the District is represented on their board. The District Manager responded that a report will be forthcoming, but meetings are open to the public and we elect our board officers. Trustee Narum asked if the payments to CalPers will meet the District's just-approved policy of the pension being 80% funded. The District Manager responded that with the current actuarial report, that goal is met. Trustee Poulson asked why there are two forms of payments for copiers. The District Manager explained that each copier has an independent contract—one via an invoice and payable by warrant, one on an automatic credit card deduction. The District does not need two copiers, so rather than restructuring the payments on one machine and thus extending the contract, the option of letting the contract expire at the end of the year is preferred. Trustee Dickinson questioned why a District credit card was used for such a large purchase \$24,511.47 for lab equipment. The District Manager explained that because our funds are held by law with the County Treasury, payments from the County can only be made to approved County vendors. This vendor was either not eligible, or less expensive, than a vendor on the County approved vendor list. The District manager continued that improvements are planned regarding our financial arrangements between the District and the County Treasury regarding the approved vendor process along with more current cash balance information. Trustee Narum offered assistance in these improvements, if needed.

The Board reviewed the budget summary received as of July 30th, 2016. Trustee Dickinson asked why the total July warrant payments does not match the expenditures total on the budget summary. The District Manager assumed it was accruals from the last fiscal year, but will provide that information as soon as possible. Trustee Dickinson also offered improvements to the financial reports to increase accountability, fraud protection, and transparency which will allow the Board to fulfill their fiduciary responsibility. Trustee Dickinson suggested that a CPA consultant may be an option to improve our financial statements, before an in-house option is available. Board President Guarienti asked if after the accruals, is last year's budget still under. The District Manager responded that the District was still under budget in fiscal year 2015-16 after the accruals.

The District Manager presented the Monthly Staff Report for July 2016. Board President Guarienti and Trustee Narum asked if the West Nile virus activity in the Tri-Valley is similar to activity in 2014. The District Manager responded that the foci are nearer to the Livermore Airport, rather than Max Baer and Bruno Canziani parks. Trustees Narum and Marquez asked if Nextdoor is used in the District's social media strategy, and if the District considered using YouTube videos. The District Manager responded that the District is using Nextdoor, but would need more information to respond to our exact role. He also responded that a YouTube video was prepared, through the Washington Hospital District, regarding Zika. This video was distributed mostly through the hospitals community access television channel much later than when it was produced.

During the Manager's report for July 2016, Trustee Marquez asked if the information forwarded to animal control shelters can be forwarded to the Trustees (yes). Trustee Dickinson asked about what effect the incorrect past practices of discarded possible infected birds may have had. The District Manager responded that no confirmed human WNV cases have yet to be detected in Alameda County. Board President Guarienti offered the

importance of the Alameda Chapter of the CSDA meetings. Trustee Quinn emphasized the value of attending an MVCAC conference.

Board President Guarienti asked for reports on conferences and seminars attended by Trustees, there were none.

Board President Guarienti asked for announcement from the Board, which were none, but did ask if the District's biennial reports, if not dropped off by Trustees, were mailed. The District Manager replied that they were hand-delivered by either himself or staff.

Board President Guarienti asked trustees for items to be added to the agenda for the September Board meeting and then reminded the District Manager to add the rescheduling or cancellation of the October meeting as an agenda item.

The meeting adjourned at 6:16 P.M.

Respectfully submitted,

Approved as written and/or corrected
at the 1037th meeting of the Board of
Trustees held September 14th, 2016

Richard Guarienti, President
BOARD OF TRUSTEES

Robert Dickinson, Secretary
BOARD OF TRUSTEES

A. Recommended changes to ACMAD Staff Positions:

Current Title	Proposed Title	Pay change	FLSA Exempt
Systems Specialist	IT Director	5%	YES (+ 40 hours of vacation & occasional sup.)
Environmental Specialist	Regulatory & Public Affairs Director	5.5%	YES (+ 40 hours of vacation & occasional sup.)
Entomologist	Lab Director	(no change)	YES (+ 40 hours of vacation)
Biological Specialist	(no change)	4.5%	(no change)
Field Operations Supervisor	(no change)	(no change)	YES (+ 40 hours of vacation)

B. Reasons for proposed changes

1. Title changes will more accurately reflect, and relate to job duties and responsibilities of outside agencies.
2. Based on salary surveys (attached), this will also separate the salaries from each other. The financial impact to the District is roughly \$15,000, approved in the 2016-17 budget
3. Exemptions will allow for flexibility, match current Department of Labor rules, and reduce overtime accumulation.
4. This is the first half of job descriptions updates by staff and the HR Consultant, the second will not include any title, pay, or exemption changes.
5. Exemption language and salary change will be amended, but must also be approved by the ACMAD Employee Association, in the existing MOU.
 - a. *Exempt employees will be given 40 hours of administrative leave to supplement work over 40 hours per week. This leave is given every July 1st, and does not accumulate. Flexible schedules and adjustments are subject to District Manager approval.*

C. Salary Surveys:

Biological Specialist	Monthly low	Monthly High	Annual low	Annual High
San Mateo Mosquito	\$5,655	\$8,153.58	\$67,864	\$97,843
Contra Costa Mosquito	\$6,303	\$7,979	\$75,636	\$95,748
ACMAD (current)	\$7,179.73	\$7,945.97	\$86,156.76	\$95,351.61
<i>Proposed 4.5%</i>	\$7,502.82	\$8,303.54	\$90,033.81	\$99,642.43

Regulatory and Public Affairs Director	Monthly low	Monthly High	Annual Low	Annual High
San Mateo Mosquito*			\$67,864	\$97,836
Contra Costa Mosquito*	\$6,801	\$9,254	\$81,612	\$111,048
ACMAD (current)	\$7,179.73	\$7,945.97	\$86,156.76	\$95,351.61
<i>Proposed 5.5%</i>	\$7,574.61	\$8,383.00	\$90,895.38	\$100,595.94

*Other districts are public affairs only, not regulatory

IT Director	Monthly low	Monthly High	Annual Low	Annual High
Contra Costa Mosquito	\$6,656	\$8,502	\$79,872	\$102,024
Alameda County*	\$8,625	\$12,464	\$103,501	\$149,572
Santa Clara*	\$7,073	\$12,103	\$84,876	\$145,234
Marin County*	\$7,063	\$11,054	\$84,760	\$132,652
San Francisco*	\$8,329	\$10,326	\$99,944	\$123,916
ACMAD (current)	\$7,179.73	\$7,945.97	\$86,156.76	\$95,351.61
<i>Proposed 5.0%</i>	\$7,538.72	\$8,343.26	\$90,464.60	\$100,119.19

*County agencies, various titles

Field Operations Supervisor

DEFINITION:

Under administrative direction and supervision of the District Manager, and in a manner consistent with the District's shared vision and mission statement, the Field Operations Supervisor (FOS) is responsible for supervising, directing, and assisting the Mosquito Control Technicians and Vector Biologists in their daily operational work activities. The FOS comprises an active component of the District's support staff that collaborates to assist the District Manager in planning, organizing, directing, and evaluating the District's mosquito control program.

DISTINGUISHING CHARACTERISTICS

This classification performs work in several functional areas and is distinguished by its core responsibility for supervising employees, programs and activities within ACMAD. Depending upon assignment, work is performed under general direction and incumbents may provide support for inter-divisional programs and functions. This classification has full supervisory responsibility for staff at different locations and has full administrative and fiscal responsibility for specific programs and/or projects. Incumbents perform professional level activities and have considerable latitude for independent decision making in choosing methods of developing and implementing approved procedures.

SUPERVISION RECEIVED AND EXERCISED

General supervision is provided by the District Manager. Responsibilities include supervising of regular full time, seasonal and temporary staff.

EXAMPLES OF IMPORTANT AND ESSENTIAL DUTIES:

- Supervises and evaluates directly, the responsibilities and daily activities of operational field staff;
- Maintains organized files and records on the daily activities and work performance of the operational field control staff;
- Evaluates the daily time records and service requests of operational field staff for timely completion, accuracy, and keeping up with work load;
- Provides manager with weekly update of field control activities;
- Budgets pesticide purchases for the year;
- Purchases pesticides and keeps records of pesticide use, completes a monthly pesticide use report;
- Assists in hiring and recruiting prospective regular operational control employees;
- Assists in planning, organizing and implementing elements of the operational control program;
- Assists in training and instructing new and current operational field employees on

- pesticide safety and application methods including calibration of equipment;
- Helps resolve, individually, when necessary, public complaints arising out of District field activities;
 - Collaborates, occasionally, with outside agencies to coordinate and facilitate the operational field control work of the District;
 - Keeps informed on current developments in mosquito and vector control;
 - Maintains certification and supervisor training by attending technical and job-related sessions, seminars, and continuing education classes;
 - Attends Coastal Region supervisor meetings;
 - Keeps a neat and professional appearance;
 - Performs, occasionally other tasks or functions not stated in this description, but within the scope of experience and capability; and
 - Performs related work as required.

Accountability:

The employee is accountable to the District Manager to ensure that mosquito control operational functions are carried out in accordance with the Mosquito Act, applicable Government Code, and California Health and Safety Code Standards, Federal and State laws (including those related to grants), and departmental policies. Assignments may be specific or general with only desired results being specified. Recommendations on improvements to Division activities are expected.

The employee is responsible for complying with all District safety requirements and practices. Additionally, the employee is responsible for ensuring that any direct reports also comply with all Agency's safety requirements and practices.

EMPLOYMENT STANDARDS

Knowledge of:

- Fundamentals and techniques of employee supervision;
- Organization and operation of a mosquito control operation and the use and application of pesticides for mosquito control;
- Fundamental mathematics and algebra;
- Correct English usage, spelling grammar and punctuation;
- Principles of composition and report writing; and
- Basic use and operation of a Microsoft Windows® – based PC system and MS Office® software.

Skills in:

- Planning, organizing, and directing work of the Mosquito Abatement Division;
- Communicating effectively in English both orally and in writing, making presentations, and preparing written reports;
- Interacting effectively with Agency staff, elected and appointed officials, and representatives of various public and private agencies;

- Establishing and maintaining effective working relationships with others;
- Understanding, interpreting, and applying complex guidelines;
- Budget management;
- Time management for daily and ongoing projects.

Ability to:

- Collaborate effectively and share in District decision making;
- Contribute personal skills, talents and interests to further the organization;
- Lead, listen, encourage, and motivate;
- Pursue valid information to better serve the District goals and objectives;
- Make sound and responsible decisions;
- Work with a high degree of independence;
- Be a good team player with all sections/divisions of the District.
- Establish and maintain effective working relationships with those contacted in the course of work;
- Work congenially and cooperatively with others;
- Communicate with the public in a tactful, courteous, and professional manner.

JOB RELATED AND ESSENTIAL QUALIFICATIONS

Education/Training and Experience Guidelines:

Any combination equivalent to experience and training that would likely provide the required knowledge and abilities would be qualifying. A typical way to obtain the knowledge and abilities would be:

Experience:

Six months of work experience as a Vector Biologist II with the/a Mosquito Abatement District.

Education/Training:

A Bachelor's degree from an accredited college or university with major work in biological science, or related field.

or

Six (6) years in vector control work experience with at least 2 years of supervisory experience.

License or Certificate:

A valid California Driver's license issues by the State Department of Motor Vehicles and must be insurable under the guidelines set forth by the District's insurance carrier.

Possession of or ability to obtain and maintain the following certifications from the State Department of Public Health within one year of employment:

- Mosquito Control Technician Certificate
- Vertebrate Vector Certificate
- Invertebrate Certificate

WORKING CONDITIONS/PHYSICAL REQUIREMENTS:

Essentially the employee's working hours are spent in office areas and field setting; exposure to cold, heat, noise, outdoors, inclement weather, dust, dirt, vibration, chemicals, traffic, traffic hazards, confining workspace, odors, mechanical hazards, electrical hazards, explosive hazards.

Incumbent must be sighted in both eyes with the ability to demonstrate depth perception and color perception; have a minimum of single-ear aided hearing; be without physical limitations that would prevent climbing ladders and performing customary and usual activities associated with field operational mosquito surveillance and control activities. Lift up to 50 (fifty) pounds.

Working Conditions:

Medium Work – Incumbent performs work, which involves frequent lifting, pushing and/or pulling of objects of approximately 50 pounds. Heavier lifting is an infrequent aspect of this position.

Mobility – Incumbent must have complete and normal mobility of arms to reach and dexterity of hands to grasp and manipulate small objects; be able to stand, stoop, reach and bend and to walk on uneven terrain, such as field, dirt banks, natural and cement stream beds, and shallow ponds.

Other Conditions – Incumbent may be exposed to and handle toxic and hazardous substances; be available on call for evening and weekend emergencies, as assigned; travel within and out of the county; work, when necessary, in inclement weather including sun, cold and rain.

Adopted Date: September 14th 2016

Revised:

Retitled:

FLSA Designation: Exempt

Unit: ACMAD Employee Association

Laboratory Director

DEFINITION:

Under administrative direction and supervision and in a manner consistent with the District's shared vision and mission statement, the Laboratory Director is responsible for conducting and executing various aspects of the District's mosquito surveillance and research programs, applying the knowledge associated with the scientific disciplines of entomology, biology, ecology, molecular biology, microbiology, and biostatistics. The Laboratory Director comprises an active component of the District's support staff that collaborates to assist the District Manager in planning, organizing, directing, and evaluating the District's mosquito control program.

DISTINGUISHING CHARACTERISTICS

This classification is distinguished from all other technical and professional classifications at the District through its specialized responsibilities in the areas of surveillance and research programs.

SUPERVISION RECEIVED AND EXERCISED

General supervision is provided by the District Manager. Responsibilities include supervision of seasonal and temporary staff.

EXAMPLES OF IMPORTANT AND ESSENTIAL DUTIES:

- Conduct ecological population studies and surveys of mosquito breeding sources and species distribution in the District;
- Collects, processes and identifies mosquito specimens to species, evaluates their public health significance and advises District employees on control measures;
- Performs arbovirus testing of mosquitoes and birds, and reports the results to District employees and California Department of Public Health;
- Advises District employees on pesticide use by mosquito species, season, environmental conditions and equipment;
- Investigates resistance of mosquitoes to pesticides that are or may be employed by the District for mosquito control, and recommends changes as indicated;
- Monitors and evaluates efficacy of field applications of pesticides;
- Plan, conduct and evaluate the outcomes of field- and laboratory-based research studies related to mosquito or arbovirus control, and advises District employees on the outcomes of such studies;
- Presents findings of research conducted by the District at professional meetings;
- Advise and assist District employees on the presentation of research conducted by the District at professional meetings;
- Prepares analyses, reports and recommendations for program development, technical and operational projects;

- Maintains certification by attending technical and job-related training sessions, seminars, and continuing education classes;
- Keeps informed and knowledgeable about District policies and procedures;
- Participates in Coastal Region vector biologist meetings;
- Maintains a professional appearance and relationship with District employees and public;
- Performs, occasionally other tasks or functions not stated in this description, but within the scope of experience and capability;
- Performs related work as required;

Accountability:

The employee is accountable to the District Manager to ensure that laboratory and field work functions are carried out in accordance with the Mosquito Act, Government Code, and California Health and Safety Code Standards, Federal and State laws (including those related to grants), and departmental policies. Assignments may be specific or general with only desired results being specified. Recommendations on improvements to Division activities are expected.

The employee is responsible for complying with all District safety requirements and practices. Additionally, the employee is responsible for ensuring that any direct reports also comply with all Agency's safety requirements and practices.

EMPLOYMENT STANDARDS

Knowledge of:

- Fundamental biology and general entomology at an in depth level;
- Biological, molecular biology, microbial biology, chemical and physical science principles at a working professional level;
- Working knowledge and application of mathematics, algebra, and biostatistics;
- Correct English usage, spelling grammar and punctuation;
- Scientific data recording, interpretation and reporting;
- Principles of composition and report writing;
- Basic use and operation of a Microsoft Windows® – based PC system and MS Office® software.

Skills in:

- Planning, organizing, and directing work of the Mosquito Abatement Division;
- Communicating effectively in English both orally and in writing, making presentations, and preparing written reports;
- Interacting effectively with Agency staff, elected and appointed officials, and representatives of various public and private agencies;
- Establishing and maintaining effective working relationships with others;
- Understanding, interpreting, and applying complex guidelines;
- Budget management;
- Time management for daily and ongoing projects.

Ability to:

- Collaborate effectively and share in District decision making;
- Contribute personal skills, talents and interests to further the organization;
- Lead, listen, encourage, and motivate;
- Pursue valid information to better serve the District goals and objectives;
- Make sound and responsible decisions;
- Work with a high degree of independence;
- Be a good team player with all sections/divisions of the District;
- Establish and maintain effective working relationships with those contacted in the course of work;
- Work congenially and cooperatively with others;
- Communicate with the public in a tactful, courteous, and professional manner.

JOB RELATED AND ESSENTIAL QUALIFICATIONS

Education/Training and Experience Guidelines:

Any combination equivalent to experience and training that would likely provide the required knowledge and abilities would be qualifying. A typical way to obtain the knowledge and abilities would be:

Experience:

Three years of increasingly responsible work experience as an Entomologist with a government agency, district or equivalent.

Education/Training:

A Master's degree from an accredited college or university with major course work in biological science, or related field. A Doctorate degree is preferred.

License or Certificate:

Possession of a valid California Driver's license issues by the State Department of Motor Vehicles. Must be insurable under the guidelines set forth by the District's insurance carrier.

Possession of or ability to obtain and maintain the following certifications from the State Department of Public Health within one year of employment:

- Mosquito Control Technician Certificate
- Vertebrate Vector Certificate
- Invertebrate Certificate

WORKING CONDITIONS/PHYSICAL REQUIREMENTS:

Essentially the employee's working hours are spent in office and laboratory areas. Work generally involves a high degree sitting, standing and walking; potential for exposure to extreme noise, outdoors, chemicals, dust, toxic waste and mechanical hazards. There may be some light to moderate physical work in the handling of supplies, files, computer and lab equipment, etc.

Incumbent must be sighted in both eyes with the ability to demonstrate depth perception and color perception; have a minimum of single-ear aided hearing; be

without physical limitations that would prevent climbing ladders and performing customary and usual activities associated with field operational mosquito surveillance and control activities.

Working Conditions:

Medium Work – Incumbent performs work, which involves frequent lifting, pushing and/or pulling of objects of approximately 25 pounds. Heavier lifting is an infrequent aspect of this position.

Mobility – Incumbent must have complete and normal mobility of arms to reach and dexterity of hands to grasp and manipulate small objects; be able to stand, stoop, reach and bend and to walk on uneven terrain, such as field, dirt banks, natural and cement stream beds, and shallow ponds.

Other Conditions – Incumbent may be exposed to and handle toxic and hazardous substances; be available on call for evening and weekend emergencies, as assigned; travel within and out of the county; work, when necessary, in inclement weather including sun, cold and rain.

Adopted Date: September 14th 2016

Revised:

Retitled:

FLSA Designation: Exempt

Unit: ACMAD Employee Association

Regulatory and Public Affairs Director

DEFINITION:

Under administrative direction and supervision and in a manner consistent with the District's shared vision and mission statement, the Regulatory and Public Affairs Director is responsible for the coordination and effective planning of the District's source prevention/reduction program & public relations program.

DISTINGUISHED CHARACTERISTICS

This classification is distinguished from all other technical and professional classifications at the District through its specialized responsibilities in the areas of source prevention/reduction, education and public relations programs.

SUPERVISION RECEIVED AND EXERCISED

General supervision is provided by the ACMAD Manager. Responsibilities may include supervising of regular full time, seasonal, and temporary staff.

EXAMPLES OF IMPORTANT AND ESSENTIAL DUTIES:

- Represents the District at planning, agency and public meetings with the objective of educating agency officials and the public about the ecologically-oriented methodologies used by the District to detect, monitor and control mosquitoes;
- Secures permits, contracts, MOU's or cooperative agreements to prevent or eliminate mosquito sources;
- Coordinates source prevention/planning projects and public relations activities in an environmentally sound and informed manner to meet the concerns of the public and other agencies;
- Makes recommendations to planning agencies and landowners to prevent or eliminate mosquito sources;
- Participates in and/or leads training sessions on wetlands laws, policies, agreements and identification;
- Works with the District Manager to ensure the District's compliance with environmental laws and regulations;
- Develops, implements and maintains a community education program to inform Alameda County residents, officials and anyone interested about the District and its programs;
- Develops and updates public outreach materials; oversees District social media platforms;
- Coordinates media-related inquires/interviews with appropriate staff. As a member of the support team, assists and supports technicians, vector biologists, administrative assistant and manager and accomplishes field work, facility and equipment maintenance as needed.

- Manages District website content;

Accountability:

The employee is accountable to the District Manager to ensure that the coordination and effective planning of the District's source prevention/reduction, education and public relations programs are carried out in accordance with the Mosquito Act, applicable Government Code, and California Health and Safety Code Standards, Federal and State laws (including those related to grants), and departmental policies. Assignments may be specific or general with only desired results being specified. Recommendations on improvements to Division activities are expected.

The employee is responsible for complying with all Agency safety requirements and practices. Additionally, the employee is responsible for ensuring that any direct reports also comply with all Agency's safety requirements and practices.

EMPLOYMENT STANDARDS

Knowledge of:

- Programs of the District and the materials and equipment used to detect, monitor and control mosquitoes (physical, chemical and biological control methodologies both past and present);
- The dynamics and values of aquatic ecosystems that potentially support mosquitoes and mosquito-like gnats;
- The wetlands types, values and associated laws and regulations;
- The identification, biology and ecology of the mosquitoes and mosquito-like gnats of Alameda County and the biology, ecology, identification and laws associated with endangered or threatened species.
- Numerous computer programs including but not limited to: desktop publishing software; Microsoft Office programs; and internet website design software.

Skills in:

- Planning, organizing, and directing work of a Environmental Division.
- Communicating effectively in English both orally and in writing, making presentations, and preparing written reports.
- Interacting effectively with Agency staff, elected and appointed officials, and representatives of various public and private agencies.
- Establishing and maintaining effective working relationships with others.
- Understanding, interpreting, and applying complex guidelines.

Ability to:

- Ability to effectively plan, estimate, layout and implement source enhancement and public education projects and to speak and write effectively in English.
- Design and build displays for community education events such as the annual County Fair, Home and Garden Shows, school presentations, etc. And to coordinate staffing of these events.
- Design, create and update the District's website in coordination with the IT

Director.

- Collaborate effectively and share in District decision making;
- Contribute personal skills, talents and interests;
- Lead, listen, encourage, and motivate;
- Pursue valid information to better serve the District goals and objectives.
- Analyze fiscal problems and make sound policy and procedural recommendations.
- Prepare complex technical and analytical reports.
- Read, understand, interpret, evaluate and apply laws, policies, rules, contracts, guidelines, and literature of the profession;
- Instruct others, both verbally and in writing, in an effective and professional manner, organize and maintain accurate records;
- Compile numerical information;
- Work with a high degree of independence;
- Write legibly and effectively in English and keep detailed records;
- Communicate with the public in a tactful, courteous, and professional manner;
- Lift objects weighing in excess of 25 pounds (occasionally);
- Perform standard data processing using a MS Windows® based PC system;
- Operate a motor vehicle and other specialized types of transport associated with mosquito control in a safe and legal manner.

JOB RELATED AND ESSENTIAL QUALIFICATIONS

Education/Training and Experience Guidelines:

Any combination equivalent to experience and training that would likely provide the required knowledge and abilities would be qualifying. A typical way to obtain the knowledge and abilities would be:

Education/Training:

A bachelor's degree from an accredited college or university with major in biological science, education, communication, or a related field.

License or Certificate:

A valid California Driver's license issues by the State Department of Motor Vehicles and must be insurable under the guidelines set forth by the District's insurance carrier.

Possession of or ability to obtain and maintain certification from the State Department of Public Health within one year of employment:

- Mosquito Control Technician Certificate
- Vertebrate Vector Certificate
- Invertebrate Vector Certificate and a valid California Driver's license.

WORKING CONDITIONS/PHYSICAL REQUIREMENTS:

Essentially all of the employee's working hours are spent in an office. Work generally involves a high degree of concentration, especially in the consideration of technical and personnel problems and the origination of programs to increase departmental efficiency and improvement of services. There may be some light to moderate physical work in the handling of supplies, files, computer equipment, etc.

Work Environment:

Essential duties require the following physical abilities and work environment:

Requires adequate vision (which may be corrected) to read, write, perform fine laboratory and microscope work, and safely operate in the conditions listed below. Requires adequate hearing (which may be corrected) to hear alarms, horns, use of telephones, and radios.

Working Conditions:

Medium Work – Incumbent performs work, which involves frequent lifting, pushing and/or pulling of objects of approximately 25 pounds. Heavier lifting is an infrequent aspect of this position.

Mobility – Incumbent must have complete and normal mobility of arms to reach and dexterity of hands to grasp and manipulate small objects; be able to stand, stoop, reach and bend and to walk on uneven terrain, such as field, dirt banks, natural and cement stream beds, and shallow ponds.

Other Conditions – Incumbent may be exposed to and handle toxic and hazardous substances; be available on call for evening and weekend emergencies, as assigned; travel within and out of the county; work, when necessary, in inclement weather including sun, cold and rain.

Adopted Date: September 14th 2016

Revised:

Retitled:

FLSA Designation: Exempt

Unit: ACMAD Employee Association

Information Technology Director

Definition:

Under administrative direction and supervision of the District Manager, and in a manner consistent with the District's shared vision and mission statement, the IT Director is responsible for the coordination, maintenance, and development of the District's computer and information systems.

DISTINGUISHING CHARECTERISTICS

This classification is assigned to manage computer support services. Employees in this classification may not perform all of the duties listed below. Depending on assignment, duties may include, but are not limited to, the duty statements indicated below.

SUPERVISION RECEIVED AND EXERCISED

General supervision is provided by the District Manager. Responsibilities may include supervising of regular full time, seasonal, and temporary staff.

EXAMPLES OF IMPORTANT AND ESSENTIAL DUTIES:

- Make recommendations on custom applications, which include a number of MS-Access data, capture systems for and other databases.;
- Identify opportunities to improve efficiency of business processes;
- Investigate and resolve application functionality related issues;
- Coordinate application development for multiple projects;
- Manage outsource relationships for 3rd party application development and programming consultants;
- Troubleshoot technical issues and identify modifications needed in existing applications to meet changing user requirements;
- Analyze data contained in the District database and identify data integrity issues with existing and proposed systems and implement solutions;
- Provide assistance and advice to users in the effective use of applications and information technology;
- Write technical procedures and documentation for the applications including operations, user guide, etc.;
- Produce technical documentation for new and existing applications;
- Verify database and data integrity;
- Participate in meetings with district users to discuss progress and issues to be resolved, and report progress on a weekly basis to the District Manager;
- Participate on IT project steering committees and be involved in the design phase of any new IT software development projects;
- Assist in the creation of the system design and functional specifications for all new development projects;
- Serve as a liaison and facilitator between Contractors to assist in addressing and resolving IT software issues;

- Manage the computer network and components;
- Provides computer and web-based security including backups;
- Researches, budgets and purchases software and hardware for District needs;
- Maintains equipment inventory;
- Database administration; error corrections, data review, data queries, reports;
- Trains employees in the use of computer systems and creates user manuals;
- Leads in the development of a Geographic Information System;
- Submits reports of District pesticide use to other government agencies as required by law;
- Coordinates with other agencies as needed;
- Works with the Regulatory and Public Affairs Director in the development and maintenance of the District's website and public education programs;
- Assists and supports other staff in field work, facility and equipment maintenance, as needed;

Accountability:

The employee is accountable to the District Manager to ensure that laboratory and field work functions are carried out in accordance with the Mosquito Act, applicable Government Code, and California Health and Safety Code Standards, Federal and State laws (including those related to grants), and departmental policies. Assignments may be specific or general with only desired results being specified. Recommendations on improvements to Division activities are expected.

The employee is responsible for complying with all District safety requirements and practices. Additionally, the employee is responsible for ensuring that any direct reports also comply with all Agency's safety requirements and practices.

EMPLOYMENT STANDARDS

Knowledge of:

- IT hardware and software (Servers, Routers, Switches, Computers);
- Identification, biology, ecology and public health importance of mosquitoes;
- Control programs, materials and equipment used to detect, monitor and control mosquitoes;
- Budget management

Skills in:

- Planning, organizing, and directing work of the information technology Division;
- Communicating effectively in English both orally and in writing, making presentations, and preparing written reports;
- Interacting effectively with Agency staff, elected and appointed officials, and representatives of various public and private agencies;
- Establishing and maintaining effective working relationships with others;
- Understanding, interpreting, and applying complex guidelines;

Ability to:

- Work with other agencies, officials, employees and the public;

- Communicate effectively by speaking, writing and understanding English clearly;
- Read, understand, interpret, evaluate and apply laws, policies, rules, contracts, and guidelines;
- Organize and maintain accurate records;
- Prepare reports generated from the District's database;
- Compile numerical information;
- Work with a high degree of independence;
- Manage time for daily and ongoing projects;
- To be a good leader;
- Make sound decisions;
- Forecast for technology and budgeting;
- Establish and maintain effective working relationships with those contacted in the course of work;
- Be a good team player with all sections/divisions of the District.

JOB RELATED AND ESSENTIAL QUALIFICATIONS

Education/Training and Experience Guidelines:

Any combination equivalent to experience and training that would likely provide the required knowledge and abilities would be qualifying. A typical way to obtain the knowledge and abilities would be:

Experience:

Management of an I.T. department in a Mosquito Abatement program, or similar field, is desirable.

Education/Training:

A Bachelor's degree from an accredited college or university with major work in Information Technology, computer science or related program or field is desirable.

License or Certificate:

A valid California Driver's license issues by the State Department of Motor Vehicles and must be insurable under the guidelines set forth by the District's insurance carrier.

Possession of or ability to obtain and maintain certification from the State Department of Public Health within one year of employment:

- Mosquito Control Technician Certificate

WORKING CONDITIONS/PHYSICAL REQUIREMENTS:

Essentially the employee's working hours are spent in office areas. Work generally involves a high degree of concentration, especially in the consideration of technical problems and the origination of programs to increase departmental efficiency and improvement of general and I.T. services. There may be some light to moderate physical work in the handling of supplies, files, computer equipment, etc.

Essential duties require the following physical abilities and work environment:
Requires adequate vision (which may be corrected) to read, write, and safely operate in the conditions listed below. Requires adequate hearing (which may be corrected) to hear alarms, horns, use of telephones, and radios.

Working Conditions:

- **Medium Work** – Incumbent performs work, which involves frequent use of a keyboard while seated and viewing a computer monitor. Requires the ability to move computer equipment to different locations for maintenance.
- **Mobility** – Incumbent must have complete and normal mobility of arms to reach and dexterity of hands to grasp and manipulate small objects.
- **Other Conditions** – Incumbent may be exposed to and handle toxic and hazardous substances; be available on call for evening and weekend emergencies, as assigned; travel within and out of the county.

Adopted Date: September 14th 2016

Revised:

Retitled:

FLSA Designation: Exempt

Unit: ACMAD Employee Association

Biological Specialist

DEFINITION

Under the direction of the District's Laboratory Director, performs laboratory and field work related to the surveillance and control of mosquitoes.

DISTINGUISHING CHARACTERISTICS

This classification is distinguished from the Laboratory Director classifications at the District as the later possesses specialized responsibilities of the Division by conducting and executing various aspects of the District's mosquito surveillance and research programs.

SUPERVISION RECEIVED AND EXERCISED

General supervision is provided by the Laboratory Director. Responsibilities may include Technical supervising of seasonal/temporary staff.

EXAMPLES OF IMPORTANT AND ESSENTIAL DUTIES

- Conducts surveys of mosquitoes to determine population densities and species distribution.
- Supports the Entomologist in monitoring mosquito populations by setting and retrieving traps, counting and identifying insects collected, and recording results in computer databases.
- Assists in the development of new surveillance tools for monitoring populations of mosquitoes and other vectors.
- Performs laboratory tests of mosquitoes and birds for the presence of arboviruses using PCR and an immunosorbent assay.
- Prepare reports, maps, and graphs as directed for surveillance and control operations.
- Works with operational staff in evaluating control materials in the field. Assists the Entomologist in writing experimental protocols, sets up datasheets for recording results and enters results into a computer program for analysis.
- Assists in conducting research projects, with the guidance of the Laboratory Director, and present the outcomes of the research at annual conferences of the Mosquito and Vector Control Association of California or the American Mosquito Control Association.
- Identify mosquitoes and other insects to species that are submitted by District Operational staff or the public.
- Assists maintaining a mosquito colony and caring for live insects used in the District's educational programs.

Accountability:

The employee is accountable to the Laboratory Director to ensure that laboratory and field work functions are carried out in accordance with the Mosquito Act, Government

Code, and California Health and Safety Code Standards, Federal and State laws (including those related to grants), and departmental policies. Assignments may be specific or general with only desired results being specified. Recommendations on improvements to Division activities are expected.

The employee is responsible for complying with all Agency safety requirements and practices. Additionally, the employee is responsible for ensuring that any direct reports also comply with all Agency's safety requirements and practices.

EMPLOYMENT STANDARDS:

Knowledge of:

- Entomology.

Skills in:

- Communicating effectively in English both orally and in writing, making presentations, and preparing written reports;
- Interacting effectively with Agency staff and representatives of various public and private agencies;
- Understanding, interpreting, and applying complex guidelines.

Ability to:

- Identify mosquitoes and other insects using binomial keys;
- Read, understand, interpret, evaluate and apply laws, policies, rules, contracts, guidelines, and literature of the profession;
- Write legibly and effectively in English and keep detailed records;
- Establish and maintain effective working relationships with those contacted in the course of work;
- Communicate with the public in a tactful, courteous, and professional manner;
- Lift objects weighing 25 pounds;
- Perform standard data processing using a MS Windows® based PC system;
- Operate a motor vehicle and other specialized types of transport associated with mosquito control in a safe and legal manner.

JOB RELATED AND ESSENTIAL QUALIFICATIONS

Education/Training and Experience Guidelines:

Any combination equivalent to experience and training that would likely provide the required knowledge and abilities would be qualifying. A typical way to obtain the knowledge and abilities would be:

Experience:

Two years of progressively responsible Biological work experience in the areas of: laboratory practices including dissection and compound microscopes,

polymerase chain reaction (PCR), biological safety cabinets, fume hoods, and centrifuges. Experience in rearing insects, particularly mosquitoes is desirable.

Education/Training:

A bachelor's degree from an accredited college or university with major course work in entomology/biological science or related field.

License or Certificate:

A valid California Driver's license issues by the State Department of Motor Vehicles and must be insurable under the guidelines set forth by the District's insurance carrier.

Possession of or ability to obtain and maintain certification from the State Department of Public Health within one year of employment:

- Certificate Technician – Mosquito Control
- Terrestrial Invertebrate Vector Control
- Vertebrate Vector Control (Licenses A, B, C, D)

WORKING CONDITIONS/PHYSICAL REQUIREMENTS:

Essentially the employee's working hours are spent in office areas and field setting; exposure to cold, heat, noise, outdoors, inclement weather, dust, dirt, vibration, chemicals, traffic, traffic hazards, confining workspace, odors, mechanical hazards, electrical hazards, explosive hazards.

Incumbent must be sighted in both eyes with the ability to demonstrate depth perception and color perception; have a minimum of single-ear aided hearing; be without physical limitations that would prevent climbing ladders and performing customary and usual activities associated with field operational mosquito surveillance and control activities. Lift up to 50 (fifty) pounds.

Working Conditions:

Medium Work – Incumbent performs work, which involves frequent lifting, pushing and/or pulling of objects of approximately 50 pounds. Heavier lifting is an infrequent aspect of this position.

Mobility – Incumbent must have complete and normal mobility of arms to reach and dexterity of hands to grasp and manipulate small objects; be able to stand, stoop, reach and bend and to walk on uneven terrain, such as field, dirt banks, natural and cement stream beds, and shallow ponds.

Other Conditions – Incumbent may be exposed to and handle toxic and hazardous substances; be available on call for evening and weekend emergencies, as assigned; travel within and out of the county; work, when necessary, in inclement weather including sun, cold and rain.

Adopted Date: September 14th 2016
Revised:
Retitled:
FLSA Designation: Non-Exempt
Rep Unit: ACMAD Employee Association

DRAFT

Review of quotes for New Database and Mapping Software

The Alameda County Mosquito Abatement District solicited quotes for the replacement of our aging database. The process started September 2015 with 3 vendors being contacted. Each of the 3 vendors were given the chance to show proficiency in all areas needed. We ended our evaluations August 26th 2016.

Per district bidding policies 202.3 & 202.4 we began a 10 day RFQ process which ended 9/7/2016 in which we received 2 quotes. We have included an older quote from ElecData to satisfy the 3 quote process.

- **Digital Map Products - \$50,000 / 3 Years – Data Hosted**
- **(Old Quote) ElecData (FieldSeeker) - \$49,000 / 1 Year – Non Hosted**
- **Leading Edge Technology - \$218,000 / 3 Years - Data Hosted**

Summary:

Leading Edge has the most developed product with MapVision 2.0. Leading Edge also has the most experience implementing full database solutions in the mosquito data field.

Our recommendation is to contract Leading Edge to implement the MapVision product, and host of ACMAD's data.



September 1, 2016

Ryan Clausnitzer
General Manager
Alameda County Mosquito Abatement District
23187 Connecticut St.
Hayward, CA 94545

Dear Mr. Clausnitzer,

Thank you very much for your consideration of our proposal. Your feedback to us throughout this process has been tremendously productive and is sincerely appreciated.

We believe that we have a unique opportunity to partner with you in the successful deployment of a comprehensive workforce management solution with your help as a showcase customer. Due to the strength of our core product, GovClarity Vector, and the essential enhancements currently in development, we genuinely believe we have the strongest solution to meet both your immediate needs, and also to ensure that you can adapt to the state and county's ever-changing rules and regulations.

We understand both the risks and advantages you face in partnering with us as we finalize the development of GovClarity Vector, and we are prepared to mitigate the financial risk by engaging in a cooperative approach whereby we will develop and deploy, with the help of your industry expertise, at no cost to you. Please find the fully outlined proposal herein. In summary, we are presenting the financial and risk mitigation benefits for partnering with us as a showcase customer:

- You will have continued access to product in development, through initial production deployment, which will be scheduled to our mutual agreement
- At which point the date of our mutually agreed upon scheduled production deployment, you will have the option of cancelling the entire contract, at no cost to you, if the product does not perform to your total satisfaction.
- We will waive 100% of the typical \$50,000 fees for initial configuration
- We will waive 100% of the recommended on-site training fees of \$7,500
- We will waive 100% of the first year of annual subscription fee for use of the product
- We will discount the next 2 years of annual subscription fees by 50% for use of the product

Our close proximity and dedication to the successful deployment of our comprehensive product make us an ideal partner for ACMAD's long-term vision of streamlining efficiencies and spatially enabling all of your daily workflows.

We have enjoyed working with you and hope to win the opportunity to see this implementation through with you and your staff.

Sincerely,

DIGITAL MAP PRODUCTS

James Skurzynski
CEO & Founder

Overview

Alameda County Mosquito Abatement District (ACMAD) is seeking to streamline and modernize their operations by implementing a digital, web-based and spatially enabled Workforce Management solution. ACMAD's currently utilizes an Access Database as their primary system to track and report on activities within the district. Digital Map Products (DMP) offers a turnkey and extensible solution that gives ACMAD access to finished goods software that includes all the necessary data for research, administration, analysis and reports with the flexibility for later customization by ACMAD at your discretion.

The successful implementation of GovClarity Vector requires both DMP and ACMAD resources to work in concert to:

- a. Integrate key data sets**
- b. Define and execute custom interface and information displays for users**
- c. Enhance GovClarity Vector with additional features**
- d. Configure queries and reports**

Agile Project Management

As your partner, we commit to streamlining our project management approach to ensure expectations are met, and we always realize the highest and best use of everyone's time.

- Project Management
 - Weekly status updates with ACMAD
 - Define Priorities to Engineering
- Define
 - General Requirements Gathering Session
 - Design Mockups
 - Mockup Iterations – Review and Revise
- Design
 - Engineering develops a design that fulfills the use case requirements
 - Daily scrums are held to describe the last 24 hours / next 24 hours
- Build
 - Code is written and tested
- Demo
 - Demos are done early in the project cycle to confirm that we are meeting the use case
- Test
 - Feature is handed off to QA and Product Manager for testing and for review
 - Any errors / usability issues are then forward to engineering to fix
- Deploy and Train
 - Release build is deployed monthly to ACMAD account and training is scheduled

ACMAD Scope of Work

Reporting Filters

Implement filters to query data for the following reports*:

- NPDES
- CA Agricultural
- Service Request
- Chemical Usage
- Activity Info
- Activity Plan Info

*Data is exported to .csv file and can be later formatted to meet reporting requirements. Filtering is limited to data present in the application.

Customize Activity Forms

DMP will work with Alameda to understand form requirements, and make recommendations and customizations based on further grooming.

- Dips – Add dip fields such as, Dip Count, Larvae Count, Species Type
- Mosquito Species – Add mosquito species field
- Weather Conditions – Add weather condition field

Configure Existing Activity Forms

Modify existing forms and pull down menus to align with ACMAD's workflows.

- Site Type
- Vector Type
- Vector Source
- Cultural, Physical, Chemical, and Other Controls

Legacy Reference Data

DMP team will review data in ACMAD existing Access database and advise what can be added as reference data.

- DMP will import georeferenced data as reference layers

Training

Three days onsite training. Two custom training videos. Support 7am-5pm Monday through Friday.

Sandbox Instance

A second, non-production account will be provided to ACMAD to preview release candidate prior to official delivery.



Time On-Site

Ability to track time on site while performing activity.

Lab Workflow

Trap location details and lab data results linked to each collection site. All required data is automatically uploaded to CalSurv Gateway. Collection sites displayed on map and filtered by metadata, new collection sites can be added as needed.

Reporting

Automated reporting via Microsoft Power BI or Tableau. DMP to provide samples.

User Interface for Chemical Input

UI to allow administrators to easily add, delete and update chemical information. This will include label rates as well as validation

Catch Basin Workflow

DMP will work with Alameda to customize Catch Basin Workflow. Requirements may include:

- Treated/Not Treated
- Oil or Briquette Treatment
- Wet or Dry
- User Interface for driver
- Add new catch basin

Under Treatment

GovClarity Vector currently handles overtreatments with an alert to the technician. Similarly, technicians can be alerted to under treatments. Input of chemicals and rates are required.

Automation of Chemical Amount Needed in the Field

Display suggested chemical application range based on a calculated area.

ULV Integration

ULV software/hardware module for truck based Adulticide fogging. GC will record all available data from the GPS sensor and spray equipment.

- Integrate Datamaster truck mounted Ultra Low Volume (ULV) adult mosquito spraying machine output.

CalSurv – Pesticide Application Resistance Testing (PART) Workflow

Lab module to track PART data and upload to CalSurv PART project.

- Baseline lab sample species
- Compare against wild caught species
- Copy CalSurv PART database input

Cost Summary

Pricing

Proposed Solution	Standard Price	ACMAD Showcase Price
<i>GovClarity Vector Mobile Field Force Management Application</i>	\$25,000 per year	<i>Waived year one</i>
<i>Implementation Configuration and Onboarding</i>	\$50,000 one-time	<i>Waived for industry expertise partnership</i>
<i>Onsite Training</i>	\$7,500	<i>Waived. We will make regular visits to Hayward for training and project management</i>
Year 1 Cost	<i>\$82,500</i>	\$0
Years 2 - 3 Annual Costs	<i>\$50,000</i>	\$25,000
3 Year Total Cost	<i>\$182,500</i>	\$50,000
	<i>Quote is Valid for 30 Days and Expires 9/30/2016</i>	

Fees proposed are based upon a 3-year engagement. First year payment is due within 30 days of delivery and on each annual payment is due on the anniversary date of the contract.



Authorization:

Ryan Clausnitzer
Alameda County Mosquito Abatement District

Date

James S. Skurzynski
CEO/President
Digital Map Products

Date



Address Purchase Orders to:

Electronic Data Solutions
 154 1st Ave West
 Jerome, ID 83338
 208-324-8006

PRICE QUOTATION

Quote No. JRMQ35935

Date 02/16/16

Quotation By: Ryan Pierson

Quotation For:

Alameda County MAD
 Robert Ferdan
 23187 Connecticut Street
 Hayward, CA 94545
 USA

Phone (510)783-7744
 Fax
 Email robert@mosquitoes.org

Special Notes

This price proposal provides all FieldSeeker GIS software licenses and Esri software licenses to support Larviciding, Surveillance, Service Request, and ULV Adulticiding activities for:
 - 6 Office Staff
 - 16 Field Staff
 - 1 ULV Spray Vehicle

This quotation DOES NOT include any office or field PC hardware. A suitable server, iPad or iPhone devices are not part of this price proposal.

Shipping, handling and applicable sales tax will be added to invoice. Please see the Returns/Repairs section on the last page.

Qty	Part No.	Description	Unit Price	Extended Price
1	MOS-WAB-APkg	FieldSeeker GIS Starter - Core & ULV Includes software tools for: Larviciding Surveillance Service Request ULV Adulticiding FieldSeeker GIS Bundle includes: - Esri ArcGIS for Server Workgroup Advanced License On premise deployment, unlimited multi-user - FieldSeeker GIS Office Core License (x1) Larviciding, Surveillance, Service Request - FieldSeeker GIS Office ULV Extension License (x1) ULV Adulticiding - FieldSeeker GIS Mobile Core Licenses (x5) Mobile Larviciding, Surveillance, Service Request - FieldSeeker GIS Mobile ULV Extension Licenses (x2) Mobile ULV Adulticiding - Esri ArcGIS for Windows Mobile Licenses (x5) - 12 Month FieldSeeker GIS Software Maintenance - 12 Month Esri ArcGIS for Server Maintenance REQUIRES: - On Premise server for application installation OR	\$18,500.00	\$18,500.00

Qty	Part No.	Description	Unit Price	Extended Price
		- Subscription to Amazon EC2 Cloud Server service AND - ArcGIS for Desktop Standard (ArcEditor) or Higher		
5	MOS-FSO-CORE	FieldSeeker Office Core software license Office software for Larviciding, Surveillance and Service Request Includes 12 month software maintenance agreement	\$1,500.00	\$7,500.00
5	MOS-FSO-ADU	FieldSeeker Office ULV Extension software license Office Software for ULV Adulticiding Includes 12 Month software maintenance agreement	\$1,000.00	\$5,000.00
11	MOS-FSM-CORE	FieldSeeker Mobile Core software license Mobile software for Larviciding, Surveillance and Service Request Includes 12 Month software maintenance agreement	\$1,000.00	\$11,000.00
1	MOS-Esri-ADS	Esri ArcGIS for Desktop PC Standard (ArcEditor) license Includes 12 Month Software Maintenance Agreement NOTE: Please disregard this line item if you already possess an Esri ArcGIS for Desktop PC Standard software license (ArcEditor) available for use.	\$7,000.00	\$7,000.00
			SubTotal	\$49,000.00
			Sales Tax	\$0.00
			Shipping	\$0.00
			Total	\$49,000.00

Terms and Conditions

All invoices are in U. S. Dollars

Prices are good for 30 days.

Shipping and handling charges are prepaid and added to invoice. Shipment will be made by UPS Ground unless otherwise specified, FOB Shipping Point.

Payment terms are net 30 days upon approved credit. We also accept VISA, MasterCard and American Express.

**Returns- No returns may be made without first obtaining a Return to Stock Number (RSN).
A standard restocking fee of 25% will be charged for any returned equipment.**

Repair - To return an item for repair, you must first obtain a Return Materials Authorization Number (RMA).

Please address your purchase order to:

**Electronic Data Solutions®
154 1st Ave West
P. O. Box 31
Jerome, Idaho 83338**

MapVision Enterprise Geospatial Database

Leading Edge Associates, Inc.

675 South Haywood St Waynesville, NC 28786

Bill Reynolds 407-468-0008

September 7, 2016

Description of experience in planning, building and hosting databases:

Leading Edge Associates (LEA) has extensive experience in all aspects of vector control, aerial agriculture and forestry, offering expertise in consulting, software solutions, and application technology for these industries.

- Since 2008, MapVision has been deployed across the United States, 10 of which are deployed in California mosquito control and aerial operations
- Our team consists of 10 professionals that collectively have more than one hundred years of experience in every aspect of mosquito control across various technology platforms and multiple service lines
- Leading Edge Associates' programming team consists of 6 software engineers offering world class programming, depth of skills and relevant experience to specifically support mosquito control activities and operations
- LEA has established responsive project management and tracking systems allowing for rapid software support
- Leading Edge's experience in other mosquito control operations qualifies our testing team to fully understand and ensure functional performance and usability, ensuring delivery of a robust solution

In addition to software solutions, LEA provides consulting services which include droplet analysis, characterization, calibration and drift optimization for ground and aerial applications for private, public and federal agencies such as FEMA, universities and the US military services. Most recently, Leading Edge's custom designed product line of Remote Piloted Aircraft (RPA) is leading the industry in Unmanned Aerial System (UAS) technology and innovation, offering many advantages to vector control agencies for aerial surveillance, multispectral imagery, underwater mosquito larval surveillance and pesticide applications for larval and adult mosquito control.

Leading Edge is a North Carolina Sub S corporation, with the main office in Fletcher, NC and one satellite office in Cotati, CA. LEA has three employees and currently six independent contractors and three advisory directors. Leading Edge is a privately held company, whose principals have invested significant life experiences and financial capital in establishing products and relationships with current and future clients. Leading Edge currently has in excess of thirty MapVision customers across the United States providing the same or similar services to customers like Alameda County Mosquito Abatement District.

Leading Edge enjoys a strong relationship with our customers and the vector industry by supporting the industry as a sustaining member in the Mosquito and Vector Control Association of California (MVCAC), American Mosquito Control Association (AMCA) and the Florida Mosquito Control Association (FMCA) and numerous state vector and aerial agricultural associations.

We organize under a project manager who has the authority to establish priorities and assign responsibilities necessary to complete tasks. In addition to the individuals and team who will be primarily responsible for the project, the entire organization will be available to provide support and expert advice and guidance.

List of how many full time, part time and contractor staff in your organization:

Principal's Qualifications						
Name	Role	Responsibilities	Summary of Experience	Address	Phone	Email
Mike Reynolds	Project Manager	Primary Point of Contact, secondary Project Manager, technical support, integration, implementation, training, client relations, service and support	20 years of experience developing business, marketing plans and implementing projects with clients; to include project management, coordinating proposals, programmers, implementation, system managers, sales, service, support and training.	Fletcher, NC	828-246-2111	mreynolds@leateam.com
Bill Reynolds	Technical and Operational Advisor	Technical support, Integration, Implementation, Training, Client Relations, Service and Support	31 years of operational vector control experience, droplet evaluation, drift, originator and patent of numerous technology	New Smyrna Beach, FL	407-468-0008	breynolds@leateam.com
Dave Davis	Lead Project Manager	Primary Point of Contact, Primary Project Manager, Integration, Implementation, Training, Client Relations, Service and Support	Certified PMI, Project Manager, senior customer facing technology manager, skilled in all phases of delivering projects on time, on budget and consistently exceeding customer expectations. Skills include management, software, hardware, team leadership and use of management tools and techniques.	Milton, GA	678-521-4160	ddavis@leateam.com
Piper Kimball	Vector & Ag Science Advisor	Provide guidance and input regarding vector biology and laboratory sciences	17 years' experience in mosquito & vector control, 13 years in zoo and exotic animal medicine. Ability to design and direct various scientific projects from concept to completion. 6 years' experience in geospatial databases	Cotati, CA	707-484-6937	piiper@leateam.com
Allan McCormick	Lead Software Engineer	Programmer for project, primary service and support for mobile applications.	Twenty-four years in software development, managing projects with clients, implementation of systems, service, support and training.	Sanford, FL	407-729-9275	AllanMcCormick@att.net
Greg Parrow	Lead Software Engineer	Programmer, primary service and support.	10 years' experience in software programming in mosquito control industry. Proficiency in multiple applications & languages. Strong abilities in custom programming, customer service.	Orlando, FL	352-223-7084	gregparrow@gmail.com
Vishal Patel	Software Engineer	Programmer for project, service and support.	12 years' experience in all phases of software application architecture, development and integration, encompassing	Marietta, GA	404-510-3041	hirtechnology@gmail.com

			the full life cycle of an organization's project in various industries. Strong analytical, technical and communication skills.			
Ritesh Pandya	Software Engineer	Programmer for Project, Service and Support.	14 years of IT experience, senior IT professional with vast experience in design, architecture definition and software development of mission critical applications for large scales customers. Extensive experience in providing technology solutions in various industry domains.	Freemont, CA	510-358-5314	riteshp@hirtechnology.com
Hemang Patel	Software Engineer	Programmer for Project, Service and Support.	Key accounts manager and developer responsible for software development and deployment. Designed and developed of eCommerce, content management, social networking and mobile applications using Google Maps API, PHP, MySQL, Java, .NET, Linux, Oracle and IBM technologies.	Connecticut	203-243-5044	hemangp@hirtechnology.com
Swarup Ravoori	Software Engineer	Programming Manager for MapVision Enterprise and MapVision Enterprise Mobile iPad solution	Application Development: .Net, Java, Python Web Application: ASP.NET, HTML5, Angular JS, Node JS, PHP Mobile: iOS, Android development and windows universal apps Cloud: Azure, AWS, Share Point, Office 365 CRM: Salesforce, Microsoft Dynamics Data Science & Analytics: MS Power BI, QLIK, TABLAUE, MS HD Insight, Apache HADOOP , My SQL, PostgreSQL Data Integration: SQL Server Integreation Services, Informatics	Alpharetta, GA	770.298.5514	
Carlos Gonzales	Hardware Engineer	Implementation, equipment installation, training and support	Hardware and installation engineering skills. Over twenty years associated with the vector control industry.	Sanford, FL	321-363-4977	carlos@mymces.com

Examples of 3 or more successful implementations in the mosquito field by your organization

Year Installed	Product	Customer Name	Contact/ Client Project Manager	Address	Email	Phone
2009 & 2014	MapVision®	Beach Mosquito Control District	James Clausen, Director Eddie Summers, IT	1016 Cox Grade Road Panama City Beach, FL 32407	jamesclauson@comcast.net	850-233-5030
2011, 12, 13	MapVision®	Marin/Sonoma Mosquito & Vector Control District	Phil Smith, Manager	595 Helman Lane Cotati, CA 94931	phils@msmosquito.com	707-285-2205
2012	MapVision®	Placer Mosquito & Vector Control District	Joel Buettner, Manager Alvin Eng, IT	2021 Opportunity Drive Roseville, CA 95678	joelb@placermosquito.org	916-380-5444
2013	MapVision®	Tangipahoa Mosquito Abatement District	Dennis L. Walette, Director Chris Fayette, IT	15483 Club Deluxe Road Hammond, LA 70403	dennis@tangimosquito.org	985-543-0454
2013	MapVision®	Napa County Mosquito Abatement District	Wes Maffei, Manager	15 Melvin Rd American Canyon, CA 94503	Bugsydoc1@yahoo.com	707-553-9610
2013	MapVision®	Calcasieu Parish Police Jury Mosquito Control	Scott Willis, Director Scott Harrington, Asst. Dir.	1037 Tom Watson Rd Lake Charles, LA 70615	swillis@cppj.net	337-721-3783
2013	MapVision®	Williams County Mosquito Control	Francis Bosch, Director Steve Kemp, IT & Director	1719 42nd St Williston, ND 58802-0017	franb@co.williams.nd.us	701-577-4563
2014	MapVision®	Orange County Mosquito Control, Orange County, Orlando, FL	Kellie Duetsch, Director	2715 Convoy Road Orlando, FL 2289	Thomas.Breud@ocfl.net	407-345-5538
2014	MapVision®	San Mateo County Mosquito and Vector Control	Chindi Peavey, Manager	1351 Rollings road Burlingame, CA 94010	rrodriguez@smcmad.org	650-344-8592
2014	MapVision®	Sarasota Mosquito Management Services	Matt Smith, Director	5531 Pinkney Ave Sarasota, FL 34233	matasmith@scgov.net	941-861-9723
2015	MapVision®	SacYolo Mosquito & Vector Control District	Mr. Garry Goodman	8631 Bond Road Elk Grove, Ca 95624	gwwoodman@fightthebite.net	916 685 1022

Detailed Project Descriptions:

MapVision Client Information:	Project Start Date Mo./Yr.	Project End Date Mo./Yr.	System Description	On Schedule and On Budget	Project Size
Beach Mosquito Control District	9/08	11/10	MapVision processes and manages all data sets associated with adult trapping, LRC, service requests, aerial shapefile polygon design, flight recording display, truck route recordings, mapping, real time tracking of ground and aerial assets, real time distribution of public and internal service requests and database management	Yes, inclusive of enhancements and clients expectation of delivery date	MapVision
Marin/Sonoma Mosquito & Vector Control District.	1/10	3/11	MapVision processes and manages all data sets associated with the operation. Real time collection and dissemination of public and internal service requests. Creation of aerial shapefile polygon design to be imported into aircraft GPS guidance and recording system. Display of flight recordings. Real time tracking of ground vehicle assets. Management and display of 15,000+ sources. Manage through icon and color coding each and every source site status as it relates to type of source, last inspection, last treatment, all lab data sets behind each source, 10+ years of historical information associated with each source, including type, treatments, service request mapping and database management	Yes, inclusive of enhancements and clients expectation of delivery date	MapVision
Placer Mosquito & Vector Control District	5/11	4/12	MapVision processes and manages all data sets associated with the operation. Real time collection and dissemination of public and internal service requests. Creation of aerial shapefile polygon design to be imported into aircraft GPS guidance and recording system. Display of flight recordings. Real time tracking of ground vehicle assets. Management and display of 15,000+ sources. Manage through icon and color coding each and every source site status as it relates to type of source, last inspection, last treatment, all lab data sets behind each source, 10+ years of historical information associated with each source, including type, treatments, service request mapping and database management	Yes, inclusive of enhancements and clients expectation of delivery date	MapVision
Tangipahoa Mosquito Abatement District	5/11	4/12	MapVision processes and manages all data sets associated with the operation. Real time collection and dissemination of public and internal service requests. Creation of aerial shapefile polygon design to be imported into aircraft GPS guidance and recording system. Display of flight recordings. Real time tracking of ground vehicle assets. Management and display of 15,000+ sources. Manage through icon and color coding each and every source site status as it relates to type of source, last inspection, last treatment, all lab data sets behind each source, 10+ years of historical information associated with each source, including type, treatments, service request mapping and database management	Yes, inclusive of enhancements and clients expectation of delivery date	MapVision
Napa County Mosquito Abatement District	7/12	5/13	MapVision processes and manages all data sets associated with the operation. Real time collection and dissemination of public and internal service requests. Creation of aerial shapefile polygon design to be imported into aircraft GPS guidance and recording system. Display of flight recordings. Real time tracking of ground vehicle assets. Management and display of 15,000+ sources. Manage through icon and color coding each and every source site status as it relates to type of source, last	Yes, inclusive of enhancements and clients expectation of delivery date	MapVision

			inspection, last treatment, all lab data sets behind each source, 10+ years of historical information associated with each source, including type, treatments, service request mapping and database management		
Calcasieu Parish Police Jury Mosquito Control	12/12	7/12	MapVision processes and manages all data sets associated with the operation. Real time collection and dissemination of public and internal service requests. Creation of aerial shapefile polygon design to be imported into aircraft GPS guidance and recording system. Display of flight recordings. Real time tracking of ground vehicle assets. Management and display of sources. Manage through icon and color coding each and every source sites status as it relates to type of source, last inspection, last treatment, all lab data sets behind each source, historical information associated with each source, including type, treatments, service request mapping and database management	Yes, inclusive of enhancements and clients expectation of delivery date	MapVision
Williams County Mosquito Control	2/13	7/15	MapVision processes and manages all data sets associated with the operation. Real time collection and dissemination of public and internal service requests. Creation of aerial shapefile polygon design to be imported into aircraft GPS guidance and recording system. Display of flight recordings. Real time tracking of ground vehicle assets. Management and display of sources. Manage through icon and color coding each and every source sites status as it relates to type of source, last inspection, last treatment, all lab data sets behind each source, historical information associated with each source, including type, treatments, service request mapping and database management	Yes, inclusive of enhancements and clients expectation of delivery date	MapVision
North Salinas Valley Mosquito Abatement District	1/01/15	01/05/15	MapVision with full browser compatibility with iPad IOS, and catch basin iPad application.	Yes, inclusive of enhancements and client expectations	MapVision
Orange County Mosquito Control, Orange County, Orlando, FL	9/14	Planned 2/15	MapVision processes and manages all data sets associated with the operation. Real time collection and dissemination of public and internal service requests. Creation of aerial shapefile polygon design to be imported into aircraft GPS guidance and recording system. Display of flight recordings. Real time tracking of ground vehicle assets. Management and display of sources. Manage through icon and color coding each and every source sites status as it relates to type of source, last inspection, last treatment, all lab data sets behind each source, historical information associated with each source, including type, treatments, service request mapping and database management	Yes, inclusive of enhancements and client's expectation of delivery date. Significant configurations and enhancements	Enterprise System
San Mateo County Mosquito and Vector Control	11/14	9/15	MapVision processes and manages all data sets associated with the operation. Real time collection and dissemination of public and internal service requests. Creation of aerial shapefile polygon design to be imported into aircraft GPS guidance and recording system. Display of flight recordings. Real time tracking of ground vehicle assets. Management and display of sources. Manage through icon and color coding each and every source sites status as it relates to type of source, last inspection, last treatment, all lab data sets behind each source, historical information associated with	No, departure of manager, 5 months without manager, new manager, staff unavailable. Two seasons until completed	Enterprise System

			each source, including type, treatments, service request mapping and database management		
Sarasota Mosquito Management Services	11/14	4/15	MapVision processes and manages all data sets associated with the operation. Real time collection and dissemination of public and internal service requests. Creation of aerial shapefile polygon design to be imported into aircraft GPS guidance and recording system. Display of flight recordings. Real time tracking of ground vehicle assets. Management and display of sources. Manage through icon and color coding each and every source sites status as it relates to type of source, last inspection, last treatment, all lab data sets behind each source, historical information associated with each source, including type, treatments, service request mapping and database management	Yes, inclusive of enhancements and clients expectation of delivery date	Enterprise System
SacYolo Mosquito and Vector Control District	02/15	Lab Completion is final tasks. Based on SYMVCD schedule	Most comprehensive and fully integrated geospatial database system deployed. Fully integrated with Gateway CalSurv State reporting system.	On scheduled established by SYMVCD. Currently .026% over budget	Enterprise System
Turlock Mosquito Abatement District	01/01/2015	Project complete	MapVision, MapVision Mobile. Additional features added: data synchronization with CalSurv, customized workflow & icons for weed herbicide requirements. Currently adding: Tier III Reporting and Vector Index synchronization with CalSurv	Currently on budget	MapVision
St Lucie County Mosquito Control	07/29/16	Project site established, migrating data sets. Project completion scheduled for January 2017	MapVision processes and manages all data sets associated with the operation. Real time collection and dissemination of public and internal service requests. Creation of aerial shapefile polygon design to be imported into aircraft GPS guidance and recording system. Display of flight recordings. Real time tracking of ground vehicle assets. Management and display of sources. Manage through icon and color coding each and every source sites status as it relates to type of source, last inspection, last treatment, all lab data sets behind each source, historical information associated with each source, including type, treatments, service request mapping and database management. Includes complete integration of impound zones, sites, pump data, meteorological data sets. Heightened surveillance, parcel inspection and Tier III reporting	Currently on budget schedule.	Enterprise System

Reference contact information for at least 3 successful implementations

Director/Managers Name	Entity Name	Address	Email	Phone
Joel Buettner	Placer Mosquito & Vector Control District	2021 Opportunity Drive Roseville CA 95678	joelb@placermosquito.org	916-380-5444
Gary Goodman	Sacramento-Yolo Mosquito & Vector Control District	Sacramento Co 8631 Bond Road Elk Grove CA 95624	gwgoodman@fightthebite.net	800-429-1022
Phil Smith	Marin/Sonoma MVCD	595 Helman Lane Cotati, CA 94931	phils@msmosquito.com	707-285-2200
David Heft	Turlock Mosquito Abatement District	4412 North Washington Road Turlock CA 95380	dheft@turlockmosquito.com	209-634-1234
Wes Maffei	Napa County Mosquito Abatement District	15 Melvin Rd American Canyon CA 94503	bugsydoc1@yahoo.com	707-553-9610
Chindi Peavy	San Mateo County Mosquito and Vector Control	1351 Rollings Road Burlingame CA 94010	cpeavey@smcmvcd.org	650-344-8592
Ken Klemme	Northern Salinas Valley MAD	342 Airport Blvd Salinas CA 93905	ken@montereycountymosquito.com	831-422-6438
Kelly Deutsch	Orange County Government	2715 Convoy Road Orlando FL 22839	Kelly.Deutsch@ocfl.net	407-345-5538
James Clauson	Beach MCD	1016 Cox Grade Road Panama City Beach FL 32407	jamesclauson@comcast.net	850-233-5030
Dennis Walette	Tangipahoa Mosquito Abatement District	15483 Club Deluxe Road Hammond LA 70403	dennis@tangimosquito.org	985-543-0454
Scott Willis	Calcasieu Parish Police Jury	1037 Tom Watson Rd Lake Charles LA 70615	swillis@cnpj.net	337-437-3547
Francis Bosch	Williams County	1719 42 nd St W Williston ND 58801	franb@co.williams.nd.us	701-577-4563

*Additional references available upon request



MapVision installations (partial list)

Anticipated resources you will assign to this project (total number, role, title, experiences)

Please refer to the *List of how many full time, part time and contractor staff in your organization* in section above for individual experiences on page 2

1. Technical personnel:	
<ul style="list-style-type: none"> Customize and configure project 	Project Managers Dave Davis, PM Mike Reynolds, Administrator Field Support/Training and Technical Agent Piper Kimball, Vector Biologist Bill Reynolds Software Engineers Swarup Ravoori Hemang Patel
<ul style="list-style-type: none"> Test system on site 	Bill Reynolds Piper Kimball
<ul style="list-style-type: none"> Training 	Dave Davis, PM Mike Reynolds, Administrator Bill Reynolds Piper Kimball, Vector & Ag Biologist
<ul style="list-style-type: none"> Data integration and Implementation 	Dave Davis, PM Mike Reynolds, Administrator Hemang Patel, Software Programmer Swarup Ravoori, Software Programmer
2. Data Base administrative	
<ul style="list-style-type: none"> Database creation 	Dave Davis, PM
<ul style="list-style-type: none"> Performance 	Mike Reynolds, Administrator
<ul style="list-style-type: none"> Diagnosis 	Hemang Patel
<ul style="list-style-type: none"> Resolution of problems 	Swarup Ravoori
<ul style="list-style-type: none"> Reporting environment 	

Staffing to maintain and operate turnkey solution	Dave Davis, PM Mike Reynolds, PM Hemang Patel Swarup Ravoori
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A full testing plan:

Introduction:

The software test plan is created to communicate the test approach to team members. It includes the objectives, scope, schedule, risks and approach. This approach is to clearly identify what the deliverables will be and what is deemed in and out of scope.

Objectives:

The testing team is responsible for testing the product and ensuring it meets the client’s needs. The test team is both the customer and Leading Edge Associates members assigned to this project.

Team Members from Leading Edge and Client

Member Name	Role & Responsibility	Agency

Scope:

The initial phase will include all ‘must have’ requirements to include:

1. Description of features detailed within Redmine Project Management software with parent and child tickets that specifically describe and document the feature
2. Detailed description and understanding of work flow associated with feature
3. Clarification and definition of permission access for users to new feature
4. Leading Edge to provide cost estimate
5. Cost estimate agreement accepted and signed off by client

Assumptions / Risks:

Assumptions:

This section lists assumptions that are made specific to the feature(s)

Risks:

The following risks and the appropriate action will be identified to mitigate their impact on the project. The impact (or severity) of the risk is based on how the project would be affected if the risk was triggered. The trigger is what milestone or event would cause the risk to become an issue of concern.

#	Risk	Impact	Trigger	Mitigation Plan
1	Scope Creep – as testers become more familiar with the tool, they will want more functionality	High	Delays in implementation date	Functionality will be closely monitored in each iteration. Priorities will be set and discussed by stakeholders. Since the driver is functionality, it may be necessary to push the date out.
2	Changes to the functionality may negate the tests performed and lose of test cases already passed	High – to schedule and quality	Loss of all test cases	Additional data backup to offsite location is performed in addition to nightly backups
3	Weekly delivery is not possible because the developer works off site	Medium	Product did not get delivered on schedule	This risk is not applicable as client is onsite
4	Assessed as low risk to overall system	Low	No impact	No risk, no delay for timely delivery

Test Approach:

The project is using an agile approach, with weekly iterations meetings. At the end of each week the requirements identified for that iteration will be delivered to the team and will be tested.

Test Environment:

Leading Edge Associates maintains three instances of the MapVision Enterprise solution for each client.

<https://dev.clientname.leateamapps.com>

<https://pre.clientname.leateamapps.com>

<https://clientname.leateamapps.com>

The dev or development site is where new product code for feature enhancements is developed and deployed for initial internal testing. Upon review of parent and child tickets in Redmine and client demonstration and approval of new feature(s), the new software source code is moved from the dev site to the pre-production site. The client pressure tests the new feature(s) in the pre-production site. Upon user acceptance testing, the client assigns the ticket(s) to be approved for release to the live site. The entire process from scope requirements to deployment to live site is managed through online weekly project meetings

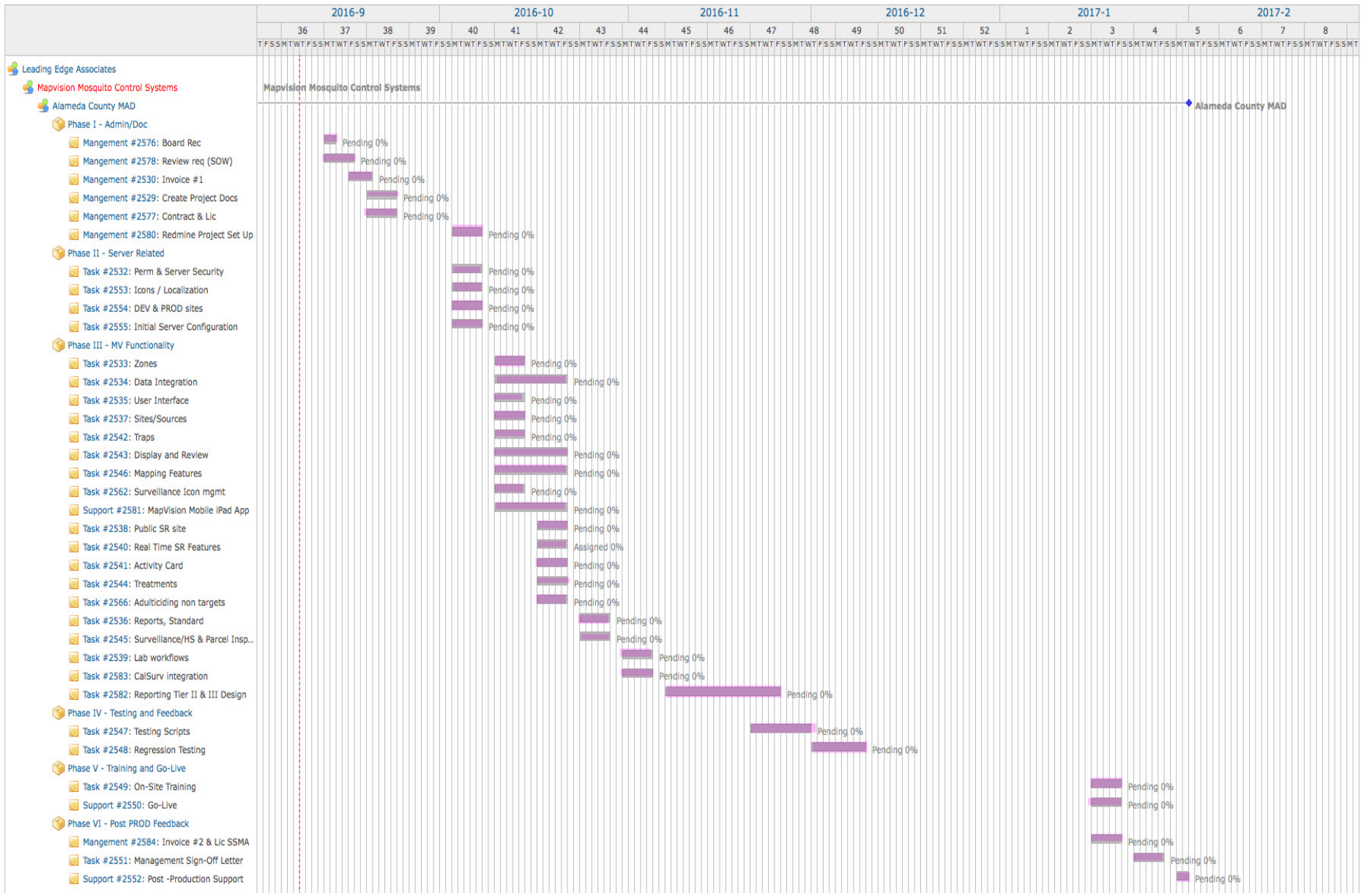
Milestones / Deliverables:

Test Schedule:

Task Name	Start	Finish	Effort	Comments
Test Planning				
Review Requirements documents				
Create initial test estimates				
Staff and train new test resources				
First deploy to DEV test environment				
Functional testing – Iteration 1				
Iteration 2 deploy to PRO environment				
Functional testing – Iteration 2 Client				
System testing				
UAT				
Resolution of final defects				
Performance testing				
Release to Live				

Timeframe for completion of the project:

The Gantt Chart, on the following page, details the key project tasks, schedule, duration and person(s) responsible for each task. The project assumes a start date of September 14, 2016, following the September Alameda County Mosquito Abatement District Board meeting.



Project management methodology

Leading Edge will approach this project in an organized manner, relying upon direct communication with District staff and applying proven tracking and management tools. Weekly/bi weekly WebEx meetings will be regularly scheduled to review progress, demonstrate, identify and train super users and obtain feedback throughout the project life cycle. Phases will include the following:



Phases defined	Organization	Build Deliverables	User Acceptance Test.
Project scope	Work structure	Redmine and dashboard	Lessons learned
SOW	Project mgt. plan	Change request	Documentation
Set up project	Issues log		Project closure
	Readiness checklist		
	Production transition		

All MapVision systems are deployed with a development (“Dev”) site, “Pre-Production” (PreProd) and a “Live” site. The development site is used for initial deployment, data migration/data entry, internal testing, user testing, training, discrepancy identification and enhancement integration. The pre-production site will mirror the live site for user acceptance testing with real data, once UAT is received, the live site will be updated. Leading Edge uses Agile Management Methodology, referring to an iterative, incremental method of managing the design and building of activities for engineering, information technology and other business areas that aim to provide new product or service development in a highly flexible and interactive manner

Pricing Proposal:

(please see attached pricing schedule)

Software Configuration Proposal
September 7 2016

Customer: Alameda County Mosquito Abatement District
Contact: Robert Ferdan
Address: 23187 Connecticut St
City, St Zip: Hayward, Ca 94545
Email: robert@mosquitoes.org
Phone: 510-783-7744

Category	Quantity/Hours	Unit Cost	Subtotal	Delivery Date	Notes
MapVision 2.0 Enterprise	1	\$ 145,000.00	\$ 145,000.00	TBD	Features outlined below
1 Total Core Software:			\$ 145,000.00		

Operations		Laboratory	
Activity card - primary activity & sub activity tracking		Mosquito identification	
Site & source management		Adult trap counts	
Materials and products management system		Larval counts	
Employee		CalSurv integration with mosquito abundance & disease testing (carcasses, sentinels)	
Zones		CalSurv Pesticide Use and Resistance Testing data auto sync (PART)	
Equipment		Resistance management	
Service requests: mosquitoes, yellow jackets		Bioassays	
Mapping		Reporting - Tier I (See below for other reporting options)	
Multiple map interface (Field map, Operations planning map)		Action type by employee report	
Sites and sources		Inventory item by material - adjustment history of items report	
Zones/boundaries		Inventory cost by material report	
Adult mosquito surveillance		Laboratory item report - adjustment history of items report	
Larval mosquito surveillance		California State AG pesticide use report	
Rainfall surveillance		NPDES report	
Auto notification (inventory, service requests, positive birds, mosquitoes & announcements)		Graphs & charts:	
My Task feature (activity cards, lab surveillance, service request status)		- Service requests batch assignment bar chart and map	
My Task feature (inventory, workflows)		- Service requests by status pie chart	
Extensive login history and activity audit log		- Adult trap counts (1 & 5 year average line graphs)	
Mosquito pool testing results		- Acres treated by source/site bar chart	
Dead bird and carcass		All table queries within MapVision have CSV and PDF functions for printing and exporting	
Treatment plans/polygons		PDFs will have customer logo and are presented in a professional format	
Ground & aerial GPS system file upload and display			
KML files			
Administration			
My Task feature		Aerial and ground module (spray block design)	
Manage system data		Time card management (regular & comp time, OT, vacation, sick leave, holiday, jury duty)	
Employee		Contact resource management (CRM) for service requests	
Source type, sub type, properties and flags		Inventory management system with automatic reorder, multiple locations, etc.	
Activity actions		Lab inventory management system (auto reorder, lab processes, item and batch management)	
Materials and products management system		Permission management	
Species lists		Modify language "don't send to CalSurv"	
Real time service requests		Over ride min/max treatment application rate	
Real time asset tracking (vehicles, boats, ATV, etc.)		Multiple tier ponds, fountains at site	
Treatment and route management (adulticiding, larvaciding, general routing)		Tier III update rate set to 15 minutes if reasonable on server	

2 Configurations:				
	Units	Unit Price	Extended Amount	Notes
Data Migration				
Migrate historical data into MapVision	1	\$ 15,000.00	\$ 15,000.00	Using scripts LEA will provide two migrations, one initially and one prior to go live
Heightened Surveillance and Parcel Inspection Plan				
Work flow management system for disease incidents, invasive species, etc.	1	\$ 10,000.00	\$ 10,000.00	
Tier II Reports				
	0	\$ 7,500.00	\$ -	Requirements for dashboards, tiles and visualizations to be defined and final pricing negotiated
Includes all Tier I reports. Leading Edge creates two dashboards with four tiles each that can be shared among departments				
Print and access can be defined by administrators within MapVision's permissions module				
Updated in real time when data is entered into the MapVision system				
Accessible with OS apps from iPhones and iPads				
Additional dashboards and tiles will be negotiated based on user requirements				
Tier III Reports				
	1	\$ 15,000.00	\$ 15,000.00	
Includes all Tier I and Tier II features. Leading Edge will provide access to the database tables, whereby administrators can create numerous additional dashboards, tiles and visualizations and pin them to the MapVision menu bar				
MapVision Enterprise Mobile iOS APP				
MapVision Enterprise Mobile iOS APP provides field technician features	1	\$ 14,770.00	\$ 14,770.00	
Additional Features Available				
2 Total Configurations Software:			\$ 54,770.00	

3 Equipment				
TBD	0	\$ -	\$ -	
	0	\$ -	\$ -	

4 Total Optional Equipment:						\$	-
Travel & Training:							
	Onsite integration & training	1	\$	6,800.00	\$	6,800.00	Includes 8-days onsite throughout project
	Travel, hotel & expenses	1	\$	3,000.00	\$	3,000.00	
5 Total Travel, Training:						\$	9,800.00
Pricing Summary:							
Initial Costs:							
1	Core software			\$	145,000.00		
2	Configurations			\$	54,770.00		May be adjusted based on additional configurations selected
3	Equipment			\$	-		
4	Travel & training			\$	9,800.00		Includes 8-days onsite throughout project
	Full Implementation:					\$	209,570.00
Recurring Costs:							
5	Annual license, service and support			\$	7,800.00		
	Total Annual Recurring Costs					\$	7,800.00
Payment Terms:							
		Percent		Date Due			Benchmarks/Notes
1	Equipment acquisition	100%		TBD	\$	-	TBD
2	Initial payment of all software	50%		TBD	\$	99,885.00	TBD
3	Balance of software payment	50%		TBD	\$	99,885.00	TBD
4	Onsite integration, training & travel	100%		TBD	\$	9,800.00	TBD
5	Annual Service and Support	100%		TBD	\$	7,800.00	Due upon go live date
				Total:	\$	217,370.00	
Proposal Acceptance:							
Proposal Accepted this ____ Day of _____, 2016			Contact Information:			Remittance Address:	
Signature: _____			Piper Kimball, 707-484-6937			Leading Edge Associates, Inc.	
Authorized Representative:			piper@leateam.com			675 S. Haywood St	
Alameda County Mosquito Abatement District			Mike Reynolds, 828-246-2111			Waynesville, NC 28786	
Robert Ferdan			mreynolds@leateam.com			Corporate Address:	
23187 Connecticut St						702 Tulip Tree Ct	
Hayward, Ca 94545						Fletcher, NC 28732	
robert@mosquitoes.org							
510-783-7744							

Agenda Item: 1037.9a

ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT
LIST OF WARRANTS DATED **AUGUST 15, 2016.**

WAR NO	PAYEE	ACCT NO	AMT OF CHARGE	AMT OF WARRANT
006717	Biological Specialist			
	Total salary less deduction for payroll	600001	\$ 2,498.78	
006717	Mosq Control Tech			
	August 1 to August 15, 2016.	600001	\$ 2,156.55	
006717	Vector Biologist			
	"	600001	\$ 2,823.83	
006717	Vector Biologist			
	"	600001	\$ 2,875.09	
006717	Mosq Control Tech			
	"	600001	\$ 1,136.55	
006717	Environment Specialist			
	"	600001	\$ 2,183.23	
006717	District Manager			
	"	600001	\$ 2,669.31	
006717	Asst Mosq Control Tech			
	"	600001	\$ 3,857.54	
006717	Lab Seasonal			
	"	600001	\$ 2,079.90	
006717	Field Seasonal			
	"	600001	\$ 1,136.55	
006717	IT Specialist			
	"	600001	\$ 1,146.04	
006717	Entomologist			
	"	600001	\$ 2,981.27	
006717	Office Seasonal			
	"	600001	\$ 3,000.23	
006717	Field Seasonal			
	"	600001	\$ 1,082.49	
006717	Field Supervisor			
	"	600001	\$ 1,230.48	
006717	Lab Seasonal			
	"	600001	\$ 3,550.43	
006717	Finance Manager			
	"	600001	\$ 1,106.87	
006717	Office Assistant			
	"	600001	\$ 2,574.73	
006717	Vector Biologist			
	"	600001	\$ 1,593.80	
006717	Mosq Control Tech			
	"	600001	\$ 3,539.77	
006717	Mosq Control Tech			
	"	600001	\$ 2,565.95	
006717	Mechanic Specialist			
	"	600001	\$ 2,131.34	
006717	IRS			
	Federal tax withheld (payroll)	600001	\$ 3,151.67	
006717	IRS			
	Medicare Tax Withheld (payroll)	600001	\$ 8,415.79	
006717	State of California			
	District Contribution to Medicare (payroll)	600401	\$ 978.99	
006717	EDD			
	State Tax withheld (payroll)	600001	\$ 979.00	
006717	EDD			
	Ca Disability	600001	\$ 2,528.99	
006817	Public Employees' Retirement System			
	Employee Contributions	600001	\$ 567.91	\$ 65,406.53
	Employee Paid Member Contributions, 7% & 6.5%	600001	\$ 17.00	
	Employer Contribution 9.558% & 6.930%	600201	\$ 4,562.63	
			\$ 5,781.50	\$ 10,361.13
006917	Aetna Life & Annuity			
	Employee Contributions	600001	\$	\$ 150.00
007017	CALPERS 457 Plan			
	Employee Contributions - PERS 457	600001	\$	\$ 2,960.00
007117	Delta Dental Plan			
	Monthly Premium	600601	\$	\$ 4,953.18
007217	Vision Service Plan			
	Health premium	600601	\$	\$ 638.16
007317	Airgas			
	Dry ice cut block slab	620141.1	\$	\$ 355.44
007417	Bayside			
	Janitorial services, August 2016	620021	\$	\$ 300.00
007517	Busam, John			
	Reimbursement for gas	610191.1	\$	\$ 20.00
007617	Cintas			
	Laundry service	610011	\$ 210.61	
	Personal supply	610001	\$ 124.18	\$ 334.79
007717	Corporate Park Landscaping			
	Landscape maintenance	610122	\$	\$ 195.00
007817	Calpers			
	Fees for GASB- 68 Reports & Schedules	610261	\$	\$ 1,300.00
007917	CA Dept of Public Health			
	Biennial Renewal Application	610351	\$	\$ 175.00
008017	Grainger			
	Brush killer, padlock	610122	\$ 222.45	
	Anchor, Axe handle	620261	\$ 28.51	\$ 250.96
008117	Hayward Water System			
	Utilities	610021	\$	\$ 1,020.37
008217	The Hartford Group Benefits			
	Life insurance	610351	\$	\$ 148.16
008317	Huffstutler, Kevin			
	Reimbursement for gas	610191.1	\$	\$ 20.00
008417	KBA Docusys			
	Canon copier rental	620041	\$	\$ 514.43
008517	Kimball Midwest			
	Quick Strap	610141	\$	\$ 315.14
008617	Mello, Melvin			
	Dental expenses for Mary Mello	600601	\$	\$ 1,500.00
008717	NBC Supply Corp			
	Masks, gloves	610461.6	\$	\$ 504.90
008817	PFM Asset			
	Investment advisory services	610261	\$	\$ 1,630.04
008917	Praxair Distribution Inc			
	Fish supplies	610461.4	\$	\$ 41.26
009017	Waste Management			
	Garbage, July service, Dumpster	610021	\$	\$ 955.58

WAR NO		PAYEE	ACCT NO	AMT OF CHARGE	AMT OF WARRANT
009117	U.S Bank	Canon copier rental	620041	\$ 372.01	
		Office Depot - File Cabinet	620041	\$ 150.98	
		My Choice Software - Microsoft Office 365	620042	\$ 1,079.20	
		Amazon - Enterprise Wi-Fi System	620042	\$ 113.18	
		Amazon - Backlit Monitor	620042	\$ 217.38	
		Discount Mugs - Discount Mugs	620141.1	\$ 42.00	
		Tap Plastics - Plastic trap	620141.1	\$ 11.17	
		Anchor paper - Germination paper	620141.1	\$ 198.60	
		Target - Batteries, cord	620141.1	\$ 87.37	
		Route4Me - Professional plan	620141.1	\$ 49.00	
		Stericycle - Steri-Safe Compliance Solutions	620141.2	\$ 188.53	
		Amazon - Microcentrifuge tube	620141.2	\$ 204.20	
		Amazon - Beaker graduated 12 pk	620141.3	\$ 39.09	
		Amazon - Boston round bottle	620141.3	\$ 60.20	
		Amazon - Detergent cleaning concentrate	620141.3	\$ 112.57	
		Amazon - Safety coated bottle	620141.3	\$ 138.16	
		Applied Biosystems - Quantstudio	620141.3	\$ 4,541.04	
		Bio Tek Instruments - Epock reader (Accrual)	620141.3	\$ 8,827.66	
		Amazon - Bottle w/ screw caps	620141.3	\$ 34.99	
		Lifetech - Kingfisher duo pack	620141.3	\$ 408.53	
		Lifetech - Kingfisher duo pack	620141.3	\$ 367.84	
		Amazon - Prime membership	620141.3	\$ 108.90	
		Amazon - Food pans	620141.3	\$ 20.59	
		Lifetech - Magmax - 96 viral	620141.3	\$ 1,707.76	
		Amazon - Cleaning concentrate, beaker	620141.5	\$ 282.70	
		Smart N Final - Food pans, containers	620141.5	\$ 117.90	
		The Home Depot - Batteries	620141.5	\$ 24.12	
		Office Depot - Utility table	620141.5	\$ 220.87	
		Smart N Final - Foil, lysol	620141.5	\$ 45.04	
		Sigma - A-Naphthyl Acetate	620141.7	\$ 1,505.58	
		Sigma - Dinitrobenzene	620141.7	\$ 63.25	
		Lampire Biological Lab - Chicken blood	620141.7	\$ 206.00	
		Sigma - Acetonitrile, reagent	620141.7	\$ 328.40	
		Amazon - Lab notebooks (6)	620141.8	\$ 107.18	
		West Marine - Hand bilge pump	620261	\$ 60.48	
		Amazon - Vault/ C.B/ water pump	620261	\$ 32.96	
		Souza and Viviani - Toilet repair	610122	\$ 342.00	
		Amazon - Storage cabinet	610122	\$ 188.56	
		The Ford Store - Quick service	610141	\$ 65.25	
		The Ford Store - Brake kit	610141	\$ 48.38	
		Guaranteed Auto - Automatic transmission service	610141	\$ 229.57	
		Telepacific - Communications	610022.1	\$ 1,088.52	
		Mayaco Marketing - Logo & Web page formation	610022.3	\$ 31.25	
		Fastrak - Fast Track Fee	610191.1	\$ 0.35	
		Oakland Parking - Parking	610191.1	\$ 1.00	
		Oakland Parking - Parking	610191.1	\$ 11.00	
		California Special District - CSDA (R.C)	610191.3	\$ 225.00	
		California Special District - CSDA (R.C)	610191.3	\$ 225.00	
		CalPERS - CalPERS Conference (M.M)	610191.3	\$ 350.00	
		Southwest - Flights for CalPERS Conference (M.M)	610191.3	\$ 177.96	
		Walgreens - Board supplies	610191.4	\$ 4.99	
		Trader Joes- Board supplies	610191.4	\$ 26.33	
		Foodmaxx - Staff BBQ	610191.7	\$ 343.78	
		Amazon - Automatic fish feeder	610461.4	\$ 161.82	
		Lucky Vitamin- Insect repellent wipes	610451	\$ 271.30	
		National Pen - Jumbo Carabiners	610451	\$ 615.65	
		Office Depot - Color Copy paper	610451	\$ 78.31	
		Constant contract - Contract	610451	\$ 20.00	
		National Pen - Pens with district logo	610451	\$ 355.77	
		My Binding - Badge reel with belt clip	610451	\$ 422.64	
		Sub-total			\$ 27,359.86
		Total Warrants August 15			\$ 121,409.93

ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT
LIST OF WARRANTS DATED **AUGUST 31, 2016.**

WAR NO	PAYEE	FOR	ACCT NO	AMT OF CHARGE	AMT OF WARRANT
009217	Biological Specialist	Total salary less deductions for payroll period	600001	\$ 2,705.97	
009217	Mosq Control Tech	"	600001	\$ 2,156.54	
009217	Vector Biologist	"	600001	\$ 2,900.18	
009217	Vector Biologist	"	600001	\$ 2,875.10	
009217	Mosq Control Tech	"	600001	\$ 2,183.22	
009217	Environmental Specialist	"	600001	\$ 2,745.55	
009217	District Manager	"	600001	\$ 4,108.90	
009217	Asst Mosq Control Tech	"	600001	\$ 2,079.89	
009217	Lab Seasonal	"	600001	\$ 1,230.48	
009217	Field Seasonal	"	600001	\$ 1,452.10	
009217	IT Specialist	"	600001	\$ 3,018.78	
009217	Entomologist	"	600001	\$ 3,114.15	
009217	Office Seasonal	"	600001	\$ 1,177.09	
009217	Field Seasonal	"	600001	\$ 1,452.09	
009217	Field Supervisor	"	600001	\$ 3,598.10	
009217	Lab Seasonal	"	600001	\$ 1,041.57	
009217	Finance Manager	Total salary less deductions for payroll period	600001	\$ 2,631.49	
009217	Office Assistant	"	600001	\$ 1,593.81	
009217	Vector Biologist	"	600001	\$ 3,539.77	
009217	Mosq Control Tech	"	600001	\$ 2,565.96	
009217	Mosq Control Tech	"	600001	\$ 2,131.33	
009217	Mechanic Specialist	"	600001	\$ 3,313.48	\$ 53,615.55
009217	IRS	Federal Tax Withheld	600001	\$ 8,865.56	
009217		Medicare Tax Withheld	600001	\$ 1,013.28	
009217		District Contribution to Medicare	600401	\$ 1,013.29	
009217	State of California	State Tax Withheld	600001	\$ 2,714.40	
009217	EDD	Ca Disability	600001	\$ 561.34	\$ 14,167.87
009317	Public Employees' Retirement System	Employees contributions	600001	\$ 17.00	
		Employee paid member contributions, 7%, 6.5%	600001	\$ 4,571.44	
		District contribution 9.558%, 6.930%	600201	\$ 5,790.90	\$ 10,379.34
009417	Aetna Life & Annuity	Employee contributions	600001	\$	\$ 150.00
009517	Calpers 457 Plan	Employees contributions - PERS 457	600001	\$	\$ 2,960.00
009617	Calpers	Health insurance	600601	\$	\$ 32,676.62
009717	The Hartford Group Benefits	Life insurance	600601	\$	\$ 85.18
	T Scott Donahue	Trustee in lieu expenses - 1036th meeting	610191.5	\$	\$ -
	P. Robert Beatty	Trustee in lieu expenses - 1036th meeting	610191.5	\$	\$ -
	James Doggett	Trustee in lieu expenses - 1036th meeting	610191.5	\$	\$ -
009817	Robert Dickinson	Trustee in lieu expenses - 1036th meeting	610191.5	\$	\$ 100.00
009917	Richard Guarienti	Trustee in lieu expenses - 1036th meeting	610191.5	\$	\$ 100.00
010017	Eric Hentschke	Trustee in lieu expenses - 1036th meeting	610191.5	\$	\$ 100.00
010117	Humberto Izquierdo	Trustee in lieu expenses - 1036th meeting	610191.5	\$	\$ 100.00
010217	Elisa Marquez	Trustee in lieu expenses - 1036th meeting	610191.5	\$	\$ 100.00
010317	Katherine Narum	Trustee in lieu expenses - 1036th meeting	610191.5	\$	\$ 100.00
010417	Wendi Poulson	Trustee in lieu expenses - 1036th meeting	610191.5	\$	\$ 100.00
010517	Ronald Quinn	Trustee in lieu expenses - 1036th meeting	610191.5	\$	\$ 100.00
	Ursula Reed	Trustee in lieu expenses - 1036th meeting	610191.5	\$	\$ -
	Jan Washburn	Trustee in lieu expenses - 1036th meeting	610191.5	\$	\$ -
010617	George Young	Trustee in lieu expenses - 1036th meeting	610191.5	\$	\$ 100.00

WAR NO	PAYEE	FOR	ACCT NO	AMT OF CHARGE	AMT OF WARRANT
010717	Airgas	Dry ice pellets	620141.1		\$ 325.75
010817	California Special Districts Association	Membership dues 7/1/16 to 6/30/17	610351		\$ 50.00
010917	Cintas	Personal supplies	610001	\$ -	
		Laundry service	610011	\$ 339.56	\$ 339.56
011017	City of Hayward	Hazardous material permit	610461.52		\$ 1,103.00
011117	Coachella Valley Mosquito and Vector Control	Barker Research Project	610261.6		\$ 7,500.00
011217	Grainger	Water hose, masonry drill, bolt cutter	620261	\$ 529.95	
		Adhesive, CFL ballast	610122	\$ 228.73	\$ 758.68
011317	Hayashida Architects	Shed project	800002		\$ 3,036.18
011417	Municipal Resource	Human resources services	610261		\$ 2,100.00
011517	Mar-Len Supply Inc.	Truck wash brush, wooden handle	610141		\$ 153.06
011617	Matthes, Michelle	Reimbursement for Business books	610191.7		\$ 256.50
011717	Namakan West Fisheries	Mosquito Fish	610461.4		\$ 540.00
011817	Quill	Stationery	620041		\$ 136.21
011917	Pitney Bowes	Postage	620041		\$ 208.99
012017	PG & E	Utilities	610021		\$ 1,402.94
012117	PC Professional	Data base development	202100		\$ 2,212.50
012217	Sonitrol	Monitoring charges	610072		\$ 743.00
012317	Verizon	Communication expenses	610022.4		\$ 645.80
012417	Wright Express	Fuel expenses, statement ended 08-15-16	610191.1		\$ 3,161.16
		Total Warrants August 31			\$ 139,607.89
		Total Warrants August 15			\$ 121,409.93
		Total August Warrants			\$ 261,017.82

Alameda County Mosquito Abatement District Budget Summary
As of August 31, 2016. (2 of 12 mth, 16.67%)

Account #		EXPENDED IN (August)	EXPENDED TO DATE	BUDGETED	BALANCE	% EXPENDED
SALARY & BENEFITS						
600001	Salary and Wages	\$ 146,585.73	\$ 291,422.21	\$ 1,700,594.00	\$ 1,409,171.79	17%
600401	Contribution to Medicare	\$ 1,992.29	\$ 3,979.93	\$ 24,659.00	\$ 20,679.07	16%
600201	Contribution to Retirement	\$ 11,572.40	\$ 306,970.53	\$ 422,589.00	\$ 115,618.47	73%
600601	Contribution to Health Care	\$ 40,001.30	\$ 77,668.10	\$ 500,000.00	\$ 422,331.90	16%
SERVICE AND SUPPLIES						
610001	Clothing and personal supplies	\$ 124.18	\$ 209.37	\$ 8,500.00	\$ 8,290.63	2%
610011	Laundry services and supplies	\$ 550.17	\$ 1,112.36	\$ 9,000.00	\$ 7,887.64	12%
610021	Utilities total	\$ 3,378.89	\$ 4,969.37	\$ 35,900.00	\$ 30,930.63	14%
Communications						
610022.1	Telephone Service & Internet	\$ 1,088.52	\$ 1,088.52	\$ 13,800.00	\$ 12,711.48	8%
610022.3	Website and email hosting	\$ 31.25	\$ 31.25	\$ 850.00	\$ 818.75	4%
610022.4	Cell phone service (Verizon)	\$ 645.80	\$ 1,310.70	\$ 9,000.00	\$ 7,689.30	15%
610141	Maintenance of equipment	\$ 811.40	\$ 2,303.88	\$ 45,000.00	\$ 42,696.12	5%
610122	Maintenance of structure and improvements					
610122.1	Landscaping service	\$ 195.00	\$ 390.00	\$ 3,600.00	\$ 3,210.00	11%
610122.2	Building Maintenance and repairs	\$ 981.74	\$ 1,474.57	\$ 10,000.00	\$ 8,525.43	15%
610122.3	Yard Maintenance and repairs	\$ -	\$ -	\$ 1,400.00	\$ 1,400.00	0%
Transportation, travel, & training						
610191.1	Fuel and GPS (WexMart)	\$ 3,213.51	\$ 7,487.04	\$ 44,000.00	\$ 36,512.96	17%
610191.3	Meetings, conferences, & travel	\$ 977.96	\$ 977.96	\$ 35,000.00	\$ 34,022.04	3%
610191.4	Board meeting expenses	\$ 31.32	\$ 31.32	\$ 1,000.00	\$ 968.68	3%
610191.5	Board payments in lieu	\$ 900.00	\$ 2,000.00	\$ 16,800.00	\$ 14,800.00	12%
610461.53	Continuing Education fees	\$ -	\$ -	\$ 4,000.00	\$ 4,000.00	0%
610191.6	Training for trustees	\$ -	\$ -	\$ 1,000.00	\$ 1,000.00	0%
610191.7	Staff Training (automotive, IT, staff development)	\$ 600.28	\$ 600.28	\$ 80,000.00	\$ 79,399.72	1%
Professional services						
610261.1	Audit	\$ -	\$ -	\$ 13,000.00	\$ 13,000.00	0%
610261.2	Actuarial reports	\$ 1,300.00	\$ 1,300.00	\$ 3,000.00	\$ 1,700.00	43%
610261.3	Helicopter service	\$ -	\$ -	\$ 30,000.00	\$ 30,000.00	0%
610261.4	Legal Services	\$ 3,730.04	\$ 4,190.04	\$ 20,000.00	\$ 15,809.96	21%
610261.5	MVCAC Research Foundation	\$ -	\$ -	\$ 5,000.00	\$ 5,000.00	0%
610261.6	UC Davis Zika virus vector competency research	\$ 7,500.00	\$ 7,500.00	\$ 7,500.00	\$ -	100%
610261.7	Tax collection service - SCI	\$ -	\$ -	\$ 35,000.00	\$ 35,000.00	0%
610261.8	Payroll service	\$ -	\$ -	\$ 6,000.00	\$ 6,000.00	0%
610261.9	Environmental consultant services for regulatory issues	\$ -	\$ -	\$ 5,000.00	\$ 5,000.00	0%
610261.1	HR Services (RGS)	\$ -	\$ -	\$ 25,000.00	\$ 25,000.00	0%
610351	Annual memberships and dues total	\$ 225.00	\$ 9,003.00	\$ 22,935.00	\$ 13,932.00	39%
610378	Insurance total	\$ -	\$ 113,867.00	\$ 140,138.00	\$ 26,271.00	81%
610451	Community education total	\$ 1,763.67	\$ 1,763.67	\$ 35,000.00	\$ 33,236.33	5%
Special expenses						
610461.1	Pesticides	\$ -	\$ 4,576.00	\$ 200,000.00	\$ 195,424.00	2%
610461.2	Field supplies (dippers etc)	\$ -	\$ -	\$ 1,000.00	\$ 1,000.00	0%
610461.4	Fish and Fish Maint.	\$ 743.08	\$ 1,190.08	\$ 4,000.00	\$ 2,809.92	30%
610461.51	Aerial Pool Survey	\$ -	\$ -	\$ 17,000.00	\$ 17,000.00	0%
610461.52	Permits	\$ 1,103.00	\$ 1,104.00	\$ 3,000.00	\$ 1,896.00	37%
610461.54	Board plaques and nameplates	\$ -	\$ -	\$ 1,000.00	\$ 1,000.00	0%
610461.6	Spray equipment & Safety	\$ 504.90	\$ 1,023.32	\$ 14,000.00	\$ 12,976.68	7%
620021	Household expenses total	\$ 1,043.00	\$ 2,336.10	\$ 14,480.00	\$ 12,143.90	16%
620041	Office supplies total	\$ 1,382.62	\$ 1,940.26	\$ 22,400.00	\$ 20,459.74	9%
Information technology						
620042.1	Computers, supplies and software	\$ 1,409.76	\$ 1,409.76	\$ 15,000.00	\$ 13,590.24	9%
620042.2	Contract services for Computer network	\$ -	\$ -	\$ 4,000.00	\$ 4,000.00	0%
620042.3	Database consultant	\$ -	\$ -	\$ 25,000.00	\$ 25,000.00	0%
620141	Laboratory total	\$ 11,902.77	\$ 12,813.61	\$ 88,594.00	\$ 75,780.39	14%
620261	Small tools and instruments	\$ 651.90	\$ 651.90	\$ 2,500.00	\$ 1,848.10	26%
650011	Structure/ improvement	\$ -	\$ -	\$ 544,731.00	\$ 544,731.00	0%
650031.1	Capital expenditures	\$ -	\$ -	\$ 295,000.00	\$ 295,000.00	0%
TOTAL EXPENDITURES ^{1 2 3}		\$ 246,941.48	\$ 246,941.48	\$ 4,565,970.00	\$ 4,319,028.52	5%
Total Warrants		\$ 261,017.82				
Discrepancy between Expenditures and Warrants		\$ 14,076.34				

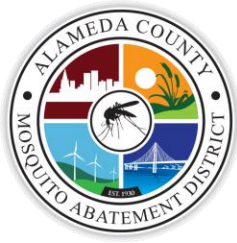
1- Warrant #009117 in account #620141, for the amount of \$8,827.66 is an accrual.

2- Warrant #012117 in account #610261, for the amount of \$2,212.50 is an accrual.

3- \$3,036.18 deducted from Capital Replacement Reserves, account #800002 on IRC page

Investments, Reserves, and Cash Balance

Account #		EXPENDED IN July	EXPENDED TO DATE	BALANCE
Budgetary Reserves				
800001	Working Capital (Dry Period Cash)	\$ -	\$ -	\$ 2,427,743.00
800002	Capital Replacement	\$ 3,036.18	\$ 3,036.18	\$ 541,694.82
800003	Public Health	\$ -	\$ -	\$ 500,000.00
800004	Contingency	\$ -	\$ -	\$ 25,000.00
800006	VCJPA Contingency	\$ -	\$ -	\$ 287,282.00
Investment Accounts				
800005	LAIF	\$ -	\$ -	\$ 150,115.20
	OPEB Fund	\$ -	\$ -	\$ 4,072,587.25
Bank of America (payroll bank)				
County Cash balance as of 8/31/16				\$ 4,205,655.66



Board of Trustees

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Dublin

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Hayward

James N. Doggett

Livermore

Eric Hentschke

Newark

Jan O. Washburn

Oakland

Ursula Reed

San Leandro

Ronald E. Quinn

Union City

Ryan Clausnitzer

District Manager

1. OPERATIONS

A. Narrative

OPERATIONS REPORT AUGUST 2016

During the spring and summer months, marsh sources in four ACMAD zones are monitored for *Aedes dorsalis* after each high tide event. High tides leave water pooled in the upper reaches of numerous salt marsh sources and can hatch eggs of *Ae. dorsalis* that have previously been laid on pickle weed and / or salt grass. Timing of inspections and treatments for this species is critical for several reasons.

In warm temperatures, *Ae. dorsalis* can go from egg to adult in less than a week. Several sources in our county fall under U.S. Fish and Wildlife regulations which prohibit the use of some of our equipment, most importantly of which are our Argo (ATVs), as well as prohibiting our use of larvacidal oils. This makes the window of treatment that much smaller and often requires several members of the field staff to team up in order to get some of these sources treated in the limited amount of time available.

August had three high tide events that required inspections and treatments *Ae. dorsalis*, the most in any month so far this year. Not a single service request received during August was attributable to this species. That, along with CO₂ trap data via the lab indicates that it was a very effective monitoring and treatment program for the month. *Ae. dorsalis* is a very aggressive day-biting mosquito and even in very small numbers, can generate a considerable number of service requests.

As is always the case with summer months, the prime focus of field operations is concentrated on inspections and treatments for the District's three main *Culex* species. Treatments of catch basins, sewer plants, flooded basements and other sources for *Culex pipiens* were a big focus for field staff and seasonal operations employees. There were several treatments including two major treatments in sources with tules / bull rush targeting *Culex erythrothorax*. Flood control channels, canals, ditches, creeks, ponds, and unmaintained swimming pools were inspected and when necessary, treated for *Culex tarsalis*. Treatment of *Culex* species is imperative in keeping West Nile virus (WNV), and several other mosquito-borne diseases, in check in our County.

The District collected only three crows that tested positive for WNV in the month of August. The numbers of adult *Culex* species collected in light traps and

collected in CO₂ traps via the ACMAD lab were also statistically quite low. These numbers are not only low for Alameda County but also low compared to neighboring counties and other counties throughout the state. This is a testament to the efforts of the District's Staff and to ACMAD's long standing emphasis and dedication to a thorough and comprehensive larval mosquito control program.

Joseph Huston
Field Operations Supervisor

B. Special Report on Swimming Pool Inspections

The following report is as of August 26th, 2016:

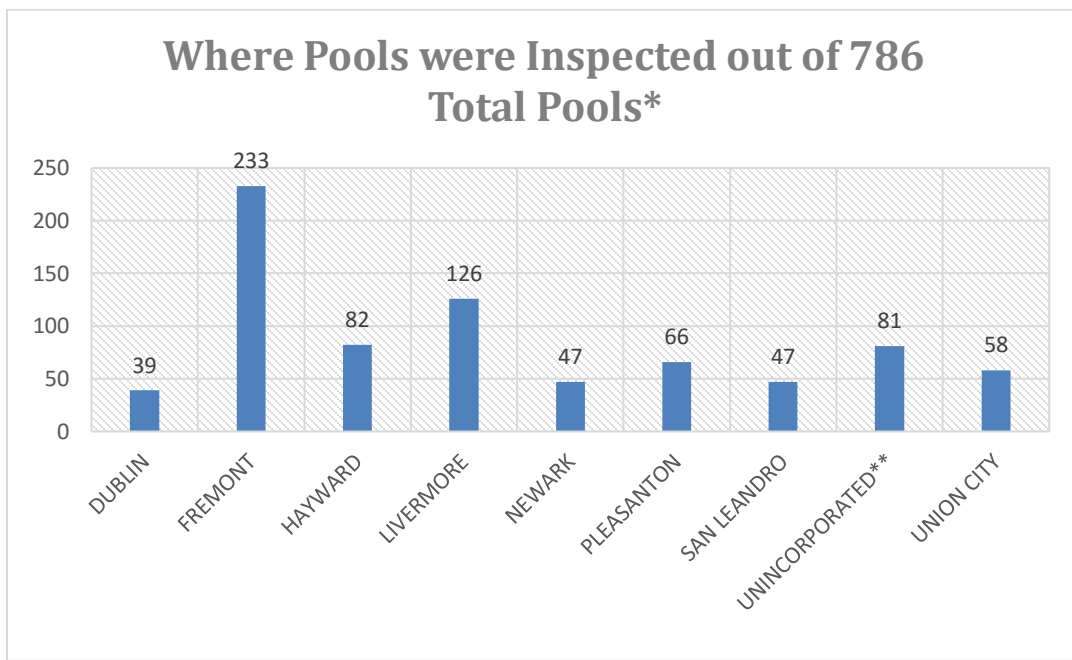


Figure 1: Pools inspected by city by number

*Alameda, Berkeley, Emeryville, Oakland, and Piedmont were not included in this survey

**Unincorporated = San Lorenzo, Castro Valley, and Sunol

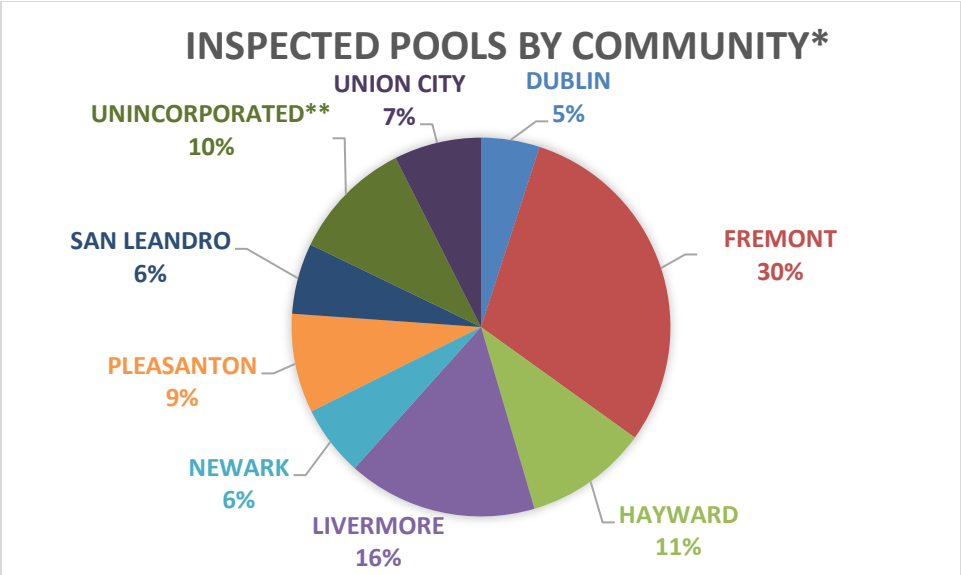


Figure 2: Pools inspected by city as a percentage of the total inspected

* Alameda, Berkeley, Emeryville, Oakland, and Piedmont were not included in this survey

**Unincorporated = San Lorenzo, Castro Valley, and Sunol

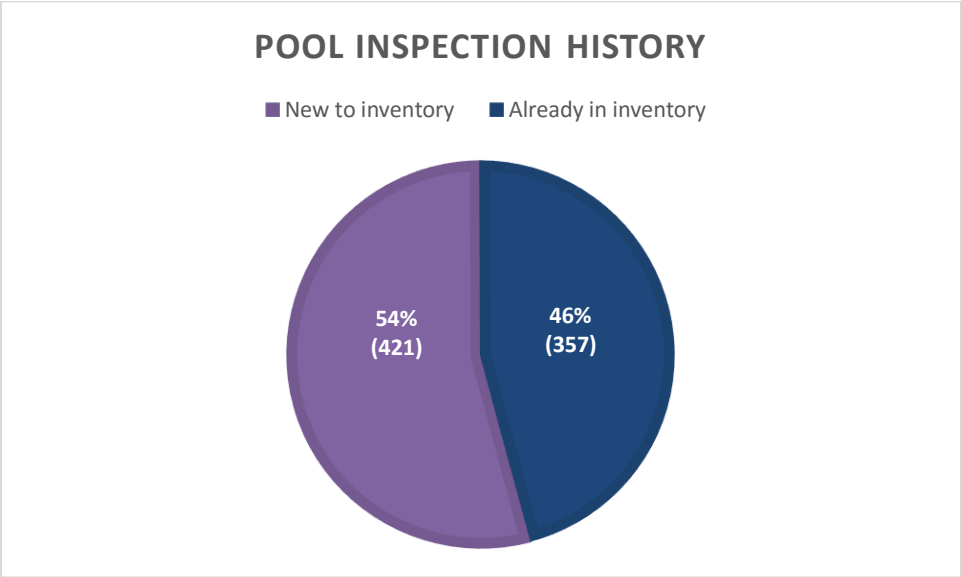


Figure 3: New pools as a result of this aerial survey

RESULTS FROM POOL INSPECTIONS

■ Breeding ■ Dry ■ Clean

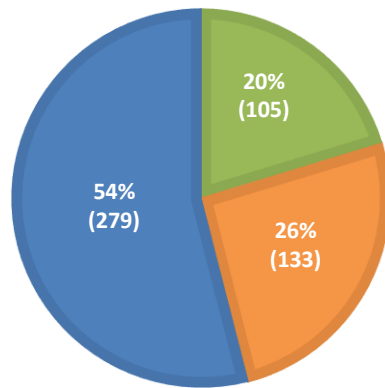


Figure 4: Results from on-site inspections of pools identified during aerial survey

HOW POOLS WERE TREATED

■ Chemically Treated ■ Stocked with Mosquitofish

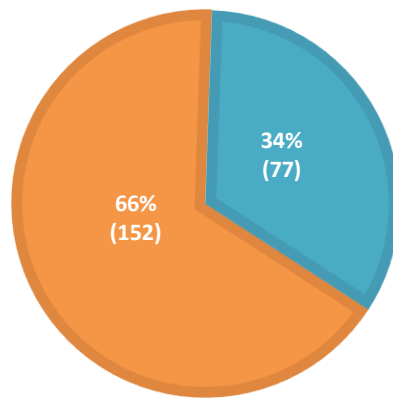


Figure 5: Action taken to abate pools found to be breeding mosquitoes

SURVEY OF MOSQUITOFISH IN POOLS

■ Mosquitofish still est. ■ Mosquitofish restocked

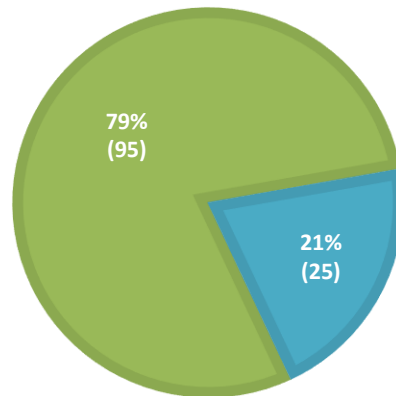


Figure 6: Mosquitofish survey in re-inspected pools

INSPECTIONS NEEDED TO ABATE

■ One ■ Two ■ Three

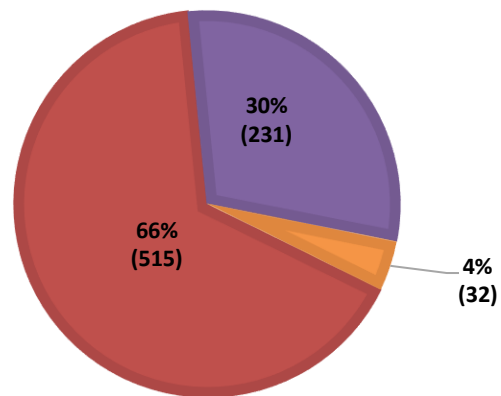
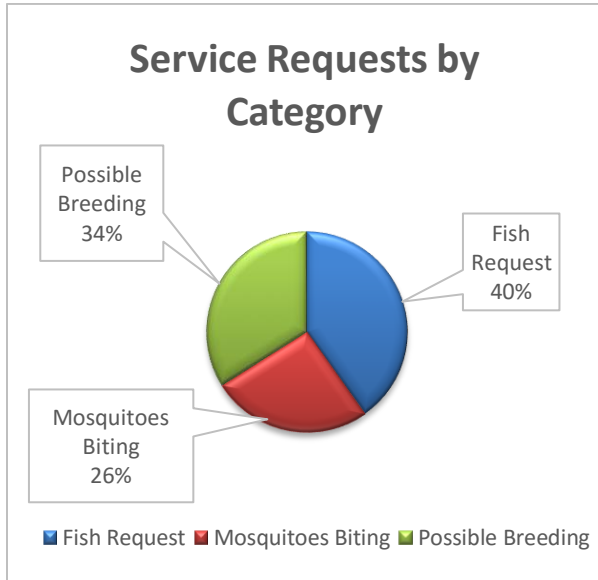


Figure 7: Number of repeat inspections needed to abate pools

C. Operational Data

1. Service Requests



Total Service Requests August 2016	=112
August - Ten year average	=130
August - Five year average	=113
August - Last Year	=98
Range (10 yr) =	= 74-247

Mosquito species attributed to service request	
Cx tarsalis	11
Cs incidens	34
Cx pipiens	12
Fungus Gnats	1

2. Other

Number of all injuries during 2016 = 2

3. Activity Report

Administration	1239.9
Larval Surveillance & Control	1099.85
Disease Monitoring	114.75
Laboratory	609.5
Equipment & Facility Maintenance	154.75
Public Education	68.5
Interagency Communication	13.25
Fish Rearing and Maintenance	37.5
Safety	98.75
Misc	6.5
Regular Hours	3443.25
ETO Hours Accrued	42.5
Total Work	3485.75

Vacation Hrs Used	284.25
Sick Hours Used	48
Workers Comp.	1
ETO Used	47.5
Total Leave	380.75
Total Work - Leave	3485.75
Total Hours	3866.5

2. LAB

Below is a summary of the activities from the Lab for August, 2016

Budget

- As of August 31, 2016 (month 2 of 12, 16 % of the year), 14 % of the lab budget has been expended. The majority of expenditures were to supply mosquito surveillance, disease testing, and pesticide resistance testing activities. Expenditures were lower than projected because mosquito abundance for the month of August was lower than prior years.

Mosquito Abundance Monitoring

- Comparison of mosquito abundance for weeks 1 – 36 during 2015 and 2016 show an ongoing and significant reduction in the average number of mosquitoes for 2016, as measured with New Jersey Light Traps (Figure 1; Paired t-test, $P = 0.0003$). When the month of August was compared for 2015 and 2016, there was a reduction in mosquito abundance for 2016 (Paired t-test, $P = 0.0005$). A comparison of the Growing Degree Days for 2015 and 2016 (year to date) show no significant difference (Paired t-test, $P = 0.7844$), suggesting that differences in outdoor temperatures cannot alone explain the observed reduction in mosquito abundance for 2016. Instead, the reduced mosquito abundance may be attributed to increased efficacy of mosquito control activities by ACMAD Mosquito Control Technicians and Vector Biologists as they become increasingly aware of mosquito breeding sites in their zones, and consequently, more effective in controlling adult mosquito populations in the County.
- Mosquito abundance for the month of August was measured using New Jersey Light Traps (NJLT) and CDC EVS CO₂ traps. Over this period, the contents of 75 NJLT were assessed and a total of 1,657 mosquitoes identified to species (average of 22.1 mosquitoes per NJLT week). An analysis of mosquito number for the most abundant species collected in the NJLT during each week of August for 2014 – 2016 show that the 2016 abundance for each species, except *Culiseta incidens*, was near or lower than the prior two years (Figure 2A). *Cs. incidens* is not known to transmit diseases that threaten human health.
- For the month of August, 81 CDC EVS CO₂ traps were placed, and the collected mosquitoes enumerated and identified to species (total of 1241 mosquitoes, average of 15.3 mosquitoes per trap). The weekly abundance of each species, with the exception of *Culex erythrothorax*, was lower for 2016 relative to the prior two years (Figure 2B). Although *Cx. erythrothorax* is known to transmit West Nile virus (WNV), this mosquito species breeds exclusively in marsh-like water sources that contain tule (a large bulrush plant), and as a result, preferentially obtain blood meals from birds, not humans. Greater numbers of *Cx. erythrothorax* for 2016 was due to increased numbers of traps set at the Hayward Regional Shoreline to assess the efficacy of larvicide treatment of mosquito breeding sources in that area (described below).
- Geospatial analysis of the most abundant mosquito species collected in the CDC EVS CO₂ traps show the highest numbers of *Cx. tarsalis* and *Cx. erythrothorax* present in cities with marshland habitats (Figure 2C, indicated by yellow and pink circles). *Cx. pipiens* and *Culiseta spp.* were most abundant in urban environments (Figure 2C, red

and blue circles, respectively). Mosquito surveillance for the month of August was focused upon the southern and eastern regions of the County where WNV-positive birds and mosquitoes were found.

- Ongoing monitoring for invasive *Aedes* species around the District headquarters and throughout Alameda County has not detected any such mosquitoes during 2016 (a total of 146 traps have been deployed throughout the County that are continuously monitored for invasive *Aedes*).
- To support our invasive *Aedes* monitoring program, we have partnered with the Math Science Nucleus of Fremont, an organization centered upon training high school students in the practice of research. The ACMAD Lab has supplied this organization with traps that are designed to monitor for invasive *Aedes*, and are providing expertise and resources for identifying the mosquitoes they collect. The intent of this partnership is to serve as a foundation from which additional student-based organizations will participate in invasive *Aedes* monitoring throughout the County.

Arbovirus Monitoring

- For the year 2016, 10 dead birds have been found to contain WNV (Figure 3, top). Three of these WNV-positive birds were collected during the month of August from the cities of Pleasanton and Livermore. The number of WNV-positive birds and mosquitoes in Alameda County remains low relative to most nearby counties (Figure 3, bottom).
- For the year to date, 463 mosquito pools have been tested by the Lab for arboviruses and two were found to contain WNV. No WNV-positive mosquitoes were detected during August.
- To date, no bird or mosquito have been found in Alameda County to contain St. Louis encephalitis virus or Western equine encephalitis virus.

Research

- The Lab and Operations are assessing the efficacy of three larvicide products for controlling *Cx. erythrothorax* and *Cx. tarsalis* at the Dutra Duck Ponds located in the Hayward Regional Shoreline. During the months of May and June, we observed very high mosquito abundance at this site and during late June, implemented an intensified treatment and surveillance program aimed at reducing the quantity of breeding mosquitoes at the site. The treatment plan was weekly application of larvicide products, on a rotational basis (VectoMax, VectoBac G, VectoLex CG). The results show that within the first two weeks of the program, there was a substantial reduction in adult *Cx. erythrothorax* and *Cx. tarsalis* trapped at the site (Figure 4). Ongoing treatments are intended to suppress breeding at the site.
- Pesticide resistance studies in *Culex pipiens* mosquitoes collected from the environment and a laboratory colony are ongoing in the Lab. Low concentrations of permethrin (0.5 and 0.75 µg per test chamber) killed a high proportion of ACMAD Lab Colony mosquitoes within 80 and 40 minutes of exposure, respectively (Figure 5A). However, the same concentrations of permethrin were less effective in killing the mosquitoes collected from Val Vista Park (Pleasanton, CA), indicating they were more resistant to the pesticide. When we quantified the activity of enzymes that are known to metabolize chemical pesticides (oxidase, alpha-esterase, and beta-esterase), oxidase activity was higher for the mosquitoes collected from Val Vista Park, although the difference was not

statistically significant (Figure 5B, 5C, 5D; Unpaired t test, $P = 0.0939$). We have been attempting to collect additional mosquitoes from this site and others for repeating this study, but because Operations Staff are so effective at eliminating breeding mosquitoes, we have been largely unsuccessful.

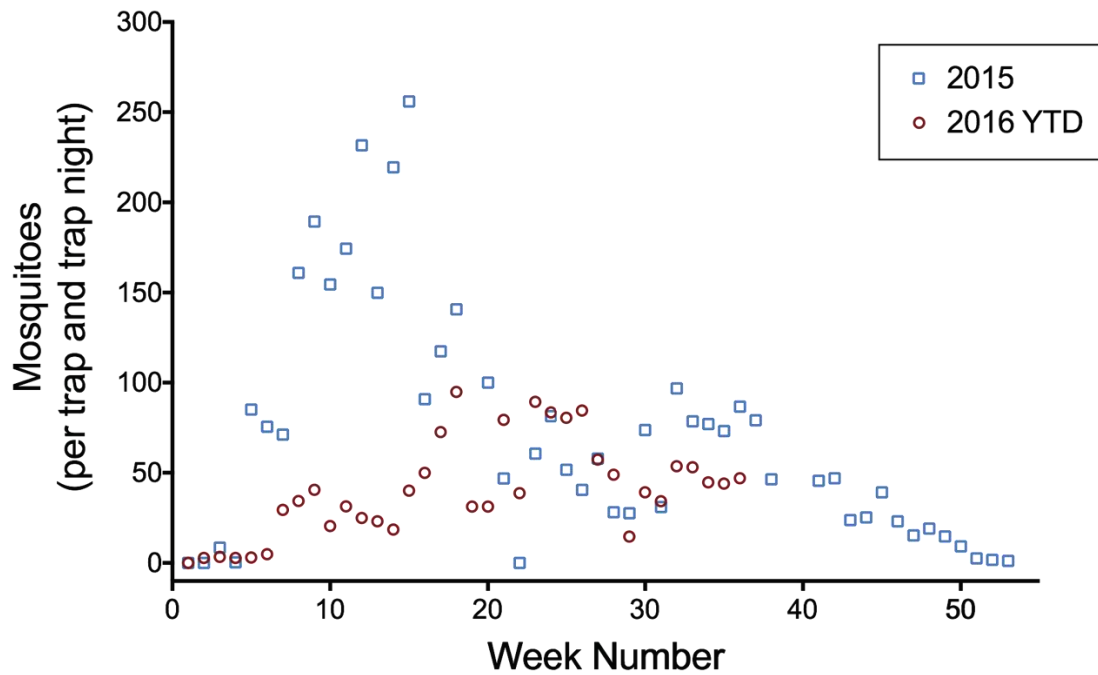
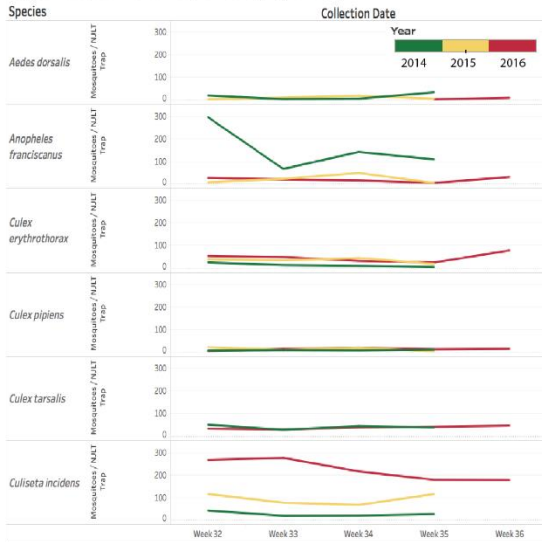


Figure 1. Mosquito abundance for 2015 and 2016 (year to date (YTD)) as measured using New Jersey Light Traps and reported as number of mosquitoes per trap per trap night.

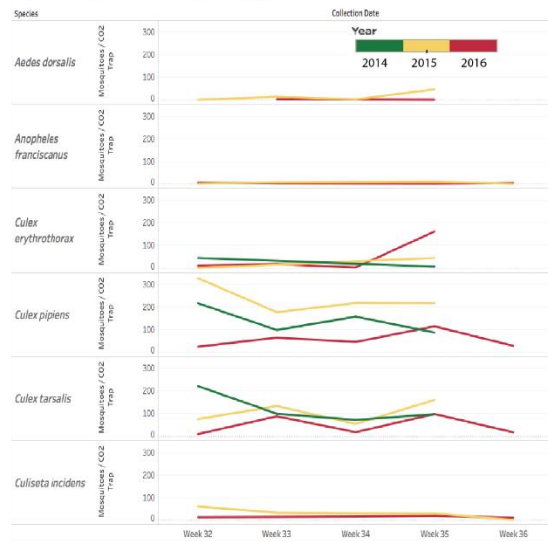
A

August Mosquito Abundance (New Jersey Light Traps)



B

August Mosquito Abundance (CO2 Traps)



C

August Mosquito Abundance by City (CO2 Traps)

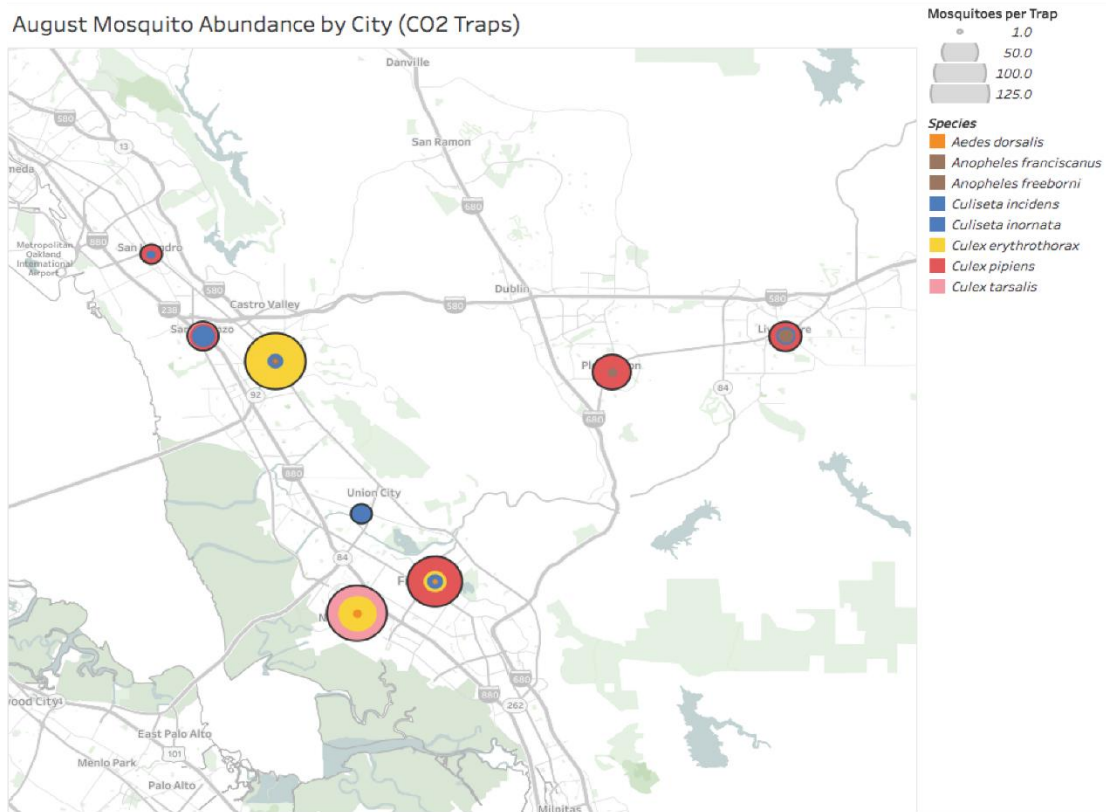


Figure 2. Abundance of the most prevalent mosquito species collected in the County using NJLT (A) and CDC EVS CO₂ traps (B) during the month of August for 2014 – 2016. Geospatial distribution of the most prevalent mosquito species collected in each City during the month of August, 2016 (C). Larger diameter circles indicate higher numbers of mosquitoes while color of the nested circles indicate the species.

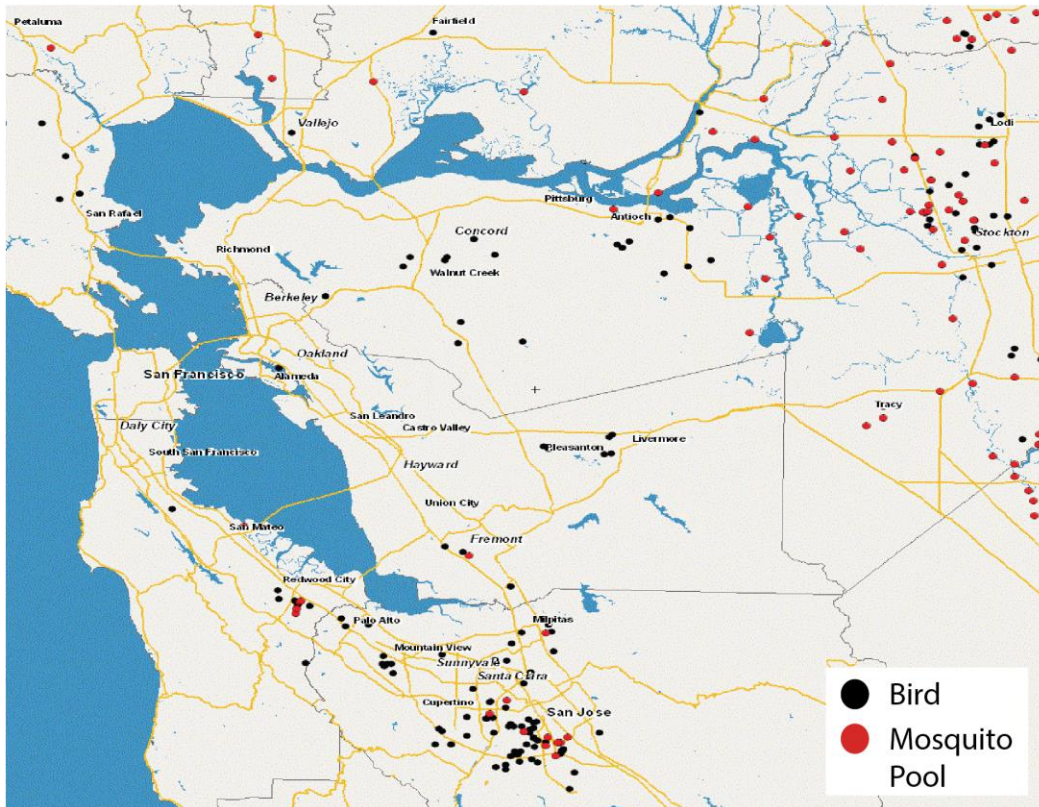
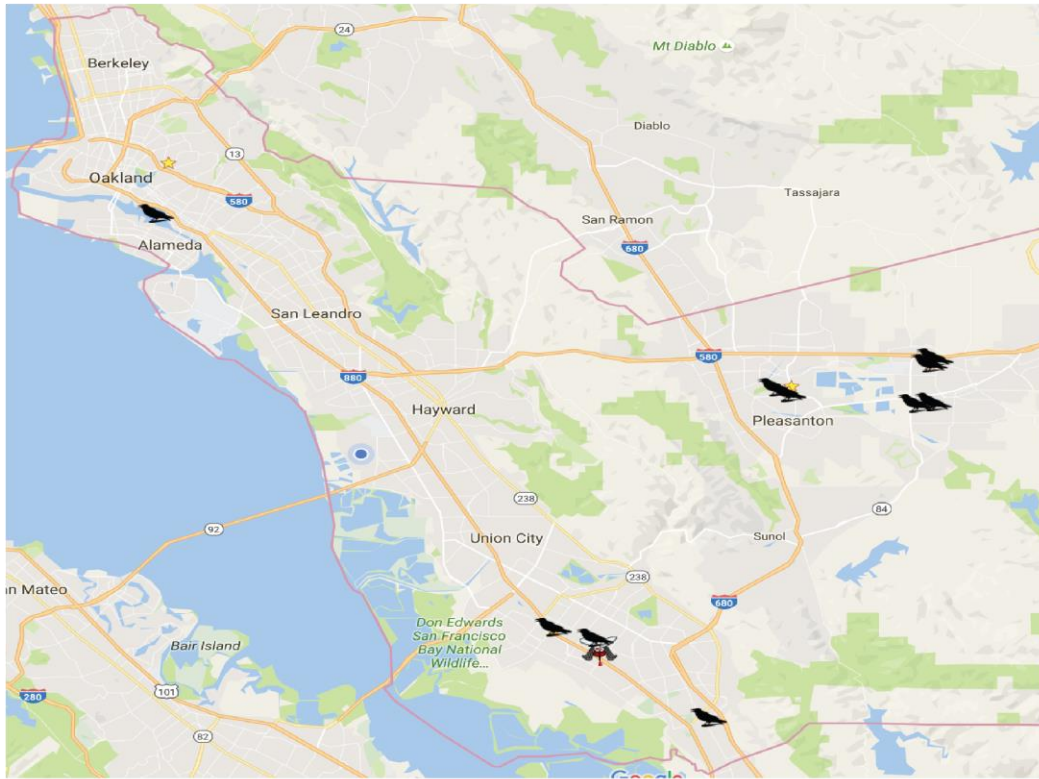


Figure 3. Geographic distribution of WNV-positive birds and mosquitoes in Alameda County (top) and surrounding region (bottom) from January – August of 2016.

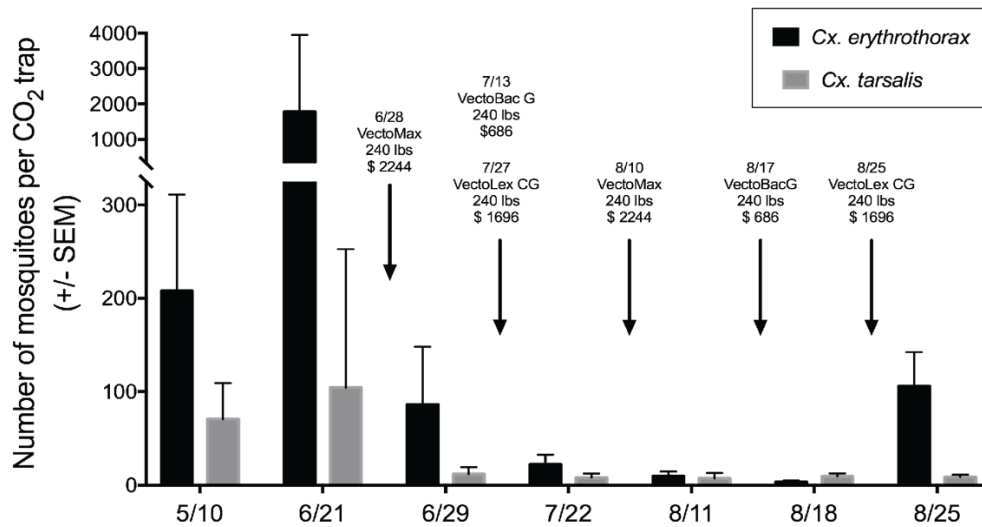


Figure 4. Efficacy test of three larvicides at the Hayward Regional Shoreline.

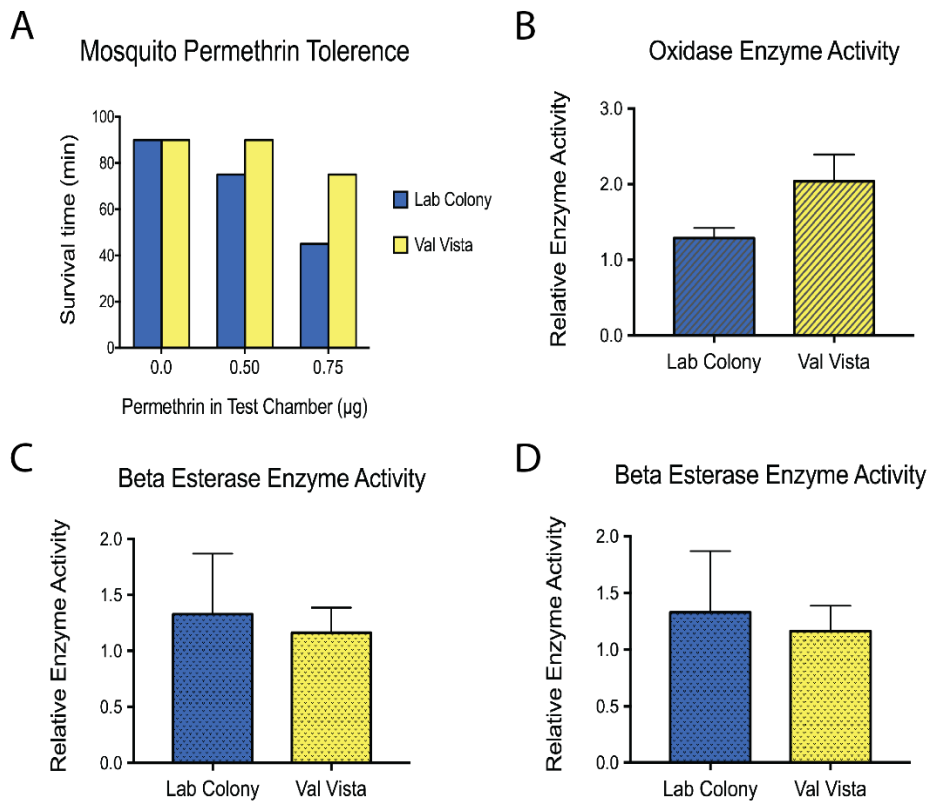


Figure 5. Pesticide resistance studies of *Culex pipiens* mosquitoes collected from Val Vista Park (Pleasanton, CA) and the ACMAD Lab Colony. Resistance of mosquitoes to permethrin (A). Bradford protein assay was used to normalize results from the oxidase (B), alpha-esterase (C) and beta-esterase (D) enzyme assays.

Submitted respectfully by Eric Haas-Stapleton PhD on September 7, 2016

3. PUBLIC EDUCATION

A. Upcoming Events

- **Newark Days Celebration** – Sunday, September 18th, 12pm-4pm (Newark Community Center, Newark)
- **Alameda County Fall Home & Garden Show** – Friday, September 30th to Sunday, October 2nd, 10am-6pm (opens at noon on Friday) (Alameda County Fairgrounds, Pleasanton)
- **Jenny Lin Foundation Safety Fair** – Saturday, October 1st, (Castro Valley Library)

B. Google Analytics

	August 2016	July 2016
Number of Sessions	1,691	1,478
Users	1,460	1,333
Pageviews	3,125	2,583
Average Session Duration	1 minute 59 seconds	1 minute 36 seconds
New Visitors	1,414 (83.6%)	1,290 (87.3%)
Top Cities	San Francisco (7.4%), Not Set (7%), Hayward (5.7%), Oakland (4.2%), Winamac (2.7%)	Oakland (7%), San Francisco (7%), Not Set (5.6%), Los Angeles (4.5%), Hayward (3.6%)
Top Pages	Homepage (21.5%), California Species (17.4%), Education (7.8%), Mosquito Lifecycle (7.1%), Request Mosquitofish (3.2%)	Homepage (22.6%), California Species (19.2%), Request Mosquitofish (7.5%), Mosquito Lifecycle (7.1%), Education (5.8%)

C. Facebook

	August	July
Total Posts	11	9
Number Reached	219	280
Most Popular	CDPH Press Release: Zika & end of Summer travel	Dead Bird Press Release
Total Number of "Likes"	108	106

D. Twitter

	August	July
Total Tweets	11	9
Tweet Impressions	1,893	1,239
Top Tweet (# Impressions)	August is one of the most active months for #WestNileVirus activity. Use #repellent when spending time outdoors. (404)	New Drug found to block Zika virus transmission from mother to her fetus (132)
Profile Visits	81	28
New Followers (Total Followers)	9 (419)	7 (413)

E. Online Advertisements

Display Campaigns

REPORT (pdf)

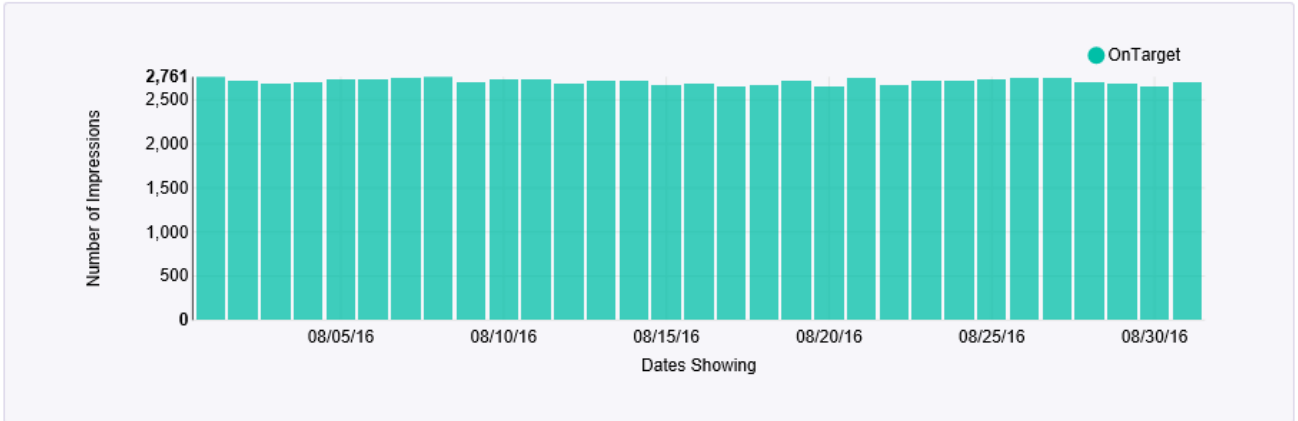


Impressions
83,990

Clicks
171

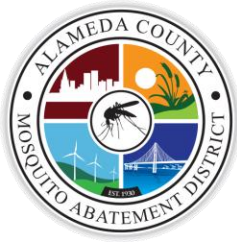
CTR
0.20%

Aug 01 2016 – Aug 31 2016



All Display Campaigns

Campaign	Dates	Impressions	Clicks	CTR
Alameda County Mosquito 2016 Summer Campaign+06.09.16_09.09.16	6/8/16 - 9/9/16	83,990	171	0.20%



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Mosquito-Borne Arbovirus Response Plan

August 2016

1. Overview

The purpose of this document is to serve as a guide for the Alameda County Mosquito Abatement District (the District) in responding to the detection of birds and native mosquitoes that are infected with arboviruses (e.g. West Nile virus (WNV), Saint Louis encephalitis virus (SLE), or western equine encephalitis virus (WEE)). This document describes an enhanced surveillance and response plan for Alameda County, excluding the City of Albany, that is based upon assessing the risk of native mosquitoes transmitting WNV, SLE, or WEE to people. Several species of native mosquito are known to transmit WNV, SLE, and WEE, including: *Culex pipiens* (northern house mosquito), *Culex tarsalis* (western encephalitis mosquito), and *Culex erythrothorax* (tule mosquito). Because the breeding, dispersion, and control of mosquitoes native to Alameda County differ substantially from that of invasive mosquito species, a distinct response plan is needed for native mosquitoes that transmit arboviruses to people. The Mosquito-Borne Arbovirus Response Plan described herein was developed using the California Mosquito-Borne Virus Surveillance & Response Plan (revision published April 2015) that was prepared by the California Department of Public Health (CDPH), the Mosquito & Vector Control Association of California and the University of California (available via www.cdph.ca.gov/programs/vbds), and knowledge of the environmental factors that drive mosquito abundance in Alameda County. A supplementary Invasive Aedes Mosquito Response Plan is described elsewhere.

2. Annual Training

Training should focus on all known mosquito species present in the County. Upon completion of training, Operations and Lab Staff should be able to:

- Identify all life stages of native mosquito species.
- Have knowledge of the biology and ecology of the native mosquito species.
- Be current on latest surveillance and control methods used for native mosquitoes in California.

3. Mosquito Control. Operations Staff inspect potential mosquito breeding sites and when appropriate, employ physical control (e.g. environmental management practices), biological control (e.g. mosquito fish), or chemical control (e.g. pesticides) to reduce the abundance of adult mosquitoes. Office or Lab Staff that hold current Vector Control Technician certifications issued by CDPH (Category A and B) may participate in mosquito control activities, when needed.

4. Pre-Detection of Arboviruses in Native Mosquitoes and Birds Response Plan

- A. **Mosquito Surveillance.** Dry ice-baited EVS traps (CO₂ attractant) New Jersey Light Traps are placed throughout the County to monitor native mosquito abundance. Mosquito species that are collected in EVS traps which have the potential to transmit WNV, SLE, or WEE are typically tested in the District Lab for the presence of these viruses using reverse transcription quantitative polymerase chain reaction (RT-QPCR). Alternatively, mosquitoes may be sent to the Davis Arbovirus Research and Training (DART) Lab for testing. The results of the arbovirus tests are reported to CDPH.
- B. **Bird Surveillance.** Dead birds reported by County residents to CDPH are evaluated to determine suitability for arbovirus testing. Suitable dead birds are retrieved by District Staff and brought to the District Lab for arbovirus testing. Initially, a rapid analyte measurement platform test (*i.e.* RAMP test, an immunoassay) is typically employed to screen corvid birds for WNV infection. If the dead bird is found to contain WNV, it may be tested again using RT-QPCR to confirm the RAMP test, and to determine if the bird was also infected with SLE and WEE. If the dead bird is not a corvid, RT-QPCR will be used in place of the RAMP for arbovirus testing. Specimens collected from dead birds may be sent to the DART Lab for arbovirus testing. The results of the arbovirus tests are reported to CDPH.
- C. **Service Requests.** If a service request made by a County resident indicates biting mosquitoes, District Staff may inspect the site for mosquitoes, collect specimens to determine mosquito abundance and the species present, and employ control measures to reduce mosquito breeding at the site (Section 3).
- D. **Public Outreach.** The goal is to educate the community on the mosquitoes that can transmit WNV, SLE and WEE to humans. The focus is on prevention and detection by encouraging residents to eliminate or reduce potential mosquito breeding sources, and to report dead birds to CDPH (http://westnile.ca.gov/report_wnv.php).

5. Post-Detection of Arboviruses in Native Mosquitoes and Birds Response Plan

- A. **Confirmed Arbovirus in Dead Birds.** When testing of dead birds show them to contain WNV, SLE, or WEE, additional District Staff are deployed to place EVS traps around the site where the dead bird was collected, inspect the surrounding area for known and cryptic mosquito breeding sites, and employ physical, biological, or chemical control practices to reduce adult mosquito abundance (Section 3). Mosquitoes that are collected in the CDC EVS traps are tested in the District Lab for the presence of WNV, SLE, and WEE. If unusually high numbers of arbovirus-infected birds are found in a region or after the first detection of a WNV-infected bird in the County for the year, a press release may be made to advise persons in that area of increased risk for exposure to mosquito-borne arboviruses.
- B. **Confirmed Arbovirus in Mosquitoes.** When testing of mosquitoes collected in CDC EVS traps show them to contain arbovirus, additional CDC EVS traps are placed around the area where the infected mosquitoes were collected. Additional inspections may be conducted. Physical, biological, or chemical control measures may be employed at mosquito breeding sites to reduce adult mosquito abundance. If unusually high numbers of arbovirus-infected mosquitoes are found in a region or after the first detection of a WNV-infected mosquito the County for the year, a press release may be made to advise persons in that area of increased risk for exposure to mosquito-borne arboviruses. Lab Staff will generate maps that indicate the location of WNV-positive birds and mosquitoes.
- C. **Human Case.** When local public health agencies notify ACMAD of a suspected or confirmed case of WNV disease in humans, Lab Staff may place mosquito traps near to where the case resided and test the mosquitoes for the presence of WNV to determine if transmission of WNV is occurring between mosquitoes and birds in that area.