



Orange County Mosquito and Vector Control District

Serving Orange County Since 1947

PURSUANT TO ASSEMBLY BILL 361 THIS MEETING WILL BE
HELD AS A TELECONFERENCE MEETING

BOARD OF TRUSTEES MEETING
THURSDAY DECEMBER 16, 2021
3:00 P.M.

Observers may view the meeting on Zoom at:
<https://us02web.zoom.us/j/83426650447>

Or Telephone:
Dial: 888 475 4499 (Toll Free), 877 853 5257 (Toll Free) or 213 338 8477
Webinar ID: 834 2665 0447

Comments may be submitted via email to agenda-comments@ocvector.org up
to one hour prior to beginning of the meeting.

If you want to make a comment during the meeting, please hit *9 to raise your
hand and be recognized by the moderator.



Orange County Mosquito and Vector Control District

Serving Orange County Since 1947

EXECUTIVE COMMITTEE MEETING DECEMBER 1 AT 11:30 AM
JOINT COMMITTEE MEETING: BUDGET & FINANCE AND BUILDING, PROPERTY & EQUIPMENT COMMITTEE DECEMBER 15 AT 11:30 AM
OPERATIONS COMMITTEE DECEMBER 15 AT 1:30 PM
POLICY AND PERSONNEL COMMITTEE DECEMBER 16 AT 11:30 AM
BUDGET AND FINANCE COMMITTEE DECEMBER 16 AT 1:30 PM

NOTICE AND AGENDA
OF THE REGULAR MEETING OF THE BOARD OF TRUSTEES
THURSDAY DECEMBER 16, 2021
898TH REGULAR MEETING 3:00 P.M.
13001 GARDEN GROVE BLVD.
GARDEN GROVE, CA 92843
WEBSITE ADDRESS: www.ocvector.org
REGULAR MEETING 3:00 P.M.

A. PLEDGE OF ALLEGIANCE, ROLL CALL, AND LATE COMMUNICATIONS

1. Call business meeting to order 3:00 p.m.
2. Pledge of Allegiance
3. Roll Call - (If absences occur, consider whether to deem those absences excused based on facts presented for the absence — such determination shall be the permission required by law.)

PRESIDENT:	Mike Posey	Huntington Beach
VICE-PRESIDENT:	James Gomez	La Habra
SECRETARY:	Peggy Huang	Yorba Linda

Aliso Viejo	Richard Hurt	Lake Forest	Vladimir Anderson
Anaheim	Lucille Kring	Los Alamitos	Tanya Doby
Brea	Cecilia Hupp	Mission Viejo	Bob Ruesch
Buena Park	Susan Sonne	Newport Beach	Joy Brenner
Costa Mesa	William Turpit	Orange	Michael Alvarez
Cypress	Jon Peat	Placentia	Craig Green
Dana Point	Richard Viczorek	Rancho Santa Margarita	April Josephson
Fountain Valley	Cheryl Brothers	San Clemente	Jim Dahl
Fullerton	Nick Dunlap	San Juan Capistrano	John Taylor
Garden Grove	Stephanie Klopfenstein	Santa Ana	Cecilia Aguinaga
Huntington Beach	Mike Posey	Seal Beach	Sandra Massa-Lavitt
Irvine	Tammy Kim	Stanton	Gary Taylor
La Habra	James Gomez	Tustin	Rebecca Gomez
La Palma	Nitesh Patel	Villa Park	Crystal Miles
Laguna Beach	Susan Kempf	Westminster	Chi Charlie Nguyen
Laguna Hills	Erica Pezold	Yorba Linda	Peggy Huang
Laguna Niguel	Rischi Paul Sharma	County of Orange	Elizabeth Guillen-Merchant
Laguna Woods	Shari Horne		

4. Adopt Resolution No. 516 Authorizing Remote Teleconference Meetings of the Legislative Bodies of the Orange County Mosquito and Vector Control District for the Period of December 20, 2021 through January 18, 2022 Pursuant to Brown Act Provisions (Exhibit A, B)
5. Late/Other Communications

B. PUBLIC COMMENTS

(Individual Public Comments may be limited to a 3-minute or less time limit)

During Public Comments, the public may address the Board on any issue within the District's jurisdiction which is not on the agenda. The public may comment on any item on the Agenda at the time that item is before the Board for consideration. Any person wishing to speak must come up and speak from the lectern. There will be no dialog between the Board and the commenter. Any clarifying questions from the Board must go through the Board President.

C. PRESENTATIONS

1. Recognize Outgoing Trustees
2. Staff will give a presentation entitled "SIT Proposal for LA/OC Basin"

D. ADJOURN TO CLOSED SESSION:

1. Government Code Section 54957 (performance evaluation):
Position: District Manager

E. RECONVENE TO OPEN SESSION: REPORT OF ANY REQUIRED DISCLOSURES OF ACTION IN CLOSED SESSION

F. OCMVCD COMMITTEE REPORTS TO THE BOARD OF TRUSTEES

1. Executive Committee
2. Joint Committee Meeting: Budget and Finance and Building, Property, & Equipment
3. Operations Committee
4. Policy and Personnel Committee
5. Budget and Finance Committee

G. CONSENT CALENDAR

All matters listed under the CONSENT CALENDAR are considered by the District to be routine and will be enacted by one motion. Any member of the Board may pull an item from the Consent Calendar for additional clarification or action.

1. Approve the DRAFT Minutes for the regular meeting of November 18, 2021
2. Approve Warrant Register for October 2021 (Exhibit A)
3. Approve Monthly Financial Report for October 2021 (Exhibit A)

H. BUSINESS ITEMS

1. Review of the FY 20-21 Audited Financial Statements (Exhibit A, B)
2. Adopt Orange County Mosquito and Vector Control District Emergency Operations Plan 2021 Update (Exhibit A)
3. Review and Approve the Orange County Mosquito and Vector Control District Updated 2019-2023 Strategic Plan (Exhibit A, B, C)

I. INFORMATIONAL ITEMS ONLY (NO ACTION NECESSARY)

1. Staff Presentation: Staff will give an update on vector activity in Orange County
2. Staff Presentation: Staff will give an update on outreach activity in Orange County
3. Staff Presentation: Staff will give an update on operations activity in Orange County
4. Receive and File Trustee Terms of Office to Expire on January 3, 2022 at 11:59 AM
5. Recognize District Employee Years of Service
6. Receive and File Laboratory Reports – Included in agenda packet

J. PRESIDENT'S REPORT AND TRUSTEE COMMENTS

K. DISTRICT MANAGER'S REPORT – Discussion and Possible Action

L. DISTRICT LEGAL COUNSEL REPORT – Discussion and Possible Action

M. CORRESPONDENCE – Discussion and Possible Action

1. Staff Conference Reports from September, October, and November 2021

N. FUTURE AGENDA ITEMS

O. ADJOURNMENT

1. Adjourn to a special meeting on January 13, 2022 starting at 3:00 p.m. at the Orange County Mosquito and Vector Control District offices, 13001 Garden Grove Blvd., Garden Grove, CA 92843



ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT

December 16, 2021

AGENDA REPORT

AGENDA ITEM A.4

Prepared By: Alan Burns, Legal Counsel
Submitted By: Rick Howard, District Manager

Agenda Title:

Adopt Resolution 516 Authorizing Remote Teleconference Meetings of the Legislative Bodies of the Orange County Mosquito and Vector Control District for the Period of December 20, 2021, through January 18, 2022, Pursuant to Brown Act Provisions

Recommended Action:

Adopt Resolution No. 516 Proclaiming a Local Emergency, Ratifying the Proclamation of a State of Emergency by Governors' Order No 25-20, and Authorizing Remote Teleconference Meetings of the Legislative Bodies of the Orange County Mosquito and Vector Control District for the Period December 20, 2021, through January 18, 2022, Pursuant to Brown Act Provisions.

Executive Summary:

On March 4, 2020, at the beginning of the COVID-19 pandemic, and in response to public agencies' urgent need to adapt to the challenges brought by the COVID-19 pandemic, Governor Newsom issued Executive Order N-29-20 (EO) to suspend portions of the Brown Act that ordinarily limit the use of teleconferencing public meetings. That EO expired on September 30, 2021.

AB 361 has now been signed into law, which permits local public agency legislative bodies the ability to conduct and hold public meetings virtually, with exceptions. Existing Brown Act teleconferencing rules remain in place but would except agencies from complying with them where (1) the Governor has declared a state of emergency and (2) and a local agency has recommended measures to promote social distancing, or (3) the local agency has determined that meeting in person would present imminent risks to the health or safety of attendees. AB 361 is intended to guarantee that local agencies do not have to rely on an executive order from the Governor to serve their communities remotely during future emergencies.

Under AB 361, the public must be provided a call-in or internet-based service option but need not be given a physical location from which to observe and comment on the meeting. In the event of a disruption that prevents the broadcasting of the meeting via the call-in or internet-based service options, a body may not take further action until access is restored. Additionally, within 30 days of holding a virtual meeting for the first time, and every 30 days thereafter, the legislative body must make findings ratifying the conditions that justify the exception from the Brown Act's normal teleconferencing provisions.

Governor Newsom signed into law Assembly Bill 361 (AB 361) on September 16, 2021. The bill was adopted as an "Urgency" measure and was chaptered by the Secretary of State on the same date.

AB 361, which continues the authority to have remote meetings, provided certain findings are made. The Board will need to determine if it desires to continue with remote meetings, or at least have the option of remote meetings, and if so, adopt a resolution making findings.

Analysis:

The Brown Act authorized teleconferenced meetings provided all locations involved in the call were accessible to the public and a public agenda was posted outside the location. With the COVID 19 pandemic, the Governor issued EO N-25-20, which authorized remote meetings provided the meetings are accessible to the public, that agendas are prepared in advance, and the public has a right to comment on meeting items.

N-25-20 expired on Sep 30, 2021. AB 361 revises the Brown Act to allow remote meetings to continue, subject to the making of certain findings.

AB 361 authorizes a public agency to use remote conferencing provided a State of Emergency exists and the local agency has imposed or recommended social distancing or has determined that meeting in public would present imminent risks to the health or safety of attendees.

In order to continue to conduct meeting virtually under AB 361, the District is required to notice the meeting and post agendas, allow the public to address the body in a meaningful manner, and by call-in or internet-based service option. In the event of a disruption of the teleconferencing, the meeting must stop. Public comments are not allowed to be required in advance of the meeting.

If a state of emergency exists and social distancing is recommended, and/or the Board adopts a finding that meeting in public would present imminent risks to the health or safety of attendees, the Board must adopt a resolution at its first meeting, and every 30 days thereafter, making at least one of the following findings: that the state of emergency continues to exist and: that the state of emergency continues to directly impact the ability of persons to meet safely in person, or that state or local officials continue to impose or recommend social distancing.

This agenda item was regularly noticed using the procedure authorized by Governor's Executive Order N-25-20.

Fiscal Impact:

Amount Requested \$ N/A

Sufficient Budgeted Funds Available:

Category: Pers. Optg. Cap. -or- CIP# Fund#

Previous Relevant Board Actions for This Item:

Resolution No. 512 approved at the October 21, 2021 Board Meeting
Resolution No. 514 approved at the November 18, 2021 Board Meeting

Exhibits:

Exhibit A: Assembly Bill 361

Exhibit B: Resolution No. 516

Assembly Bill No. 361

CHAPTER 165

An act to add and repeal Section 89305.6 of the Education Code, and to amend, repeal, and add Section 54953 of, and to add and repeal Section 11133 of, the Government Code, relating to open meetings, and declaring the urgency thereof, to take effect immediately.

[Approved by Governor September 16, 2021. Filed with
Secretary of State September 16, 2021.]

LEGISLATIVE COUNSEL'S DIGEST

AB 361, Robert Rivas. Open meetings: state and local agencies: teleconferences.

(1) Existing law, the Ralph M. Brown Act requires, with specified exceptions, that all meetings of a legislative body of a local agency, as those terms are defined, be open and public and that all persons be permitted to attend and participate. The act contains specified provisions regarding the timelines for posting an agenda and providing for the ability of the public to directly address the legislative body on any item of interest to the public. The act generally requires all regular and special meetings of the legislative body be held within the boundaries of the territory over which the local agency exercises jurisdiction, subject to certain exceptions. The act allows for meetings to occur via teleconferencing subject to certain requirements, particularly that the legislative body notice each teleconference location of each member that will be participating in the public meeting, that each teleconference location be accessible to the public, that members of the public be allowed to address the legislative body at each teleconference location, that the legislative body post an agenda at each teleconference location, and that at least a quorum of the legislative body participate from locations within the boundaries of the local agency's jurisdiction. The act provides an exemption to the jurisdictional requirement for health authorities, as defined. The act authorizes the district attorney or any interested person, subject to certain provisions, to commence an action by mandamus or injunction for the purpose of obtaining a judicial determination that specified actions taken by a legislative body are null and void.

Existing law, the California Emergency Services Act, authorizes the Governor, or the Director of Emergency Services when the governor is inaccessible, to proclaim a state of emergency under specified circumstances.

Executive Order No. N-29-20 suspends the Ralph M. Brown Act's requirements for teleconferencing during the COVID-19 pandemic provided that notice and accessibility requirements are met, the public members are allowed to observe and address the legislative body at the meeting, and that a legislative body of a local agency has a procedure for receiving and swiftly

resolving requests for reasonable accommodation for individuals with disabilities, as specified.

This bill, until January 1, 2024, would authorize a local agency to use teleconferencing without complying with the teleconferencing requirements imposed by the Ralph M. Brown Act when a legislative body of a local agency holds a meeting during a declared state of emergency, as that term is defined, when state or local health officials have imposed or recommended measures to promote social distancing, during a proclaimed state of emergency held for the purpose of determining, by majority vote, whether meeting in person would present imminent risks to the health or safety of attendees, and during a proclaimed state of emergency when the legislative body has determined that meeting in person would present imminent risks to the health or safety of attendees, as provided.

This bill would require legislative bodies that hold teleconferenced meetings under these abbreviated teleconferencing procedures to give notice of the meeting and post agendas, as described, to allow members of the public to access the meeting and address the legislative body, to give notice of the means by which members of the public may access the meeting and offer public comment, including an opportunity for all persons to attend via a call-in option or an internet-based service option, and to conduct the meeting in a manner that protects the statutory and constitutional rights of the parties and the public appearing before the legislative body. The bill would require the legislative body to take no further action on agenda items when there is a disruption which prevents the public agency from broadcasting the meeting, or in the event of a disruption within the local agency's control which prevents members of the public from offering public comments, until public access is restored. The bill would specify that actions taken during the disruption are subject to challenge proceedings, as specified.

This bill would prohibit the legislative body from requiring public comments to be submitted in advance of the meeting and would specify that the legislative body must provide an opportunity for the public to address the legislative body and offer comment in real time. The bill would prohibit the legislative body from closing the public comment period and the opportunity to register to provide public comment, until the public comment period has elapsed or until a reasonable amount of time has elapsed, as specified. When there is a continuing state of emergency, or when state or local officials have imposed or recommended measures to promote social distancing, the bill would require a legislative body to make specified findings not later than 30 days after the first teleconferenced meeting pursuant to these provisions, and to make those findings every 30 days thereafter, in order to continue to meet under these abbreviated teleconferencing procedures.

Existing law prohibits a legislative body from requiring, as a condition to attend a meeting, a person to register the person's name, or to provide other information, or to fulfill any condition precedent to the person's attendance.

This bill would exclude from that prohibition, a registration requirement imposed by a third-party internet website or other online platform not under the control of the legislative body.

(2) Existing law, the Bagley-Keene Open Meeting Act, requires, with specified exceptions, that all meetings of a state body be open and public and all persons be permitted to attend any meeting of a state body. The act requires at least one member of the state body to be physically present at the location specified in the notice of the meeting.

The Governor's Executive Order No. N-29-20 suspends the requirements of the Bagley-Keene Open Meeting Act for teleconferencing during the COVID-19 pandemic, provided that notice and accessibility requirements are met, the public members are allowed to observe and address the state body at the meeting, and that a state body has a procedure for receiving and swiftly resolving requests for reasonable accommodation for individuals with disabilities, as specified.

This bill, until January 31, 2022, would authorize, subject to specified notice and accessibility requirements, a state body to hold public meetings through teleconferencing and to make public meetings accessible telephonically, or otherwise electronically, to all members of the public seeking to observe and to address the state body. With respect to a state body holding a public meeting pursuant to these provisions, the bill would suspend certain requirements of existing law, including the requirements that each teleconference location be accessible to the public and that members of the public be able to address the state body at each teleconference location. Under the bill, a state body that holds a meeting through teleconferencing and allows members of the public to observe and address the meeting telephonically or otherwise electronically would satisfy any requirement that the state body allow members of the public to attend the meeting and offer public comment. The bill would require that each state body that holds a meeting through teleconferencing provide notice of the meeting, and post the agenda, as provided. The bill would urge state bodies utilizing these teleconferencing procedures in the bill to use sound discretion and to make reasonable efforts to adhere as closely as reasonably possible to existing law, as provided.

(3) Existing law establishes the various campuses of the California State University under the administration of the Trustees of the California State University, and authorizes the establishment of student body organizations in connection with the operations of California State University campuses.

The Gloria Romero Open Meetings Act of 2000 generally requires a legislative body, as defined, of a student body organization to conduct its business in a meeting that is open and public. The act authorizes the legislative body to use teleconferencing, as defined, for the benefit of the public and the legislative body in connection with any meeting or proceeding authorized by law.

This bill, until January 31, 2022, would authorize, subject to specified notice and accessibility requirements, a legislative body, as defined for purposes of the act, to hold public meetings through teleconferencing and

to make public meetings accessible telephonically, or otherwise electronically, to all members of the public seeking to observe and to address the legislative body. With respect to a legislative body holding a public meeting pursuant to these provisions, the bill would suspend certain requirements of existing law, including the requirements that each teleconference location be accessible to the public and that members of the public be able to address the legislative body at each teleconference location. Under the bill, a legislative body that holds a meeting through teleconferencing and allows members of the public to observe and address the meeting telephonically or otherwise electronically would satisfy any requirement that the legislative body allow members of the public to attend the meeting and offer public comment. The bill would require that each legislative body that holds a meeting through teleconferencing provide notice of the meeting, and post the agenda, as provided. The bill would urge legislative bodies utilizing these teleconferencing procedures in the bill to use sound discretion and to make reasonable efforts to adhere as closely as reasonably possible to existing law, as provided.

(4) This bill would declare the Legislature's intent, consistent with the Governor's Executive Order No. N-29-20, to improve and enhance public access to state and local agency meetings during the COVID-19 pandemic and future emergencies by allowing broader access through teleconferencing options.

(5) This bill would incorporate additional changes to Section 54953 of the Government Code proposed by AB 339 to be operative only if this bill and AB 339 are enacted and this bill is enacted last.

(6) The California Constitution requires local agencies, for the purpose of ensuring public access to the meetings of public bodies and the writings of public officials and agencies, to comply with a statutory enactment that amends or enacts laws relating to public records or open meetings and contains findings demonstrating that the enactment furthers the constitutional requirements relating to this purpose.

This bill would make legislative findings to that effect.

(7) Existing constitutional provisions require that a statute that limits the right of access to the meetings of public bodies or the writings of public officials and agencies be adopted with findings demonstrating the interest protected by the limitation and the need for protecting that interest.

This bill would make legislative findings to that effect.

(8) This bill would declare that it is to take effect immediately as an urgency statute.

The people of the State of California do enact as follows:

SECTION 1. Section 89305.6 is added to the Education Code, to read:

89305.6. (a) Notwithstanding any other provision of this article, and subject to the notice and accessibility requirements in subdivisions (d) and (e), a legislative body may hold public meetings through teleconferencing

and make public meetings accessible telephonically, or otherwise electronically, to all members of the public seeking to observe and to address the legislative body.

(b) (1) For a legislative body holding a public meeting through teleconferencing pursuant to this section, all requirements in this article requiring the physical presence of members, the clerk or other personnel of the legislative body, or the public, as a condition of participation in or quorum for a public meeting, are hereby suspended.

(2) For a legislative body holding a public meeting through teleconferencing pursuant to this section, all of the following requirements in this article are suspended:

(A) Each teleconference location from which a member will be participating in a public meeting or proceeding be identified in the notice and agenda of the public meeting or proceeding.

(B) Each teleconference location be accessible to the public.

(C) Members of the public may address the legislative body at each teleconference conference location.

(D) Post agendas at all teleconference locations.

(E) At least one member of the legislative body be physically present at the location specified in the notice of the meeting.

(c) A legislative body that holds a meeting through teleconferencing and allows members of the public to observe and address the meeting telephonically or otherwise electronically, consistent with the notice and accessibility requirements in subdivisions (d) and (e), shall have satisfied any requirement that the legislative body allow members of the public to attend the meeting and offer public comment. A legislative body need not make available any physical location from which members of the public may observe the meeting and offer public comment.

(d) If a legislative body holds a meeting through teleconferencing pursuant to this section and allows members of the public to observe and address the meeting telephonically or otherwise electronically, the legislative body shall also do both of the following:

(1) Implement a procedure for receiving and swiftly resolving requests for reasonable modification or accommodation from individuals with disabilities, consistent with the federal Americans with Disabilities Act of 1990 (42 U.S.C. Sec. 12101 et seq.), and resolving any doubt whatsoever in favor of accessibility.

(2) Advertise that procedure each time notice is given of the means by which members of the public may observe the meeting and offer public comment, pursuant to paragraph (2) of subdivision (e).

(e) Except to the extent this section provides otherwise, each legislative body that holds a meeting through teleconferencing pursuant to this section shall do both of the following:

(1) Give advance notice of the time of, and post the agenda for, each public meeting according to the timeframes otherwise prescribed by this article, and using the means otherwise prescribed by this article, as applicable.

(2) In each instance in which notice of the time of the meeting is otherwise given or the agenda for the meeting is otherwise posted, also give notice of the means by which members of the public may observe the meeting and offer public comment. As to any instance in which there is a change in the means of public observation and comment, or any instance prior to the effective date of this section in which the time of the meeting has been noticed or the agenda for the meeting has been posted without also including notice of the means of public observation and comment, a legislative body may satisfy this requirement by advertising the means of public observation and comment using the most rapid means of communication available at the time. Advertising the means of public observation and comment using the most rapid means of communication available at the time shall include, but need not be limited to, posting such means on the legislative body's internet website.

(f) All legislative bodies utilizing the teleconferencing procedures in this section are urged to use sound discretion and to make reasonable efforts to adhere as closely as reasonably possible to the otherwise applicable provisions of this article, in order to maximize transparency and provide the public access to legislative body meetings.

(g) This section shall remain in effect only until January 31, 2022, and as of that date is repealed.

SEC. 2. Section 11133 is added to the Government Code, to read:

11133. (a) Notwithstanding any other provision of this article, and subject to the notice and accessibility requirements in subdivisions (d) and (e), a state body may hold public meetings through teleconferencing and make public meetings accessible telephonically, or otherwise electronically, to all members of the public seeking to observe and to address the state body.

(b) (1) For a state body holding a public meeting through teleconferencing pursuant to this section, all requirements in this article requiring the physical presence of members, the clerk or other personnel of the state body, or the public, as a condition of participation in or quorum for a public meeting, are hereby suspended.

(2) For a state body holding a public meeting through teleconferencing pursuant to this section, all of the following requirements in this article are suspended:

(A) Each teleconference location from which a member will be participating in a public meeting or proceeding be identified in the notice and agenda of the public meeting or proceeding.

(B) Each teleconference location be accessible to the public.

(C) Members of the public may address the state body at each teleconference conference location.

(D) Post agendas at all teleconference locations.

(E) At least one member of the state body be physically present at the location specified in the notice of the meeting.

(c) A state body that holds a meeting through teleconferencing and allows members of the public to observe and address the meeting telephonically

or otherwise electronically, consistent with the notice and accessibility requirements in subdivisions (d) and (e), shall have satisfied any requirement that the state body allow members of the public to attend the meeting and offer public comment. A state body need not make available any physical location from which members of the public may observe the meeting and offer public comment.

(d) If a state body holds a meeting through teleconferencing pursuant to this section and allows members of the public to observe and address the meeting telephonically or otherwise electronically, the state body shall also do both of the following:

(1) Implement a procedure for receiving and swiftly resolving requests for reasonable modification or accommodation from individuals with disabilities, consistent with the federal Americans with Disabilities Act of 1990 (42 U.S.C. Sec. 12101 et seq.), and resolving any doubt whatsoever in favor of accessibility.

(2) Advertise that procedure each time notice is given of the means by which members of the public may observe the meeting and offer public comment, pursuant to paragraph (2) of subdivision (e).

(e) Except to the extent this section provides otherwise, each state body that holds a meeting through teleconferencing pursuant to this section shall do both of the following:

(1) Give advance notice of the time of, and post the agenda for, each public meeting according to the timeframes otherwise prescribed by this article, and using the means otherwise prescribed by this article, as applicable.

(2) In each instance in which notice of the time of the meeting is otherwise given or the agenda for the meeting is otherwise posted, also give notice of the means by which members of the public may observe the meeting and offer public comment. As to any instance in which there is a change in the means of public observation and comment, or any instance prior to the effective date of this section in which the time of the meeting has been noticed or the agenda for the meeting has been posted without also including notice of the means of public observation and comment, a state body may satisfy this requirement by advertising the means of public observation and comment using the most rapid means of communication available at the time. Advertising the means of public observation and comment using the most rapid means of communication available at the time shall include, but need not be limited to, posting such means on the state body's internet website.

(f) All state bodies utilizing the teleconferencing procedures in this section are urged to use sound discretion and to make reasonable efforts to adhere as closely as reasonably possible to the otherwise applicable provisions of this article, in order to maximize transparency and provide the public access to state body meetings.

(g) This section shall remain in effect only until January 31, 2022, and as of that date is repealed.

SEC. 3. Section 54953 of the Government Code is amended to read:

54953. (a) All meetings of the legislative body of a local agency shall be open and public, and all persons shall be permitted to attend any meeting of the legislative body of a local agency, except as otherwise provided in this chapter.

(b) (1) Notwithstanding any other provision of law, the legislative body of a local agency may use teleconferencing for the benefit of the public and the legislative body of a local agency in connection with any meeting or proceeding authorized by law. The teleconferenced meeting or proceeding shall comply with all otherwise applicable requirements of this chapter and all otherwise applicable provisions of law relating to a specific type of meeting or proceeding.

(2) Teleconferencing, as authorized by this section, may be used for all purposes in connection with any meeting within the subject matter jurisdiction of the legislative body. All votes taken during a teleconferenced meeting shall be by rollcall.

(3) If the legislative body of a local agency elects to use teleconferencing, it shall post agendas at all teleconference locations and conduct teleconference meetings in a manner that protects the statutory and constitutional rights of the parties or the public appearing before the legislative body of a local agency. Each teleconference location shall be identified in the notice and agenda of the meeting or proceeding, and each teleconference location shall be accessible to the public. During the teleconference, at least a quorum of the members of the legislative body shall participate from locations within the boundaries of the territory over which the local agency exercises jurisdiction, except as provided in subdivisions (d) and (e). The agenda shall provide an opportunity for members of the public to address the legislative body directly pursuant to Section 54954.3 at each teleconference location.

(4) For the purposes of this section, “teleconference” means a meeting of a legislative body, the members of which are in different locations, connected by electronic means, through either audio or video, or both. Nothing in this section shall prohibit a local agency from providing the public with additional teleconference locations.

(c) (1) No legislative body shall take action by secret ballot, whether preliminary or final.

(2) The legislative body of a local agency shall publicly report any action taken and the vote or abstention on that action of each member present for the action.

(3) Prior to taking final action, the legislative body shall orally report a summary of a recommendation for a final action on the salaries, salary schedules, or compensation paid in the form of fringe benefits of a local agency executive, as defined in subdivision (d) of Section 3511.1, during the open meeting in which the final action is to be taken. This paragraph shall not affect the public’s right under the California Public Records Act (Chapter 3.5 (commencing with Section 6250) of Division 7 of Title 1) to inspect or copy records created or received in the process of developing the recommendation.

(d) (1) Notwithstanding the provisions relating to a quorum in paragraph (3) of subdivision (b), if a health authority conducts a teleconference meeting, members who are outside the jurisdiction of the authority may be counted toward the establishment of a quorum when participating in the teleconference if at least 50 percent of the number of members that would establish a quorum are present within the boundaries of the territory over which the authority exercises jurisdiction, and the health authority provides a teleconference number, and associated access codes, if any, that allows any person to call in to participate in the meeting and the number and access codes are identified in the notice and agenda of the meeting.

(2) Nothing in this subdivision shall be construed as discouraging health authority members from regularly meeting at a common physical site within the jurisdiction of the authority or from using teleconference locations within or near the jurisdiction of the authority. A teleconference meeting for which a quorum is established pursuant to this subdivision shall be subject to all other requirements of this section.

(3) For purposes of this subdivision, a health authority means any entity created pursuant to Sections 14018.7, 14087.31, 14087.35, 14087.36, 14087.38, and 14087.9605 of the Welfare and Institutions Code, any joint powers authority created pursuant to Article 1 (commencing with Section 6500) of Chapter 5 of Division 7 for the purpose of contracting pursuant to Section 14087.3 of the Welfare and Institutions Code, and any advisory committee to a county-sponsored health plan licensed pursuant to Chapter 2.2 (commencing with Section 1340) of Division 2 of the Health and Safety Code if the advisory committee has 12 or more members.

(e) (1) A local agency may use teleconferencing without complying with the requirements of paragraph (3) of subdivision (b) if the legislative body complies with the requirements of paragraph (2) of this subdivision in any of the following circumstances:

(A) The legislative body holds a meeting during a proclaimed state of emergency, and state or local officials have imposed or recommended measures to promote social distancing.

(B) The legislative body holds a meeting during a proclaimed state of emergency for the purpose of determining, by majority vote, whether as a result of the emergency, meeting in person would present imminent risks to the health or safety of attendees.

(C) The legislative body holds a meeting during a proclaimed state of emergency and has determined, by majority vote, pursuant to subparagraph (B), that, as a result of the emergency, meeting in person would present imminent risks to the health or safety of attendees.

(2) A legislative body that holds a meeting pursuant to this subdivision shall do all of the following:

(A) The legislative body shall give notice of the meeting and post agendas as otherwise required by this chapter.

(B) The legislative body shall allow members of the public to access the meeting and the agenda shall provide an opportunity for members of the public to address the legislative body directly pursuant to Section 54954.3.

In each instance in which notice of the time of the teleconferenced meeting is otherwise given or the agenda for the meeting is otherwise posted, the legislative body shall also give notice of the means by which members of the public may access the meeting and offer public comment. The agenda shall identify and include an opportunity for all persons to attend via a call-in option or an internet-based service option. This subparagraph shall not be construed to require the legislative body to provide a physical location from which the public may attend or comment.

(C) The legislative body shall conduct teleconference meetings in a manner that protects the statutory and constitutional rights of the parties and the public appearing before the legislative body of a local agency.

(D) In the event of a disruption which prevents the public agency from broadcasting the meeting to members of the public using the call-in option or internet-based service option, or in the event of a disruption within the local agency's control which prevents members of the public from offering public comments using the call-in option or internet-based service option, the body shall take no further action on items appearing on the meeting agenda until public access to the meeting via the call-in option or internet-based service option is restored. Actions taken on agenda items during a disruption which prevents the public agency from broadcasting the meeting may be challenged pursuant to Section 54960.1.

(E) The legislative body shall not require public comments to be submitted in advance of the meeting and must provide an opportunity for the public to address the legislative body and offer comment in real time. This subparagraph shall not be construed to require the legislative body to provide a physical location from which the public may attend or comment.

(F) Notwithstanding Section 54953.3, an individual desiring to provide public comment through the use of an internet website, or other online platform, not under the control of the local legislative body, that requires registration to log in to a teleconference may be required to register as required by the third-party internet website or online platform to participate.

(G) (i) A legislative body that provides a timed public comment period for each agenda item shall not close the public comment period for the agenda item, or the opportunity to register, pursuant to subparagraph (F), to provide public comment until that timed public comment period has elapsed.

(ii) A legislative body that does not provide a timed public comment period, but takes public comment separately on each agenda item, shall allow a reasonable amount of time per agenda item to allow public members the opportunity to provide public comment, including time for members of the public to register pursuant to subparagraph (F), or otherwise be recognized for the purpose of providing public comment.

(iii) A legislative body that provides a timed general public comment period that does not correspond to a specific agenda item shall not close the public comment period or the opportunity to register, pursuant to subparagraph (F), until the timed general public comment period has elapsed.

(3) If a state of emergency remains active, or state or local officials have imposed or recommended measures to promote social distancing, in order to continue to teleconference without compliance with paragraph (3) of subdivision (b), the legislative body shall, not later than 30 days after teleconferencing for the first time pursuant to subparagraph (A), (B), or (C) of paragraph (1), and every 30 days thereafter, make the following findings by majority vote:

(A) The legislative body has reconsidered the circumstances of the state of emergency.

(B) Any of the following circumstances exist:

(i) The state of emergency continues to directly impact the ability of the members to meet safely in person.

(ii) State or local officials continue to impose or recommend measures to promote social distancing.

(4) For the purposes of this subdivision, “state of emergency” means a state of emergency proclaimed pursuant to Section 8625 of the California Emergency Services Act (Article 1 (commencing with Section 8550) of Chapter 7 of Division 1 of Title 2).

(f) This section shall remain in effect only until January 1, 2024, and as of that date is repealed.

SEC. 3.1. Section 54953 of the Government Code is amended to read:

54953. (a) All meetings of the legislative body of a local agency shall be open and public, and all persons shall be permitted to attend any meeting of the legislative body of a local agency in person, except as otherwise provided in this chapter. Local agencies shall conduct meetings subject to this chapter consistent with applicable state and federal civil rights laws, including, but not limited to, any applicable language access and other nondiscrimination obligations.

(b) (1) Notwithstanding any other provision of law, the legislative body of a local agency may use teleconferencing for the benefit of the public and the legislative body of a local agency in connection with any meeting or proceeding authorized by law. The teleconferenced meeting or proceeding shall comply with all otherwise applicable requirements of this chapter and all otherwise applicable provisions of law relating to a specific type of meeting or proceeding.

(2) Teleconferencing, as authorized by this section, may be used for all purposes in connection with any meeting within the subject matter jurisdiction of the legislative body. All votes taken during a teleconferenced meeting shall be by rollcall.

(3) If the legislative body of a local agency elects to use teleconferencing, it shall post agendas at all teleconference locations and conduct teleconference meetings in a manner that protects the statutory and constitutional rights of the parties or the public appearing before the legislative body of a local agency. Each teleconference location shall be identified in the notice and agenda of the meeting or proceeding, and each teleconference location shall be accessible to the public. During the teleconference, at least a quorum of the members of the legislative body

shall participate from locations within the boundaries of the territory over which the local agency exercises jurisdiction, except as provided in subdivisions (d) and (e). The agenda shall provide an opportunity for members of the public to address the legislative body directly pursuant to Section 54954.3 at each teleconference location.

(4) For the purposes of this section, “teleconference” means a meeting of a legislative body, the members of which are in different locations, connected by electronic means, through either audio or video, or both. Nothing in this section shall prohibit a local agency from providing the public with additional teleconference locations.

(c) (1) No legislative body shall take action by secret ballot, whether preliminary or final.

(2) The legislative body of a local agency shall publicly report any action taken and the vote or abstention on that action of each member present for the action.

(3) Prior to taking final action, the legislative body shall orally report a summary of a recommendation for a final action on the salaries, salary schedules, or compensation paid in the form of fringe benefits of a local agency executive, as defined in subdivision (d) of Section 3511.1, during the open meeting in which the final action is to be taken. This paragraph shall not affect the public’s right under the California Public Records Act (Chapter 3.5 (commencing with Section 6250) of Division 7 of Title 1) to inspect or copy records created or received in the process of developing the recommendation.

(d) (1) Notwithstanding the provisions relating to a quorum in paragraph (3) of subdivision (b), if a health authority conducts a teleconference meeting, members who are outside the jurisdiction of the authority may be counted toward the establishment of a quorum when participating in the teleconference if at least 50 percent of the number of members that would establish a quorum are present within the boundaries of the territory over which the authority exercises jurisdiction, and the health authority provides a teleconference number, and associated access codes, if any, that allows any person to call in to participate in the meeting and the number and access codes are identified in the notice and agenda of the meeting.

(2) Nothing in this subdivision shall be construed as discouraging health authority members from regularly meeting at a common physical site within the jurisdiction of the authority or from using teleconference locations within or near the jurisdiction of the authority. A teleconference meeting for which a quorum is established pursuant to this subdivision shall be subject to all other requirements of this section.

(3) For purposes of this subdivision, a health authority means any entity created pursuant to Sections 14018.7, 14087.31, 14087.35, 14087.36, 14087.38, and 14087.9605 of the Welfare and Institutions Code, any joint powers authority created pursuant to Article 1 (commencing with Section 6500) of Chapter 5 of Division 7 for the purpose of contracting pursuant to Section 14087.3 of the Welfare and Institutions Code, and any advisory committee to a county-sponsored health plan licensed pursuant to Chapter

2.2 (commencing with Section 1340) of Division 2 of the Health and Safety Code if the advisory committee has 12 or more members.

(e) (1) A local agency may use teleconferencing without complying with the requirements of paragraph (3) of subdivision (b) if the legislative body complies with the requirements of paragraph (2) of this subdivision in any of the following circumstances:

(A) The legislative body holds a meeting during a proclaimed state of emergency, and state or local officials have imposed or recommended measures to promote social distancing.

(B) The legislative body holds a meeting during a proclaimed state of emergency for the purpose of determining, by majority vote, whether as a result of the emergency, meeting in person would present imminent risks to the health or safety of attendees.

(C) The legislative body holds a meeting during a proclaimed state of emergency and has determined, by majority vote, pursuant to subparagraph (B), that, as a result of the emergency, meeting in person would present imminent risks to the health or safety of attendees.

(2) A legislative body that holds a meeting pursuant to this subdivision shall do all of the following:

(A) The legislative body shall give notice of the meeting and post agendas as otherwise required by this chapter.

(B) The legislative body shall allow members of the public to access the meeting and the agenda shall provide an opportunity for members of the public to address the legislative body directly pursuant to Section 54954.3. In each instance in which notice of the time of the teleconferenced meeting is otherwise given or the agenda for the meeting is otherwise posted, the legislative body shall also give notice of the means by which members of the public may access the meeting and offer public comment. The agenda shall identify and include an opportunity for all persons to attend via a call-in option or an internet-based service option. This subparagraph shall not be construed to require the legislative body to provide a physical location from which the public may attend or comment.

(C) The legislative body shall conduct teleconference meetings in a manner that protects the statutory and constitutional rights of the parties and the public appearing before the legislative body of a local agency.

(D) In the event of a disruption which prevents the public agency from broadcasting the meeting to members of the public using the call-in option or internet-based service option, or in the event of a disruption within the local agency's control which prevents members of the public from offering public comments using the call-in option or internet-based service option, the body shall take no further action on items appearing on the meeting agenda until public access to the meeting via the call-in option or internet-based service option is restored. Actions taken on agenda items during a disruption which prevents the public agency from broadcasting the meeting may be challenged pursuant to Section 54960.1.

(E) The legislative body shall not require public comments to be submitted in advance of the meeting and must provide an opportunity for

the public to address the legislative body and offer comment in real time. This subparagraph shall not be construed to require the legislative body to provide a physical location from which the public may attend or comment.

(F) Notwithstanding Section 54953.3, an individual desiring to provide public comment through the use of an internet website, or other online platform, not under the control of the local legislative body, that requires registration to log in to a teleconference may be required to register as required by the third-party internet website or online platform to participate.

(G) (i) A legislative body that provides a timed public comment period for each agenda item shall not close the public comment period for the agenda item, or the opportunity to register, pursuant to subparagraph (F), to provide public comment until that timed public comment period has elapsed.

(ii) A legislative body that does not provide a timed public comment period, but takes public comment separately on each agenda item, shall allow a reasonable amount of time per agenda item to allow public members the opportunity to provide public comment, including time for members of the public to register pursuant to subparagraph (F), or otherwise be recognized for the purpose of providing public comment.

(iii) A legislative body that provides a timed general public comment period that does not correspond to a specific agenda item shall not close the public comment period or the opportunity to register, pursuant to subparagraph (F), until the timed general public comment period has elapsed.

(3) If a state of emergency remains active, or state or local officials have imposed or recommended measures to promote social distancing, in order to continue to teleconference without compliance with paragraph (3) of subdivision (b), the legislative body shall, not later than 30 days after teleconferencing for the first time pursuant to subparagraph (A), (B), or (C) of paragraph (1), and every 30 days thereafter, make the following findings by majority vote:

(A) The legislative body has reconsidered the circumstances of the state of emergency.

(B) Any of the following circumstances exist:

(i) The state of emergency continues to directly impact the ability of the members to meet safely in person.

(ii) State or local officials continue to impose or recommend measures to promote social distancing.

(4) For the purposes of this subdivision, “state of emergency” means a state of emergency proclaimed pursuant to Section 8625 of the California Emergency Services Act (Article 1 (commencing with Section 8550) of Chapter 7 of Division 1 of Title 2).

(f) This section shall remain in effect only until January 1, 2024, and as of that date is repealed.

SEC. 4. Section 54953 is added to the Government Code, to read:

54953. (a) All meetings of the legislative body of a local agency shall be open and public, and all persons shall be permitted to attend any meeting

of the legislative body of a local agency, except as otherwise provided in this chapter.

(b) (1) Notwithstanding any other provision of law, the legislative body of a local agency may use teleconferencing for the benefit of the public and the legislative body of a local agency in connection with any meeting or proceeding authorized by law. The teleconferenced meeting or proceeding shall comply with all requirements of this chapter and all otherwise applicable provisions of law relating to a specific type of meeting or proceeding.

(2) Teleconferencing, as authorized by this section, may be used for all purposes in connection with any meeting within the subject matter jurisdiction of the legislative body. All votes taken during a teleconferenced meeting shall be by rollcall.

(3) If the legislative body of a local agency elects to use teleconferencing, it shall post agendas at all teleconference locations and conduct teleconference meetings in a manner that protects the statutory and constitutional rights of the parties or the public appearing before the legislative body of a local agency. Each teleconference location shall be identified in the notice and agenda of the meeting or proceeding, and each teleconference location shall be accessible to the public. During the teleconference, at least a quorum of the members of the legislative body shall participate from locations within the boundaries of the territory over which the local agency exercises jurisdiction, except as provided in subdivision (d). The agenda shall provide an opportunity for members of the public to address the legislative body directly pursuant to Section 54954.3 at each teleconference location.

(4) For the purposes of this section, “teleconference” means a meeting of a legislative body, the members of which are in different locations, connected by electronic means, through either audio or video, or both. Nothing in this section shall prohibit a local agency from providing the public with additional teleconference locations

(c) (1) No legislative body shall take action by secret ballot, whether preliminary or final.

(2) The legislative body of a local agency shall publicly report any action taken and the vote or abstention on that action of each member present for the action.

(3) Prior to taking final action, the legislative body shall orally report a summary of a recommendation for a final action on the salaries, salary schedules, or compensation paid in the form of fringe benefits of a local agency executive, as defined in subdivision (d) of Section 3511.1, during the open meeting in which the final action is to be taken. This paragraph shall not affect the public’s right under the California Public Records Act (Chapter 3.5 (commencing with Section 6250) of Division 7 of Title 1) to inspect or copy records created or received in the process of developing the recommendation.

(d) (1) Notwithstanding the provisions relating to a quorum in paragraph (3) of subdivision (b), if a health authority conducts a teleconference meeting,

members who are outside the jurisdiction of the authority may be counted toward the establishment of a quorum when participating in the teleconference if at least 50 percent of the number of members that would establish a quorum are present within the boundaries of the territory over which the authority exercises jurisdiction, and the health authority provides a teleconference number, and associated access codes, if any, that allows any person to call in to participate in the meeting and the number and access codes are identified in the notice and agenda of the meeting.

(2) Nothing in this subdivision shall be construed as discouraging health authority members from regularly meeting at a common physical site within the jurisdiction of the authority or from using teleconference locations within or near the jurisdiction of the authority. A teleconference meeting for which a quorum is established pursuant to this subdivision shall be subject to all other requirements of this section.

(3) For purposes of this subdivision, a health authority means any entity created pursuant to Sections 14018.7, 14087.31, 14087.35, 14087.36, 14087.38, and 14087.9605 of the Welfare and Institutions Code, any joint powers authority created pursuant to Article 1 (commencing with Section 6500) of Chapter 5 of Division 7 for the purpose of contracting pursuant to Section 14087.3 of the Welfare and Institutions Code, and any advisory committee to a county-sponsored health plan licensed pursuant to Chapter 2.2 (commencing with Section 1340) of Division 2 of the Health and Safety Code if the advisory committee has 12 or more members.

(e) This section shall become operative January 1, 2024.

SEC. 4.1. Section 54953 is added to the Government Code, to read:

54953. (a) All meetings of the legislative body of a local agency shall be open and public, and all persons shall be permitted to attend any meeting of the legislative body of a local agency, in person except as otherwise provided in this chapter. Local agencies shall conduct meetings subject to this chapter consistent with applicable state and federal civil rights laws, including, but not limited to, any applicable language access and other nondiscrimination obligations.

(b) (1) Notwithstanding any other provision of law, the legislative body of a local agency may use teleconferencing for the benefit of the public and the legislative body of a local agency in connection with any meeting or proceeding authorized by law. The teleconferenced meeting or proceeding shall comply with all requirements of this chapter and all otherwise applicable provisions of law relating to a specific type of meeting or proceeding.

(2) Teleconferencing, as authorized by this section, may be used for all purposes in connection with any meeting within the subject matter jurisdiction of the legislative body. All votes taken during a teleconferenced meeting shall be by rollcall.

(3) If the legislative body of a local agency elects to use teleconferencing, it shall post agendas at all teleconference locations and conduct teleconference meetings in a manner that protects the statutory and constitutional rights of the parties or the public appearing before the

legislative body of a local agency. Each teleconference location shall be identified in the notice and agenda of the meeting or proceeding, and each teleconference location shall be accessible to the public. During the teleconference, at least a quorum of the members of the legislative body shall participate from locations within the boundaries of the territory over which the local agency exercises jurisdiction, except as provided in subdivision (d). The agenda shall provide an opportunity for members of the public to address the legislative body directly pursuant to Section 54954.3 at each teleconference location.

(4) For the purposes of this section, “teleconference” means a meeting of a legislative body, the members of which are in different locations, connected by electronic means, through either audio or video, or both. Nothing in this section shall prohibit a local agency from providing the public with additional teleconference locations.

(c) (1) No legislative body shall take action by secret ballot, whether preliminary or final.

(2) The legislative body of a local agency shall publicly report any action taken and the vote or abstention on that action of each member present for the action.

(3) Prior to taking final action, the legislative body shall orally report a summary of a recommendation for a final action on the salaries, salary schedules, or compensation paid in the form of fringe benefits of a local agency executive, as defined in subdivision (d) of Section 3511.1, during the open meeting in which the final action is to be taken. This paragraph shall not affect the public’s right under the California Public Records Act (Chapter 3.5 (commencing with Section 6250) of Division 7 of Title 1) to inspect or copy records created or received in the process of developing the recommendation.

(d) (1) Notwithstanding the provisions relating to a quorum in paragraph (3) of subdivision (b), if a health authority conducts a teleconference meeting, members who are outside the jurisdiction of the authority may be counted toward the establishment of a quorum when participating in the teleconference if at least 50 percent of the number of members that would establish a quorum are present within the boundaries of the territory over which the authority exercises jurisdiction, and the health authority provides a teleconference number, and associated access codes, if any, that allows any person to call in to participate in the meeting and the number and access codes are identified in the notice and agenda of the meeting.

(2) Nothing in this subdivision shall be construed as discouraging health authority members from regularly meeting at a common physical site within the jurisdiction of the authority or from using teleconference locations within or near the jurisdiction of the authority. A teleconference meeting for which a quorum is established pursuant to this subdivision shall be subject to all other requirements of this section.

(3) For purposes of this subdivision, a health authority means any entity created pursuant to Sections 14018.7, 14087.31, 14087.35, 14087.36, 14087.38, and 14087.9605 of the Welfare and Institutions Code, any joint

powers authority created pursuant to Article 1 (commencing with Section 6500) of Chapter 5 of Division 7 for the purpose of contracting pursuant to Section 14087.3 of the Welfare and Institutions Code, and any advisory committee to a county-sponsored health plan licensed pursuant to Chapter 2.2 (commencing with Section 1340) of Division 2 of the Health and Safety Code if the advisory committee has 12 or more members.

(e) This section shall become operative January 1, 2024.

SEC. 5. Sections 3.1 and 4.1 of this bill incorporate amendments to Section 54953 of the Government Code proposed by both this bill and Assembly Bill 339. Those sections of this bill shall only become operative if (1) both bills are enacted and become effective on or before January 1, 2022, but this bill becomes operative first, (2) each bill amends Section 54953 of the Government Code, and (3) this bill is enacted after Assembly Bill 339, in which case Section 54953 of the Government Code, as amended by Sections 3 and 4 of this bill, shall remain operative only until the operative date of Assembly Bill 339, at which time Sections 3.1 and 4.1 of this bill shall become operative.

SEC. 6. It is the intent of the Legislature in enacting this act to improve and enhance public access to state and local agency meetings during the COVID-19 pandemic and future applicable emergencies, by allowing broader access through teleconferencing options consistent with the Governor's Executive Order No. N-29-20 dated March 17, 2020, permitting expanded use of teleconferencing during the COVID-19 pandemic.

SEC. 7. The Legislature finds and declares that Sections 3 and 4 of this act, which amend, repeal, and add Section 54953 of the Government Code, further, within the meaning of paragraph (7) of subdivision (b) of Section 3 of Article I of the California Constitution, the purposes of that constitutional section as it relates to the right of public access to the meetings of local public bodies or the writings of local public officials and local agencies. Pursuant to paragraph (7) of subdivision (b) of Section 3 of Article I of the California Constitution, the Legislature makes the following findings:

This act is necessary to ensure minimum standards for public participation and notice requirements allowing for greater public participation in teleconference meetings during applicable emergencies.

SEC. 8. (a) The Legislature finds and declares that during the COVID-19 public health emergency, certain requirements of the Bagley-Keene Open Meeting Act (Article 9 (commencing with Section 11120) of Chapter 1 of Part 1 of Division 3 of Title 2 of the Government Code) were suspended by Executive Order N-29-20. Audio and video teleconference were widely used to conduct public meetings in lieu of physical location meetings, and public meetings conducted by teleconference during the COVID-19 public health emergency have been productive, have increased public participation by all members of the public regardless of their location in the state and ability to travel to physical meeting locations, have protected the health and safety of civil servants and the public, and have reduced travel costs incurred by members of state bodies and reduced work hours spent traveling to and from meetings.

(b) The Legislature finds and declares that Section 1 of this act, which adds and repeals Section 89305.6 of the Education Code, Section 2 of this act, which adds and repeals Section 11133 of the Government Code, and Sections 3 and 4 of this act, which amend, repeal, and add Section 54953 of the Government Code, all increase and potentially limit the public's right of access to the meetings of public bodies or the writings of public officials and agencies within the meaning of Section 3 of Article I of the California Constitution. Pursuant to that constitutional provision, the Legislature makes the following findings to demonstrate the interest protected by this limitation and the need for protecting that interest:

(1) By removing the requirement that public meetings be conducted at a primary physical location with a quorum of members present, this act protects the health and safety of civil servants and the public and does not preference the experience of members of the public who might be able to attend a meeting in a physical location over members of the public who cannot travel or attend that meeting in a physical location.

(2) By removing the requirement for agendas to be placed at the location of each public official participating in a public meeting remotely, including from the member's private home or hotel room, this act protects the personal, private information of public officials and their families while preserving the public's right to access information concerning the conduct of the people's business.

SEC. 9. This act is an urgency statute necessary for the immediate preservation of the public peace, health, or safety within the meaning of Article IV of the California Constitution and shall go into immediate effect. The facts constituting the necessity are:

In order to ensure that state and local agencies can continue holding public meetings while providing essential services like water, power, and fire protection to their constituents during public health, wildfire, or other states of emergencies, it is necessary that this act take effect immediately.

RESOLUTION NO. 516

A RESOLUTION OF THE BOARD OF TRUSTEES OF THE ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT

RATIFYING THE PROCLAMATION OF A STATE OF EMERGENCY BY GOVERNORS' ORDER NO 25-20, AND AUTHORIZING REMOTE TELECONFERENCE MEETINGS OF THE LEGISLATIVE BODIES OF THE ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT FOR THE PERIOD DECEMBER 20, 2021, THROUGH JANUARY 18, 2022, PURSUANT TO BROWN ACT PROVISIONS.

WHEREAS, the ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT is committed to preserving and nurturing public access and participation in meetings of the Board of Trustees; and

WHEREAS, all meetings of the ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT legislative bodies are open and public, as required by the Ralph M. Brown Act (Cal. Gov. Code 54950-54963), so that any member of the public may attend, participate, and watch the District's legislative bodies conduct their business; and

WHEREAS, the Brown Act, Government Code section 54953(e), makes provisions for remote teleconferencing participation in meetings by members of a legislative body, without compliance with the requirements of Government Code section 54953 (b)(3), subject to the existence of certain conditions; and

WHEREAS, a required condition is that a state of emergency is declared by the Governor pursuant to Government Code section 8625, proclaiming the existence of conditions of disaster or of extreme peril to the safety of persons and property within the state caused by conditions as described in Government Code section 8558; and

WHEREAS, a proclamation is made when there is an actual incident, threat of disaster, or extreme peril to the safety of persons and property within the jurisdictions that are within the District's boundaries, caused by natural, technological, or human-caused disasters; and

WHEREAS, it is further required that state or local officials have imposed or recommended measures to promote social distancing, or, the legislative body meeting in person would present imminent risk to the health and safety of attendees; and

WHEREAS, such conditions now exist in the District, specifically, a state of emergency remains active pursuant to the Governor's Executive Order N-25-20; and

WHEREAS, the Board of Trustees continues to recommend social distancing as a method of addressing the COVID-19 pandemic; and

WHEREAS, the Board of Trustees further finds that meeting in person would present an imminent risk to the health and safety of attendees; and

WHEREAS, the Board of Trustees does hereby find that COVID-19 and the variants thereof has caused, and will continue to cause, conditions of peril to the safety of persons within the District that are likely to be beyond the control of services, personnel, equipment, and facilities of the District, and desires to proclaim a local emergency and ratify the proclamation of state of emergency by the Governor of the State of California; and

WHEREAS, as a consequence of the local emergency, the Board of Trustees does hereby find that the legislative bodies of the ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT shall conduct their meetings without compliance with paragraph (3) of subdivision (b) of Government Code section 54953, as authorized by subdivision (e) of section 54953, and that such legislative bodies shall comply with the requirements to provide the public with access to the meetings as prescribed in paragraph (2) of subdivision (e) of section 54953; and

WHEREAS, the District will continue to provide agendas and notices to assure the public's participation, will allow remote call-in or internet access, and will otherwise comply with AB 361.

NOW, THEREFORE, THE BOARD OF TRUSTEES OF THE ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT DOES HEREBY RESOLVE AS FOLLOWS:

Section 1. Recitals. The Recitals set forth above are true and correct and are incorporated into this Resolution by this reference.

Section 2. Proclamation of Local Emergency. The Board hereby proclaims that a local emergency now exists throughout the District and would be exacerbated by fully live meetings of the legislative bodies.

Section 3. Ratification of Governor's Proclamation of a State of Emergency. The Board hereby ratifies the Governor of the State of California's Proclamation of State of Emergency, effective as of its issuance date of March 4, 2020.

Section 4. Remote Teleconference Meetings. The District Manager and District Clerk of the Board and legislative bodies of the ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT are hereby authorized and directed to take all actions necessary to carry out the intent and purpose of this Resolution including, conducting open and public meetings in accordance with Government Code section 54953 (e) and other applicable provisions of the Brown Act.

Section 5. Effective Date of Resolution. This Resolution shall take effect December 20, 2021 and shall be effective until the earlier of (i) January 18, 2022, or such time the Board of Trustees adopts a subsequent resolution in accordance with Government Code section 54953 (e)(3) to extend the time during which the legislative bodies of the ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT may continue to teleconference without compliance with paragraph (3) of subdivision (b) of section 54953.

Section 6. Hybrid meetings allowed. To the extent the District Manager determines that a hybrid meeting, in which some or all of the meeting is conducted remotely, will be sufficient to protect the public health, that discretion is vested in the District Manager provided the public access and other requirements of AB 361 are observed.

PASSED, APPROVED, and ADOPTED by the Board of Trustees of the Orange County Mosquito and Vector Control District at its regular meeting thereof held on the 16th day of December 2021, at 13001 Garden Grove Blvd., Garden Grove, California, 92843.

Mike Posey, President

I hereby certify that the foregoing Resolution was duly adopted by the Board of Trustees of the Orange County Mosquito and Vector Control District at a regularly scheduled meeting, held on December 16, 2021:
APPROVED AS TO FORM:

Peggy Huang, Secretary

Alan R. Burns, District Counsel



Orange County Mosquito and Vector Control District

Serving Orange County Since 1947

PURSUANT TO ASSEMBLY BILL 361 THIS MEETING WILL BE
HELD AS A TELECONFERENCE MEETING

EXECUTIVE COMMITTEE
WEDNESDAY DECEMBER 1, 2021
11:30 A.M.

Observers may view the meeting on Zoom at:
<https://us02web.zoom.us/j/81820305201>

Or Telephone:
Dial: 888 475 4499 (Toll Free) 877 853 5257 (Toll Free) 213 338 8477
Webinar ID: 818 2030 5201

Comments may be submitted via email to agenda-comments@ocvector.org up
to one hour prior to beginning of the meeting.

If you want to make a comment during the meeting, please hit *9 to raise your
hand and be recognized by the moderator.



EXECUTIVE COMMITTEE MEETING NOTICE DECEMBER 1, 2021 11:30 AM

TO: Executive Committee
Mike Posey, President
James Gomez, Vice President
Peggy Huang, Secretary
Michael Alvarez, Past President

Huntington Beach
La Habra
Yorba Linda
Orange

FROM: Tawnia Pett, Executive Assistant/Clerk of the Board

RE: Executive Committee Meeting:
Wednesday December 1, 2021 11:30 AM
TELECONFERENCE MEETING

AGENDA

1. Call Meeting to Order and Roll Call
2. Public Comments
3. Adjourn to Closed Session:
 - a. Government Code Section: 54957 (performance evaluation):
Position: District Manager
4. Reconvene to Open Session: Report of any required disclosures of action in closed session
5. Provide update and seek recommendations of the committee to possibly utilize a "Hybrid" meeting format for future meetings of the Board of Trustees of the Orange County Mosquito and Vector Control District
6. Discuss proposed update to District Value statement
7. Discuss proposed update to District Strategic Plan
8. Adjourn

tep



Orange County Mosquito and Vector Control District

Serving Orange County Since 1947

PURSUANT TO ASSEMBLY BILL 361 THIS MEETING WILL BE
HELD AS A TELECONFERENCE MEETING

JOINT COMMITTEE MEETING:
BUDGET AND FINANCE
AND
BUILDING, PROPERTY, & EQUIPMENT
COMMITTEES
WEDNESDAY DECEMBER 15, 2021
11:30 A.M.

Observers may view the meeting on Zoom at:
<https://us02web.zoom.us/j/88028633410>

Or Telephone:

Dial: 888 475 4499 (Toll Free) 877 853 5257 (Toll Free) 213 338 8477
Webinar ID: 880 2863 3410

Comments may be submitted via email to agenda-comments@ocvector.org up
to one hour prior to beginning of the meeting.

If you want to make a comment during the meeting, please hit *9 to raise your
hand and be recognized by the moderator.



**JOINT MEETING: BUDGET AND FINANCE COMMITTEE
AND
BUILDING, PROPERTY, & EQUIPMENT COMMITTEE
MEETING NOTICE
DECEMBER 15, 2021
11:30 A.M.**

TO: Budget and Finance Committee

Richard Hurt	Aliso Viejo
Mike Posey	Huntington Beach
Nitesh Patel	La Palma
Vladimir Anderson	Lake Forest
Bob Ruesch	Mission Viejo
Jim Dahl	San Clemente
Gary Taylor	Stanton
Crystal Miles (Chair)	Villa Park
Liz Guillen-Merchant	County of Orange

 Building, Property, & Equipment Committee

Lucille Kring	Anaheim
Cecilia Hupp	Brea
Bill Turpit	Costa Mesa
Cheryl Brothers	Fountain Valley
Erica Pezold	Laguna Hills
Craig Green (Chair)	Placentia
Sandra Massa-Lavitt	Seal Beach

FROM: Tawnia Pett, Executive Assistant/Clerk of the Board

RE: Joint Committee Meeting:
 11:30 a.m., Wednesday December 15, 2021
 Teleconference Meeting

AGENDA

1. Call to Order and Roll Call
2. Public Comments
3. Provide the Joint Committee with a project update and status report on the District's effort to identify a long-term solution for the District's facilities.
4. Adjourn

tep



Orange County Mosquito and Vector Control District

Serving Orange County Since 1947

PURSUANT TO ASSEMBLY BILL 361 THIS MEETING WILL BE
HELD AS A TELECONFERENCE MEETING

OPERATIONS COMMITTEE
WEDNESDAY DECEMBER 15, 2021
1:30 P.M.

Observers may view the meeting on Zoom at:
<https://us02web.zoom.us/j/87310251961>

Or Telephone:

Dial: 888 475 4499 (Toll Free) 877 853 5257 (Toll Free) 213 338 8477
Webinar ID: 873 1025 1961

Comments may be submitted via email to agenda-comments@ocvector.org up
to one hour prior to beginning of the meeting.

If you want to make a comment during the meeting, please hit *9 to raise your
hand and be recognized by the moderator.



**OPERATIONS COMMITTEE
MEETING NOTICE
DECEMBER 15, 2021
1:30 P.M.**

TO: Operations Committee

Jon Peat	Cypress
James Gomez	La Habra
Tanya Doby	Los Alamitos
Mike Alvarez (Chair)	Orange
John Taylor	San Juan Capistrano
Sandra Massa-Lavitt	Seal Beach
Crystal Miles	Villa Park

FROM: Tawnia Pett, Executive Assistant/Clerk of the Board

RE: Operations Committee Meeting:
1:30 p.m., Wednesday, December 15, 2021
TELECONFERENCE MEETING

AGENDA

1. Call meeting to Order and Roll Call
2. Public Comments
3. Provide update and seek input of the committee on the Sterilized Insect Technique regional collaborative project
4. Adjourn

tep



Orange County Mosquito and Vector Control District

Serving Orange County Since 1947

PURSUANT TO ASSEMBLY BILL 361 THIS MEETING WILL BE
HELD AS A TELECONFERENCE MEETING

POLICY AND PERSONNEL COMMITTEE
THURSDAY DECEMBER 16, 2021
11:30 A.M.

Observers may view the meeting on Zoom at:
<https://us02web.zoom.us/j/87327358077>

Or Telephone:
Dial: 888 475 4499 (Toll Free) 877 853 5257 (Toll Free) 213 338 8477
Webinar ID: 873 2735 8077

Comments may be submitted via email to agenda-comments@ocvector.org up
to one hour prior to beginning of the meeting.

If you want to make a comment during the meeting, please hit *9 to raise your
hand and be recognized by the moderator.



**POLICY AND PERSONNEL COMMITTEE
MEETING NOTICE
DECEMBER 16, 2021
11:30 A.M.**

TO: Policy and Personnel Committee
Tammy Kim
Sue Kempf
Shari Horne
Tanya Doby
Craig Green
April Josephson
Jim Dahl
Cecilia Aguinaga (Chair)
Rebecca Gomez
Irvine
Laguna Beach
Laguna Woods
Los Alamitos
Placentia
Rancho Santa Margarita
San Clemente
Santa Ana
Tustin

FROM: Tawnia Pett, Executive Assistant/Clerk of the Board

RE: Policy and Personnel Committee Meeting:
11:30 a.m., Thursday, December 16, 2021
Teleconference Meeting

AGENDA

1. Call Meeting to Order and Roll Call
2. Public Comments
3. Approve minutes from August 19, 2021
4. Discuss proposed update to District Strategic Plan
5. Adjourn

tep

MINUTES OF POLICY AND PERSONNEL COMMITTEE MEETING

Orange County Mosquito and Vector Control District

TIME: 11:00 A.M., August 19, 2021

PLACE: Zoom Teleconference, Remote Meeting

Policy and Personnel Committee Members Present:

Craig Green	Placentia
Jim Dahl	San Clemente
Cecilia Aguinaga (Chair)	Santa Ana
Rebecca Gomez	Tustin

Policy and Personnel Committee Members Absent:

Tammy Kim	Irvine
Sue Kempf	Laguna Beach
Shari Horne	Laguna Woods
Tanya Doby	Los Alamitos
April Josephson	Rancho Santa Margarita

Others Present:

Richard Howard	District Manager
Tina Pacific	Human Resources Manager
Lora Young	Director of Communications
Steve Shepherd	Director of Operations
Tawnia Pett	Executive Assistant/Clerk of the Board

The meeting was called to order at 11:03 A.M.

- 1. Called the Meeting to Order and Roll Call:** Four members of the committee were present out of nine members.
- 2. Public Comments:** None
- 3. Approved Minutes from July 14, 2021:** On motion from Trustee R. Gomez, seconded by Trustee Dahl and approved by unanimous vote, the minutes for July 14, 2021 were approved. (Trustees Kim, Kempf, Horne, Doby, and Josephson were absent).
- 4. Provided the Committee with a plan to reorganize staffing for portions of the District, including potential staffing changes and anticipated associated expenses:** District Manager Howard and Operations Supervisor Shepherd gave a report about the recommended proposed changes to the operations department. The committee unanimously supported the reorganization plan (Trustees Kim, Kempf, Horne, Doby, Josephson, and Dahl were absent).
- 5. Adjourned:** Meeting adjourned at 11:28 A.M.



Orange County Mosquito and Vector Control District

Serving Orange County Since 1947

PURSUANT TO ASSEMBLY BILL 361 THIS MEETING WILL BE
HELD AS A TELECONFERENCE MEETING

BUDGET AND FINANCE COMMITTEE
THURSDAY DECEMBER 16, 2021
1:30 P.M.

Observers may view the meeting on Zoom at:
<https://us02web.zoom.us/j/89202521617>

Or Telephone:

Dial: 888 475 4499 (Toll Free) 877 853 5257 (Toll Free) 213 338 8477
Webinar ID: 892 0252 1617

Comments may be submitted via email to agenda-comments@ocvector.org up
to one hour prior to beginning of the meeting.

If you want to make a comment during the meeting, please hit *9 to raise your
hand and be recognized by the moderator.



**BUDGET AND FINANCE COMMITTEE
MEETING NOTICE
DECEMBER 16, 2021
1:30 P.M.**

TO: Budget and Finance Committee

Richard Hurt	Aliso Viejo
Mike Posey	Huntington Beach
Nitesh Patel	La Palma
Vladimir Anderson	Lake Forest
Bob Ruesch	Mission Viejo
Jim Dahl	San Clemente
Gary Taylor	Stanton
Crystal Miles (Chair)	Villa Park
Liz Guillen-Merchant	County of Orange

FROM: Tawnia Pett, Executive Assistant/Clerk of the Board

RE: Budget and Finance Committee Meeting:
1:30 p.m., Thursday December 16, 2021
Teleconference Meeting

AGENDA

1. Call the meeting to order and Roll Call
2. Public Comments
3. Approve minutes of July 15, 2021
4. Meet with District Auditors regarding the FY 2020-21 Independent Financial Audit of the OCMVCD
5. Adjourn

tep

MINUTES OF BUDGET AND FINANCE COMMITTEE MEETING

Orange County Mosquito and Vector Control District

TIME: 1:30 P.M., July 15, 2021

PLACE: Zoom Teleconference, Remote Meeting

Budget and Finance Committee Members Present:

Richard Hurt	Aliso Viejo
Nitesh Patel	La Palma
Vladimir Anderson	Lake Forest
Bob Ruesch	Mission Viejo
Jim Dahl	San Clemente

Budget and Finance Committee Members Absent:

Mike Posey	Huntington Beach
Gary Taylor	Stanton
Crystal Miles	Villa Park
Liz Guillen-Merchant	County of Orange

Others Present:

Richard Howard	District Manager
Tan Nguyen	Finance Manager
Tawnia Pett	Executive Assistant/Clerk of the Board

The meeting was called to order at 1:36 P.M.

- 1. Called the Meeting to Order and Roll Call:** Four members of the committee were present out of nine members, Trustee Dahl arrived late.
- 2. Public Comments:** None
- 3. Approved minutes of May 10, 2021:** On motion by Trustee Ruesch, seconded by Trustee Anderson, and passed by unanimous vote, the committee approved the minutes May 10, 2021. (Trustees Posey, Dahl, Taylor, Miles, and Guillen-Merchant were absent).
- 4. Reviewed District Credit Card Program and Policy:** District Manager Howard gave a presentation to the committee on the proposed changes to the District credit card program and policy. The committee felt uncomfortable making a policy change decision since there were so few committee members and since this wasn't a pressing issue, they asked that it come back to a future committee meeting.
- 5. Reviewed Audit Communication Letter for Fiscal Year 2021-22:** District Manager Howard reported Board President Posey, Budget and Finance Committee Chair Miles, and Trustee Green are meeting with the District Auditors to discuss the District financial situation. Finance Manager Nguyen gave a report on the audit letter.
- 6. Adjourned:** Meeting adjourned at 2:06 P.M.

MINUTES OF THE 897th MEETING

**BOARD OF TRUSTEES
Orange County Mosquito and Vector Control District**

TIME: 3:00 P.M. November 18, 2021

PLACE: 13001 Garden Grove Blvd., Garden Grove, CA 92843
MEETING TOOK PLACE BY TELECONFERENCE

PRESIDENT:	Mike Posey	Huntington Beach
VICE PRESIDENT:	James Gomez	La Habra
SECRETARY:	Peggy Huang	Yorba Linda

TRUSTEES PRESENT:

Aliso Viejo	Richard Hurt	Lake Forest	Vladimir Anderson
Anaheim	Lucille Kring	Los Alamitos	Tanya Doby
Brea	Cecilia Hupp	Mission Viejo	Bob Ruesch
Buena Park	Susan Sonne	Newport Beach	Joy Brenner
Costa Mesa	Bill Turpit	Orange	Michael Alvarez
Cypress	Jon Peat	Placentia	Craig Green
Dana Point	Rick Viczorek	Rancho Santa Margarita	April Josephson
Fountain Valley	Cheryl Brothers	San Clemente	Jim Dahl
Garden Grove	Stephanie Klopfenstein	San Juan Capistrano	John Taylor
Huntington Beach	Mike Posey	Santa Ana	Cecilia Aguinaga
Irvine	Tammy Kim	Seal Beach	Sandra Massa-Lavitt
La Habra	James Gomez	Stanton	Gary Taylor
Laguna Beach	Sue Kempf	Tustin	Rebecca Gomez
Laguna Hills	Erica Pezold	Villa Park	Crystal Miles
Laguna Niguel	Rischi Paul Sharma	Yorba Linda	Peggy Huang
Laguna Woods	Shari Horne	County of Orange	Elizabeth Guillen-Merchant

TRUSTEES ABSENT:

Fullerton	Nicholas Dunlap	Westminster	Chi Charlie Nguyen
La Palma	Nitesh Patel		

OTHERS PRESENT:

Rick Howard, District Manager
Amber Semrow, Director of Scientific Technical Services
Lora Young, Director of Communications
Steve Shepherd, Director of Operations
Tawnia Pett, Executive Assistant/Clerk of the Board
Alan Burns, District Counsel

A. Opening:

1. **Call the Business Meeting to Order:** President Posey called the meeting to order at 3:02 P.M.
2. **Pledge of Allegiance:** President Posey asked Trustee Viczorek to lead the Pledge of Allegiance.
3. **Roll Call:** Roll call indicated 29 Trustees were present with Trustees Hurt, Josephson, and Guillen-Merchant arriving late to bring the number to 32 out of the current Board membership of 35.
4. **Adopted Resolution No 514 Authorizing Remote Teleconference Meetings of the Legislative Bodies of the Orange County Mosquito and Vector Control District for the Period of November 20, 2021, through December 19, 2021, Pursuant to Brown Act Provisions: (Exhibit A, B)**

On motion from Trustee Aguinaga, seconded by Trustee Kring and approved by majority vote, the Board of Trustees adopted Resolution No. 514 proclaiming a local emergency, ratifying the proclamation of a state of emergency by Governors' Order No. 25-20, and authorized remote teleconference meetings of the legislative bodies of the Orange County Mosquito and Vector Control District for the period of November 20, 2021, through December 19, 2021, pursuant to Brown Act Provisions.

Ayes: Trustees Kring, Hupp, Sonne, Turpit, Peat, Viczorek, Brothers, Klopfenstein, Posey, Kim, J. Gomez, Kempf, Pezold, Sharma, Horne, Anderson, Doby, Ruesch, Brenner, Alvarez, Green, Josephson, Dahl, J. Taylor, Aguinaga, Massa-Lavitt, G. Taylor, R. Gomez, and Huang.

Noes: Trustee Miles.

Abstained: None.

Absent: Trustees Hurt, Dunlap, Patel, Nguyen, and Guillen-Merchant.

5. **Late/Other Communications:**
Late Communications: None

Other Communications: Update to Agenda Item G.4

B. Public Comments: None**C. Presentations:**

1. Staff gave a presentation entitled "Celebrating 75 Years of Service in Public Health: Outreach, Events, and Activities"

D. OCMVCD Committee Reports to the Board of Trustees:

1. Public Relations Committee: Committee Chair Klopfenstein reported that the committee reviewed the proposed schedule for the District's 75th anniversary celebration and the 2022 mosquito season campaign.

E. Consent Calendar: Items for Approval by General Consent

On motion from Trustee Kring, seconded by Trustee Miles, and passed by unanimous vote, the Board of Trustees approved Consent Calendar Items E.2 through E.3. Agenda Item E.1 was passed by majority vote due to absences at the previous Board Meeting (Abstained: Trustees Kring and Hupp).

Ayes: Trustees Kring, Hupp, Sonne, Turpit, Peat, Viczorek, Brothers, Klopfenstein, Posey, Kim, J. Gomez, Kempf, Pezold, Sharma, Horne, Anderson, Doby, Ruesch, Brenner, Alvarez, Green, Josephson, Dahl, J. Taylor, Aguinaga, Massa-Lavitt, G. Taylor, R. Gomez, Miles, Huang, and Guillen-Merchant.

Noes: None.

Abstained: None.

Absent: Trustees Hurt, Dunlap, Patel, and Nguyen.

1. **Approval of Minutes:** Approved, without reading, the Minutes of the 896th Meeting of the Board of Trustees held October 21, 2021.
2. **Approved Warrant Register for September 2021: (Exhibit A)** Received and filed.
3. **Approved Monthly Financial Report for September 2021: (Exhibit A)** Received and filed.

F. **Business and Action Items:**

1. **Adopted Resolution No. 515 Approving Proposed Staffing Modification to the Orange County Mosquito and Vector Control District Operations Department: (Exhibit A, B)**

On motion from Vice President J. Gomez, seconded by Trustee Hupp, and approved by unanimous vote, the Board of Trustees adopted Resolution No. 515 approving the reorganization of the District Operations Department by 1) eliminating one Vector Control Inspector III position; eliminating the Vector Assistant position; 2) adding two Vector Control Inspector II positions; and 3) amending the FY 2021-2022 Authorized Position Schedule to reflect the changes.

Ayes: Trustees Kring, Hupp, Turpit, Peat, Viczorek, Brothers, Klopfenstein, Posey, Kim, J. Gomez, Kempf, Pezold, Sharma, Horne, Anderson, Doby, Ruesch, Brenner, Alvarez, Green, Josephson, Dahl, J. Taylor, Aguinaga, Massa-Lavitt, G. Taylor, R. Gomez, Miles, Huang, and Guillen-Merchant.

Noes: None.

Abstained: None.

Absent: Trustees Hurt, Sonne, Dunlap, Patel, and Nguyen.

2. **Authorized Contract Renewal Between the Orange County Mosquito and Vector Control District and Vector Disease Control International, LLC to Perform Aerial Adult Mosquito Control Services (Exhibit A, B, C, D)**

On motion from Trustee Hupp, seconded by Trustee Alvarez, and approved by majority vote, the Board of Trustees authorized entering into a two year contract between the Orange County Mosquito and Vector Control District and Vector Disease Control International, LLC for aerial adult mosquito control services from January 1, 2022 until December 31, 2024; and authorized the District Manager to execute all contract documents associated with this action.

Ayes: Trustees Hurt, Kring, Hupp, Sonne, Turpit, Peat, Viczorek, Brothers, Klopfenstein, Posey, Kim, J. Gomez, Kempf, Pezold, Sharma, Anderson, Doby, Ruesch, Brenner, Alvarez, Green, Josephson, Dahl, J. Taylor, Aguinaga, Massa-Lavitt, G. Taylor, R. Gomez, Miles, Huang, and Guillen-Merchant.

Noes: Trustee Horne.

Abstained: None.

Absent: Trustees Dunlap, Patel, and Nguyen.

G. Informational Items Only (NO ACTION NECESSARY):

1. **Staff Presentation:** Director of Scientific Technical Services Semrow gave an update on vector activity in Orange County.
2. **Staff Presentation:** Director of Communications Young did not have a report.
3. **Staff Presentation:** Director of Operations Shepherd gave an update on operations activity in Orange County.
4. **Received and filed Trustee Terms of Office to Expire on January 3, 2022 at 11:59 AM:** Received and filed.
5. **Laboratory Reports- included in agenda packet:** Received and filed.

H. President's Report and Trustee Comments: None

I. District Manager's Report: District Manager Howard reported:

1. The District Manager from San Gabriel Valley MVCD has turned in his resignation.
2. There will be a special meeting on January 13, 2022 to approve AB 361 to stay within the 30 day limitations.
3. The District is a Toys for Tots regional distribution site through December 17, 2021.
4. If you are interested in attending the MVCAC or AMCA Annual Conference let the Clerk know by December 16, 2021.
5. There are five committee meetings in December: Executive December 1; Joint Committee meeting: Budget and Finance and Building, Property, & Equipment December 15; Operations December 15; Policy and Personnel December 16; Budget and Finance December 16.

J. District Legal Counsel Report: None

K. Correspondence:

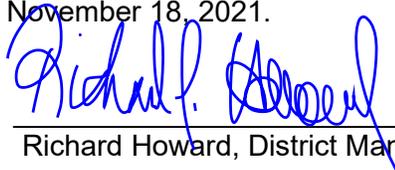
1. Staff Conference Reports from October and November 2021

L. Future Agenda Items: None

M. Adjournment:

1. President Posey adjourned the meeting at 4:07 p.m. to the next regularly scheduled meeting on Thursday, December 16, 2021.

I certify that the above minutes substantially reflect the actions taken by the Board of Trustees at its meeting held November 18, 2021.


Richard Howard, District Manager

Approved as written and/or corrected by the Board of Trustees at its _____
_____ meeting held _____

ATTEST: _____
Peggy Huang, Secretary



ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT

December 16, 2021

AGENDA REPORT

AGENDA ITEM G.2

Prepared By: Tan Nguyen, Finance Manager
Submitted By: Rick Howard, District Manager

Agenda Title:

Approve Warrant Register for October 2021

Recommended Action:

Receive and file.

Executive Summary:

Receive and file payment of October warrant register dated December 16, 2021 in the amount of \$440,924.48 as presented by in-house check runs dated October 7, 14, 21, 26, 27, and 29, 2021.

Fiscal Impact:

Amount Requested \$ N/A

Sufficient Budgeted Funds Available:

Category: Pers. Optg. Cap. -or- CIP# Fund#

Previous Relevant Board Actions for This Item:

Exhibits:

Exhibit A: October 2021 Warrant Report

ORANGE COUNTY MOSQUITO & VECTOR CONTROL DISTRICT

REGISTER OF DEMANDS DECEMBER 16, 2021

ACCOUNTS PAYABLE REGISTER

A/P Check Run	10/7/2021	34,410.01
A/P Check Run	10/14/2021	122,285.09
A/P Check Run	10/21/2021	109,691.28
A/P Check Run	10/26/2021	10,307.42
A/P Check Run	10/27/2021	10,998.64
P/R CalPERS1	10/14/2021	41,393.40
P/R EDD	10/14/2021	10,599.75
P/R IRS	10/14/2021	37,465.66
P/R STATE	10/14/2021	173.53
P/R TASC	10/14/2021	2,259.35
P/R EEASSOC	10/14/2021	787.50
P/R ICMA	10/14/2021	22,813.38
P/R NATION	10/14/2021	4,760.00
P/R USB	10/14/2021	2,010.19
P/R EEASSOC	10/29/2021	787.50
P/R ICMA	10/29/2021	23,519.25
P/R NATION	10/29/2021	4,760.00
P/R USB	10/29/2021	1,902.53
TOTAL	\$	440,924.48

I hereby certify that the claims or demands covered by the foregoing listed warrants have been audited as to the accuracy and availability of funds for payment thereof. Subscribed and sworn on this 16TH day of December 2021.


Rick Howard, District Manager


Tan Nguyen, Finance Manager

Accounts Payable

Checks by Date - Summary by Check Date

User: chumphrey
 Printed: 11/2/2021 9:37 AM



Check No	Vendor No	Vendor Name	Check Date	Check Amount
ACH	CLA	CLIFTON LARSON ALLEN LLP	10/07/2021	11,900.00
ACH	HASLER	MAIL FINANCE INC.	10/07/2021	119.28
ACH	IRON	Iron Mountain Records Mgmt, Inc.	10/07/2021	169.52
ACH	PRAXAIR	Praxair Distribution, Inc	10/07/2021	4,622.60
ACH	SPECTRUM	Time Warner Cable/Spectrum	10/07/2021	826.01
ACH	VERIZON	Verizon Wireless Services LLC	10/07/2021	5,708.12
ACH	VZCONNEX	VERIZON CONNECT NWF, INC	10/07/2021	1,266.82
26176	AQUATIC	Pentair Aquatic Eco-Systems Inc.	10/07/2021	551.72
26177	CASH	CASH	10/07/2021	455.45
26178	CDPH CE	Vector-Borne Disease Account	10/07/2021	684.00
26179	GENESEE	Genesee Scientific Corporation	10/07/2021	773.64
26180	GFS	Governmental Financial Services	10/07/2021	1,885.00
26181	GG WATER	City of Garden Grove	10/07/2021	1,610.40
26182	KOSMONT	Kosmont & Associates	10/07/2021	756.82
26183	LIFE	Life Technologies	10/07/2021	1,873.04
26184	QDOXS	Q Document Solutions, Inc,	10/07/2021	177.86
26185	QIAGEN	QIAGEN INC.	10/07/2021	874.32
26186	SMART	Smart & Final Stores Corp	10/07/2021	155.41
Total for 10/7/2021:				34,410.01
ACH	CalPERS1	CalPERS	10/14/2021	41,393.40
ACH	EDD	Employment Development Dept.	10/14/2021	10,599.75
ACH	IRS	Internal Revenue Service	10/14/2021	37,465.66
ACH	STATE	STATE DISBURSEMENT UNIT	10/14/2021	173.53
ACH	TASC	Total Administrative Services Corp.	10/14/2021	2,259.35
ACH	EEASSOC	OCVCD Employee Association	10/14/2021	787.50
ACH	ICMA	MissionSquare Retirement (ICMA)	10/14/2021	22,813.38
ACH	NATION	Nationwide Retirement Solutions	10/14/2021	4,760.00
ACH	USB	PARS/U.S. Bank N.A. Minnesota	10/14/2021	2,010.19
ACH	ADAPCO	ADAPCO, INC.	10/14/2021	38,759.83
ACH	AIRGAS	AIRGAS USA, LLC	10/14/2021	137.16
ACH	GG DISP	Republic Waste Svcs of So. Calif., LLC	10/14/2021	1,812.35
ACH	HASLER	MAIL FINANCE INC.	10/14/2021	597.86
ACH	SPARK	Sparkletts	10/14/2021	469.48
ACH	SPECTRUM	Time Warner Cable/Spectrum	10/14/2021	1,494.00
ACH	TARGET	Target Specialty Products	10/14/2021	15,281.05
26187	AQUA	AquaSolver, LLC	10/14/2021	545.74
26188	AT T	AT&T MOBILITY	10/14/2021	32.14
26189	AT&T	AT&T	10/14/2021	68.12
26190	BATT SYS	Battery Systems Inc.	10/14/2021	212.80
26191	BEL-AIR	Bel-Air Shells	10/14/2021	246.16
26192	BIO QUIP	Bio Quip Products	10/14/2021	373.60
26193	CAGATE	California Gate & Entry System	10/14/2021	123.75
26194	CROWN	Crown Maintenance	10/14/2021	215.00
26195	DEMSEY	Demsey, Filliger & Associates, LLC	10/14/2021	500.00
26196	DMV	Calif. Dept. of Motor Vehicles	10/14/2021	22.00

Check No	Vendor No	Vendor Name	Check Date	Check Amount
26197	DUBOSE	Michael DuBose	10/14/2021	150.00
26198	GGCC	Garden Grove Chamber of Commerce	10/14/2021	159.00
26199	HARPER	Harper & Burns, LLP	10/14/2021	5,626.20
26200	HOME DEP	Home Depot Credit Services	10/14/2021	371.89
26201	INSIGHT	Insight Public Sector, Inc.	10/14/2021	1,283.14
26202	KWEST	K'WEST Printing	10/14/2021	266.44
26203	LIFE	Life Technologies	10/14/2021	1,394.72
26204	MARTIN D	Daniel Martinez	10/14/2021	575.00
26205	SCHORR	Schorr Metals	10/14/2021	6.59
26206	STAPLES	Staples Business Advantage	10/14/2021	7.46
26207	SYNTECH	SYNTECH GROUP, INC.	10/14/2021	39,221.00
26208	TRITON	Triton Technology Solutions, Inc	10/14/2021	5,678.37
26209	WESTCOAS	RJ International	10/14/2021	4,954.24
26210	WOODRUFF	Woodruff Spradlin & Smart	10/14/2021	1,700.00
Total for 10/14/2021:				244,547.85
ACH	AIRGAS	AIRGAS USA, LLC	10/21/2021	171.83
ACH	MVCAC	M.V.C.A.C.	10/21/2021	11,550.00
26211	AMAZON	AMAZON/SYNCB	10/21/2021	4,099.12
26212	CINTAS	Cintas Corporation No. 2	10/21/2021	2,054.76
26213	CSDA	Calif. Special Districts Assoc.	10/21/2021	8,420.00
26214	FISHER	Fisher Scientific	10/21/2021	1,053.76
26215	FREEWAY	Freeway Toyota of Hanford Cappel Management	10/21/2021	28,682.00
26216	GENESEE	Genesee Scientific Corporation	10/21/2021	141.80
26217	HASFIN	Quadient Finance USA, Inc	10/21/2021	750.22
26218	JACOT	Jacot Plumbing Inc.	10/21/2021	793.85
26219	JUST	JUST TIRES	10/21/2021	1,670.05
26220	KWEST	K'WEST Printing	10/21/2021	913.50
26221	LAMPIRE	Lampire Biological Laboratories, Inc.	10/21/2021	336.00
26222	OCFILMS	George Alexander Bicer	10/21/2021	6,700.00
26223	OCTAX	County Of Orange	10/21/2021	9,702.20
26224	OREILLY	O'Reilly Auto Enterprises, LLC	10/21/2021	2,002.08
26225	PARS	Public Agency Retirement Svcs	10/21/2021	300.00
26226	PASSPORT	Passport Health Los Angeles	10/21/2021	1,680.00
26227	PR	P & R Paper Supply Company, Inc.	10/21/2021	506.24
26228	PROLOCK	Professional Lock System, Inc.	10/21/2021	1,440.41
26229	SAMSARA	Samsara Networks, Inc.	10/21/2021	26,034.75
26230	SCG	Southern Calif. Gas Co.	10/21/2021	72.09
26231	XEROX	Xerox Financial Services	10/21/2021	616.62
Total for 10/21/2021:				109,691.28
ACH	ABBE	ROGER ABBE	10/26/2021	49.78
ACH	ARIASA	Adina Arias	10/26/2021	234.05
ACH	BENNETT	Stephen Bennett	10/26/2021	234.05
ACH	BOBBITT	Catherine Bobbitt	10/26/2021	234.05
ACH	CAMPBELL	JAMES CAMPBELL	10/26/2021	75.27
ACH	CAVILEER	Raymond Cavileer	10/26/2021	234.05
ACH	CUMMINGS	Robert F. Cummings	10/26/2021	234.05
ACH	DAIKER	John Daiker	10/26/2021	260.80
ACH	EDISON	SUZANNE R. EDISON	10/26/2021	297.00
ACH	ELLIOTT	MARGARET ELLIOTT	10/26/2021	49.78
ACH	EVER	GARY EVERINGHAM	10/26/2021	104.90
ACH	FOGARTY	Carrie Fogarty	10/26/2021	234.05
ACH	Goedhart	Gerard Goedhart	10/26/2021	234.05
ACH	HEARST	Michael Hearst	10/26/2021	434.05

Check No	Vendor No	Vendor Name	Check Date	Check Amount
ACH	Huff	Robert Huff	10/26/2021	234.05
ACH	KELLER	JUSTINE KELLER	10/26/2021	75.27
ACH	KIMBALL	Deborah Kimball	10/26/2021	234.05
ACH	KOENIG	Steve Koenig	10/26/2021	234.05
ACH	LACHANCE	Glenn LaChance	10/26/2021	341.30
ACH	LOUGHNER	LINDA LOUGHNER	10/26/2021	220.20
ACH	MCCARTY	Danny McCarty	10/26/2021	234.05
ACH	MILLER J	Jon Miller	10/26/2021	234.05
ACH	MONTANI	Karen Montani	10/26/2021	88.19
ACH	NIEWOLA	Urszula Niewola	10/26/2021	234.05
ACH	PARSONS	John Parsons	10/26/2021	234.05
ACH	POSPISIL	Terry Pospisil	10/26/2021	234.05
ACH	REES	JETTE REES	10/26/2021	112.00
ACH	Rehders	Renee Rehders	10/26/2021	234.05
ACH	REINIG	Allyson Reinig	10/26/2021	234.05
ACH	Reisin	Caroline Reisinger	10/26/2021	234.05
ACH	Reynolds	Thomas Reynolds	10/26/2021	49.78
ACH	RINCON	Claudio Rincon	10/26/2021	234.05
ACH	SHAW	LAWRENCE SHAW	10/26/2021	234.05
ACH	SIPE	Russell Sipe	10/26/2021	234.05
ACH	Velten	Robert K. Velten	10/26/2021	234.05
ACH	AGUINAGA	X. Cecilia Aguinaga	10/26/2021	100.00
ACH	ALVAREZ	Michael Alvarez	10/26/2021	100.00
ACH	BRENNER	JOY BRENNER	10/26/2021	100.00
ACH	BROTHERS	Cheryl Brothers	10/26/2021	100.00
ACH	DAHL	Jim Dahl	10/26/2021	100.00
ACH	DOBYT	Tanya Doby	10/26/2021	100.00
ACH	GOMEZ	James Gomez	10/26/2021	100.00
ACH	GOMEZR	REBECCA GOMEZ	10/26/2021	100.00
ACH	GREEN C	Craig S. Green	10/26/2021	100.00
ACH	HORNE	Shari Lucas Horne	10/26/2021	100.00
ACH	HUANG	Peggy Huang	10/26/2021	100.00
ACH	HURT	RICHARD HURT	10/26/2021	100.00
ACH	JOSEPH	April Josephson	10/26/2021	100.00
ACH	KEMPF	SUSAN KEMPF	10/26/2021	100.00
ACH	KIM	TAMMY KIM	10/26/2021	100.00
ACH	KLOPFEN	Stephanie L. Klopfenstein	10/26/2021	100.00
ACH	MASSA-LA	Sandra Massa-Lavitt	10/26/2021	100.00
ACH	MILESC	Crystal Miles	10/26/2021	100.00
ACH	NGUYENC	CHI CHARLIE NGUYEN	10/26/2021	100.00
ACH	PEATJ	Jon Peat	10/26/2021	100.00
ACH	PEZOLDE	Erica Pezold	10/26/2021	100.00
ACH	RUESCH	Robert J. Ruesch	10/26/2021	100.00
ACH	SHARMA	RISCHI SHARMA	10/26/2021	100.00
ACH	SONNE	SUSAN SONNE	10/26/2021	100.00
ACH	TURPIT	WILLIAM TURPIT	10/26/2021	100.00
ACH	ZTAYLORG	Gary Taylor	10/26/2021	100.00
26232	ANDERSON	Vladimir Anderson	10/26/2021	100.00
26233	POSEY	Mike Posey	10/26/2021	100.00
26234	TAYLOR	John Taylor	10/26/2021	100.00
26235	VICZOREK	Richard Viczorek	10/26/2021	100.00
Total for 10/26/2021:				10,307.42
26236	FM	F M CREDIT CARD	10/27/2021	10,998.64
Total for 10/27/2021:				10,998.64

Check No	Vendor No	Vendor Name	Check Date	Check Amount
ACH	EEASSOC	OCVCD Employee Association	10/29/2021	787.50
ACH	ICMA	MissionSquare Retirement (ICMA)	10/29/2021	23,519.25
ACH	NATION	Nationwide Retirement Solutions	10/29/2021	4,760.00
ACH	USB	PARS/U.S. Bank N.A. Minnesota	10/29/2021	1,902.53
Total for 10/29/2021:				30,969.28
Report Total (151 checks):				440,924.48



ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT

December 16, 2021

AGENDA REPORT

AGENDA ITEM G.3

Prepared By: Tan Nguyen, Finance Manager
Submitted By: Rick Howard, District Manager

Agenda Title:

Approve Monthly Financial Report for October 2021

Recommended Action:

Receive and file

Executive Summary:

Accept for inclusion, the Orange County Mosquito and Vector Control District Monthly Financial Report for October 2021

Fiscal Impact:

Amount Requested \$ N/A

Sufficient Budgeted Funds Available:

Category: Pers. Optg. Cap. -or- CIP# Fund#

Previous Relevant Board Actions for This Item:

Exhibits:

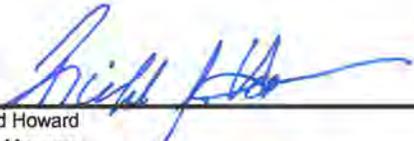
Exhibit A: Monthly Financial Report for October 2021

Orange County Mosquito and Vector Control District
Monthly Financial Report
Month Ending October 31, 2021

Fund No.	Fund	Cash Balance 9/30/2021	Revenue	Expenditures	Transfers	Accrual Adjustment	Cash Balance 10/31/2021	Cash Balance 10/31/2020
10	Operating	\$ 5,838,218	\$ 6,538	\$ 768,860	\$ -	\$ (29,070)	\$ 5,046,826	\$ 2,907,732
20	Vehicle Replacement	591,108	1,152	-	-	-	592,260	555,206
30	Liability Reserve	370,366	721	-	-	-	371,087	360,611
40	Equipment Replacement	839,857	1,637	-	-	-	841,494	836,602
50	Emergency Vector Control	1,681,544	3,277	-	-	-	1,684,821	1,675,027
60	Facility Improvement	8,974,806	39,628	8,158	-	-	9,006,276	8,188,138
70	Habitat Remediation	100,002	-	-	-	-	100,002	100,002
90	Retiree Medical Insurance	(48,055)	3,052	17,514	-	10,206	(52,311)	109,446
95	Retirement Contingency	254,272	495	-	-	-	254,767	253,185
99	Payroll Clearing	293,593	-	-	-	(120,759)	172,834	118,507
		\$ 18,895,711	\$ 56,500	\$ 794,532	\$ -	\$ (139,623)	\$ 18,018,056	\$ 15,104,456

Cash & Investment Balances:		Monthly Yield
California LAIF	\$ 9,891,262	0.203%
O.C. Treasurer	1,735,642	0.456%
Stifel Brokerage account		
Money market (par)	49,963	0.01%
Fixed income - Muni (par)	2,465,000	2.50%
Fixed income - other (par)	2,585,000	2.22%
Unamortized premium/(discount) on investments	133,168	n/a
F&M Checking	1,077,566	n/a
Payroll Checking	24,092	n/a
F&M HBP	46,363	0.05%
Petty Cash - Checking	10,000	n/a
Total Cash and Investments	\$ 18,018,056	

Section 115 Irrevocable Trust Balances:		3-month return
PARS Post-Employment Benefits Trust	\$ 4,520,105	1.53%
PARS Pension Trust	2,774,798	1.53%
Total PARS Trust Balances	\$ 7,294,903	


Richard Howard
District Manager


Tan Nguyen
Finance Manager

Monthly Cash Flow

Month	Revenue	Expenditures	Transfers	Accrual Adjustment	Monthly Cash Flow	Prior Year Comparison
July	\$ 41,901	\$ 948,422	\$ -	\$ 242,764	\$ (663,757)	\$ (1,433,920)
August	91,249	1,769,806	-	4,146	(1,674,411)	(1,056,777)
September	174,220	1,379,560	-	(84,182)	(1,289,522)	(823,080)
October	56,500	794,532	-	(139,623)	(877,655)	(1,390,796)
November					-	1,997,754
December					-	4,524,859
January					-	(384,054)
February					-	(775,667)
March					-	(116,431)
April					-	3,275,642
May					-	(122,973)
June					-	(939,850)
Total YTD	\$ 363,870	\$ 4,892,320	\$ -	\$ 23,105	\$ (4,505,345)	\$ 2,754,707

Revenues: 33% of Fiscal Year

10-Operating Fund	Budget	Actual	Percentage
Property Taxes	\$ 6,820,650	\$ 161,069	2.4%
1996 Benefit Assessment	1,575,850	179	0.0%
2004 Benefit Assessment	6,740,000	272	0.0%
Interest and Concessions	40,000	19,969	49.9%
Miscellaneous	15,000	992	6.6%
Successor Agency Pass thru/Residual	400,000	4,955	1.2%
Rent for Cell Sites	29,909	10,219	34.2%
VCJPA Pooled Services	64,991	-	0.0%
CDPH - CA State Grant	-	-	0.0%
Charges for Services	60,000	29,869	49.8%
Total Operating Fund Revenues	15,746,400	227,524	1.4%

The major distributions of property tax and benefit assessments occur in four installments: December, January, April, and May

Monies come through the County and are unpredictable

No.	Other Funds	Budget	Actual	Percentage
20	Vehicle Replacement	15,000	1,152	7.7%
30	Liability Reserve	3,000	722	24.1%
40	Equipment Replacement	6,000	1,637	27.3%
50	Emergency Vector Control	10,000	3,277	32.8%
60	Facility Improvement	330,000	118,547	35.9%
70	Habitat Remediation	-	-	0.0%
90	Retiree Medical Insurance	33,000	10,515	31.9%
95	Retirement Contingency	2,000	496	24.8%
	Total Other Funds	381,000	136,346	35.8%
	Total Revenue	\$ 16,145,400	\$ 363,870	2.3%

Expenditures: 33% of Fiscal Year

No.	10-Operating Fund	Budget	Actual	Percentage
110	Trustees	\$ 76,050	\$ 12,200	16.0%
120	District Manager	455,145	123,521	27.1%
130	Legal Services	122,000	15,090	12.4%
140	Non-Departmental	431,500	87,642	20.3%
	Executive	1,084,695	238,453	22.0%
210	Administrative Services	880,345	291,448	33.1%
220	Insurance	787,600	726,375	92.2%
	Administrative Services	1,667,945	1,017,823	61.0%
310	Technical Services	2,007,370	509,453	25.4%
	Scientific Technical Services	2,007,370	509,453	25.4%
410	Field Operations	7,130,935	2,169,705	30.4%
430	Vehicle Maintenance	918,865	263,374	28.7%
440	Building Maintenance	291,455	75,448	25.9%
	Operations	8,341,255	2,508,527	30.1%
510	Public Information	804,085	234,919	29.2%
520	Information Technology	878,995	244,216	27.8%
530	Public Service	169,310	50,082	29.6%
	Public Information	1,852,390	529,217	28.6%
	Total Operating Fund Expenditures	14,953,655	4,803,473	32.1%

Invoices are paid monthly, one or two months after services provided.

Annual insurance premiums were paid in August.

No.	Other Funds	Budget	Actual	Percentage
20	Vehicle Replacement	-	-	0.0%
30	Liability Reserve	-	-	0.0%
40	Equipment Replacement	-	-	0.0%
50	Emergency Vector Control	-	-	0.0%
60	Facility Improvement	44,500	12,541	28.2%
70	Habitat Remediation	-	-	0.0%
90	Retiree Medical Insurance	218,010	76,306	35.0%
95	Retirement Contingency	300,000	-	0.0%
	Total Other Funds	562,510	88,847	15.8%
	Total Expenditures	\$ 15,516,165	\$ 4,892,320	31.5%

The triennial true-up payment to OCERS is not needed.

STIFEL PRESTIGE® ACCOUNT STATEMENT

1 1 1 D183680 SSNR00901

**ORANGE COUNTY MOSQUITO &
VECTOR CONTROL DISTRICT
13001 GARDEN GROVE BLVD
GARDEN GROVE CA 92843-2102**



Your Financial Advisor (LU04):

SANDRA WHEELER
Telephone: (805) 783-2921

Office Serving Your Account:

999 MONTEREY ST. STE. 360
SAN LUIS OBISPO, CA 93401

PRIMARY INVESTMENT OBJECTIVE: Income

RISK TOLERANCE: Moderate

For a full definition of this objective and risk tolerance, including the use of margin, please see www.stifel.com, IMPORTANT DISCLOSURES, or contact your Financial Advisor. If you have any questions concerning your investment objective or risk tolerance, or wish to make a change, please contact your Financial Advisor or the Branch Manager for this office.

TRADING TAX LOT RELIEF METHOD: First In, First Out

INVESTOR UPDATE

The end of the year will be here before you know it. Talk to your Stifel Financial Advisor to assess your plans, schedule charitable donations, and tie up any tax planning before 2021 comes to a close.

ACCOUNT PROTECTION

Stifel, Nicolaus & Company, Incorporated provides up to \$150 million of coverage for securities held in client accounts, of which \$1.15 million may be in cash deposits. Ask your Financial Advisor for more details.

Thank you for allowing Stifel to serve you. In order to protect your rights, including rights under the Securities Investor Protection Act (SIPA), please promptly report, in writing, any inaccuracies or discrepancies in this account or statement to the Compliance Department of Stifel at the address below. If you have any questions regarding your account or this statement, please contact your Financial Advisor or the Branch Manager for this office. For additional information regarding your Stifel account, please refer to the current Stifel Account Agreement and Disclosure Booklet, which is available at www.stifel.com/disclosures/account-agreement.

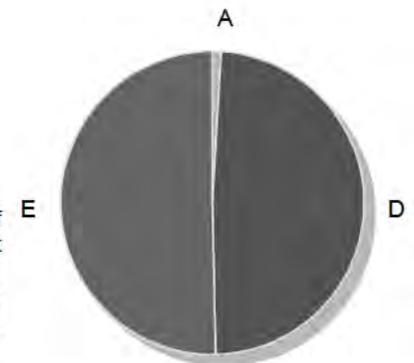
PORTFOLIO SUMMARY	October 31	September 30
Net Cash Equivalents **	49,962.60	10,977.88
Net Portfolio Assets held at Stifel	5,191,295.40	5,239,991.45
Net Portfolio Assets not held at Stifel		
Net Portfolio Value	\$5,241,258.00	\$5,250,969.33
YOUR CHANGE IN PORTFOLIO VALUE	October 31	September 30
Net Cash Flow (Inflows/Outflows) ²		
Securities Transferred In/Out		
Income and Distributions	13,984.72	4,602.69
Change in Securities Value	-23,696.05	-20,484.65
Net Change in Portfolio Value	-\$9,711.33	-\$15,881.96

** See the Stifel Insured Bank Deposit Program Disclosure Statements for additional information.

² Does not include cost or proceeds for buy or sell transactions.

YOUR ASSET SUMMARY

	Value on October 31, 2021 (\$)	Percentage of your account
A Net Cash Equivalents**	49,962.60	0.95%
D Fixed Income-Muni	2,550,703.15	48.67%
E Fixed Income-Other	2,640,592.25	50.38%
Total Assets	\$5,241,258.00	100.00%



ASSET SUMMARY

	Value as of October 31, 2021			% of assets *	Gains/(-)Losses		
	At Stifel	Not at Stifel	Total		Unrealized	Realized This Period	Year-to-date
Cash							
Cash Sweep**	49,962.60		49,962.60	0.95%			
Margin Balance							
A. Net Cash Equivalents	\$49,962.60		\$49,962.60	0.95%			
B. Equities							
C. Preferreds							
D. Fixed Income-Muni	2,550,703.15		2,550,703.15	48.67%	-12,908.93	-925.94	2,055.51
E. Fixed Income-Other	2,640,592.25		2,640,592.25	50.38%	23,519.11		4,524.73
F. Mutual Funds							
G. Unit Investment Trusts							
H. Insurance Products							
I. Alternative Investments							
J. Other Investments							
K. Stifel Smart Rate Program **							
Net Portfolio Assets	\$5,191,295.40	\$0.00	\$5,191,295.40	99.05%	\$10,610.18	-\$925.94	\$6,580.24
Net Portfolio Value	\$5,241,258.00	\$0.00	\$5,241,258.00	100.00%	\$10,610.18	-\$925.94	\$6,580.24

INCOME & DISTRIBUTION SUMMARY

	Security Type	Year-to-date	This period
Dividends	Tax-Exempt		
	Taxable		
Interest	Tax-Exempt	2,358.33	333.33
	Taxable	105,869.49	13,651.39
Capital Gain Distributions			
Return of Principal			
Other			
Total Income & Distributions		\$108,227.82	\$13,984.72

INFORMATION SUMMARY

	Security Type	Year-to-date	This period
Accrued Interest Paid	Tax-Exempt		
	Taxable	9,931.37	
Accrued Interest Received	Tax-Exempt		
	Taxable	2,937.78	
Gross Proceeds		1,327,585.96	25,000.00
Federal Withholding			
Foreign Taxes Paid			
Margin Interest Charged		28.08	

* Please note "% of assets" figures are shown gross of any amounts owed to Stifel and/or net short positions.

** Include balances which are FDIC insured bank deposits, not cash held in your Securities Account and not covered by SIPC.

ASSET DETAILS

This section shows the cash equivalents and/or securities in your account. Prices obtained from outside sources are considered reliable but are not guaranteed by Stifel. Actual prices may vary, and upon sale, you may receive more or less than your original purchase price. Contact your Financial Advisor for current price quotes. Gain/Loss is provided for informational purposes only. Cost basis may be adjusted for, but not limited to, amortization, accretion, principal paydowns, capital changes, listed option premiums, gifting rules, inheritance step-up, or wash sales. The Gain/Loss information should not be used for tax preparation without the assistance of your tax advisor. Lot detail quantity displayed is truncated to the one thousandth of a share.

NET CASH EQUIVALENTS

	<i>Current value</i>	<i>Cost Basis</i>	<i>Estimated Annualized Income</i>	<i>Estimated Yield %</i>
STIFEL FDIC INSURED	49,962.60	49,962.60	5.00	0.01%
Total Net Cash Equivalents	\$49,962.60	\$49,962.60	\$5.00	0.01%

STIFEL INSURED BANK DEPOSIT PROGRAM

Funds deposited through the Stifel Insured Bank Deposit Program (the "Program") may be deposited at multiple banks. The Program's Disclosure Statement is available at www.stifel.com/disclosures/account-agreement. The deposits are not covered by the Securities Investor Protection Corporation ("SIPC"). Deposits are insured by the FDIC within applicable limits.

Balances in the Program or in any money market fund offered as an available fund for Cash Investment Services at Stifel, subject to applicable limits, can be liquidated upon request and the proceeds returned to your securities account or can be distributed directly to you with the proper withdrawal form on file.

PORTFOLIO ASSETS - HELD AT STIFEL

Fixed Income-Muni	<i>Symbol/ Bond Rating/ Type</i>	<i>Quantity</i>	<i>Current Price/ Current Value</i>	<i>Average Unit Cost/ Cost Basis</i>	<i>Accrued Income⁶</i>	<i>Unrealized Gain/(-)Loss¹⁰</i>	<i>Estimated Annualized Income</i>	<i>Estimated Yield %</i>
OHIO ST WTR DEV AUTH POLLTN CTL REV WTR QUAL B2 BABS B/E TXBL CPN 3.742% DUE 12/01/21 DTD 08/24/10 FC 12/01/10 CUSIP: 67766WQH8 <i>Original Cost: 77,685.99</i>	S&P: AAA Moody: Aaa Cash	75,000	100.2870 75,215.25	100.1675 75,125.62	1,169.38	89.63	2,806.50	3.73%
NORCO CA CMNTY REDEV AGY SUCCESS AGY REV TAX ALLOC RFDG B B/E TXBL CPN 2.715% DUE 03/01/22 DTD 12/20/17 FC 03/01/18 CUSIP: 655505BJ3 <i>Original Cost: 153,354.50</i>	S&P: AA- Cash	150,000	100.7740 151,161.00	100.4024 150,603.63	678.75	557.37	4,072.50	2.69%



ASSET DETAILS (continued)

PORTFOLIO ASSETS - HELD AT STIFEL (continued)

Fixed Income-Muni	<i>Symbol/ Bond Rating/ Type</i>	<i>Quantity</i>	<i>Current Price/ Current Value</i>	<i>Average Unit Cost/ Cost Basis</i>	<i>Accrued Income⁶</i>	<i>Unrealized Gain/(-)Loss¹⁰</i>	<i>Estimated Annualized Income</i>	<i>Estimated Yield %</i>
OCEANSIDE CA PENSION OBLIG RFDG REV B/E TXBL CPN 3.839% DUE 08/15/22 DTD 08/11/15 FC 02/15/16 CUSIP: 675371AY4 <i>Original Cost: 104,986.00</i>	S&P: AA+ Cash	100,000	102.6730 102,673.00	101.7327 101,732.67	810.46	940.33	3,839.00	3.74%
WATAUGA CNTY NC RFDG B/E TXBL CPN 2.330% DUE 06/01/23 DTD 10/02/19 FC 06/01/20 CUSIP: 94109SAT8 <i>Original Cost: 113,363.30</i>	S&P: AA Cash	110,000	102.6570 112,922.70	101.6023 111,762.56	1,067.92	1,160.14	2,563.00	2.27%
FARRELL PA AREA SCH DIST AGM B/E TXBL CPN 1.270% DUE 08/15/23 DTD 08/18/20 FC 02/15/21 CUSIP: 311690HM6 <i>Original Cost: 50,930.00</i>	S&P: AA Moody: A2 Cash	50,000	100.6800 50,340.00	101.3572 50,678.61	134.06	-338.61	635.00	1.26%
CONNECTICUT ST SER A B/E TXBL CPN 1.998% DUE 07/01/24 DTD 06/11/20 FC 01/01/21 CUSIP: 20772KJW0 <i>Original Cost: 112,753.90</i>	S&P: A+ Moody: Aa3 Cash	110,000	102.8470 113,131.70	101.6682 111,835.02	732.60	1,296.68	2,197.80	1.94%
KANSAS ST DEV FIN AUTH REV ATHLETIC FACS K ST SER B 2 B/E TXBL CPN 4.083% DUE 07/01/24 DTD 03/01/12 FC 07/01/12 CUSIP: 485429MF8 <i>Original Cost: 77,557.81</i>	S&P: A- Moody: A1 Cash	70,000	107.8820 75,517.40	108.0897 75,662.81	952.70	-145.41	2,858.10	3.78%
AMARILLO TX HOTEL OCCUP TAX REV AGM B/E TXBL CPN 3.070% DUE 08/15/24 DTD 03/15/16 FC 02/15/17 CUSIP: 023039AF7 <i>Original Cost: 80,422.25</i>	S&P: AA Cash	75,000	104.2800 78,210.00	106.3164 79,737.27	486.08	-1,527.27	2,302.50	2.94%

ASSET DETAILS (continued)

PORTFOLIO ASSETS - HELD AT STIFEL (continued)

Fixed Income-Muni	<i>Symbol/ Bond Rating/ Type</i>	<i>Quantity</i>	<i>Current Price/ Current Value</i>	<i>Average Unit Cost/ Cost Basis</i>	<i>Accrued Income⁶</i>	<i>Unrealized Gain/(-)Loss¹⁰</i>	<i>Estimated Annualized Income</i>	<i>Estimated Yield %</i>
MIAMI DADE CNTY FL AVIATION REV RFDG SER B B/E TXBL CPN 2.504% DUE 10/01/24 DTD 08/25/16 FC 10/01/16 CUSIP: 59333PV39 <i>Original Cost: 208,207.00</i>	S&P: A- Cash	200,000	104.6120 209,224.00	102.9873 205,974.59	417.33	3,249.41	5,008.00	2.39%
SAN DIEGO CA CONVNTN CTR EXPANSION FING AUTH LSE REV RFDG B/E TXBL CPN 1.677% DUE 04/15/25 DTD 07/08/20 FC 10/15/20 CUSIP: 79727LBS7 <i>Original Cost: 173,029.30</i>	S&P: AA- Cash	170,000	100.5730 170,974.10	101.4418 172,450.99	126.71	-1,476.89	2,850.90	1.67%
NEW YORK NY CITY HSG DEV CORP MLTIFAM HSG REV SER E B/E CPN 3.000% DUE 05/01/25 DTD 09/24/14 FC 11/01/14 CALL 05/01/23 @ 100.000 CUSIP: 64972CBF9 <i>Original Cost: 117,294.45</i>	S&P: AA+ Moody: Aa2 Cash	110,000	103.5540 113,909.40	103.6700 114,037.03	1,650.00	-127.63	3,300.00	2.90%
SUFFOLK CNTY NY RFDG SER C AGM B/E TXBL CPN 1.607% DUE 06/15/25 DTD 11/18/20 FC 12/15/20 CUSIP: 86476PE20 <i>Original Cost: 252,280.00</i>	S&P: AA Cash	250,000	100.6410 251,602.50	100.7271 251,817.65	1,517.72	-215.15	4,017.50	1.60%
FLORIDA ST BRD ADMIN FIN CORP REV SER A B/E TXBL CPN 1.258% DUE 07/01/25 DTD 09/16/20 FC 01/01/21 CUSIP: 341271AD6 <i>Original Cost: 101,351.00</i>	S&P: AA Moody: Aa3 Cash	100,000	100.0150 100,015.00	101.2934 101,293.36	419.33	-1,278.36	1,258.00	1.26%

ASSET DETAILS (continued)

PORTFOLIO ASSETS - HELD AT STIFEL (continued)

Fixed Income-Muni	<i>Symbol/ Bond Rating/ Type</i>	<i>Quantity</i>	<i>Current Price/ Current Value</i>	<i>Average Unit Cost/ Cost Basis</i>	<i>Accrued Income⁶</i>	<i>Unrealized Gain/(-)Loss¹⁰</i>	<i>Estimated Annualized Income</i>	<i>Estimated Yield %</i>
KENTUCKY HSG CORP REV SER B B/E TXBL CPN 3.312% DUE 07/01/25 DTD 12/01/16 FC 07/01/17 CUSIP: 49130TVJ2 <i>Original Cost: 216,995.00</i>	S&P: AAA Moody: Aaa Cash	200,000	105.7240 211,448.00	107.5249 215,049.79	2,208.00	-3,601.79	6,624.00	3.13%
CLEVELAND OH INCM TAX REV RFDG SUB LEIN SER A 1 B/E TXBL CPN 1.985% DUE 10/01/25 DTD 02/26/20 FC 10/01/20 CUSIP: 186387VE3 <i>Original Cost: 104,395.00</i>	S&P: AA Moody: A1 Cash	100,000	102.4510 102,451.00	103.5159 103,515.86	165.42	-1,064.86	1,985.00	1.94%
STEPHENSON CNTY IL SCH DIST 145 FREEPORT RFDG AGM B/E TXBL CPN 1.750% DUE 10/01/25 DTD 11/24/20 FC 04/01/21 CUSIP: 858892MD1 <i>Original Cost: 103,005.00</i>	S&P: AA Cash	100,000	100.5290 100,529.00	102.4381 102,438.14	145.83	-1,909.14	1,750.00	1.74%
BAY AREA TOLL AUTH CA TOLL BRDG REV SAN FRANCISO F 1 B/E TXBL CPN 2.425% DUE 04/01/26 DTD 09/26/19 FC 04/01/20 CUSIP: 072024WR9 <i>Original Cost: 133,472.85</i>	S&P: AA Moody: Aa3 Cash	125,000	104.7000 130,875.00	106.1663 132,707.83	252.60	-1,832.83	3,031.25	2.32%
UNIVERSITY CA REV RFDG GENL SER AS B/E TXBL CPN 2.587% DUE 05/15/26 DTD 04/20/16 FC 11/15/16 CUSIP: 91412GE27 <i>Original Cost: 161,363.00</i>	S&P: AA Moody: Aa2 Cash	150,000	105.3350 158,002.50	106.9077 160,361.57	1,789.34	-2,359.07	3,880.50	2.46%



ASSET DETAILS (continued)

PORTFOLIO ASSETS - HELD AT STIFEL (continued)

Fixed Income-Muni	<i>Symbol/ Bond Rating/ Type</i>	<i>Quantity</i>	<i>Current Price/ Current Value</i>	<i>Average Unit Cost/ Cost Basis</i>	<i>Accrued Income⁶</i>	<i>Unrealized Gain/(-)Loss¹⁰</i>	<i>Estimated Annualized Income</i>	<i>Estimated Yield %</i>
MASSACHUSETTS EDL FING AUTH ED LN ISSUE L SR SER A REV B/E TXBL CPN 4.038% DUE 07/01/26 DTD 06/13/18 FC 01/01/19 CUSIP: 57563RPM5 <i>Original Cost: 248,805.20</i>	S&P: AA Cash	220,000	110.2280 242,501.60	112.1941 246,827.08	2,961.20	-4,325.48	8,883.60	3.66%
Total Fixed Income-Muni		2,465,000	\$2,550,703.15	\$2,563,612.08	\$17,685.43	-\$12,908.93	\$63,863.15	2.50%

Municipal Bonds held may or may not be tax free. Please consult with your tax advisor.

Fixed Income-Other	<i>Symbol/ Bond Rating/ Type</i>	<i>Quantity</i>	<i>Current Price/ Current Value</i>	<i>Average Unit Cost/ Cost Basis</i>	<i>Accrued Income⁶</i>	<i>Unrealized Gain/(-)Loss¹⁰</i>	<i>Estimated Annualized Income</i>	<i>Estimated Yield %</i>
FEDL NATL MTG ASSN NOTE CPN 2.000% DUE 01/05/22 DTD 01/09/17 FC 07/05/17 CUSIP: 3135G0S38 <i>Original Cost: 152,238.52</i>	S&P: AA+ Moody: Aaa Cash	150,000	100.3350 150,502.50	100.1144 150,171.57	966.67	330.93	3,000.00	1.99%
PFIZER INC NOTE CPN 2.800% DUE 03/11/22 DTD 03/11/19 FC 09/11/19 CUSIP: 717081ER0 <i>Original Cost: 101,548.00</i>	S&P: A+ Moody: A2 Cash	100,000	100.9160 100,916.00	100.2057 100,205.70	396.67	710.30	2,800.00	2.77%
U S TREASURY NOTE CPN 2.250% DUE 04/15/22 DTD 04/15/19 FC 10/15/19 CUSIP: 9128286M7 <i>Original Cost: 253,725.75</i>	Moody: Aaa Cash	250,000	100.9730 252,432.50	100.2521 250,630.21	262.70	1,802.29	5,625.00	2.23%
IBM CORP UNSECD NOTE CPN 2.850% DUE 05/13/22 DTD 05/15/19 FC 11/15/19 CUSIP: 459200JX0 <i>Original Cost: 151,274.50</i>	S&P: A- Moody: A3 Cash	150,000	101.3790 152,068.50	100.1314 150,197.17	1,971.25	1,871.33	4,275.00	2.81%
SALLIE MAE BANK SALT LAKE CITY UT CD FDIC #58177 CPN 2.550% DUE 05/16/22 DTD 05/15/19 FC 10/15/19 CUSIP: 7954502X2	Cash	100,000	101.3470" 101,347.00	100.0000 100,000.00	1,187.68	1,347.00	2,550.00	2.52%

ASSET DETAILS (continued)

PORTFOLIO ASSETS - HELD AT STIFEL (continued)

Fixed Income-Other	Symbol/ Bond Rating/ Type	Quantity	Current Price/ Current Value	Average Unit Cost/ Cost Basis	Accrued Income ⁶	Unrealized Gain/(-)Loss ¹⁰	Estimated Annualized Income	Estimated Yield %
ALLY BANK SANDY UT CD FDIC #57803 CPN 1.850% DUE 08/29/22 DTD 08/29/19 FC 02/29/20 CUSIP: 02007GLJ0	Cash	200,000	101.4480" 202,896.00	100.0000 200,000.00	648.77	2,896.00	3,700.00	1.82%
UNITEDHEALTH GRP INC NOTE CPN 2.375% DUE 10/15/22 DTD 10/25/17 FC 04/15/18 CUSIP: 91324PDD1 <i>Original Cost: 153,461.00</i>	S&P: A+ Moody: A3 Cash	150,000	101.9210 152,881.50	100.8292 151,243.73	158.33	1,637.77	3,562.50	2.33%
JPMORGAN CHASE & CO SR NOTE CPN 3.200% DUE 01/25/23 DTD 01/25/13 FC 07/25/13 CUSIP: 46625HJH4 <i>Original Cost: 254,432.00</i>	S&P: A- Moody: A2 Cash	250,000	103.3310 258,327.50	100.6125 251,531.35	2,133.33	6,796.15	8,000.00	3.10%
MORGAN STANLEY BANK NA SALT LAKE CITY UT CD FDIC #32992 CPN 2.650% DUE 01/25/23 DTD 01/25/18 FC 07/25/18 CUSIP: 61747MH46 <i>Original Cost: 101,128.00</i>	Cash	100,000	102.9730" 102,973.00	100.3999 100,399.89	718.77	2,573.11	2,650.00	2.57%
AMERICAN EXPRESS NATL BK SANDY UT CD FDIC #27471 CPN 1.450% DUE 03/31/23 DTD 03/31/20 FC 09/30/20 CUSIP: 02589AB50	Cash	100,000	101.6210" 101,621.00	100.0000 100,000.00	127.12	1,621.00	1,450.00	1.43%
CAPITAL ONE BANK USA NA GLEN ALLEN VA CD FDIC #33954 CPN 1.450% DUE 04/10/23 DTD 04/08/20 FC 10/08/20 CUSIP: 14042TDF1	Cash	240,000	101.6410" 243,938.40	100.0000 240,000.00	228.82	3,938.40	3,480.00	1.43%

ASSET DETAILS (continued)

PORTFOLIO ASSETS - HELD AT STIFEL (continued)

Fixed Income-Other	<i>Symbol/ Bond Rating/ Type</i>	<i>Quantity</i>	<i>Current Price/ Current Value</i>	<i>Average Unit Cost/ Cost Basis</i>	<i>Accrued Income⁶</i>	<i>Unrealized Gain/(-)Loss¹⁰</i>	<i>Estimated Annualized Income</i>	<i>Estimated Yield %</i>
MICROSOFT CORP NOTE CPN 2.375% DUE 05/01/23 DTD 05/02/13 FC 11/01/13 CALL 02/01/23 @ 100.000 CUSIP: 594918AT1 <i>Original Cost: 102,711.00</i>	S&P: AAA Moody: Aaa Cash	100,000	102.3290 102,329.00	101.1277 101,127.71	1,187.50	1,201.29	2,375.00	2.32%
BMW BANK OF NORTH AMER SALT LAKE CITY UT CD FDIC #35141 CPN 1.650% DUE 02/28/24 DTD 02/28/20 FC 08/28/20 CUSIP: 05580AVB7	Cash	200,000	102.5040" 205,008.00	100.0000 200,000.00	587.67	5,008.00	3,300.00	1.61%
ROGERS MEM HOSP INC BOND CPN 2.383% DUE 07/01/24 DTD 08/28/19 FC 01/01/20 CUSIP: 775200AE8 <i>Original Cost: 104,880.00</i>	S&P: A Cash	100,000	101.6260 101,626.00	103.3875 103,387.48	794.33	-1,761.48	2,383.00	2.34%
SIMON PPTY GRP LP NOTE CPN 3.300% DUE 01/15/26 DTD 01/13/16 FC 07/15/16 CALL 10/15/25 @ 100.000 CUSIP: 828807CW5 <i>Original Cost: 131,249.00</i>	S&P: A- Moody: A3 Cash	120,000	107.3260 128,791.20	109.0021 130,802.57	1,166.00	-2,011.37	3,960.00	3.07%
BP CAP MKTS PLC GTD NOTE CPN 3.119% DUE 05/04/26 DTD 05/04/16 FC 11/04/16 CALL 02/04/26 @ 100.000 CUSIP: 05565QDB1 <i>Original Cost: 152,787.00</i>	S&P: A- Moody: A2 Cash	140,000	106.5920 149,228.80	108.8398 152,375.76	2,146.91	-3,146.96	4,366.60	2.93%

ASSET DETAILS (continued)

PORTFOLIO ASSETS - HELD AT STIFEL (continued)

Fixed Income-Other	<i>Symbol/ Bond Rating/ Type</i>	<i>Quantity</i>	<i>Current Price/ Current Value</i>	<i>Average Unit Cost/ Cost Basis</i>	<i>Accrued Income⁶</i>	<i>Unrealized Gain/(-)Loss¹⁰</i>	<i>Estimated Annualized Income</i>	<i>Estimated Yield %</i>
FEDL HOME LOAN BANK BOND CPN 0.940% DUE 05/26/26 DTD 05/26/21 FC 11/26/21 CALL 11/26/21 @ 100.000 CUSIP: 3130AMH39	S&P: AA+ Moody: Aaa Cash	135,000	99.0410 133,705.35	100.0000 135,000.00	546.38	-1,294.65	1,269.00	0.95%
Total Fixed Income-Other		2,585,000	\$2,640,592.25	\$2,617,073.14	\$15,228.90	\$23,519.11	\$58,746.10	2.22%
Principal Protected Notes are subject to the credit risk of the issuer. Principal Protected Market Linked CDs are subject to applicable limits.								
Total Portfolio Assets - Held at Stifel			\$5,191,295.40	\$5,180,685.22		\$10,610.18	\$122,609.25	2.36%
Total Net Portfolio Value			\$5,241,258.00	\$5,230,647.82		\$10,610.18	\$122,614.25	2.34%

FOOTNOTE DEFINITIONS

- ⁶ **Accrued Income:** Accrued Income amounts are provided for informational purposes only and are not included as part of the Net Portfolio Value. Accrued Income represents the sum of accrued interest and accrued dividends on securities positions, but which Stifel has not yet received. Stifel cannot guarantee the accuracy of the Accrued Income, which may be subject to change. Accrued Income amounts are not covered by SIPC and should not be relied upon for making investment decisions.
- ¹⁰ Please note "Unrealized Gain/(-)Loss" does not equal the total current value minus the total cost if any value or cost amounts are missing. Unrealized gains or losses are provided for your information only and should not be used for tax purposes.
- " The price assigned to this instrument may have been provided by a national pricing service and is derived from a 'market-driven pricing model.'
This price may not be the actual price you would receive in the event of a sale prior to the maturity of the C.D. Additional information is available upon request.



ACTIVITY SUMMARY				CASH EQUIVALENTS		
Type of Activity	Activity	Year-to-date	This period	Cash	Cash Sweep	Margin
Opening Balance - Net Cash Equivalents			\$10,977.88	\$730.96	\$10,246.92	\$0.00
Buy and Sell Transactions	Assets Bought	-1,422,306.67				
	Assets Sold/Redeemed	1,330,523.74	25,000.00	25,000.00		
Deposits	Deposits Made To Your Account					
Withdrawals	Withdrawals From Your Account					
Income and Distributions	Income and Distributions	108,227.82	13,984.72	13,984.72		
Cash Sweep Activity	Cash Sweep Activity			-39,715.68	39,715.68	
Margin Interest	Margin Interest Charged	-28.08				
Other	Other Transactions					
Cash Management Activity	Card Activity					
	ACH/ATM Activity					
Checkwriting Activity	Checks You Wrote					
Closing Balance - Net Cash Equivalents			\$49,962.60	\$0.00	\$49,962.60	\$0.00
Securities Transferred	Securities Transferred In/Out					

ACTIVITY DETAILS					CASH EQUIVALENTS			
					This period	Cash	Cash Sweep	Margin
Opening Balance - Net Cash Equivalents					\$10,977.88	\$730.96	\$10,246.92	\$0.00
Assets Sold/Redeemed								
Date	Activity	Quantity	Price	Description	Total	Cash	Cash Sweep	Margin
10/12/2021	Redemption	-25,000.000		NEW YORK NY CITY HSG XXX PARTIAL CALL 64972C-BF-9 REV SER E B/E CPN 3.000% DUE 10/11/21 DTD 09/24/14 FC 11/01/14 CUSIP: 64972C939	25,000.00	25,000.00		
Total Assets Sold/Redeemed					\$25,000.00	\$25,000.00		

ACTIVITY DETAILS continued

CASH EQUIVALENTS continued

Income and Distributions

<i>Date</i>	<i>Activity</i>	<i>Quantity</i>	<i>Description</i>	<i>Total</i>	<i>Cash</i>	<i>Cash Sweep</i>	<i>Margin</i>
10/1/2021	Interest		BAY AREA TOLL AUTH CA TOLL BRDG REV SAN FRANCISO F 1 B/E TXBL CPN 2.425% DUE 04/01/26 DTD 09/26/19 FC 04/01/20 100121 125,000 CUSIP: 072024WR9	1,515.63	1,515.63		
10/1/2021	Interest		CLEVELAND OH INCM TAX REV RFDG SUB LEIN SER A 1 B/E TXBL CPN 1.985% DUE 10/01/25 DTD 02/26/20 FC 10/01/20 100121 100,000 CUSIP: 186387VE3	992.50	992.50		
10/1/2021	Interest		MIAMI DADE CNTY FL AVIATION REV RFDG SER B B/E TXBL CPN 2.504% DUE 10/01/24 DTD 08/25/16 FC 10/01/16 100121 200,000 CUSIP: 59333PV39	2,504.00	2,504.00		
10/1/2021	Interest		STEPHENSON CNTY IL SCH DIST 145 FREEPORT RFDG AGM B/E TXBL CPN 1.750% DUE 10/01/25 DTD 11/24/20 FC 04/01/21 100121 100,000 CUSIP: 858892MD1	875.00	875.00		
10/8/2021	Interest		CAPITAL ONE BANK USA NA GLEN ALLEN VA CD FDIC #33954 CPN 1.450% DUE 04/10/23 DTD 04/08/20 FC 10/08/20 100821 240,000 CUSIP: 14042TDF1	1,744.77	1,744.77		



ACTIVITY DETAILS continued

CASH EQUIVALENTS continued

Income and Distributions continued

<i>Date</i>	<i>Activity</i>	<i>Quantity</i>	<i>Description</i>	<i>Total</i>	<i>Cash</i>	<i>Cash Sweep</i>	<i>Margin</i>
10/12/2021	Interest		NEW YORK NY CITY HSG XXX PARTIAL CALL 64972C-BF-9 REV SER E B/E CPN 3.000% DUE 10/11/21 DTD 09/24/14 FC 11/01/14 NEW YORK NY CITY HSG XXX CUSIP: 64972C939	333.33	333.33		
10/15/2021	Interest		SAN DIEGO CA CONVNTN CTR EXPANSION FING AUTH LSE REV RFDG B/E TXBL CPN 1.677% DUE 04/15/25 DTD 07/08/20 FC 10/15/20 101521 170,000 CUSIP: 79727LBS7	1,425.45	1,425.45		
10/15/2021	Interest		U S TREASURY NOTE CPN 2.250% DUE 04/15/22 DTD 04/15/19 FC 10/15/19 101521 250,000 CUSIP: 9128286M7	2,812.50	2,812.50		
10/15/2021	Interest		UNITEDHEALTH GRP INC NOTE CPN 2.375% DUE 10/15/22 DTD 10/25/17 FC 04/15/18 101521 150,000 CUSIP: 91324PDD1	1,781.25	1,781.25		
10/29/2021	Interest		STIFEL FDIC INSURED BANK DEPOSIT PROGRAM 102921 49,962 CUSIP: 09999844	0.29	0.29		
Total Income and Distributions				\$13,984.72	\$13,984.72		

Cash Sweep Activity

<i>Date</i>	<i>Activity</i>	<i>Description</i>	<i>Total</i>	<i>Cash</i>	<i>Cash Sweep</i>	<i>Margin</i>
10/1/2021	Purchase	STIFEL FDIC INSURED BANK DEPOSIT PROGRAM		-730.96	730.96	
10/4/2021	Purchase	STIFEL FDIC INSURED BANK DEPOSIT PROGRAM		-5,887.13	5,887.13	



ACTIVITY DETAILS continued

Cash Sweep Activity continued

<i>Date</i>	<i>Activity</i>	<i>Description</i>	<i>Total</i>	<i>Cash</i>	<i>Cash Sweep</i>	<i>Margin</i>
10/12/2021	Purchase	STIFEL FDIC INSURED BANK DEPOSIT PROGRAM		-1,744.77	1,744.77	
10/13/2021	Purchase	STIFEL FDIC INSURED BANK DEPOSIT PROGRAM		-25,333.33	25,333.33	
10/18/2021	Purchase	STIFEL FDIC INSURED BANK DEPOSIT PROGRAM		-6,019.20	6,019.20	
10/29/2021	Purchase	STIFEL FDIC INSURED BANK DEPOSIT PROGRAM		-0.29	0.29	
Total Cash Sweep Activity			\$0.00	-\$39,715.68	\$39,715.68	

	<i>This period</i>	<i>Cash</i>	<i>Cash Sweep</i>	<i>Margin</i>
Closing Balance - Net Cash Equivalents	\$49,962.60	\$0.00	\$49,962.60	\$0.00

REALIZED GAINS/(-)LOSSES

This section provides estimated realized gains or losses for informational purposes only. Cost basis may be adjusted due to, but not limited to, the following: amortization, accretion, principal paydowns, capital changes, listed option premiums, gifting rules, inheritance step-up, or wash sales. Unless another method was in effect at the time of the trade, the trading tax lot relief method indicated on the first page of the statement was used to calculate gains or losses. Please review this information carefully for accuracy, and contact your Financial Advisor with any questions.

	<i>Closing Transaction</i>	<i>Date Acquired</i>	<i>Date Sold</i>	<i>Quantity</i>	<i>Cost Basis</i>	<i>Sale Proceeds</i>	<i>Realized Gain/(-)Loss**</i>
Fixed Income-Muni							
NEW YORK NY CITY HSG DEV CORP MLTIFAM HSG CUSIP: 64972CBF9	REDEEMED	08/10/20	10/12/21	25,000	25,925.94	25,000.00	-925.94 (LT)
Total Fixed Income-Muni					\$25,925.94	\$25,000.00	-\$925.94
Total Realized Gains/(-)Losses					\$25,925.94	\$25,000.00	-\$925.94
Total Net Short-Term (ST)					\$0.00	\$0.00	\$0.00
Total Net Long-Term (LT)					\$25,925.94	\$25,000.00	-\$925.94
Total Net Other-Term (OT)					\$0.00	\$0.00	\$0.00

** Please note "Realized Gain/(-)Loss" does not equal total sale proceeds minus total cost basis if any cost basis amounts are missing.

Stifel Insured Bank Deposit Program

Amount(s) listed below include accrued interest in the amount of \$0.29. The rate at month-end was 0.01%.

Description	Location	Previous Month Value	Current Month Value
Stifel Bank and Trust	St. Louis, MO	\$10,246.92	\$44,075.43
JPMorgan Chase Bank NA	Columbus, OH	\$0.00	\$5,887.17
Closing Balance - Stifel Insured Bank Deposit Program			\$49,962.60

Your deposit balances at each Program Bank are eligible for insurance by the FDIC within applicable limits. The deposit balances are not insured by SIPC. Please refer to the Stifel Insured Bank Deposit Program Disclosure Statement and the Stifel Insured Bank Deposit Program for Retirement Accounts Disclosure Statement which are available at www.stifel.com/disclosures/account-agreement or from your Financial Advisor.

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STIFEL

Certain Definitions

“**Stifel**” means Stifel, Nicolaus & Company, Incorporated, Member SIPC and NYSE.

“**Stifel Banks**” means affiliated banks of Stifel, which may include Stifel Bank & Trust, Member Federal Deposit Insurance Corporation (“FDIC”); Stifel Bank, Member FDIC; Stifel Trust Company, National Association, Member FDIC; and Stifel Trust Company Delaware, National Association, Member FDIC. **Unless otherwise specified, products purchased from or held by Stifel in a securities account are not insured by the FDIC, are not deposits or other obligations of the Stifel Banks, are not guaranteed by the Stifel Banks, and are subject to investment risk, including possible loss of the principal.**

“**Stifel Smart Rate Program**” refers to a money market deposit account at Stifel Bank & Trust or Stifel Bank, each an affiliate of Stifel, which is made available to eligible clients of Stifel. The deposits are insured by the FDIC, within applicable limits, and are not cash held in your securities account. For additional information and terms and conditions concerning these deposits, see the Stifel Smart Rate Program Disclosure, which is available at www.stifel.com/disclosures or from your Financial Advisor.

Account Disclosures

Errors and Inquiries – You should review this statement carefully and notify the Manager of the Office servicing your account of anything you believe to be incorrect. Any verbal communications should be re confirmed in writing to protect your rights, including rights under SIPA. All statements furnished to you shall be considered accurate, complete, and acknowledged by you unless you report any inaccuracies to the Manager. Instructions and inquiries should be directed to your Financial Advisor. When making inquiries, please mention your account number. Please notify us promptly of any change of address.

Investment Objective – All clients are requested to promptly notify us of any material change in their investment objective or financial situation in order to assist us in maintaining current background and financial information.

Pricing and Rating of Securities– The pricing of securities displayed on your statement is derived from various sources and, in some cases, may be higher or lower than the price you would actually receive in the market. If we cannot obtain a price, “N/A” appears. For securities listed on an exchange or trading continually in an active marketplace, the prices reflect market quotations at the close of your statement period. For securities trading less frequently, we rely on third party pricing services or a computerized pricing model, which may not always reflect actual market values. Similarly, some insurance product values provided by outside carriers may be valued as of a date other than the statement date. Bond ratings of securities were obtained from various rating services. There is no guarantee with respect to their accuracy. For current price quotes, please contact your Financial Advisor.

Cost Basis Information – All information provided with respect to cost basis is derived from transactions in the account or information supplied by other sources. There is no guarantee as to the accuracy of cost basis information or the profit and loss information provided for tax lots designated as noncovered. Stifel uses the first in, first out method when calculating the realized gain or loss on sale transactions unless a specific identification is made prior to settlement date. The gain or loss provided on your statement is informational only and should not be used for tax reporting. A 1099 including the cost basis for sale proceeds from covered tax lots will be provided after year end for tax reporting. Please inform your Financial Advisor if a cost basis is not accurate.

Transaction Dates – All securities transactions are reflected on a trade date basis. Settlement of trades will normally occur in three business days unless stated differently on your trade confirmation. Title to securities sold to you where Stifel has acted as principal shall remain with Stifel until the entire purchase price is received or until the settlement date, whichever is later.

Custody of Securities – Securities held by Stifel, Nicolaus & Company, Incorporated – for you, but which are not registered in your name, may be commingled with identical securities being held for other clients by our Correspondent, the Depository Trust Company, or in similar systems.

Assets Held Away – You may purchase certain assets through Stifel, which will be held at a custodial institution other than Stifel. Where available, we include information about these assets on your statement. The custodial institution is responsible, however, for providing year end tax reporting information (Form 1099) and separate periodic statements, which may vary from the information included on your Stifel statement because of different reporting periods. Your Stifel statements may also reflect other assets “not held” at Stifel, in addition to those held by a custodial institution. The value and nature of these investments is generally provided by you. Stifel does not guarantee the accuracy of the information with respect to the value of these investments as reflected on your statement. Assets held away are not covered by Stifel SIPC.

Estimated Annual Income and Yields – Estimated annual income and yields are calculated by annualizing the most recent distribution and do not reflect historical experience or project future results. The yield information for the money market funds is based on historical performance; future yields will fluctuate. These figures have been obtained from sources believed to be reliable, but no assurance can be made as to accuracy. Before investing in any of these funds, carefully read the prospectus, which is available through your Financial Advisor.

Order Routing and Payment for Order Flow – In order to access a wide variety of execution venues, the firm does participate in the maker/taker model. Certain exchanges and other trading centers to which the firm routes equities and options orders have implemented fee structures under which broker dealer participants may receive rebates on certain orders. Under these fee structures, participants are charged a fee for orders that take liquidity from the venue, and provided a rebate for orders that add liquidity to the venue. Rebates received by the firm from a venue during any time period may or may not exceed the fees paid by the firm to the venue during that time period. Fees and/or rebates from all venues are subject to change. Stifel will provide customers additional information regarding average net fees/rebates paid/received upon written request. For venues from which Stifel receives a rebate, Stifel is considered to be receiving payment for order flow.

Additional information will be provided upon written request, and certain order routing information is available online at www.stifel.com/disclosures/best execution. On request of a customer and at no fee, Stifel will disclose to such customer the identity of the venue to which such customer’s orders were routed for execution in the six months prior to the request, whether the orders were directed orders or non directed orders, and the time of the transactions, if any, that resulted from such orders. Orders may be routed and executed internally through Stifel’s trading desk. In such instances, Stifel stands to share in 100% of remuneration received (in the case of orders executed as agent) or profits or losses generated (in the case of orders executed as principal) as a result of internalizing such orders. Customers may mail their inquiries to: Stifel Attn: Equity Trading Compliance, One South Street, Baltimore, Maryland 21202.

Tax Information – Although your statement may describe certain items as Federally tax exempt, this is for information purposes only. When reporting your taxes, please rely exclusively on the substitute Form 1099 you will receive from us after year end for your taxable accounts. (For Retirement Accounts, Form 1099R will report distributions from the account rather than income and dividends or proceeds from sales.)

SIPC Protection – Stifel is a member of the Securities Investor Protection Corporation (SIPC). SIPC coverage protects securities customers of its members up to \$500,000 (including \$250,000 for claims for cash). An explanatory brochure is available upon request or at www.sipc.org, or investors may contact SIPC at (202) 371 8300. Stifel has purchased additional securities coverage of \$149,500,000 and cash coverage of \$900,000 for a total of \$150,000,000 of securities coverage and \$1,150,000 of cash coverage, subject to the terms and conditions of the policy, with an aggregate limit of \$300,000,000. (For more information, visit: www.stifel.com/disclosures/asset protection.) This coverage does not protect against market losses and does not cover securities not held by Stifel.

LIBOR Transition – Stifel is preparing for the discontinuation of LIBOR (the London Interbank Offered Rate), a key benchmark rate, and a transition to new alternative rates. Regulators have called for a market wide transition away from LIBOR. Certain investments you hold might use LIBOR as a benchmark. You should prepare for LIBOR to be discontinued and understand how this change may impact your investments. As a resource for clients, we have established a webpage containing important information, including risks and disclosures regarding the LIBOR transition at www.stifel.com/disclosures/LIBOR 21.

Margin Accounts – If you have a margin account, this is a combined statement of your margin account and special memorandum account (“SMA”) maintained for you under Section 220.5 of Regulation T issued by the Board of Governors of the Federal Reserve System. The permanent record of the (“SMA”) as required by Regulation T is available for your inspection upon request. If you have applied for margin privileges and have been approved, you may borrow money from Stifel in exchange for pledging assets in your account as collateral for any outstanding margin loan. The amount you may borrow is based on Regulation T, Stifel’s internal policies, and the value of securities in your margin account. Securities held in a margin account are identified by the word “margin” on your statement. Stifel reserves the right to limit margin purchases and short sales and to alter its margin requirements and due dates for house or other margin calls in accordance with the Firm’s guidelines, market conditions, and regulatory margin requirements.

STIFEL

Account Disclosures Continued

Margin Account Interest Charges – The margin interest period includes the second to last day of the prior statement period through the third day prior to the last day of the current statement period. The margin interest charge is computed by multiplying the rate of interest by the average net daily settled debit balance and a fraction, the numerator of which is the number of days the debit balance existed, and the denominator of which is three hundred sixty (360). The rate of interest is determined by the cost of borrowing money and is subject to change without notice. The average net daily settled debit balance includes any settled credit and settled debit balances in your cash and margin accounts during the period. Please review the “Statement of Credit Terms” you have already received for further information.

Late Charges – If transactions in your account result in a debit balance in your cash account and you do not make payment by the settlement date, you may be subject to interest charges.

Free Credit Balances – Customer Free Credit Balances may be used in this Firm’s business subject to the limitations of 17CFR Section 240, 15c3 3 under The Securities Exchange Act of 1934. You have the right to receive from us in the course of normal business operations, upon demand, the delivery of: a) any Free Credit Balances to which you are entitled, b) any Fully Paid Securities to which you are entitled, c) any Securities purchased on margin upon full payment of any indebtedness to us. If you participate in Stifel Advantage or Stifel Prestige® Accounts, the payment to you of a Free Credit Balance may be subject to the cancellation of any commitment made in respect to your account for the payment of checks, ATM Card, or Point of Sale transaction charges, or other debit card transactions.

Option Accounts – 1) Commissions and other charges related to the execution of option transactions have been included on confirmations for such transactions, which have already been sent to you, and copies of confirmations are available upon request; 2) should you have any changes in your investment objective or current financial situation, you should advise your investment professional immediately; and 3) assignment notices for option contracts are allocated among client short positions pursuant to an automated procedure that randomly selects from all client short option positions those contracts that are subject to assignment, which includes positions established on the day of assignment. Additional information pertaining to the procedures used for random selection is available upon request.

Complaints – Complaints relating to your account(s) may be directed to Stifel, Legal Department, 501 North Broadway, St. Louis, Missouri 63102 or by phoning (800) 488 0970 or (314) 342 2000.

Lost Certificates – In the event your statement indicates that securities were delivered out of your account in certificate form and you have not received them, it is understood that you will notify Stifel immediately in writing. If written notification is received within 120 calendar days after the delivery date, as reflected on your statement, the certificate will be replaced free of charge. Thereafter, a fee for replacement may apply.

Dividend Reinvestment – (Optional) The dollar amount of Mutual Fund distributions, Money Market Fund income, or dividends on other securities shown on your statement may have been reinvested into additional shares. You will not receive confirmations for these reinvestment transactions. However, information pertaining to these transactions which would otherwise appear on confirmations will be furnished to you upon written request. In dividend reinvestment transactions, Stifel may act as your agent and receive payment for order flow. The source and nature of such payment will be furnished to you upon written request to Stifel or your introducing firm. If Stifel is currently a market maker in the eligible security, Stifel will purchase, as principal for you, additional shares at the opening market price.

Stifel Information – A Statement of Financial Condition of Stifel, Nicolaus & Company, Incorporated is available for your inspection at any of our offices, or a copy will be mailed to you upon request.

Investor Education and Protection – Under the Public Disclosure Program, the Financial Industry Regulatory Authority (“FINRA”) provides certain information regarding the disciplinary history of FINRA members and their associated persons via FINRA’s BrokerCheck Hotline (toll free (800) 289 9999) or on the FINRA website at www.finra.org, including an investor brochure that includes information describing FINRA BrokerCheck.

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ERISA Section 408(b)(2) Notice – For Service Provider Fee Disclosures under ERISA 408(b)(2), please see www.stifel.com/disclosures/ERISA. Please direct any questions you may have to your Financial Advisor.

Notification of Change in Circumstances and Availability of Investment Advisory Disclosure Brochures – In the event that there are any material changes in your financial situation, investment objective(s), risk tolerance, or instructions regarding your account(s), please promptly report such changes to your Financial Advisor to ensure that your investment advisory accounts are being managed based on the most current information. You should review Stifel’s Form ADV Part 2A (Disclosure Brochure) for information and disclosures relating to Stifel’s investment advisory services (available at: [www.stifel.com/disclosures/investment advisory services/program disclosures](http://www.stifel.com/disclosures/investment%20advisory%20services/program%20disclosures)), including (but not limited to) a discussion of the various conflicts of interest to which our firm may be subject in the provision of investment advisory services to you.



COUNTY OF ORANGE
OFFICE OF THE TREASURER-TAX COLLECTOR

Shari L. Freidenrich, CPA, CCMT, CPFA, ACPFIM
 P. O. BOX 4515
 SANTA ANA, CA 92702-4515



ocgov.com/ocinvestments
 October 31, 2021

ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT

Attn: Richard Howard, District Manager
 13001 Garden Grove Blvd.
 Garden Grove, CA 92843

Fund Number : XXXXXXXXXX

OCTOBER 2021 STATEMENT

INVESTMENT BALANCE IN OCIP

Transactions

<u>Transaction Date</u>	<u>Transaction Description</u>	<u>Authorized Signer</u>	<u>Amount</u>
10/01/2021	September 2021 Investment Admin Fee		\$ (82.78)
10/27/2021	July 2021 Interest Paid		\$ 873.20

Summary

Total Deposit:	\$ 873.20	Beginning Balance:	\$ 1,734,851.94
Total Withdrawal:	\$ (82.78)	Ending Balance:	\$ 1,735,642.36

ACCRUED INVESTMENT INCOME

<u>Description</u>	<u>Amount</u>
August 2021 Interest Accrued	\$ 848.31
September 2021 Interest Accrued	\$ 801.95
Total	<u>\$ 1,650.26</u>

October 2021 Interest to be accrued in November 2021 \$ 758.46



Local Agency Investment Fund
 P.O. Box 942809
 Sacramento, CA 94209-0001
 (916) 653-3001

November 17, 2021

[LAIF Home](#)
[PMIA Average Monthly Yields](#)

ORANGE COUNTY VECTOR CONTROL DISTRICT

DIRECTOR OF ADMINISTRATIVE SERVICES
 13001 GARDEN GROVE BLVD
 GARDEN GROVE, CA 92843

[Tran Type Definitions](#)

Account Number: XXXXXXXXXX

October 2021 Statement

Effective Date	Transaction Date	Tran Type	Confirm Number	Web Confirm Number	Authorized Caller	Amount
10/15/2021	10/14/2021	QRD	1686816	N/A	SYSTEM	7,745.92
10/29/2021	10/29/2021	RW	1689734	N/A	TAN NGUYEN	-1,000,000.00

Account Summary

Total Deposit:	7,745.92	Beginning Balance:	10,883,515.70
Total Withdrawal:	-1,000,000.00	Ending Balance:	9,891,261.62



ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT

December 16, 2021

AGENDA REPORT

AGENDA ITEM H.1

Prepared By: Tan Nguyen, Finance Manager
Submitted By: Rick Howard, District Manager

Agenda Title:

Review of the FY 20-21 Audited Financial Statements

Recommended Action:

That the Board of Trustees receive and file the Audited Basic Financial Statements dated June 30, 2021, and the Audit Committee Letter for Fiscal Year 2020-21.

Executive Summary:

The District's contracted auditing firm, CliftonLarsonAllen, LLP, has completed the independent audit for the Fiscal Year (FY) ended June 30, 2021. The audited basic financial statements along with the independent auditor's report and the report on internal control over financial reporting and compliance are included. The independent auditor's report indicates that the financial statements present fairly in all material aspects the financial position and activities of the District for the year ended June 30, 2021. The report on internal control financial reporting is included in this agenda item. In accordance with Government Auditing Standards, this report discloses any non-compliance issues that the auditor encountered during the audit; it also discusses the District's internal controls over financial reporting. The auditor did not identify any material weaknesses in internal control. A material weakness is a deficiency or a combination of deficiencies in internal control, such that there is a reasonable possibility that a material misstatement would not be prevented or detected and corrected in a timely manner. The report also contains an Emphasis of Matters regarding a restatement to the beginning of net position because of the OPEB trust and implementation of GASB 84.

Within the basic financial statement, **Exhibit A** - is a management's discussion and analysis (MD&A) that is presented to supplement the readers' review of the basic financial statements. The MD&A is written by management and follows the format prescribed by generally accepted accounting principles for governments. The financial statements, notes, supporting schedules and narrative explanations help to ensure that all fiscal data is presented which may be needed by any persons or groups with an interest in the financial affairs of the District, such as the Board of Trustees, taxpayers and others. This document reflects the District's commitment to the highest levels of financial reporting by using a format that meets the standards adopted by the Government Accounting Standards Board which is recognized as the authoritative body for the promulgation of standards of financial accounting and reporting for local governments.

Included in this agenda item is **Exhibit B** - Audit Committee Letter, which communicates certain required items regarding the conduct of the audit such as the auditor's level of responsibility, accounting policies adopted, applied, accounting estimates used and other general accounting topics analyzed during the audit process; this letter reports that no transactions lacked authoritative guidance, all significant transactions have been included in the financial statements and that there were no difficulties or disagreements when working with management.

The Budget and Finance Committee meets prior to the December 2021 Regular Board Meeting to review the financial statements and to present the committee's report at the Board Meeting.

Fiscal Impact:

Amount Requested \$ N/A

Sufficient Budgeted Funds Available:

Category: Pers. Optg. Cap. -or- CIP# Fund#

Previous Relevant Board Actions for This Item:

Exhibits:

Exhibit A: Audited Basic Financial Statement with Report on Audit by Independent Certified Public Accountants

Exhibit B: Audit Committee Letter Addressed to the Board of Trustees provided by CliftonLarsonAllen LLP

**ORANGE COUNTY MOSQUITO AND
VECTOR CONTROL DISTRICT**

**FINANCIAL STATEMENTS AND
SUPPLEMENTARY INFORMATION**

YEAR ENDED JUNE 30, 2021



WEALTH ADVISORY | OUTSOURCING
AUDIT, TAX, AND CONSULTING

CLAconnect.com

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
TABLE OF CONTENTS
YEAR ENDED JUNE 30, 2021**

INDEPENDENT AUDITORS' REPORT	1
MANAGEMENT'S DISCUSSION AND ANALYSIS	3
BASIC FINANCIAL STATEMENTS	
GOVERNMENT-WIDE FINANCIAL STATEMENTS	
STATEMENT OF NET POSITION	13
STATEMENT OF ACTIVITIES	14
FUND FINANCIAL STATEMENTS	
GOVERNMENTAL FUNDS	
BALANCE SHEET	15
RECONCILIATION OF THE BALANCE SHEET OF GOVERNMENTAL FUNDS TO THE NET POSITION OF GOVERNMENTAL ACTIVITIES	16
STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES – GOVERNMENTAL FUNDS	17
RECONCILIATION OF THE STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES OF GOVERNMENTAL FUNDS TO THE STATEMENT OF ACTIVITIES	18
BUDGETARY COMPARISON STATEMENT	
GENERAL FUND – BY DEPARTMENT	19
NOTES TO BASIC FINANCIAL STATEMENTS	20
REQUIRED SUPPLEMENTARY INFORMATION	
SCHEDULE OF PROPORTIONATE SHARE OF THE NET PENSION LIABILITY – CALPERS	59
SCHEDULE OF CONTRIBUTIONS – PENSION – CALPERS	60
SCHEDULE OF PROPORTIONATE SHARE OF THE NET PENSION LIABILITY – OCERS WITHDRAWN PLAN	61
SCHEDULE OF CONTRIBUTIONS – CONTRIBUTIONS – OCERS WITHDRAWN PLAN	62

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
TABLE OF CONTENTS
YEAR ENDED JUNE 30, 2021**

SCHEDULE OF CHANGES IN THE NET OPEB LIABILITY AND RELATED RATIOS	63
SCHEDULE OF CONTRIBUTIONS – OPEB	64
INDEPENDENT AUDITORS’ REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH <i>GOVERNMENT AUDITING STANDARDS</i>	65



INDEPENDENT AUDITORS' REPORT

Board of Trustees
Orange County Mosquito and Vector Control District
Garden Grove, California

Report on the Financial Statements

We have audited the accompanying financial statements of the governmental activities and the major fund of the Orange County Mosquito and Vector Control District (the District), as of and for the year ended June 30, 2021, and the related notes to the financial statements, which collectively comprise the District's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America, and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the District's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the District's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities and the major fund of the District as of June 30, 2021 and the respective changes in financial position and the budgetary comparison statement for the General Fund for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matters

As discussed in Note 1D to the financial statements, the District implemented GASB 84, *Fiduciary Funds*, in the fiscal year ended June 30, 2021. This resulted in the removal of the OPEB trust from the financial statements as a fiduciary fund. Our opinion is not modified with respect to that matter.

As discussed in Note 12 to the financial statements, the District made a restatement to beginning net position. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management’s discussion and analysis, the schedule of proportionate share of the net pension liability – CalPERS and OCERS withdrawn plan, the schedule of contributions – pension – CalPERS and OCERS withdrawn plan, the schedule of changes in the net OPEB liability and related ratios, and the schedule of contributions – OPEB identified as Required Supplementary Information (RSI) in the accompanying table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the RSI in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management’s responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the RSI because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated November 11, 2021, on our consideration of the District’s internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the District’s internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the District’s internal control over financial reporting and compliance.



CliftonLarsonAllen LLP

Irvine, California
November 11, 2021

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
MANAGEMENT'S DISCUSSION AND ANALYSIS
YEAR ENDED JUNE 30, 2021**

This section of the financial statements of the Orange County Mosquito and Vector Control District (District) is management's narrative overview and analysis of the financial activities of the District for the fiscal year ended June 30, 2021. We encourage readers to consider the information presented here in conjunction with the District's financial statements and accompanying notes.

Background

The Orange County Mosquito and Vector Control District is a special district originally formed in 1947 as the Orange County Mosquito Abatement District with the purpose of protecting the County from mosquitoes and mosquito-borne diseases. In 1975, the District was renamed as the Orange County Vector Control District and assumed responsibility for comprehensive vector control, specifically adding fly and rat control services. Then in 2004, the District established a Red Imported Fire Ant program. In 2015, the District was renamed to Orange County Mosquito and Vector Control District to better identify the District's purpose.

The District's operation is overseen by a 35-member Board of Trustees with one member appointed by each of the 34 cities within the District's boundaries and one member appointed by the County of Orange.

Financial Highlights

The comparisons in the discussion and analysis below are between FY 2019-20 and FY 2020-21. All increases and decreases are expressed relative to FY 2019-20 amounts.

Government-wide Financial Statements

- At the close of the fiscal year, the assets and deferred outflows of resources exceeded liabilities and deferred inflows of resources by \$28.8 million (net position). Of this amount, \$22.0 million may be used to meet the District's ongoing obligations to citizens and creditors (unrestricted net position).
- The District's revenues of \$16.7 million exceeded expenses of \$12.5 million, resulting in an increase to net position of \$4.2 million from the year's activities.
- The July 1, 2020 net position was restated with a reduction of \$1.2 million as a result of applying the requirements of GASB Statement No. 68 to the OCERS Withdrawn Defined Benefit Pension Plan. Refer to Notes to Basic Financial Statements No. 12 for additional information on this restatement.

Fund Financial Statements

- As of June 30, 2021, the District's governmental funds reported an ending fund balance of \$25.4 million, an increase of \$3.2 million over the prior year. Of this amount, \$11.2 million is available for spending at the District's discretion (unassigned fund balance).

Overview of the Basic Financial Statements

This discussion and analysis serves as an introduction to the District's basic financial statements, which are comprised of three components: 1) government-wide financial statements, 2) fund financial statements, and 3) notes to the basic financial statements.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
MANAGEMENT'S DISCUSSION AND ANALYSIS
YEAR ENDED JUNE 30, 2021**

Government-wide financial statements. The government-wide financial statements are designed to provide readers with a broad overview of the District's finances in a manner similar to a private-sector business. In accordance with governmental accounting standards, the District's government-wide financial statements include a Statement of Net Position and a Statement of Activities.

The Statement of Net Position presents information on all of the District's assets, deferred inflows of resources, liabilities, deferred outflows of resources, and net position. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position of the District is improving or deteriorating. The Statement of Net Position also provides the basis for evaluating the capital structure and assessing the liquidity and financial flexibility of the District.

The Statement of Activities presents information showing how the government's net position changed during the most recent fiscal year. All changes in net position are reported as soon as the underlying event occurs, regardless of the timing of related cash flows. Thus, revenues and expenses are reported in this statement for some items that will only result in cash flows in future fiscal periods (e.g. uncollected taxes and earned but unused vacation leave). This statement measures the success of the District's activities over the past year and can be used to determine whether the District has successfully recovered all of its costs.

The government-wide financial statements are in this report's financial section immediately following the Management's Discussion and Analysis (MD&A), beginning on page 13.

Fund financial statements. A fund is a grouping of related accounts that is used to maintain control over resources that have been segregated for specific activities or objectives. The District, like other state and local governments, uses fund accounting to ensure and demonstrate compliance with finance-related legal requirements. All of the District's funds are reported within the category of governmental funds.

Governmental funds. Governmental funds are used to account for essentially the same functions reported as governmental activities in the government-wide financial statements. However, unlike the government-wide financial statements, governmental fund financial statements focus on near-term inflows and outflows of spendable resources, as well as on balances of spendable resources available at the end of the fiscal year. Such information may be useful in evaluating a government's near-term financing requirements.

Because the focus of governmental funds is narrower than that of the government-wide financial statements, it is useful to compare the information presented for governmental funds with similar information presented for governmental activities in the government-wide financial statements. By doing so, readers may better understand the long-term impact of the District's near-term financing decisions. Both the governmental fund balance sheet and governmental fund statement of revenues, expenditures, and changes in fund balances provide a reconciliation to facilitate this comparison between governmental funds and governmental activities.

All of the District's governmental activity is reported in the General Fund, and the District adopts an annual appropriated budget for the General Fund. A budgetary comparison statement has been provided to demonstrate compliance with this budget.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
MANAGEMENT'S DISCUSSION AND ANALYSIS
YEAR ENDED JUNE 30, 2021**

In previous years, the District reported a Fiduciary fund to account for the activity of the trust fund which administers the District's plan for post-retirement benefits. In the current year, the District implemented GASB Statement No. 84 which removed the previously reported OPEB trust as it no longer qualifies as a fiduciary fund of the District. Refer to Notes to Basic Financial Statements No. 1(D) for additional information.

The governmental fund financial statements are found in the financial section of this report following the government-wide financial statements, beginning on page 15.

Notes to the basic financial statements. The notes provide additional information that is essential to a full understanding of the data provided in the government-wide and fund financial statements. The notes to the basic financial statements are found in the financial section of this report following the fund financial statements, beginning on page 20.

Government-wide Financial Analysis

Over time, the increases or decreases in net position may serve as a useful indicator of whether the financial position of the District is improving or deteriorating. Following is a table which compares the District's net position at the end of the current and prior fiscal years.

Net Position – Governmental Activities

	6/30/2020**	6/30/2021
Current and other assets	\$22,639,140	\$25,882,493
Net OPEB & pension assets	-	\$2,133,047
Capital assets	5,089,260	5,080,160
Total assets	27,728,400	33,095,700
Deferred outflows	1,718,144	2,337,033
Total deferred outflows	1,718,144	2,337,033
Long-term liabilities	3,170,406	3,313,319
Other liabilities	415,594	455,929
Total liabilities	3,586,000	3,769,248
Deferred inflows	88,839	2,891,382
Total deferred inflows	88,839	2,891,382
Net investment in capital assets	5,089,260	5,080,160
Restricted	-	1,647,514
Unrestricted	20,682,445	22,044,429
Total net position	\$25,771,705	\$28,772,103

** Prior year information has not been restated for prior period adjustments.

At June 30, 2021, assets and deferred outflows exceed liabilities and deferred inflows, resulting in a net position of \$28.8 million. The District's net position is comprised of three categories: net investment in capital assets, restricted net position, and unrestricted net position.

Net investment in capital assets: An important component of net position is capital assets (e.g., land, structures, and vehicles). The District's net investment in capital assets is \$5.1 million, representing 18 percent of the total net position at fiscal year-end. The District uses these capital assets to provide services to citizens; consequently, these assets are not available for future spending.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
MANAGEMENT'S DISCUSSION AND ANALYSIS
YEAR ENDED JUNE 30, 2021**

Restricted net position: The portion of the District's net position that represents resources subject to external restrictions on how they may be used totals \$1.6 million, or six percent of total net position.

Unrestricted net position: The remainder of the District's net position is categorized as unrestricted, totaling \$22.0 million or 76 percent of total net position. Unrestricted net position may be used to meet the District's ongoing obligations to citizens and creditors.

Following is a summary of the government-wide Statement of Activities. This table illustrates the \$4.2 million increase in the District's net position resulting from revenues of \$16.7 million exceeding expenses of \$12.5 million. Discussion regarding significant changes in revenue and expenses follows the table.

Change in Net Position – Governmental Activities

	6/30/2020**	6/30/2021
Program revenues:		
Charges for services	\$ 100,643	\$ 101,906
Rental income	348,461	328,833
Operating contributions and grants	72,429	63,123
General revenues:		
Property taxes and assessments	15,344,833	15,723,805
Interest income	447,486	483,942
Other revenues	25,977	39,051
Total revenues	16,339,829	16,740,660
Expenses:		
General government	2,473,791	1,122,827
Health and sanitation	11,175,197	11,424,464
Interest on pension-related debt	11,122	-
Total expenses	13,660,110	12,547,291
Increase/(decrease) in net position	2,679,719	4,193,369
Net position - July 1	23,091,986	25,771,705
Restatement for applying GASB 68	-	(1,192,971)
Net position - June 30	\$ 25,771,705	\$ 28,772,103

** Prior year information has not been restated for prior period adjustments.

Overall, revenues increased by \$0.4 million while expenses decreased by \$1.1 million. Key elements of the changes in revenues and expenses include:

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
MANAGEMENT'S DISCUSSION AND ANALYSIS
YEAR ENDED JUNE 30, 2021**

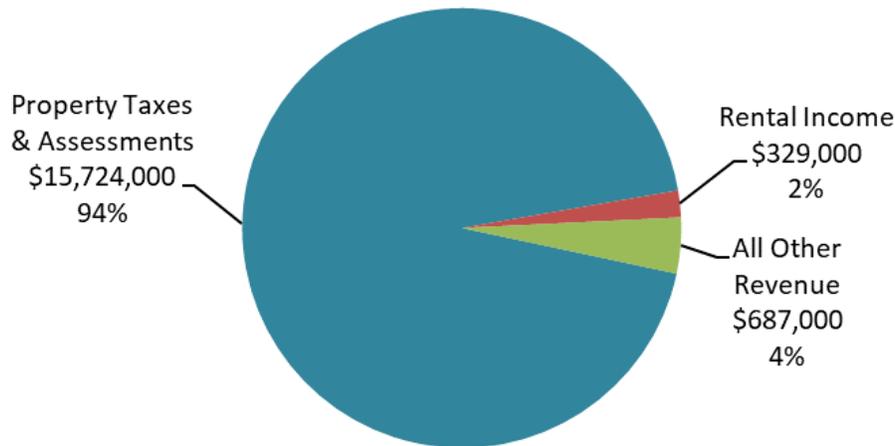
Revenues

Government-wide property tax revenues increased by \$0.4 million mainly as a result of an increase in ad valorem property taxes due to a rise in assessed value. Revenues from benefit assessments had only minor increases resulting from new parcels becoming subject to assessment. The benefit assessment rates remained the same in FY 2020-21 with Assessment District No. 1 at \$1.92 and Assessment District No. 2 at \$7.70 per parcel.

Expenses

Government-wide expenses decreased by \$1.6 million as a result of changes in the net pension liability/asset, net OPEB liability/asset, and related changes for deferred outflows of resources and deferred inflows of resources. This was offset by \$0.5 million in increases for contributions to the retirement trust and slightly higher operating costs for insurance, landscaping improvements and related professional services.

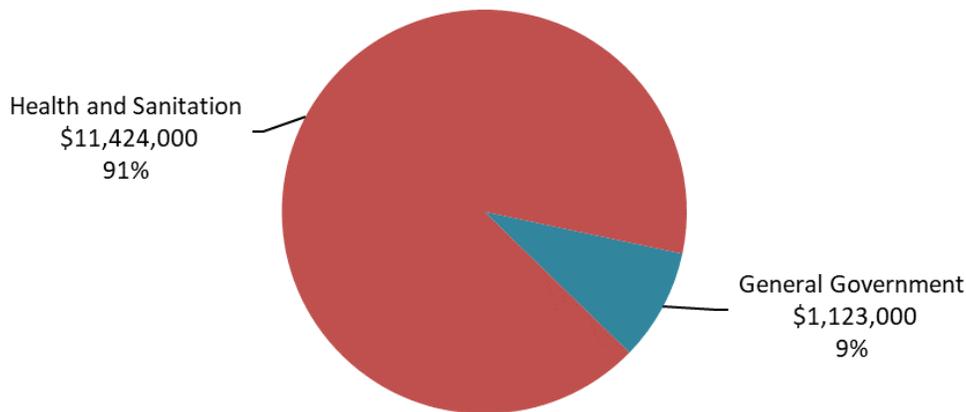
Revenues by Source - Government-wide



As identified in the revenue graph, nearly all of the District's revenues (94 percent) come from the District's share of the ad valorem property tax and property tax assessments. Of the \$15.7 million property tax and assessment revenue, 48 percent is from the District's share of the ad valorem property tax and the remaining 52 percent is from the District's property tax benefit assessments.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
MANAGEMENT'S DISCUSSION AND ANALYSIS
YEAR ENDED JUNE 30, 2021**

Expenses by Function - Government-wide



The District's expenses totaled \$12.5 million in fiscal year 2020-21. Of that total, \$11.4 million (91 percent) was for health and sanitation purposes while \$1.1 million was for general administrative functions of the District.

During fiscal year 2020-21, the District's Health and Sanitation functional expense category had \$165,000 of program revenues (\$102,000 of charges for services and \$63,000 of operating contributions); the General Government functional expense category had \$329,000 of program revenues (charges for services – rental income on District property).

Financial Analysis of the District's Funds

The focus of governmental funds is to provide information on near-term inflows, outflows, and balances of spendable resources. Such information may be useful in assessing the District's financial requirements. In particular, unassigned fund balance may serve as a useful measure of the District's net resources available for spending at the end of the fiscal year.

At the end of the current fiscal year, the District's funds reported an ending fund balance of \$25.4 million, an increase of \$3.2 million over the prior year. Revenues of \$16.7 million exceeded expenditures of \$13.5 million.

Approximately 44 percent (\$11.2 million) of the ending fund balance constitutes unassigned fund balance, which means it is available for spending at the District's discretion. The remainder of the ending fund balance is categorized as nonspendable (1 percent of total fund balance), restricted (11 percent of total fund balance), or committed (44 percent of total fund balance), indicating that it is not available for new spending because it has already been designated as:

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
MANAGEMENT'S DISCUSSION AND ANALYSIS
YEAR ENDED JUNE 30, 2021**

<u>Nonspendable</u>	
Prepaid items & computer loans	\$ 227,755
 <u>Restricted</u>	
Assets held in trust (pension)	2,718,347
 <u>Committed</u>	
Retiree Medical insurance	3,274
Retirement contingency	254,272
Liability reserve	370,366
Emergency vector control	1,681,544
Habitat remediation	100,000
Facilities improvement	8,862,641

At the end of the current fiscal year the unassigned fund balance of the General Fund was \$11,174,940 while the total fund balance was \$25,393,139. As a measure of liquidity, it may be useful to compare both unassigned fund balance and total fund balance to total fund expenditures. The unassigned fund balance represents 83 percent of the year's expenditures while the total fund balance represents 188 percent of expenditures.

Fund balance increased in fiscal year 2020-21 by \$3.2 million while in the prior year, fund balance increased by \$3.3 million. The \$0.1 million decrease from FY 2019-20 was a result of \$0.41 million higher revenues in FY 2020-21 offset with a slightly higher expenditure increase of \$0.47 million.

The reasons for the change in revenues are essentially the same as the reasons for the change in government-wide revenues since the General Fund comprises all of the governmental activities of the District. Revenues increased by \$0.4 million as a result of higher property taxes due to increased assessed values. Expenditures increased \$0.5 million due to contributions to the retirement trust and slightly higher operating costs for insurance, landscaping improvements and related professional services.

Budgetary Highlights

In preparing its budget, the District attempts to estimate its revenues using realistic, but conservative, methods so as to budget its expenditure appropriations and activities in a prudent manner. During the course of the year, the Board of Trustees did not amend the District's originally adopted expenditure budget.

The General Fund balance reflected a positive net budget variance of \$2.3 million when comparing actual amounts to the final budget for the current fiscal year. This amount reflects a positive variance of \$1.2 million in revenues and a positive variance of \$1.1 million in expenditures. The positive revenue variance mainly resulted from actual revenues exceeding the budget for property and assessment taxes and investment income. The positive expenditure variance resulted mainly from actual expenditures being less than the final budget in the Field Operations division due to reductions in seasonal employees as a result of modified operations during the pandemic.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
MANAGEMENT'S DISCUSSION AND ANALYSIS
YEAR ENDED JUNE 30, 2021**

Capital Asset and Debt Administration

Capital assets. The District's capital assets for governmental activities as of June 30, 2021, total \$5,080,160, net of accumulated depreciation. This is a net decrease of \$9,100 from June 30, 2020. The capital assets include land, structure and improvements, equipment and furniture, and vehicles. Capital asset additions totaled \$306,441 and depreciation expense totaled \$315,541. All capital asset disposals were fully depreciated assets and resulted in no loss. Additional information on the District's capital assets can be found in the Capital Assets Note (Note 4) of the Notes to Basic Financial Statements.

Capital Assets, net of depreciation

	6/30/2020	6/30/2021
Land	\$ 2,010,329	\$ 2,010,329
Structures and improvements	1,809,774	1,693,073
Equipment and furniture	568,770	641,947
Vehicles	700,387	734,811
Total	\$ 5,089,260	\$ 5,080,160

Long-term debt. At the end of the current fiscal year, the District had total debt outstanding of \$3,313,319. Information on employee compensated absences can be found in Note 1(J) and Note 5 of the Notes to Basic Financial Statements. Information on the net pension liability can be found in Note 8 of the Notes to Basic Financial Statements. Information on the net pension liability can be found in Note 8A of the Notes to Basic Financial Statements, under the heading of CalPERS Defined Benefit Pension Plan. Information on the net OPEB liability can be found in Note 9(C) of the Notes to Basic Financial Statements.

Outstanding Debt

	6/30/2020**	6/30/2021
Employee compensated absences	\$ 586,722	\$ 663,788
Pension-related debt	99,363	-
Net pension liability	2,233,924	2,649,531
Net OPEB liability	250,397	-
Total	\$ 3,170,406	\$ 3,313,319

** Prior year information has not been restated for prior period adjustments.

Economic Factors and Next Year's Budget

The District's overall revenues for FY 2021-22 are budgeted to be \$16.1 million while expenditures are budgeted to be \$15.5 million. These budgetary expectations reflect the continuation of program enhancements of such as the education and outreach programs, the expansion of the fish program as well as new and innovative program such as the drone program. The FY 2021-22 budget continues the fund balance reserve policy whereby \$500,000 is annually added to the facilities improvement fund balance commitment.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
MANAGEMENT'S DISCUSSION AND ANALYSIS
YEAR ENDED JUNE 30, 2021**

The majority of the funding for the District's programs comes from property taxes and assessments:

- Property taxes are budgeted at \$6.8 million, an increase of half a million from prior year.
- Assessments for Assessment District No. 1 will remain at \$1.92 per parcel and are projected to yield \$1.6 million, similar to prior year.
- Assessments for Assessment District No. 2 will remain at \$7.70 per parcel for the second consecutive year and are projected to yield \$6.7 million, similar to prior year

All other revenues are expected to remain generally stable with the prior fiscal year.

FY 2021-22 will be the third year of a new four-year labor agreement, and personnel costs are anticipated to increase slightly to \$10.6 million in accordance with the agreement and are estimated to account for 71 percent of the District's operating expenditures which is consistent with prior years.

Capital outlay costs are budgeted to be \$346,000 for vehicles and equipment in fiscal year 2021-22 which is consistent with prior years. The most significant proposed capital purchases include \$256,000 for vehicle replacements/additions.

The District's total fund balance is estimated to be \$23.3 million as of June 30, 2022.

Requests for Information

This financial report is designed to provide a general overview of the financial position of the Orange County Mosquito and Vector Control District for all those with an interest in the District's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the Administrative Services Department, 13001 Garden Grove Boulevard, Garden Grove, CA 92843.

BASIC FINANCIAL STATEMENTS

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
STATEMENT OF NET POSITION
JUNE 30, 2021**

	Governmental Activities
ASSETS	
Cash and Cash Equivalents	\$ 22,578,724
Restricted - Cash and Investments Held by Pension Trust	2,718,347
Receivables:	
Accounts	40,700
Taxes	127,573
Accrued Interest	49,905
Due from Other Governments	139,489
Loans	3,732
Prepaid Costs	224,023
Net OPEB Asset	451,082
Net Pension Asset	1,681,965
Capital Assets, Not Being Depreciated	2,010,329
Capital Assets, Net of Depreciation	3,069,831
Total Assets	33,095,700
DEFERRED OUTFLOWS OF RESOURCES	
Deferred Amounts from OPEB	106,806
Deferred Amounts from Pension Plans	2,230,227
Total Deferred Outflows of Resources	2,337,033
LIABILITIES	
Accounts Payable	121,738
Accrued Liabilities	295,820
Unearned Revenue	743
Deposits Payable	37,628
Noncurrent Liabilities:	
Due Within One Year:	
Compensated Absences	219,050
Due in More Than One Year:	
Compensated Absences	444,738
Net Pension Liability	2,649,531
Total Liabilities	3,769,248
DEFERRED INFLOWS OF RESOURCES	
Deferred Amounts from OPEB	285,742
Deferred Amounts from Pension Plans	2,605,640
Total Deferred Inflows of Resources	2,891,382
NET POSITION	
Net Investment in Capital Assets	5,080,160
Restricted for Pensions	1,375,368
Restricted for OPEB	272,146
Unrestricted	22,044,429
Total Net Position	\$ 28,772,103

See accompanying Notes to Basic Financial Statements.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
STATEMENT OF ACTIVITIES
YEAR ENDED JUNE 30, 2021**

Functions/Programs	Expenses	Program Revenues			Net (Expense) Revenue and Changes in Net Position
		Charges for Services	Operating Contributions and Grants	Capital Contributions and Grants	
GOVERNMENTAL ACTIVITIES					
General Government	\$ 1,122,827	\$ 328,833	\$ -	\$ -	\$ (793,994)
Health and Sanitation	11,424,464	101,906	63,123	-	(11,259,435)
Total Governmental Activities	<u>\$ 12,547,291</u>	<u>\$ 430,739</u>	<u>\$ 63,123</u>	<u>\$ -</u>	<u>(12,053,429)</u>
GENERAL REVENUES					
Taxes:					
					15,723,805
					483,942
					39,051
					<u>16,246,798</u>
					4,193,369
NET POSITION					
					<u>24,578,734</u>
					<u>\$ 28,772,103</u>

See accompanying Notes to Basic Financial Statements.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
BALANCE SHEET
GOVERNMENTAL FUNDS
JUNE 30, 2021**

ASSETS

Cash and Investments	\$ 22,578,724
Restricted - Cash and Investments Held by Pension Trust	2,718,347
Receivables:	
Accounts	40,700
Taxes	127,573
Accrued Interest	49,905
Due from Other Governments	139,489
Loans	3,732
Prepaid Items	<u>224,023</u>
Total Assets	<u><u>\$ 25,882,493</u></u>

**LIABILITIES, DEFERRED INFLOWS OF
RESOURCES AND FUND BALANCES**

LIABILITIES

Accounts Payable	\$ 121,738
Accrued Liabilities	295,820
Unearned Revenue	743
Deposits Payable	<u>37,628</u>
Total Liabilities	<u><u>455,929</u></u>

DEFERRED INFLOWS OF RESOURCES

Unavailable Revenues	<u>33,425</u>
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FUND BALANCES

Nonspendable:	
Prepaid Items	224,023
Loans	3,732
Restricted:	
Pension Trust	2,718,347
Committed:	
Retiree Medical Insurance	3,274
Retirement Contingency	254,272
Liability Reserve	370,366
Emergency Vector Control	1,681,544
Habitat Remediation	100,000
Facilities Improvements	8,862,641
Unassigned	<u>11,174,940</u>
Total Fund Balances	<u><u>25,393,139</u></u>

Total Liabilities, Deferred Inflows of Resources, and Fund Balances	<u><u>\$ 25,882,493</u></u>
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See accompanying Notes to Basic Financial Statements.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
RECONCILIATION OF THE BALANCE SHEET OF GOVERNMENTAL FUNDS
TO THE NET POSITION OF GOVERNMENTAL ACTIVITIES
JUNE 30, 2021**

Fund Balances - Total Governmental Funds \$ 25,393,139

Amounts reported for governmental activities in the statement of net position are different because:

Capital assets, net of depreciation, have not been included as financial resources in the governmental funds' activity. 5,080,160

Long-term liabilities are not available to pay for current-period expenditures and therefore, are not reported in the governmental funds. Long-term liabilities consist of the following:

Compensated Absences (663,788)

Certain revenues in the governmental funds are deferred inflows of resources because they are not collected within the prescribed time period after year-end. However, these revenues are included in the government-wide statements. 33,425

Pension and OPEB amounts applicable to the District's governmental activities are not due and payable in the current period and, accordingly, are not reported as fund liabilities. Deferred outflows of resources and deferred inflows of resources related to pensions and OPEB are only reported in the statement of net position as the changes in these amounts affects only the government-wide statements for governmental activities.

Deferred Outflows of Resources Related to OPEB	106,806
Deferred Inflows of Resources Related to OPEB	(285,742)
Net OPEB Asset	451,082
Deferred Outflows of Resources Related to Pensions	2,230,227
Deferred Inflows of Resources Related to Pensions	(2,605,640)
Net Pension Asset	1,681,965
Net Pension Liability	<u>(2,649,531)</u>

Net Position of Governmental Activities \$ 28,772,103

See accompanying Notes to Basic Financial Statements.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES
GOVERNMENTAL FUNDS
YEAR ENDED JUNE 30, 2021**

REVENUES

Taxes and Assessments	\$ 15,723,805
Intergovernmental	63,123
Charges for Services	100,263
Investment Income	483,942
Rental Income	328,833
Miscellaneous	39,051
Total Revenues	16,739,017

EXPENDITURES

Current:	
General Government	2,469,805
Health and Sanitation	10,727,072
Capital Outlay	340,765
Total Expenditures	13,537,642

EXCESS OF REVENUES OVER EXPENDITURES

3,201,375

Fund Balances - Beginning Of Year

22,191,764

FUND BALANCES - END OF YEAR

\$ 25,393,139

See accompanying Notes to Basic Financial Statements.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
RECONCILIATION OF THE STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN
FUND BALANCES OF GOVERNMENTAL FUNDS TO THE STATEMENT OF ACTIVITIES
YEAR ENDED JUNE 30, 2021**

Net Change in Fund Balances - Total Governmental Funds \$ 3,201,375

Amounts reported for governmental activities in the statement of activities are different because:

Governmental funds report capital outlays as expenditures. However, in the statement of activities, the costs of those assets are allocated over their estimated useful lives as depreciation expense. This is the amount by which capital outlays exceeded depreciation in the current period:

Capital Outlay	306,441
Depreciation	(315,541)

Compensated absences expenses reported in the statement of activities do not require the use of current financial resources and, therefore, are not reported as expenditures in the governmental funds. (77,066)

Certain revenues in the governmental funds are deferred inflows of resources because they are not collected within the prescribed time period after year-end. However, these revenues are included in the government-wide statements. 1,643

OPEB expenditures reported in the governmental funds includes the insurance premiums paid. In the statement of activities, OPEB expense includes the change in the OPEB liability (asset), and related change in OPEB amounts for deferred outflows of resources and deferred inflows of resources. 283,037

Pension expenditures reported in the governmental funds includes the annual required contributions. In the statement of activities, pension expense includes the change in the net pension liability, and related change in pension amounts for deferred outflows of resources and deferred inflows of resources. 793,480

Change in Net Position of Governmental Activities \$ 4,193,369

See accompanying Notes to Basic Financial Statements.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
BUDGETARY COMPARISON STATEMENT BY DEPARTMENT
GENERAL FUND
YEAR ENDED JUNE 30, 2021**

	Budgeted Amounts		Actual Amounts	Variance with Final Budget
	Original	Final		Positive (Negative)
RESOURCES (INFLOWS)				
Taxes and Assessments	\$ 14,857,520	\$ 14,857,520	\$ 15,723,805	\$ 866,285
Intergovernmental	72,000	72,000	63,123	(8,877)
Charges for Services	50,000	50,000	100,263	50,263
Investment Income	182,000	182,000	483,942	301,942
Rental Income	328,200	328,200	328,833	633
Miscellaneous	13,000	13,000	39,051	26,051
Total Resources (Inflows)	<u>15,502,720</u>	<u>15,502,720</u>	<u>16,739,017</u>	<u>1,236,297</u>
CHARGES TO APPROPRIATIONS (OUTFLOWS)				
Current:				
General Government:				
Trustees	78,050	78,050	39,565	38,485
District Manager	426,050	426,050	410,071	15,979
Legal Services	124,000	124,000	111,464	12,536
Nondepartmental	310,500	310,500	328,463	(17,963)
Administrative Services	848,270	848,270	786,237	62,033
Insurance	706,500	706,500	762,292	(55,792)
Facilities Improvements	44,000	44,000	31,713	12,287
Health and Sanitation:				
Technical Services	1,776,375	1,776,375	1,675,081	101,294
Field Operations	7,140,900	7,140,900	6,318,689	822,211
Vehicle Maintenance	653,200	653,200	626,374	26,826
Building Maintenance	256,510	256,510	236,175	20,335
Public Information	761,475	761,475	609,217	152,258
Information Technology	766,640	766,640	712,653	53,987
Public Service	171,000	171,000	169,875	1,125
Retiree Medical Insurance	159,890	159,890	165,485	(5,595)
Retiree Medical Trust Contribution	-	-	200,000	(200,000)
Retirement Trust Administrative Fees	100,000	100,000	13,523	86,477
Capital Outlay	281,000	281,000	340,765	(59,765)
Total Charges To Appropriations (Outflows)	<u>14,604,360</u>	<u>14,604,360</u>	<u>13,537,642</u>	<u>1,066,718</u>
EXCESS OF RESOURCES OVER CHARGES TO APPROPRIATIONS	898,360	898,360	3,201,375	2,303,015
FUND BALANCE				
Beginning Of Year	<u>22,191,764</u>	<u>22,191,764</u>	<u>22,191,764</u>	<u>-</u>
End Of Year	<u>\$ 23,090,124</u>	<u>\$ 23,090,124</u>	<u>\$ 25,393,139</u>	<u>\$ 2,303,015</u>

See accompanying Notes to Basic Financial Statements.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A. Description of Reporting Entity

The Orange County Mosquito Abatement District was formed in 1947, in accordance with Division 3, Chapter 5, of the California Health and Safety Code. By resolution of the Board of Trustees, the name of the District was changed to Orange County Vector Control District, effective January 1, 1976, and to Orange County Mosquito and Vector Control District (the District) effective January 15, 2015. The District encompasses all of Orange County. The governing power of the District is vested in a Board of Trustees, consisting of one member appointed by the Orange County Board of Supervisors for the County at large and one member appointed by each City Council within the District. Members are appointed and serve a two to four-year term and are provided \$100 per monthly meeting attended in lieu of travel expenses.

B. Government-Wide and Fund Financial Statements

Government-Wide Financial Statements

The government-wide financial statements (i.e., the statement of net position and the statement of activities) report information on all of the activities of the District, except for its fiduciary activities. The District has no fiduciary activities. Governmental activities, which normally are supported by taxes and intergovernmental revenues, are reported separately from business-type activities, which rely to a significant extent on fees and charges for support. The District has no business-type activities.

The statement of activities demonstrates the degree to which the direct expenses of a given function or segment is offset by program revenues. Direct expenses are those that are clearly identifiable with a specific function or segment. Program revenues include: 1) charges to customers or applicants who purchase, use or directly benefit from goods, services or privileges provided by a given function or segment and 2) grants and contributions that are restricted to meeting the operational or capital requirements of a particular function or segment. Taxes and other items not properly included among program revenues are reported instead as general revenues.

Fund Financial Statements

The fund financial statements provide information about the District's general fund. Separate financial statements for the District's governmental fund are presented after the government-wide financial statements. These statements display information about the major fund individually.

The District reports the following major governmental fund:

The General Fund is used to account for all financial activity in the District.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

C. Measurement Focus and Basis of Accounting

The accounting and financial reporting treatment is determined by the applicable measurement focus and basis of accounting. Measurement focus indicates the type of resources being measured such as current financial resources or economic resources. The basis of accounting indicates the timing of transactions or events for recognition in the financial statements.

The government-wide financial statements are reported using the *economic resources measurement focus* and the *accrual basis of accounting*. Under the economic resources measurement focus, all (both current and long-term) economic resources and obligations are reported in the government-wide financial statements. Under the accrual basis of accounting, revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows. Property taxes are recognized as revenues in the year for which they are levied. Grants and similar items are recognized as revenue as soon as all eligibility requirements imposed by the provider have been met.

Governmental fund financial statements are reported using the current financial resources measurement focus and the modified accrual basis of accounting. Under the current financial resources measurement focus, current assets, current liabilities and deferred inflows of resources are generally included on the balance sheets. The reported fund balance is considered to be a measure of "available spendable resources." Governmental fund financial statements present increases (revenues and other financing sources) and decreases (expenditures and other financing uses) in fund balance. Accordingly, they are said to present a summary of sources and uses of "available spendable resources" during a period.

Under the modified accrual basis of accounting, revenues are recognized as soon as they are both measurable and available. Measurable means that amounts can be estimated, or otherwise determined. Revenues are considered to be available when they are collectible within the current period or soon enough thereafter to pay liabilities of the current period. For this purpose, the government considers revenues to be available if they are collected within 60 days of the end of the current fiscal period. Expenditures generally are recorded when a liability is incurred, as under accrual accounting. However, debt service expenditures, as well as expenditures related to compensated absences, are recorded only when payment is due.

Property taxes, rental income, charges for services and interest associated with the current fiscal period are all considered to be susceptible to accrual and so have been recognized as revenues of the current fiscal period.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

D. New Accounting Pronouncements

Current Year Standards

GASB 84

In January 2017, GASB issued Statement No. 84 – *Fiduciary Activities*. This Statement establishes criteria for identifying fiduciary activities of all state and local governments. The focus of the criteria generally is on (1) whether a government is controlling the assets of the fiduciary activity and (2) the beneficiaries with whom a fiduciary relationship exists. Separate criteria are included to identify fiduciary component units and postemployment benefit arrangements that are fiduciary activities. An activity meeting the criteria should be reported in a fiduciary fund in the basic financial statements.

This Statement also provides for recognition of a liability to the beneficiaries in a fiduciary fund when an event has occurred that compels the government to disburse fiduciary resources. Events that compel a government to disburse fiduciary resources occur when a demand for the resources has been made or when no further action, approval, or condition is required to be taken or met by the beneficiary to release the assets. The District adopted this standard in the current fiscal year. Implementation of GASB 84 removed the previously reported OPEB trust that no longer qualifies as a fiduciary fund of the District.

E. Investments

Investments are reported at the fair value, which represents the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. All investment income, including changes in the fair value of investments, is recognized as revenue in the operating statement.

F. Receivables

Management has determined that all receivables are collectible for the year ended June 30, 2021.

G. Capital Assets

Capital assets that include land, structures and improvements, equipment and furniture, and vehicles, are reported in the government-wide financial statements. Capital assets are defined by the District as assets with an initial cost of more than \$3,000 and an estimated useful life in excess of one year. Such assets are recorded at historical cost or estimated historical cost if purchased or constructed. Donated capital assets are recorded at acquisition value at the date of donation.

The costs of normal maintenance and repairs that do not add to the value of the asset or materially extend assets lives are not capitalized.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

G. Capital Assets

Capital assets are depreciated using the straight-line method over the following estimated useful lives:

Structures and improvements	30 years
Equipment and furniture	5 to 20 years
Vehicles	8 to 15 years

H. Deferred Outflows/Inflows of Resources

In addition to assets, the statement of net position and the governmental funds balance sheet reports a separate section for deferred outflows of resources. This separate financial statement element, *deferred outflows of resources*, represents a consumption of net position that applies to future periods and so will not be recognized as an outflow of resources (expense) until that time. The District has the following items that qualify for reporting in this category:

- Deferred outflow related to the pension plans equal to employer contributions made after the measurement date of the net pension liability.
- Deferred outflows related to the pension plans for changes in employer's proportion and differences between employer contributions and the employer's proportionate share of contributions and differences between actual and expected experience. These amounts are amortized over a closed period equal to the average of the expected remaining services lives of all employees that are provided with pensions through the plans.
- Deferred outflows related to the OPEB for differences between actual and expected experience and changes in assumptions. These amounts are amortized over a closed period equal to the average of the expected remaining services lives of all employees that are provided with retiree healthcare through the plan.
- Deferred outflow related to the pension plans resulting from the annual differences in projected and actual earnings on investments of the pension plan fiduciary net position. These amounts are amortized over five years.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

H. Deferred Outflows/Inflows of Resources (Continued)

In addition to liabilities, the statement of net position and the governmental funds balance sheet reports a separate section for deferred inflows of resources. This separate financial statement element, *deferred inflows of resources*, represents an acquisition of net position that applies to a future period and will not be recognized as an inflow of resources (revenue) until that time. The District has the following items that qualify for reporting in this category:

- Deferred inflow for *unavailable revenues* is reported only in the governmental funds balance sheet. The governmental funds report unavailable revenues from one source: charges for services. This amount is deferred and recognized as an inflow of resources in the period that the amount becomes available.
- Deferred inflow related to pensions for change in assumptions. These amounts are amortized over a closed period equal to the average of the expected remaining service lives of all employees that are provided with pensions through the plans.
- Deferred inflow related to OPEB for the net differences between projected and actual earnings on pension plan investments. Each annual amount is amortized over five years.

I. Claims and Judgments

When it is probable that a claim liability has been incurred and the amount of the loss can be reasonably estimated, the District records the loss, net of any insurance coverage. The District has no claims or judgments liabilities as of June 30, 2021.

J. Compensated Absences

Compensated absences (vacation, compensatory time off and sick leave) are reported as expenditures in the general fund when paid. Any remaining unpaid liability at year-end is recorded on the statement of net position since such obligation is not payable with currently available financial resources, and paid by resources in the District's general fund.

Upon termination, the District is obligated to compensate employees the earned, but unused vacation and compensatory time. At June 30, 2021, there were no employee contracts which included provisions to pay out unused sick leave.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

K. Net Position

The financial statements utilize a net position presentation. Net position is categorized as follows:

Net Investment in Capital Assets

This component of net position consists of capital assets, net of accumulated depreciation and reduced by any debt outstanding against the acquisition, construction or improvement of those assets and capital related payables.

Restricted Net Position

This component of net position consists of external constraints placed on net position imposed by creditors, grantors, contributors, or laws or regulations of other governments or constraints imposed by law through constitutional provisions or enabling legislation.

Unrestricted Net Position

This component of net position consists of net position that does not meet the definition of “net investment in capital assets” or “restricted.”

Sometimes the District will fund outlays for a particular purpose from both restricted (e.g., restricted bond or grant proceeds) and unrestricted resources. In order to calculate the amounts to report as restricted – net position and unrestricted – net position in the government-wide statements, a flow assumption must be made about the order in which the resources are considered to be applied. It is the District’s policy to consider restricted – net position to have been depleted before unrestricted – net position is applied.

L. Fund Equity

In the fund financial statements, governmental funds report the following fund balance classifications:

Nonspendable include amounts that cannot be spent because they are either (a) not in spendable form or (b) legally or contractually required to be maintained intact.

Restricted include amounts that are constrained on the use of resources by either (a) external creditors, grantors, contributors, or laws or regulations of other governments or (b) by law through constitutional provisions or enabling legislation.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

L. Fund Equity (Continued)

In the fund financial statements, governmental funds report the following fund balance classifications (continued):

Committed include amounts that can only be used for specific purposes pursuant to constraints imposed by formal action of the District's highest authority, the Board of Trustees. The formal action that is required to be taken to establish, modify, or rescind a fund balance commitment is a resolution.

Assigned include amounts that are constrained by the District's intent to be used for specific purposes, but are neither restricted nor committed. The District General Manager is authorized to assign amounts to a specific purpose, which was established by the governing body in the Fund Balance Policy.

Unassigned include the residual amounts that have not been restricted, committed, or assigned to specific purposes. In other funds, the unassigned classification is used only to report a deficit balance resulting from overspending for specific purposes for which amounts had been restricted, committed, or assigned. The unassigned fund balance classification includes the below reserves:

An operating reserve equal to two to six months (17-50%) of annual operating fund revenues. These funds are set aside to address risks facing the District related to revenue stability and expenditure volatility, including such items as economic downturns, limitations on increases to the District's benefit assessments, insurance and claims experience, and future operating needs. As of June 30, 2021, the balance in this reserve is \$2,600,000.

Vehicle and equipment replacement reserves for future vehicle and equipment replacements and improvements. This reserve will be maintained at the estimated amount of resources needed to replace assets for the next five years. Additional resources may be maintained such that the total reserves equal the amount of accumulated depreciation of assets, based on estimated replacement costs. As of June 30, 2021, the balance in the vehicle and equipment replacement reserves was \$591,108 and \$839,857, respectively.

Restricted amounts are to be considered spent when an expenditure is incurred for purposes for which the restricted fund balance is available. Committed, assigned, and unassigned amounts are considered to have been spent when an expenditure is incurred for purposes for which amounts in any of those unrestricted fund balance classifications can be used.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

L. Fund Equity (Continued)

When an expenditure is incurred for purposes for which both restricted and unrestricted fund balances are available, the District's policy is to apply restricted fund balance first. When an expenditure is incurred for purposes for which committed, assigned or unassigned fund balances are available, the District's policy is to apply committed fund balance first, then assigned fund balance, and finally unassigned fund balance.

M. Property Taxes

Property taxes attach as an enforceable lien on property as of January 1. Taxes are levied on July 1, and are payable in two installments on November 1 and February 1, and become delinquent December 11 and April 11. The County bills and collects the property taxes and remits them to the District in installments during the year. District property tax revenues are recognized when levied to the extent that they result in current receivables.

The County is permitted by State law (Proposition 13) to levy taxes at 1 % of full market value (at time of purchase) and can increase the assessed values no more than 2% per year. The District receives a share of this basic levy proportionate to what was received in the 1976 to 1978 period.

N. Pensions

For purposes of measuring the net pension liability and deferred outflows/inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the District's California Public Employees' Retirement System (CalPERS) plans and Orange County Employees Retirement System (OCERS) plan (Plans) and additions to/deductions from the Plans' fiduciary net position have been determined on the same basis as they are reported by CalPERS and OCERS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

O. OPEB Plan

For purposes of measuring the net OPEB asset and deferred outflows/inflows of resources related to OPEB, and OPEB expense, information about the fiduciary net position of the District's OPEB Plan and additions to/deductions from the OPEB Plans' fiduciary net position have been determined on the same basis as they are reported by the Plan. For this purpose, the District's OPEB Plan recognizes benefit payments when due and payable in accordance with the benefit terms. Investments are reported at fair value.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

P. Use of Estimates

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from the estimates.

NOTE 2 STEWARDSHIP, COMPLIANCE AND ACCOUNTABILITY

Budgetary Data

The District adopts an itemized budget statement of anticipated revenues, estimated operating expenditures and reserve requirements and files it with the County Auditor's office annually. The sources of financing operating costs and reserve requirements are: (1) available balance carried forward from the preceding year, (2) property taxes and assessments, (3) interest, and (4) other miscellaneous items. The legal level of control is by department.

Excess of Expenditures over Appropriations

Excess of expenditures over appropriations by department in the general fund is as follows:

	<u>Final Budget</u>	<u>Actual</u>	<u>Variance with Final Budget</u>
Major Fund:			
General Fund:			
Nondepartmental	\$ 310,500	\$ 328,463	\$ (17,963)
Insurance	706,500	762,292	(55,792)
Retiree Medical Insurance	159,890	165,485	(5,595)
Retiree Medical Trust Contribution	-	200,000	(200,000)
Capital Outlay	281,000	340,765	(59,765)

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 3 CASH AND INVESTMENTS (CONTINUED)

Cash and Investments

Cash and investments as of June 30, 2021 are classified in the accompanying government-wide statement of net position as follows:

Cash and Investments	\$ 22,578,724
Restricted Cash and Investments:	
Held by Pension Trust	<u>2,718,347</u>
Total Cash and Investments	<u>\$ 25,297,071</u>

Cash and investments consist of deposits and investments, as noted below:

Deposits with Financial Institutions	\$ 1,722,087
Investments	20,856,637
Restricted Investments:	
Held by Pension Trust	<u>2,718,347</u>
Total Cash and Investments	<u>\$ 25,297,071</u>

Investments Authorized by the California Government Code and the District's Investment Policy

The District's Investment Policy is reviewed and adopted by the Board of Trustees each year. Investment vehicles not specifically mentioned in the District's investment policy, are not authorized unless the policy is amended by the Board of Trustees. The table below identifies the investment types that are authorized for the District by the California Government Code (or the District's investment policy, where more restrictive). The table also identifies certain provisions of the California Government Code (or the District's investment policy, where more restrictive) that address interest rate risk, credit risk, and concentration of credit risk. This table does not address investments of the employer contributions to the pension trust that is governed by the trust agreement.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 3 CASH AND INVESTMENTS (CONTINUED)

Investments Authorized by the California Government Code and the District's Investment Policy (Continued)

Authorized Investment Type	Maturity	Maximum Percentage of Portfolio	Maximum Investment in One Issuer
Local Agency Bonds	5 Years	None	10%
U.S. Treasury Issues	5 Years	None	None
State Obligations: CA and Others	5 Years	None	None
CA Local Agency Obligations	5 Years	None	None
U.S. Agency Obligations (Federal Agency Issues)	5 Years	None	None
Bankers Acceptances	180 Days	40%	30%
Commercial Paper: Non-pooled Funds	270 Days	25%	None
Commercial Paper: Pooled Funds	270 Days	40%	None
Negotiable Certificates of Deposit	5 Years	30%	None
Non-Negotiable Certificates of Deposit	5 Years	None	None
Placement Service Deposits	5 Years	30%	None
Placement Service Certificates of Deposit	5 Years	30%	None
Repurchase Agreements	1 Year	None	None
Reverse Repurchase Agreements and Securities Lending Agreements	92 Days	20%	None
Medium-Term Notes	5 Years	30%	None
Mutual Funds and Money Market Mutual Funds	N/A	20%	10%
Mortgage Pass-Through and Asset Backed Securities	5 Years	20%	None
Supranational Obligations	5 Years	30%	None
Local Agency Investment Fund (LAIF)	N/A	None	None
Orange County Investment Pool (OCIP)	N/A	None	None
CalTRUST	N/A	None	None

N/A - Not Applicable

Interest Rate Risk

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Generally, the longer the maturity of an investment, the greater the sensitivity of its fair value to changes in market interest rates. One of the ways the District manages its exposure to interest rate risk is by purchasing a combination of shorter term and longer-term investments and by timing cash flows from maturities so that a portion of the portfolio is maturing or coming close to maturity as necessary to provide the cash flow and liquidity needed for operations

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 3 CASH AND INVESTMENTS (CONTINUED)

Interest Rate Risk (Continued)

Information about the sensitivity of the fair values of the District's investments to market interest rate fluctuations is provided by the following table that shows the distribution of the District's investments by maturity as of June 30, 2021:

Investment Type	Fair Value	Remaining Maturity			
		12 Months or Less	13 to 24 Months	25 to 36 Months	37 to 60 Months
Local Agency Investment Fund (LAIF)	\$ 13,875,236	\$ 13,875,236	\$ -	\$ -	\$ -
Orange County Investment Pool (OCIP)	1,736,318	1,736,318	-	-	-
Money Market Mutual Funds	2,776	2,776	-	-	-
Medium Term Notes	1,030,428	255,242	673,028	-	102,158
Local Agency Bonds	2,706,530	228,429	422,639	50,553	2,004,909
United States Treasury Issues	254,258	254,258	-	-	-
Federal Agency Issues	286,138	151,470	-	-	134,668
Negotiable Certificates of Deposit	964,953	102,193	655,506	207,254	-
PARS Pension Trust Fund	2,718,347	2,718,347	-	-	-
Total	\$ 23,574,984	\$ 19,324,269	\$ 1,751,173	\$ 257,807	\$ 2,241,735

Disclosures Relating to Credit Risk

Generally, credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. This is measured by the assignment of a rating by a nationally recognized statistical rating organization. The only minimum rating required by the California Government Code that is applicable to the District's investments is a rating of "A" or better for medium term notes and a rating of "AAA" for money market mutual funds.

Presented below are the actual ratings by Standard & Poor's as of year-end for each investment type for the fiscal year ended June 30, 2021:

Investment Type	AAA	AA+	AA	AA-	Other	Not Rated	Not Required to be Rated	Total
Orange County Investment Pool (OCIP)	1,736,318	-	-	-	-	-	-	1,736,318
Money Market Mutual Funds	-	-	-	-	-	2,776	-	2,776
Medium Term Notes	103,355	-	-	-	927,073	-	-	1,030,428
Local Agency Bonds	290,499	244,638	1,239,469	324,883	607,041	-	-	2,706,530
United States Treasury Issues	-	-	-	-	-	-	254,258	254,258
Federal Agency Issues	-	286,138	-	-	-	-	-	286,138
Negotiable Certificates of Deposit	-	-	-	-	-	964,953	-	964,953
PARS Pension Trust Fund	-	-	-	-	-	2,718,347	-	2,718,347
Total	\$ 2,130,172	\$ 530,776	\$ 1,239,469	\$ 324,883	\$ 1,534,114	\$ 17,561,312	\$ 254,258	\$ 23,574,984

Investment Type	A+	A	A-	Total Other
Orange County Investment Pool (OCIP)	-	-	-	-
Money Market Mutual Funds	-	-	-	-
Medium Term Notes	255,809	102,158	569,106	927,073
Local Agency Bonds	114,436	-	492,605	607,041
United States Treasury Issues	-	-	-	-
Federal Agency Issues	-	-	-	-
Negotiable Certificates of Deposit	-	-	-	-
PARS Pension Trust Fund	-	-	-	-
Total	\$ 370,245	\$ 102,158	\$ 1,061,711	\$ 1,534,114

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 3 CASH AND INVESTMENTS (CONTINUED)

Concentration of Credit Risk

The investment policy of the District contains no limitations on the amount that can be invested in any one issuer beyond that stipulated by the California Government Code. Other than external investment pools, the District had no investments that exceeded 5% of the portfolio.

Custodial Credit Risk

Custodial credit risk for *deposits* is the risk that, in the event of the failure of a depository financial institution, a government will not be able to recover its deposits or will not be able to recover collateral securities that are in the possession of an outside party. The custodial credit risk for *investments* is the risk that, in the event of the failure of the counterparty (e.g., broker-dealer) to a transaction, a government will not be able to recover the value of its investment or collateral securities that are in the possession of another party.

The California Government Code and the District's investment policy do not contain legal or policy requirements that would limit the exposure to custodial credit risk for deposits or investments, other than the following provision for deposits: The California Government Code requires that a financial institution secure deposits made by state or local governmental units by pledging securities in an undivided collateral pool held by a depository regulated under state law (unless so waived by the governmental unit).

The market value of the pledged securities in the collateral pool must equal at least 110% of the total amount deposited by the public agencies. California law also allows financial institutions to secure District deposits by pledging first trust deed mortgage notes having a value of 150% of the secured public deposits. At June 30, 2021, the District deposits (bank balances) were insured by the Federal Deposit Insurance Corporation up to \$250,000 or collateralized as required under California Law.

District Investments in State Investment Pool and County Investment Pool

The District is a voluntary participant in the LAIF that is regulated by California Government Code Section 16429 under the oversight of the Treasurer of the State of California. LAIF is overseen by the Local Agency Investment Advisory Board, which consists of five members, in accordance with State statute. The State Treasurer's Office audits the fund annually. The District is also a voluntary participant in the OCIP that is regulated by California Government Code and the Orange County Board of Supervisors under the oversight of the County of Orange Treasury Oversight Committee. The fair value of the District's investments in these pools is reported in the accompanying financial statements at amounts based upon the District's pro rata share of the fair value provided by LAIF and OCIP for each respective portfolio (in relation to the amortized cost of that portfolio). The balance available for withdrawal is based on the accounting records maintained by LAIF and OCIP, which are recorded on an amortized cost basis.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 3 CASH AND INVESTMENTS (CONTINUED)

Cash and Investments – PARS Pension Trust

Investment Policy

The District established a trust account with Public Agency Retirement Services (PARS) to hold assets that are legally restricted for use in administering the District's Pension Plan. The PARS Pension Trust's specific cash and investments are managed by a third-party portfolio manager under guidelines approved by the District.

Those guidelines are as follows:

Risk Tolerance Moderate

Risk Management The portfolio is constructed to control risk through four layers of diversification - asset classes (cash, fixed income, equity), investment styles (large cap, small cap, international, value, growth), managers and securities. Disciplined mutual fund selection and monitoring process helps to drive return potential while reducing portfolio risk.

Investment Objective To provide current income and moderate capital appreciation. It is expected that dividend and interest income will comprise a significant portion of total return, although growth through capital appreciation is equally important.

Strategic Ranges 0% - 20% Cash
 40% - 60% Fixed Income
 40% - 60% Equity

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 3 CASH AND INVESTMENTS (CONTINUED)

Fair Value Measurements

The District categorizes its fair value measurement within the fair value hierarchy established by accounting principles generally accepted in the United States of America. The hierarchy is based on the valuation inputs used to measure the fair value of the investments. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). Level 1 inputs are quoted prices in active markets for identical assets, Level 2 inputs are quoted prices for similar assets in active markets (significant other observable inputs), and Level 3 inputs are significant unobservable inputs.

Deposits and securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. Investments classified in Level 2 of the fair value hierarchy are valued using a matrix pricing technique. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices.

The District had the following recurring fair value measurements as of June 30, 2021:

	Fair Value	Quoted Prices Level 1	Observable Inputs Level 2	Unobservable Inputs Level 3
Investment Type (Subject to Hierarchy):				
Medium Term Notes	\$ 1,030,428	\$ -	\$ 1,030,428	\$ -
Local Agency Bonds	2,706,530	-	2,706,530	-
United States Treasury Issues	254,258	-	254,258	-
Federal Agency Issues	286,138	-	286,138	-
Negotiable Certificates of Deposit	964,953	-	964,953	-
Total Subject to Hierarchy	5,242,307	\$ -	\$ 5,242,307	\$ -
Uncategorized (Not Subject to Hierarchy)				
Local Agency Investment Fund (LAIF)	13,875,236			
Orange County Investment Pool (OCIP)	1,736,318			
Money Market Mutual Funds	2,776			
PARS Pension Trust Fund	2,718,347			
Total Investment Portfolio	\$ 23,574,984			

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 4 CAPITAL ASSETS

Capital assets activity for the year ended June 30, 2021, is as follows:

	Balance at July 1, 2020	Additions	Deletions/ Transfers	Balance at June 30, 2021
Capital Assets, Not Depreciated:				
Land	\$ 2,010,329	\$ -	\$ -	\$ 2,010,329
Total Capital Assets, Not Depreciated	2,010,329	-	-	2,010,329
Capital Assets, Being Depreciated:				
Structures and Improvements	4,548,177	-	-	4,548,177
Equipment and Furniture	1,102,177	163,788	-	1,265,965
Vehicles	2,273,405	142,653	(90,203)	2,325,855
Total Capital Assets, Being Depreciated	7,923,759	306,441	(90,203)	8,139,997
Less Accumulated Depreciation for:				
Structures and Improvements	(2,738,403)	(116,701)	-	(2,855,104)
Equipment and Furniture	(533,407)	(90,611)	-	(624,018)
Vehicles	(1,573,018)	(108,229)	90,203	(1,591,044)
Total Accumulated Depreciation	(4,844,828)	(315,541)	90,203	(5,070,166)
Total Capital Assets, Being Depreciated, Net	3,078,931	(9,100)	-	3,069,831
Governmental Activity Capital Assets, Net	<u>\$ 5,089,260</u>	<u>\$ (9,100)</u>	<u>\$ -</u>	<u>\$ 5,080,160</u>

Depreciation expense was charged to functions/programs of the primary government as follows:

Governmental Activities:	
Health and Sanitation	<u>\$ 315,541</u>

NOTE 5 COMPENSATED ABSENCES

The change in the District's compensated absences liability during the year ended June 30, 2021 consisted of the following:

	Balance at July 1, 2020	Additions	Deletions	Balance at June 30, 2021	Due Within One Year
Compensated Absences	<u>\$ 586,722</u>	<u>\$ 580,524</u>	<u>\$ (503,458)</u>	<u>\$ 663,788</u>	<u>\$ 219,050</u>

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 6 DEFERRED COMPENSATION PLAN

The District offers its employees a defined contribution deferred compensation plan in accordance with Internal Revenue Code Section 457 whereby employees authorize the District to withhold funds from their wages to be invested in individual savings accounts and other investments. Each participant directs the investments of their respective accounts and no contributions are required to be made by the District. Funds may be withdrawn by participants at termination of employment or retirement. Pursuant to Section 457, the District established trusts in which all assets are held by ICMA Retirement Corporation and Nationwide Retirement Solutions. These assets are held for the exclusive benefit of the plan participants and their beneficiaries and are not available to the creditors of the District. For this reason, the assets and related liabilities of the plan are not included in the financial records of the District and are not included in the accompanying financial statements. For the year ended June 30, 2021, employee contributions to the plan totaled \$712,907.

NOTE 7 SELF-INSURANCE PROGRAM

The District is a member of the Vector Control Joint Powers Agency (Agency).

Description of Joint Powers Agency

The Agency is comprised of California member districts and is organized under a Joint Powers Agreement pursuant to the California Government Code. The purpose of the Agency is to arrange and administer programs of insurance for the pooling of specific self-insurance limits and purchase excess insurance coverage above those limits. Each member District is represented on the board of directors. Officers of the Agency are elected annually by the board members.

Self-insurance Programs of the Agency

General Liability and Workers' Compensation

Periodic deposits/expenditures are paid by member districts and are adjusted retrospectively to cover actual costs. Each member district has a specific retention level. The District has a self-insured retention level of \$25,000 for general liability, automobile liability, and errors of omissions, and \$50,000 for workers' compensation and pays 100% of all losses incurred under those amounts. The District does not share or pay for losses of other districts under their retention level. Losses of \$50,000 to \$500,000 are pooled among all participating districts for workers' compensation and losses in excess of \$25,000 to \$1,000,000 for general liability. These limits are covered by excess insurance purchased by the Agency to a limit of \$17,000,000 for general liability and statutory coverage plus \$5,000,000 for workers' compensation subject to \$500,000 self-insured retention level. There were no instances in the past three years where a settlement exceeded the District's coverage, and no significant reductions in the insurance have occurred.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 8 RETIREMENT PLANS

A. CalPERS Defined Benefit Pension Plans

1. General Information about the Pension Plans

Plan Descriptions

All qualified permanent and probationary employees are eligible to participate in the District's 2.0% at 55 (Tier I), 2.0% at 60 (Tier II), and 2.0% at 62 (Tier III PEPRA) Miscellaneous Employee Pension Plans (Plans), cost-sharing multiple employer defined benefit pension plans administered by the California Public Employees' Retirement System (CalPERS). Benefit provisions under the Plans are established by State statute and District resolution. CalPERS issues publicly available reports that include a full description of the pension plans regarding benefit provisions, assumptions and membership information that can be found on the CalPERS website.

Benefits Provided

CalPERS provides service retirement and disability benefits, annual cost of living adjustments and death benefits to plan members, who must be public employees and beneficiaries. Benefits are based on years of credited service, equal to one year of full-time employment. Members with five years of total service are eligible to retire at age 50 to 62 with statutorily reduced benefits. All members are eligible for nonindustrial disability benefits after five (5) years of service. The death benefit is one of the following: the Basic Death Benefit, the 1957 Survivor Benefit, or the Optional Settlement 2W Death Benefit. The cost of living adjustments for each plan are applied as specified by the Public Employees' Retirement Law.

The Plans' provisions and benefits in effect for the year ended June 30, 2021, are summarized as follows:

	Miscellaneous		
	Tier I Prior to July 13, 2012	Tier II On or After July 13, 2012	Tier III - PEPRA On or After January 1, 2013
Hire Date	July 13, 2012	July 13, 2012	January 1, 2013
Benefit Formula	2%@55	2%@60	2%@62
Benefit Vesting Schedule	5 Years of Service	5 Years of Service	5 Years of Service
Benefit Payments	Monthly for Life	Monthly for Life	Monthly for Life
Retirement Age	50 - 63	50 - 63	52 - 67
Monthly Benefits, as a Percent of			
Eligible Compensation	1.426% to 2.418%	1.092% to 2.418%	1.0% to 2.5%
Required Employee Contribution Rates	7%	7%	6.25%
Required Employer Contribution Rates:			
Normal Cost Rate	11.031%	8.794%	7.732%
Payment of Unfunded Liability	\$ 141,764	\$ 2,258	\$ 11,508

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 8 RETIREMENT PLANS (CONTINUED)

A. CalPERS Defined Benefit Pension Plans (Continued)

1. General Information about the Pension Plans (Continued)

Contributions

Section 20814(c) of the California Public Employees' Retirement Law requires that the employer contribution rates for all public employers are determined on an annual basis by the actuary and shall be effective on the July 1 following notice of a change in the rate. The total plan contributions are determined through CalPERS' annual actuarial valuation process. The actuarially determined rate is the estimated amount necessary to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. The District is required to contribute the difference between the actuarially determined rate and the contribution rate of employees. District contribution rates may change if plan contracts are amended. Payments made by the employer to satisfy contribution requirements that are identified by the pension plan terms as plan member contributions requirements are classified as plan member contributions.

For the fiscal year ended June 30, 2021, the District contributed the contractually required amount of \$781,931.

Additional Funding of the Pension Plan - PARS Pension Trust

In April 2019, the District approved the creation of a CalPERS defined benefit pension plan trust with PARS (Pension Trust). The PARS trust is legally restricted to providing benefits for members of the defined benefit pension plan. However, in accordance with GASB 68, the asset balance is not included in the calculation of the net pension liability above. The PARS Trust issues a publicly available financial report for the fiduciary net position that is available upon request.

The District made contributions totaling \$190,000 to the PARS Pension Trust in the fiscal year ended June 30, 2021. Investment earnings of \$424,360 and administrative expenses of \$13,523 resulted in an asset balance of \$2,718,347 as of June 30, 2021, which is shown as a restricted asset on both the Statement of Net Position and the Balance Sheet – Governmental Funds.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 8 RETIREMENT PLANS (CONTINUED)

A. CalPERS Defined Benefit Pension Plans (Continued)

2. Pension Liabilities, Pension Expenses and Deferred Outflows/Inflows of Resources Related to Pensions

As of June 30, 2021, the District reported a net pension liability for its proportionate share of the net pension liability as follows:

	Proportionate Share of Net Pension Liability
Miscellaneous	<u>\$ 2,649,531</u>

The District's net pension liability for each Plan is measured as the proportionate share of the net pension liability, which is based on a projection of the District's long-term share of contributions to the pension plans relative to the projected contributions of all participating employers, actuarially determined. The net pension liability of each of the Plans is measured as of June 30, 2020.

The District's proportionate share of the net pension liability for all Plans as of the measurement dates ended June 30, 2020 and 2019 was as follows:

	<u>Miscellaneous</u>
Proportion - June 30, 2019	0.05579%
Proportion - June 30, 2020	0.06281%
Change - Increase (Decrease)	<u>0.00702%</u>

For the year ended June 30, 2021, the District recognized pension expense of \$1,149,348. At June 30, 2021, the District reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Pension Contributions Subsequent to Measurement Date	\$ 781,931	\$ -
Differences Between Actual and Expected Experience Changes in Assumptions	136,538	-
Changes in Employer's Proportion and Differences Between the Employer's Contributions and the Employer's Proportionate Share of Contributions	-	(18,897)
Net Differences Between Projected and Actual Earnings on Plan Investments	459,707	-
Total	<u>78,709</u>	<u>-</u>
	<u>\$ 1,456,885</u>	<u>\$ (18,897)</u>

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 8 RETIREMENT PLANS (CONTINUED)

A. CalPERS Defined Benefit Pension Plans (Continued)

2. Pension Liabilities, Pension Expenses and Deferred Outflows/Inflows of Resources Related to Pensions (Continued)

\$781,931 reported as deferred outflows of resources related to contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ending June 30, 2022. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized as pension expense as follows:

<u>Year Ending June 30,</u>	<u>Amount</u>
2022	\$ 275,140
2023	217,548
2024	125,619
2025	37,750
2026	-
Thereafter	-

Actuarial Assumptions

The total pension liability for the June 30, 2020 measurement period was determined by an actuarial valuation as of June 30, 2019, with standard update procedures used to roll forward the total pension liability to June 30, 2020. The total pension liability was based on the following assumptions:

	<u>Miscellaneous</u>
Valuation Date	June 30, 2019
Measurement Date	June 30, 2020
Actuarial Cost Method	Entry-Age Normal Cost Method
Actuarial Assumptions:	
Discount Rate	7.15%
Inflation	2.50%
Salary Increases	(1)
Mortality Rate Table	(2)
Postretirement Benefit Increase	(3)

(1) Varies by entry age and service.

(2) The mortality table used was developed based on CalPERS-specific data. The probabilities of mortality are based on the 2017 CalPERS Experience Study for the period from 1997 to 2015. Preretirement and Postretirement mortality rates include 15 years of projected mortality improvement using 90% of Scale MP-2016 published by the Society of Actuaries. For more details on this table, please refer to the CalPERS Experience Study and Review of Actuarial Assumptions report from December 2017 that can be found on the CalPERS website.

(3) The lesser of contract COLA or 2.50% until Purchasing Power Protection Allowance Floor on purchasing power applies, 2.50% thereafter.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 8 RETIREMENT PLANS (CONTINUED)

A. CalPERS Defined Benefit Pension Plans (Continued)

2. Pension Liabilities, Pension Expenses and Deferred Outflows/Inflows of Resources Related to Pensions (Continued)

Long-Term Expected Rate of Return

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class.

In determining the long-term expected rate of return, CalPERS took into account both short-term and long-term market return expectations as well as the expected pension fund cash flows. Using historical returns of all the funds' asset classes, expected compound (geometric) returns were calculated over the short-term (first 10 years) and the long-term (11+ years) using a building-block approach. Using the expected nominal returns for both short-term and long-term, the present value of benefits was calculated for each fund. The expected rate of return was set by calculating the rounded single equivalent expected return that arrived at the same present value of benefits for cash flows as the one calculated using both short-term and long-term returns. The expected rate of return was then set equal to the single equivalent rate calculated above and adjusted to account for assumed administrative expenses.

The expected real rates of return by asset class are as follows:

Asset Class (a)	Assumed Asset Allocation	Real Return Years 1 - 10 (b)	Real Return Years 11+ (c)
Global Equity	50.00%	4.80%	5.98%
Fixed Income	28.00%	1.00%	2.62%
Inflation Assets	0.00%	0.77%	1.81%
Private Equity	8.00%	6.30%	7.23%
Real Assets	13.00%	3.75%	4.93%
Liquidity	1.00%	0.00%	-0.92%
Total	100.00%		

(a) In the CalPERS CAFR, fixed income is included in Global Debt Securities; liquidity is included in short-term investments; inflation assets are included in both Global Equity Securities, and Global Debt Securities.

(b) An expected inflation of 2.0% used for this period.

(c) An expected inflation of 2.92% used for this period.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 8 RETIREMENT PLANS (CONTINUED)

A. CalPERS Defined Benefit Pension Plans (Continued)

2. Pension Liabilities, Pension Expenses and Deferred Outflows/Inflows of Resources Related to Pensions (Continued)

Discount Rate

The discount rate used to measure the total pension liability was 7.15%. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current member contribution rates and that contributions from employers will be made at statutorily required rates, actuarially determined. Based on those assumptions, the Plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the Proportionate Share of the Net Pension Liability to Changes in the Discount Rate

The following presents the District's proportionate share of the net pension liability for each Plan, calculated using the discount rate for each Plan, as well as what the District's proportionate share of the net pension liability would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the current rate:

	1% Decrease (6.15%)	Discount Rate (7.15%)	1% Increase (8.15%)
Net Pension Liability (Asset)	\$ 4,891,927	\$ 2,649,531	\$ 796,709

Pension Plan Fiduciary Net Position

Detailed information about each pension plan's fiduciary net position is available in the separately issued CalPERS financial reports.

3. Payable to the Pension Plan

At June 30, 2021, the District had no outstanding amount of contributions due to the pension plan required for the year ended June 30, 2021 for the CalPERS plans.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 8 RETIREMENT PLANS (CONTINUED)

B. Withdrawn OCERS Defined Benefit Pension Plan

1. General Information about the Pension Plans

Plan Description

The District participated in the Orange County Employees' Retirement System (OCERS), a cost-sharing multiple employer, defined benefit pension plan, for all employees prior to January 5, 2007. The participating entities in OCERS share proportionally in all risks and costs, including benefit costs. The District's withdrawal as of January 4, 2007, precludes the District from sharing risks and costs with other participating entities. Only the District will be held responsible for costs of its plan and a separate calculation is prepared by OCERS for the District specifically for this plan.

OCERS was established in 1945, under the provisions of the County Employees Retirement Law of 1937, and provides members with retirement, death, disability and cost-of-living benefits. Members employed prior to September 21, 1979, are designated as Tier I members. For Tier II members employed after September 20, 1979, the County Board of Supervisors adopted certain sections of the Government code which established formulas producing reduced allowances. OCERS issues a publicly available financial report that includes financial statements and required supplementary information for the cost-sharing plans that are administered by OCERS. The report can be obtained from the OCERS website at www.ocers.org.

Benefits Provided

OCERS provides service retirement, disability, death and survivor benefits to eligible employees. Members are eligible to retire once they attain the age of 50 and have acquired 10 or more years of retirement service credit. A member with thirty years of service is eligible to retire regardless of age. The retirement benefit the member will receive is based upon age at retirement, final average compensation, years of retirement service credit and retirement plan and tier.

General member benefits are calculated pursuant to the provisions of Sections 31676.01, 31676.1, 31676.12, 31676.16, 31676.18 or 31676.19. For Section 31676.01, the monthly allowance is equal to 1/90th of final compensation times years of accrued retirement service credit times age factor from that Section. For Section 31676.1, the monthly allowance is equal to 1/60th of final compensation times years of accrued retirement service credit times age factor from that Section. For Sections 31676.12, 31676.16, 31676.18 or 31676.19, the monthly allowance is equal to 1/50th of final compensation times years of accrued retirement service credit times age factor from the corresponding Section. The maximum monthly retirement allowance is 100% of final compensation. Final average compensation consists of the highest 12 consecutive months for a General Tier 1 member and the highest 36 consecutive months for a General Tier 2 member.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 8 RETIREMENT PLANS (CONTINUED)

B. Withdrawn OCERS Defined Benefit Pension Plan (Continued)

1. General Information about the Pension Plans (Continued)

The member may elect an unmodified retirement allowance or choose an optional retirement allowance. The unmodified retirement allowance provides the highest monthly benefit and a 60% continuance to an eligible surviving spouse or domestic partner. An eligible surviving spouse or domestic partner is one married to or registered with the member one year prior to the effective retirement date. Certain surviving spouses or domestic partners may also be eligible if marriage or domestic partnership was at least two years prior to the date of death and the surviving spouse or domestic partner has attained age 55. There are four optional retirement allowances the member may choose. Each of the optional retirement allowances requires a reduction in the unmodified retirement allowance in order to allow the member the ability to provide certain benefits to a surviving spouse, domestic partner, or named beneficiary having an insurable interest in the life of the member.

Funding Policy and Contributions

The District was a contracting employer with the Orange County Employees Retirement System (OCERS) before it withdrew from OCERS and contracted with CalPERS to provide retirement benefits for its members with respect to service after January 4, 2007. Effective from the date of withdrawal, OCERS is only responsible for providing benefits to employees or retirees of Orange County Mosquito and Vector Control District who were members of OCERS before January 5, 2007.

Per the termination and continuing contribution agreement entered into on June 1, 2008 with OCERS and Orange County Mosquito and Vector Control District, commencing as of December 31, 2010 and at least every three years thereafter OCERS will hire an actuary to recalculate the District's Unfunded Actuarial Accrued Liability (UAAL) obligation, based on accumulated assets and liabilities attributable to the District. All District members with OCERS will be considered a "closed group" for purposes of recalculating the UAAL. Based on the recalculation, in the event that there is any new UAAL obligation required of the District, it will be satisfied within three years following the effective date of each recalculation, including any accrued interest. In the event there is a surplus or negative UAAL, the surplus will remain in the retirement system as a credit against any future UAAL, unless the surplus exceeds 115%, which then it may be transferred to CalPERS.

The District did not make any contributions during the fiscal year to OCERS. Also, the District did not have an amount due to OCERS based on the most recent funding actuarial valuation dated December 31, 2020.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 8 RETIREMENT PLANS (CONTINUED)

B. Withdrawn OCERS Defined Benefit Pension Plan (Continued)

2. Pension Liabilities, Pension Expenses and Deferred Outflows/Inflows of Resources Related to Pensions

As of June 30, 2021, the District reported a net pension asset for its calculated share as follows:

Net Pension Asset	<u>\$ 1,681,965</u>
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The net pension asset was measured as of December 31, 2020, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of December 31, 2019 rolled forward to December 31, 2020, using standard update procedures. Due to the Plan's withdrawn status, the District's total pension liability for the Plan is measured separately by OCERS. In addition, the District's fiduciary net position is estimated by adjusting the Valuation Value of Assets (VVA) for each membership class by the ratio of the total OCERS Plan's fiduciary net position to total OCERS VVA.

Although, due to the plan's withdrawn status, the Districts amounts are calculated separately for this cost-sharing plan, the proportionate share of the net pension liability (asset) as a whole is available and was as follows for the measurement dates ended December 31, 2020 and 2019:

Proportion - December 31, 2019	-0.01200%
Proportion - December 31, 2020	<u>-0.04000%</u>
Change - Increase (Decrease)	<u><u>-0.02800%</u></u>

For the year ended June 30, 2021, the District recognized pension expense of \$(1,061,535). At June 30, 2021, the District reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences Between Actual and Expected Experience	\$ 388,960	\$ (840,768)
Changes in Assumptions	384,382	-
Net Differences Between Projected and Actual Earnings on Plan Investments	-	(1,745,975)
Total	<u>\$ 773,342</u>	<u>\$ (2,586,743)</u>

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 8 RETIREMENT PLANS (CONTINUED)

B. Withdrawn OCERS Defined Benefit Pension Plan (Continued)

2. Pension Liabilities, Pension Expenses and Deferred Outflows/Inflows of Resources Related to Pensions (Continued)

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized as pension expense as follows:

<u>Year Ending June 30,</u>	<u>Amount</u>
2022	\$ (568,755)
2023	(177,724)
2024	(855,054)
2025	(274,087)
2026	62,219
Thereafter	-

Actuarial Assumptions

The total pension liability was based on the following assumptions:

Valuation Date	December 31, 2019
Measurement Date	December 31, 2020
Actuarial Cost Method	Entry-Age Normal Cost Method
Actuarial Assumptions:	
Investment Rate of Return	7.00% (1)
Discount Rate	7.00%
Inflation	2.50%
Cost of Living Adjustment	2.75%
Projected Salary Increase	4.25% - 12.25% (2)
Actuarial Experience Study	Three year period ended December 31, 2019

(1) Net of pension plan investment expense, including inflation.

(2) Varies by service, including inflation.

It should be noted that the District has previously withdrawn from OCERS, and the liabilities for the District have been determined using frozen service previously accrued while at OCERS but with projected salaries at retirement for current active employees.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 8 RETIREMENT PLANS (CONTINUED)

B. Withdrawn OCERS Defined Benefit Pension Plan (Continued)

2. Pension Liabilities, Pension Expenses and Deferred Outflows/Inflows of Resources Related to Pensions (Continued)

Long-Term Expected Rate of Return

The long-term expected rate of return on pension plan investments was determined in 2020 using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before investment expenses are shown in the following table. This information was used in the derivation of the long-term expected investment rate of return assumption for the December 31, 2020 actuarial valuation. This information will change every three years based on the actuarial experience study.

<u>Asset Class (a)</u>	<u>Target Allocation</u>	<u>Long-Term Expected Arithmetic Real Rate of Return</u>
Large Cap Equity	23.10%	5.43%
Small Cap Equity	1.90%	6.21%
International Developed Equity	13.00%	6.67%
Emerging Markets Equity	9.00%	8.58%
Core Bonds	9.00%	1.10%
High Yield Bonds	1.50%	2.91%
TIPS	2.00%	0.65%
Emerging Market Debt	2.00%	3.25%
Corporate Credit	1.00%	0.53%
Long Duration Fixed Income	2.50%	1.44%
Real Estate	3.01%	4.42%
Private Equity	13.00%	9.41%
Value Added Real Estate	3.01%	7.42%
Opportunistic Real Estate	0.98%	10.18%
Energy	2.00%	9.68%
Infrastructure (Core Private)	1.50%	5.08%
Infrastructure (Non-Core Private)	1.50%	8.92%
CTA - Trend Following	2.50%	2.38%
Global Macro	2.50%	2.13%
Private Credit	2.50%	5.47%
Alternative Risk Premia	2.50%	2.50%
Total	100.00%	

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 8 RETIREMENT PLANS (CONTINUED)

B. Withdrawn OCERS Defined Benefit Pension Plan (Continued)

Long-Term Expected Rate of Return (Continued)

Note that the investment return assumption for funding purposes is developed net of both investment and administrative expenses; however, the same investment return assumption is used for financial reporting purposes, where it is considered gross of administrative expenses.

Discount Rate

The discount rate used to measure the TPL was 7.00% as of December 31, 2020. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rates. For this purpose, only employer contributions that are intended to fund benefits for current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the TPL as of December 31, 2020.

Sensitivity of the Proportionate Share of the Net Pension Liability to Changes in the Discount Rate

The following presents the District's proportionate share of the net pension liability for each Plan, calculated using the discount rate for each Plan, as well as what the District's proportionate share of the net pension liability would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the current rate:

	1% Decrease (6%)	Discount Rate (7%)	1% Increase (8%)
Net Pension Liability (Asset)	\$ 2,252,210	\$ (1,681,965)	\$ (4,888,921)

Pension Plan Fiduciary Net Position

Detailed information about each pension plan's fiduciary net position is available in the separately issued OCERS financial reports. The report can be obtained from the OCERS website at www.ocers.org.

C. Pension Expense

Pension expense for the CalPERS and OCERS pension plans was \$1,149,348 and \$(1,061,535), respectively, which results in a collective pension expense of \$87,813 for the fiscal year ended June 30, 2021.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 8 RETIREMENT PLANS (CONTINUED)

D. PARS Defined Contribution Benefit Plan

Effective December 22, 2006, the Orange County Mosquito and Vector Control District adopted the PARS 457 FICA Alternative Retirement Plan for part-time, seasonal and temporary employees.

The PARS plan is solely funded by the contributions from the employees. The contribution rate is 7.50% of gross earnings for employees. Pursuant to federal legislation, the Section 457 plan assets were placed in trust for the exclusive benefit of all employees and their beneficiaries and are not available to the creditors of the District. For this reason, the assets and related liabilities of the plan are not included in the financial records of the District and are not included in the accompanying financial statements. For the year ended June 30, 2021, contributions to the plan totaled \$14,344.

NOTE 9 OTHER POSTEMPLOYMENT BENEFITS (OPEB) PLAN

A. Plan Description

The District has an agent multiple-employer defined benefit other postemployment benefit plan that provides postemployment benefits, including medical insurance, to eligible employees and their dependents at retirement through the California Public Employees Medical and Hospital Care Act (PEMHCA) as provided under the District's memorandum of understanding with its employees. The plan provides comprehensive health insurance through a variety of Health Maintenance Organization (HMO) and Preferred Provider Organization (PPO) options.

District members become eligible to retire and receive District-paid healthcare benefits upon attainment of age 50 and 5 years of covered PERS service. Retired members over the age of 65 may join one of the Supplemental (Medicare-coordinated) options under PEMHCA or may have Medicare premiums reimbursed. Benefits are paid for the lifetime of the retiree. The District's basic contribution on behalf of retirees is determined under the "Unequal Contribution Method" as described in Government Code Section 22892(c), as applied to the statutory minimum contribution for active employees of \$139/month (2020) and \$143/month (2021). The contribution on behalf of retirees is 70% of \$139 (\$97) for 2020 and 75% of \$143 (\$107) for 2021. The percentage increases each year by 5% until it reaches 100% of the statutory minimum contribution for years 2026 and later.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 9 OTHER POSTEMPLOYMENT BENEFITS (OPEB) PLAN (CONTINUED)

A. Plan Description (Continued)

In addition to the generally applicable rules described above, there are two grandfathering provisions which apply as follows:

- (1) Employees hired prior to July 1, 2009 have an additional allowance of \$234 added to their statutory minimum as described above. The \$234 represents the medical allowance as of the date the new CalPERS resolution was adopted and is frozen for all future years. One retiree receives an additional \$200/month.
- (2) There are a number of grandfathered retirees who transferred from the Orange County Employees' Retirement System (OCERS) Health Plan to PEMHCA in April 2006, which is administered by CalPERS. These grandfathered retirees are eligible to receive a monthly grant equal to the greater of their 2006 monthly grant (calculated as \$400 per month, reduced for service less than 25 years), or the current District contribution as determined under the rules described in paragraph (1) above.

Employees hired on or after July 1, 2009, receive a supplemental benefit based on longevity with the District:

<u>Continuous Full-Time Service</u>	<u>Monthly Stipend</u>
10 to 15 Years	\$ 100
15 to 20 Years	150
20 or More Years	200

Retirees not in PEMHCA receive reimbursement equivalent to the lesser of the grandfathered provisions and their premium. There are several retirees receiving reimbursements for non-PEMHCA Medicare premiums less than the caps. The District also pays the PEMHCA administrative fee of 0.24% of the premium in fiscal year 2020-2021.

Employees Covered

As of the measurement date June 30, 2021, the following current and former employees were covered by the benefit terms under the plan:

Receiving Benefits	37
Active Employees	64
Total	101

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 9 OTHER POSTEMPLOYMENT BENEFITS (OPEB) PLAN (CONTINUED)

A. Plan Description (Continued)

Contributions

Benefit provisions and contribution requirements are established and may be amended by the District's Board and/or the employee associations through agreements and memorandums of understanding between the District and its employees. Currently, contributions are not required from plan members. Administrative costs of the OPEB plan are financed through investment earnings.

In July 2008, the District elected to join the PARS OPEB Trust as a means to fund the actuarially determined contribution (ADC). The PARS OPEB Trust issues a publicly available financial report for the fiduciary net position that is available upon request. The plan itself does not issue a separate financial report.

The District currently finances benefits based on the actuarially determined contribution. For the fiscal year ended June 30, 2021, the District paid \$200,000 into the PARS OPEB Trust, \$165,485 for current premiums and the estimated implied subsidy was \$37,631, resulting in total payments of \$403,116. The payments for current premiums of \$165,485 were not reimbursed by the OPEB trust.

Accounting for the Plan

The other postemployment benefits trust is prepared using the accrual basis of accounting. Employer contributions to the plan are recognized when due and the employer has made a formal commitment to provide the contributions. Benefits are recognized when due and payable in accordance with the terms of each plan.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 9 OTHER POSTEMPLOYMENT BENEFITS (OPEB) PLAN (CONTINUED)

B. Total OPEB Liability

Method Used to Value Investments

Investments are reported in the accompanying financial statements at fair value, which represents the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Securities for which market quotations are not readily available are valued at their fair value as determined by the custodian with the assistance of a valuation service.

Actuarial Assumptions

The District's total OPEB liability was measured as of June 30, 2021 and was determined by an actuarial valuation as of July 1, 2019, rolled forward to June 30, 2021, using standard update procedures. A summary of the principal assumptions and methods used to determine the total OPEB liability is shown below.

Valuation Date	July 1, 2019
Measurement Date	June 30, 2021
Actuarial Cost Method	Entry age normal, level percentage of payroll
Asset Valuation Method	Market value
Actuarial Assumptions:	
Discount Rate	6.50%
Long-Term Expected Rate of Return on Investments	6.50%, net of OPEB plan investment expense
Salary Increases	3.00%
PEMHCA Minimum Increase	3.50% after 2018
General Inflation	3.00%
Medical Trend	5.8% for 2021 decreasing by 0.1% per year to an ultimate rate of 5.0% for 2029 and later years
Mortality	Pre-retirement mortality rates were based on the RP-2014 Employee Mortality Table for Males or Females, as appropriate, without projection. Postretirement mortality rates were based on the RP-2014 Health Annuitant Mortality Table for Males or Females, as appropriate, without projection.
Retirement and Termination	Retirement and termination assumptions used were based on a review of plan experience and a best estimate of future plan experience.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
 NOTES TO BASIC FINANCIAL STATEMENTS
 JUNE 30, 2021**

NOTE 9 OTHER POSTEMPLOYMENT BENEFITS (OPEB) PLAN (CONTINUED)

B. Total OPEB Liability (Continued)

Actuarial Assumptions (Continued)

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. The calculated investment rate of return was set equal to the expected ten-year compound (geometric) real return plus inflation (rounded to the nearest 25 basis points, where appropriate). The table below provides the long-term expected real rates of return by asset class (based on published capital market assumptions):

<u>Asset Class</u>	<u>Assumed Asset Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
PARS OPEB Trust:		
Broad U.S. Equity	50.00%	4.40%
U.S. Fixed	45.00%	1.50%
Cash Equivalents	5.00%	0.10%
Total	<u>100.00%</u>	

Discount Rate

The discount rate used to measure the total OPEB liability was 6.50%. The projection of cash flows used to determine the discount rate assumed that the District's contributions will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected OPEB payments for current active and inactive employees and beneficiaries. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 9 OTHER POSTEMPLOYMENT BENEFITS (OPEB) PLAN (CONTINUED)

C. Changes in the Net OPEB Liability (Asset)

The changes in the net OPEB liability (asset) are as follows:

	Increase (Decrease)		
	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability (Asset)
Balance at June 30, 2020 (Measurement Date)	\$ 3,793,117	\$ 3,542,720	\$ 250,397
Changes in the Year:			
Service Cost	137,998	-	137,998
Interest on the Total OPEB Liability	249,025	-	249,025
Contribution - Employer	-	403,116	(403,116)
Net Investment Income	-	707,874	(707,874)
Benefit Payments	(203,116)	(203,116)	-
Administrative Expenses	-	(22,488)	22,488
Net Changes	<u>183,907</u>	<u>885,386</u>	<u>(701,479)</u>
Balance at June 30, 2021 (Measurement Date)	<u>\$ 3,977,024</u>	<u>\$ 4,428,106</u>	<u>\$ (451,082)</u>

Subsequent Events

There were no subsequent events that would materially affect the results presented in this disclosure.

Sensitivity of the Total OPEB Liability to the Changes in the Discount Rate

The following presents the total OPEB liability of the District, as well as what the District's total OPEB liability would be, if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the current discount rate:

	1% Decrease (5.50%)	Discount Rate (6.50%)	1% Increase (7.50%)
Net OPEB Liability (Asset)	\$ (17,585)	\$ (451,082)	\$ (818,197)

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 9 OTHER POSTEMPLOYMENT BENEFITS (OPEB) PLAN (CONTINUED)

C. Changes in the Net OPEB Liability (Asset) (Continued)

Sensitivity of the Total OPEB Liability to the Changes in Medical Trend Rates

The following presents the total OPEB liability of the District, as well as what the District's total OPEB liability would be, if it were calculated using a medical trend rate that is 1-percentage point lower or 1-percentage point higher than the current medical trend rate:

	1% Decrease (4.8% Decreasing to 4.0% for 2029)	Trend Rate (5.8% Decreasing to 5.0% for 2029)	1% Increase (6.8% Decreasing to 6.0% for 2029)
Net OPEB Liability (Asset)	\$ (752,805)	\$ (451,082)	\$ (83,019)

D. OPEB Expense and Deferred Outflows/Inflows of Resources Related to OPEB

For the year ended June 30, 2021, the District recognized OPEB expense of \$120,079. At June 30, 2021, the District reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences Between Actual and Expected Experience	\$ 106,603	\$ -
Changes in Assumptions	203	-
Net Differences Between Projected and Actual Earnings	-	(285,742)
Total	\$ 106,806	\$ (285,742)

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2021**

NOTE 9 OTHER POSTEMPLOYMENT BENEFITS (OPEB) PLAN (CONTINUED)

**D. OPEB Expense and Deferred Outflows/Inflows of Resources Related to OPEB
(Continued)**

Amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized as OPEB expense as follows:

<u>Year Ending June 30,</u>	<u>Amount</u>
2022	\$ (30,321)
2023	(37,332)
2024	(44,012)
2025	(67,271)
2026	-
Thereafter	-

E. Payable to the OPEB Plan

At June 30, 2021, the District had no outstanding amount of contributions to the OPEB plan required for the year ended June 30, 2021.

NOTE 10 OPERATING LEASES

Operating leases arise from renting the District's property on Haster Street in Garden Grove, California. The cost and corresponding accumulated depreciation of the building and land related to these operating leases as of June 30, 2021 is \$3,823,288 and \$(624,469), respectively. Initial lease terms are generally 12 months; however, many leases have expired and are now month-to-month. Future minimum rental payments to be received on noncancelable operating leases are contractually due as follows as of June 30, 2021:

<u>Year Ending June 30</u>	<u>Amount</u>
2022	<u>\$ 92,326</u>

Total Haster Street property rent revenue for the year ended June 30, 2021 was \$299,069. Other rental income of \$29,764 included in the rental income line of the Statement of Revenues, Expenditures, and Changes in Fund Balance consists of rent received for a cellular site during the fiscal year.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
 NOTES TO BASIC FINANCIAL STATEMENTS
 JUNE 30, 2021**

NOTE 11 COMMITMENTS AND CONTINGENCIES

State Assisted Programs

The District participates in certain state assisted programs. These programs are subject to program compliance audits by the grantors or their representatives. Any liability for reimbursement that may arise as the result of these audits is not believed to be material.

COVID-19

On January 30, 2020, the World Health Organization (WHO) announced a global health emergency because of an outbreak of a new strain of coronavirus (the COVID-19 outbreak) and the risks that it posed to the international community as the virus spread globally beyond its point of origin. In March 2020, the WHO classified the COVID-19 outbreak as a pandemic based on the rapid increase in exposure globally.

The full impact of the COVID-19 outbreak continues to evolve as of the date of this report. As such, it is uncertain as to the full magnitude that the pandemic will have on the District's financial condition, liquidity, and future results of operations. Management is actively monitoring the impact of the global situation on the District's financial condition, liquidity, operations and workforce. The District cannot estimate the length or gravity of the impact of the COVID-19 outbreak at this time; however, if the pandemic continues, it may have a material effect on the District's results of future operations and financial position in fiscal year 2022.

NOTE 12 RESTATEMENT

	<u>Governmental Activities</u>
Net Position at July 1, 2020, as Originally Reported	\$ 25,771,705
Correction to Record the OCERS Withdrawn Defined Benefit Pension Plan Under GASB 68	<u>(1,192,971)</u>
Net Position at July 1, 2020, as Restated	<u><u>\$ 24,578,734</u></u>

REQUIRED SUPPLEMENTARY INFORMATION

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
SCHEDULE OF PROPORTIONATE SHARE OF THE NET PENSION LIABILITY – CALPERS
LAST TEN FISCAL YEARS***

Fiscal year ended	June 30, 2021	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016	June 30, 2015
Measurement date	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016	June 30, 2015	June 30, 2014
Plans' proportion of the net pension liability	0.06281%	0.05579%	0.04989%	0.04942%	0.04379%	0.03873%	0.04500%
Plans' proportionate share of the net pension liability	\$ 2,649,531	\$ 2,233,924	\$ 1,880,117	\$ 1,948,055	\$ 1,521,330	\$ 1,062,408	\$ 1,112,227
Plans' covered payroll	\$ 6,652,998	\$ 6,375,440	\$ 5,930,211	\$ 5,003,137	\$ 4,993,576	\$ 4,479,991	\$ 4,184,192
Plans' proportionate share of the net pension liability as a percentage of its covered payroll	39.82%	35.04%	31.70%	38.94%	30.47%	23.71%	26.58%
Plans' proportionate share of the fiduciary net position as a percentage of the Plan's total pension liability	0.08%	0.07%	0.06%	0.06%	0.05%	0.05%	0.04%

NOTES TO SCHEDULE

Benefit Changes:

There were no changes in benefits.

Changes in Assumptions:

From fiscal year June 30, 2015 to June 30, 2016:

GASB 68, paragraph 68 states that the long-term expected rate of return should be determined net of pension plan investment expense but without reduction for pension plan administrative expense. The discount rate of 7.50% used for the June 30, 2014 measurement date was net of administrative expenses.

The discount rate of 7.65% used for the June 30, 2015 measurement date is without reduction of pension plan administrative expense.

From fiscal year June 30, 2016 to June 30, 2017:

There were no changes in assumptions.

From fiscal year June 30, 2017 to June 30, 2018:

The discount rate was reduced from 7.65% to 7.15%.

From fiscal year June 30, 2018 to June 30, 2019:

Inflation was reduced from 2.75% to 2.50%.

From fiscal year June 30, 2019 to June 30, 2021:

There were no changes in assumptions.

* Fiscal year 2015 was the first year of implementation, therefore only seven years are shown.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
SCHEDULE OF CONTRIBUTIONS – PENSION – CALPERS
LAST TEN FISCAL YEARS***

Fiscal Year-End	June 30, 2021	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016	June 30, 2015
Contractually required contribution (actuarially determined)	\$ 781,931	\$ 703,004	\$ 613,415	\$ 532,683	\$ 451,950	\$ 431,624	\$ 483,044
Contributions in relation to the actuarially determined contributions	(781,931)	(703,004)	(613,415)	(532,683)	(451,950)	(431,624)	(483,044)
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered payroll	\$ 6,759,803	\$ 6,652,998	\$ 6,375,440	\$ 5,930,211	\$ 5,003,137	\$ 4,993,576	\$ 4,479,991
Contributions as a percentage of covered payroll	11.57%	10.57%	9.62%	8.98%	9.03%	8.64%	10.78%

NOTES TO SCHEDULE

Valuation Date	6/30/2018	6/30/2017	6/30/2016	6/30/2015	6/30/2014	6/30/2013	6/30/2012
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Methods and Assumptions Used to Determine Contribution Rates:

Actuarial cost method	Entry age	Entry age	Entry age	Entry age	Entry age	Entry age	Entry age
Amortization method	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Asset valuation method	Market Value	Market Value	Market Value	Market Value	Market Value	Market Value	15 Year Smoothed Market Method
Inflation	2.500%	2.625%	2.75%	2.75%	2.75%	2.75%	2.75%
Salary increases	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Investment rate of return	7.00% (3)	7.25% (3)	7.375% (3)	7.50% (3)	7.50% (3)	7.50% (3)	7.50% (3)
Retirement age	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Mortality	(5)	(5)	(5)	(5)	(5)	(5)	(5)

- (1) Level percentage of payroll, closed
- (2) Depending on age, service, and type of employment
- (3) Net of pension plan investment expense, including inflation
- (4) 50 years (2%@55 and 2%@60), 52 years (2%@62)**
- (5) Mortality assumptions are based on mortality rates resulting from the most recent CalPERS Experience Study adopted by the CalPERS Board.

* Fiscal year 2015 was the 1st year of implementation, therefore only seven years are shown.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
SCHEDULE OF PROPORTIONATE SHARE OF THE NET PENSION LIABILITY – OCERS
LAST TEN FISCAL YEARS***

Fiscal year ended	June 30, 2021	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016	June 30, 2015
Measurement date	December 31, 2020	December 31, 2019	December 31, 2018	December 31, 2017	December 31, 2016	December 31, 2015	December 31, 2014
Plans' proportion of the net pension liability	-0.400%	-0.012%	0.040%	0.024%	0.032%	0.034%	0.057%
Plans' proportionate share of the net pension liability	\$ (1,681,965)	\$ (625,500)	\$ 2,492,695	\$ 1,166,920	\$ 1,669,793	\$ 1,941,891	\$ 2,900,367
Plans' covered payroll	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Plans' proportionate share of the net pension liability as a percentage of its covered payroll	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Plans' proportionate share of the fiduciary net position as a percentage of the Plan's total pension liability	106.03%	102.29%	90.92%	95.89%	93.78%	92.66%	89.85%

* Fiscal year 2015 was the first year of implementation, therefore only seven years are shown.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
SCHEDULE OF CONTRIBUTIONS – OCERS
LAST TEN FISCAL YEARS***

Fiscal Year-End	June 30, 2021	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016	June 30, 2015
Contractually required contribution (actuarially determined)	\$ -	\$ -	\$ 877,769	\$ -	\$ -	\$ 314,474	\$ -
Contributions in relation to the actuarially determined contributions	-	-	(877,769)	(4,298)	-	(314,474)	-
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ (4,298)	\$ -	\$ -	\$ -
Covered payroll	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contributions as a percentage of covered payroll	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NOTES TO SCHEDULE

Valuation Date	(5)	(5)	12/31/2017	(5)	(5)	12/31/2014	(5)
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Methods and Assumptions Used to Determine Contribution Rates:

Actuarial cost method	(5)	(5)	Entry age	(5)	(5)	Entry age	(5)
Amortization method	(5)	(5)	(1)	(5)	(5)	(1)	(5)
Asset valuation method	(5)	(5)	(2)	(5)	(5)	(2)	(5)
Inflation	(5)	(5)	2.750%	(5)	(5)	2.750%	(5)
Salary increases	(5)	(5)	N/A	(5)	(5)	N/A	(5)
Investment rate of return	(5)	(5)	7.00% (3)	(5)	(5)	7.25% (3)	(5)
Retirement age	(5)	(5)	59	(5)	(5)	59	(5)
Mortality	(5)	(5)	(4)	(5)	(5)	(4)	(5)

(1) Level percentage of payroll, closed

(2) The Actuarial Value of Assets is determined by recognizing any difference between the actual and the expected market return over a five-year period. The Valuation Value of Assets is the Actuarial Value of Assets reduced by the value of the non-valuation reserves.

(3) Net of pension plan investment expense, including inflation

(4) Pub-2010 General Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females) with rates increased by 5%, projected 30 years (from 2010) with the two-dimensional mortality improvement scale MP year of valuation, weighted 40% male and 60% female.

(5) Valuations are only required every three years for this withdrawn plan.

* Fiscal year 2015 was the 1st year of implementation, therefore only seven years are shown.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
SCHEDULE OF CHANGES IN THE NET OPEB LIABILITY AND RELATED RATIOS
LAST TEN FISCAL YEARS***

Fiscal Year-End	6/30/2021	6/30/2020	6/30/2019	6/30/2018
Measurement date	6/30/2020	6/30/2019	6/30/2018	6/30/2017
Total OPEB Liability:				
Service cost	\$ 137,998	\$ 133,979	\$ 149,564	\$ 145,208
Interest on total OPEB liability	249,025	237,289	204,873	193,579
Change of benefit terms	-	26,765	-	-
Change of assumptions	-	311	-	-
Differences between actual and expected experience	-	162,711	-	-
Benefit payments, including refunds and the implied subsidy benefit payments	<u>(203,116)</u>	<u>(186,651)</u>	<u>(172,520)</u>	<u>(157,788)</u>
Net Change in Total OPEB Liability	183,907	374,404	181,917	180,999
Total OPEB Liability - Beginning of Year	<u>3,793,117</u>	<u>3,418,713</u>	<u>3,236,796</u>	<u>3,055,797</u>
Total OPEB Liability - End of Year (a)	<u><u>3,977,024</u></u>	<u><u>3,793,117</u></u>	<u><u>3,418,713</u></u>	<u><u>3,236,796</u></u>
Plan Fiduciary Net Position:				
Contributions - employer	403,116	186,651	332,520	157,788
Net investment income	707,874	154,442	187,022	172,915
Administrative expenses	(22,488)	(21,011)	(18,258)	(17,814)
Benefit payments, including refunds and the implied subsidy benefit payments	<u>(203,116)</u>	<u>(186,651)</u>	<u>(172,520)</u>	<u>(157,788)</u>
Net Change in Plan Fiduciary Net Position	885,386	133,431	328,764	155,101
Plan Fiduciary Net Position - Beginning of Year	<u>3,542,720</u>	<u>3,409,289</u>	<u>3,080,525</u>	<u>2,925,424</u>
Plan Fiduciary Net Position - End of Year (b)	<u><u>4,428,106</u></u>	<u><u>3,542,720</u></u>	<u><u>3,409,289</u></u>	<u><u>3,080,525</u></u>
Net OPEB Liability (Asset) - Ending (a)-(b)	<u><u>\$ (451,082)</u></u>	<u><u>\$ 250,397</u></u>	<u><u>\$ 9,424</u></u>	<u><u>\$ 156,271</u></u>
Plan fiduciary net position as a percentage of the total OPEB liability (asset)	111.34%	93.40%	99.72%	95.17%
Covered - employee payroll	\$ 6,759,803	\$ 6,652,998	\$ 6,375,440	\$ 5,930,211
Net OPEB liability (asset) as percentage of covered - employee payroll	-6.67%	3.76%	0.15%	2.64%

NOTES TO SCHEDULE

Benefit Changes:

There were no changes in benefits.

Changes in Assumptions:

The fiscal year ended June 30, 2018 is the first year of implementation and the same actuarial report was utilized for fiscal year ended June 30, 2019; therefore, there are no previous GASB 75 actuarial reports for comparison.

The fiscal year ended June 30, 2020 contained a medical trend rate of 5.9% for 2020 decreasing by 0.1% per year to an ultimate rate of 5.0% for 2029 and later years while the fiscal years ended June 30, 2019 and 2018 included a medical trend rate of 5.0% for 2018 and later years.

* Fiscal year 2018 was the first year of implementation; therefore, only four years are shown.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
SCHEDULE OF CONTRIBUTIONS – OPEB
LAST TEN FISCAL YEARS***

Fiscal Year-End	6/30/2021	6/30/2020	6/30/2019	6/30/2018
Contractually required contribution (actuarially determined)	\$ 195,944	\$ 186,651	\$ 158,204	\$ 152,416
Contributions in relation to the actuarially determined contributions	(403,116)	(186,651)	(332,520)	(157,788)
Contribution deficiency (excess)	<u>\$ (207,172)</u>	<u>\$ -</u>	<u>\$ (174,316)</u>	<u>\$ (5,372)</u>
Covered - employee payroll	<u>\$ 6,759,803</u>	<u>\$ 6,652,998</u>	<u>\$ 6,375,443</u>	<u>\$ 6,216,041</u>
Contributions as a percentage of covered - employee payroll	5.96%	2.81%	5.22%	2.54%

NOTES TO SCHEDULE

Valuation Date	7/1/2019	7/1/2019	7/1/2017	7/1/2017
Methods and Assumptions Used to Determine Contribution Rates:				
Actuarial cost method	Entry age normal, level percentage of payroll			
Amortization method	Level percent of pay			
Amortization period	30-years			
Asset valuation method	Market value			
Discount rate	6.50%			
Salary increases	3.00%			
General Inflation	3.00%			
Medical trend	5.9% for 2020 decreasing by 0.1% per year to an ultimate rate of 5.0%			
Mortality	Pre-retirement mortality rates were based on the RP-2014 Employee Mortality Table for Males or Females, as appropriate, without projection. Post-retirement mortality rates were based on the RP-2014 Health Annuitant Mortality Table for Males or Females, as appropriate, without projection.			
Retirement and termination	Retirement and termination assumptions used were based on a review of plan experience and a best estimate of future plan experience.			

* Fiscal year 2018 was the first year of implementation; therefore, only four years are shown.



**INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER
FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS
BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED
IN ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS**

Board of Trustees
Orange County Mosquito and Vector Control District
Garden Grove, California

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the governmental activities and the major fund of the Orange County Mosquito and Vector Control District (the District) as of and for the year ended June 30, 2021, and the related notes to the financial statements, which collectively comprise the District's basic financial statements, and have issued our report thereon dated November 11, 2021.

Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered Orange County Mosquito and Vector Control District's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of Orange County Mosquito and Vector Control District's internal control. Accordingly, we do not express an opinion on the effectiveness of Orange County Mosquito and Vector Control District's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.



Compliance and Other Matters

As part of obtaining reasonable assurance about whether Orange County Mosquito and Vector Control District's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.



CliftonLarsonAllen LLP

Irvine, California
November 11, 2021

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Board of Directors
Orange County Mosquito and Vector Control District
Garden Grove, California

We have audited the financial statements of Orange County Mosquito and Vector Control District (the District) as of and for the year ended June 30, 2021, and have issued our report thereon dated November 11, 2021. We have previously communicated to you information about our responsibilities under auditing standards generally accepted in the United States of America and *Government Auditing Standards*, as well as certain information related to the planned scope and timing of our audit. Professional standards also require that we communicate to you the following information related to our audit.

Significant audit findings

Qualitative aspects of accounting practices

Accounting policies

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by Orange County Mosquito and Vector Control District are described in Note 1 to the financial statements.

As described in Note 1D, the District implemented the Statement of Governmental Accounting Standards (GASB Statement) No. 84, *Fiduciary Activities*, in fiscal year 2020-2021 by excluding the previously report Other Post-Employment Benefits (OPEB) trust from the District's fiduciary funds since the trust no longer meets the definition of a fiduciary fund.

We noted no transactions entered into by the entity during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimates affecting the financial statements were:

- The annual required contributions, pension expense, net pension liability and corresponding deferred outflows of resources and deferred inflows of resources for the District's public defined benefit plans with CalPERS are based on an actuarial valuation provided by CalPERS.
- The required contributions, pension expense, net pension asset and corresponding deferred outflows of resources and deferred inflows of resources for the District's terminated public defined benefit plans with OCERS are based on an actuarial valuation provided by OCERS.

- The OPEB expense, net OPEB liability, and corresponding deferred outflows of resources and deferred inflows of resources for the District's defined benefit OPEB plan are based several key assumptions that are set by management with the assistance of an independent third-party actuary. These key assumptions include anticipated investment rate of return, health care cost trends, mortality and certain amortization periods.

We evaluated the key factors and assumptions used to develop these accounting estimates in determining that it is reasonable in relation to the financial statements taken as a whole.

Financial statement disclosures

Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. The most sensitive disclosures affecting the financial statements were:

- The disclosure of the District's retirement plans in Note 8 to the financial statements.
- The disclosure of the District's defined benefit OPEB plan in Note 9 to the financial statements.

The financial statement disclosures are neutral, consistent, and clear.

Difficulties encountered in performing the audit

We encountered no significant difficulties in dealing with management in performing and completing our audit.

Corrected and Uncorrected misstatements

Professional standards require us to accumulate all misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. As a result of our audit related test work, we proposed an adjustment to record the OCERS terminated defined benefit pension plan under GASB 68 in order to record the net pension asset and corresponding deferred outflows and inflows of resources, which resulted in a restatement of beginning net position for governmental activities that, in our judgment, had a significant effect on the District's financial reporting process.

Disagreements with management

For purposes of this letter, a disagreement with management is a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditors' report. No such disagreements arose during our audit.

Management representations

We have requested certain representations from management that are included in the management representation letter dated November 11, 2021.

Management consultations with other independent accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the entity's financial statements or a determination of the type of auditors' opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Other information in documents containing audited financial statements

With respect to the required supplementary information (RSI) accompanying the financial statements, we made certain inquiries of management about the methods of preparing the RSI, including whether the RSI has been measured and presented in accordance with prescribed guidelines, whether the methods of measurement and preparation have been changed from the prior period and the reasons for any such changes, and whether there were any significant assumptions or interpretations underlying the measurement or presentation of the RSI. We compared the RSI for consistency with management's responses to the foregoing inquiries, the basic financial statements, and other knowledge obtained during the audit of the basic financial statements. Because these limited procedures do not provide sufficient evidence, we did not express an opinion or provide any assurance on the RSI.

* * *

This communication is intended solely for the information and use of the board of directors and management of Orange County Mosquito and Vector Control District and is not intended to be, and should not be, used by anyone other than these specified parties.



CliftonLarsonAllen LLP

Irvine, California
November 11, 2021



ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT

December 16, 2021

AGENDA REPORT

AGENDA ITEM H.2

Prepared By: Rick Howard, District Manager
Submitted By: Rick Howard, District Manager

Agenda Title:

Adopt Orange County Mosquito and Vector Control District Emergency Operations Plan 2021 Update

Recommended Action:

Adopt 2021 Emergency Operations Plan 2021 Update

Executive Summary:

The District completed its first ever Emergency Operation Plan in July 2017. The Plan was developed under contract with Russ Patterson of R.E. Patterson and Associates, a California based emergency management consulting firm. Mr. Patterson presented the initial Plan to the Board of Trustees in July 2017. Staff and Mr. Patterson have been working on a Plan update which was recently completed. The Plan is SEMS (Standardized Emergency Management System) and NIMS (National Incident Management System) compliant.

Since 1960 the state of California has utilized an Incident Command Structure (ICS) to manage emergencies throughout the state. After the Oakland Hills Fire in 1991 the Governor's Office of Emergency Services established a more managed and coordinated approach to multiple emergencies occurring simultaneously. The Standardized Emergency Management System (SEMS) was established for managing multiagency and multijurisdictional responses to emergencies in California. State and local government agencies are required to use SEMS in order to be eligible for any state or federal reimbursement of response-related costs under the state's disaster assistance programs.

After 9/11, the Federal Government and Department of Homeland Security established the National Incident Management System (NIMS). Like SEMS at the state level, NIMS is a standardized approach to incident management. It is intended to facilitate coordination between all responders (including all levels of government with public, private, and nongovernmental organizations). Failure to follow NIMS in a federally declared disaster will result in the loss of costs incurred during a declared emergency.

The updated Plan includes the addition of a disease related emergencies section, as well as updating the original plan to meet current FEMA and CalOES requirements. Staff will provide a more through update of the Plan at the December 16, 2021 Board meeting.

Fiscal Impact:

Amount Requested \$ N/A

Sufficient Budgeted Funds Available:

Category: Pers. Optg. Cap. -or- CIP# Fund#

Previous Relevant Board Actions for This Item:

July 20, 2017 Board Meeting – Presentation of Emergency Plan

Exhibits:

Exhibit A: Emergency Operation Plan – 2021 Update



Orange County
Mosquito and Vector Control District

A Public Health Agency Serving Orange County Since 1947

Emergency Operations Plan

December 2021

**13001 Garden Grove Boulevard
Garden Grove, CA 92843-2102
(714) 971-2412**

EMERGENCY USE OF THIS PLAN

Step 1

- Turn to **APPENDIX 1** - EOC Assignments.
- Determine Your **EOC** Positional Assignment.

Step 2

- Turn to **SECTION 2** - Emergency Operations Center.
- Set up EOC based on **Page 65** - EOC Activation Checklist.
- Lay out EOC based on **Page 63** - EOC Layout.

Step 3

- Noting your EOC Assignment, refer to Checklists in **SECTION 3** and the **APPENDICES** and **ANNEXES** sections for supplemental information as you assume emergency response duties.

Table of Contents

Section 1 - Basic Emergency Plan

Basic Plan	3
Promulgation.....	3
The Basic Plan.....	5
Requirements.....	5
Purpose & Scope	7
Purpose.....	7
Scope	7
Overall Emergency Planning Assumptions	9
Plan Assumptions.....	9
Objectives & Goals	11
The objectives of the plan are to:	11
Standardized Emergency Management System (SEMS)	13
What is SEMS?	13
Purpose of SEMS.....	13
Organizational / Response Levels and Activation Requirements	14
Field Response Level.....	14
City/ Local Government Level.....	14
Operational Area.....	14
Regional.....	15
State.....	15
Features Common to all Organizational/Response Levels.....	16
Essential Management Functions.....	16
Management by Objectives	16
Action Planning	16
After Action Reporting.....	16
Organizational Flexibility - Modular Organization	17
Organizational Unity and Hierarchy of Command or Management.....	17
Span of Control	17
Personnel Accountability.....	17
Common Terminology.....	17
Resources Management	18
Integrated Communications	18
Mutual Aid.....	18

What is Mutual Aid?	18
Mutual Aid Systems	18
Mutual Aid Coordinators	19
Participation of Volunteer and Private Agencies	19
Emergency Facilities used for Mutual Aid	20
Overview of SEMS Response.....	20
Local Incident within Capability of Local Government / City.....	20
Single Jurisdiction Incident	21
Major Single Jurisdiction Disaster	21
Major Area-Wide Disaster - Damage in Multiple Operational Areas.....	22
Authorities and References.....	23
State of California.....	23
The California Emergency Plan	23
Definitions	25
Incident	25
Emergency.....	25
Disaster	27
Response Levels.....	27
Response Levels are used to describe the type of event:	27
Response Level 1 - Local Emergency	27
Response Level 2 - Local Disaster.....	27
Response Level 3 - Major Disaster	28
Response Level Diagram.....	29
Emergency Phases	31
General Information Regarding Emergencies.....	31
Mitigation Phase	31
Preparedness Phase	31
Response Phase	32
Recovery Phase.....	32
Emergency Proclamations	33
Local Emergency	33
State of Emergency.....	34
State of War Emergency.....	34
Sample Proclamation.....	35
Hazard Vulnerability Assessments / Risk Analyses.....	37
Hazard Risks.....	37
Vector Hazards.....	38
Mosquito-borne Disease	38
West Nile Virus.....	38

Saint Louis encephalitis	39
Invasive <i>Aedes</i> Diseases.....	39
Malaria	39
Flea-borne Diseases.....	40
Flea-borne Typhus	40
Plague	40
Hantavirus	41
Natural Hazards	41
County Hazard Identification	42
Earthquake	43
Landslide	44
Flood Hazards.....	45
Fire Hazards.....	45
Human-caused Hazards.....	46
Hazardous Materials.....	46
Transportation of Hazardous Materials	47
Terrorism Events.....	47
Plan Maintenance and Training	49
Emergency Operations Plan Maintenance.....	49
Orientation	49
Training Program	49
NIMS Training Matrix.....	50
Suggested NIM Training Courses	51
SEMS Required EOC Exercises and After Action Reports	52
Continuity of Government	53
General	53
Succession of District Officials.....	53
Temporary Seat.....	53
Preservation of Essential Records.....	53
Plan Revision Log	55
Section 2 – Emergency Operations Center	
Emergency Structure	57
Emergency Operations Center	59
Explanation of the EOC.....	59
EOC Organizational Chart.....	61
EOC Positional Definitions	63
EOC Director.....	63
Public Information Officer	63
Liaison Officer.....	63

Legal Officer.....	63
Operations Section Chief.....	63
Field Operations Branch Manager.....	63
Laboratory Operations Branch Manager.....	64
Support Operations Branch Manager.....	64
Planning and Intelligence Section Chief.....	64
Situation Status Unit Leader.....	64
Surveillance Unit Leader.....	64
Documentation Unit Leader.....	64
Advance Planing Unit Leader.....	65
Logistics Section Chief.....	65
Supplies and Services Unit Leader.....	65
Personnel Unit Leader.....	65
Finance and Administration Section Chief.....	65
Cost and Time Unit Leader.....	65
Compensation and Claims Unit Leader.....	66
Emergency Operations Center Diagram.....	67
EOC Activation and Set-Up Procedure.....	69
When the EOC is Activated.....	70
EOC Closeout Checklist.....	71

Section 3 – Emergency Operations Center Positional Checklists

EOC Director.....	75
Legal Officer.....	77
Public Information Officer.....	79
Liaison Officer.....	81
Operations Section Chief.....	83
Field Operations Branch Manager.....	85
Laboratory Operations Branch Manager.....	87
Support Operations Branch Manager.....	89
Planning and Intelligence Section Chief.....	91
Situation Status Unit Leader.....	93
Surveillance Unit Leader.....	95
Documentation Unit Leader.....	97
Advance Planning Unit Leader.....	99
Logistics Section Chief.....	101

Supplies and Services Unit Leader.....103
Personnel Unit Leader105
Finance and Administration Section Chief107
Cost and Time Unit Leader109
Compensation and Claims Unit Leader111

APPENDICES

APPENDIX 1 - EOC Position Assignments & District Personnel Contact Information

APPENDIX 2 - Outside Agency Contact Information

APPENDIX 3 - Vendor Contact Information

APPENDIX 4 - District Spray Equipment and Vehicle List

APPENDIX 5 - California Vector Control District Information

APPENDIX 6 - West Nile Virus and Aedes Response Guidelines

APPENDIX 7 - Typhus Response Guidelines

APPENDIX 8 - Natural Hazard Specific Checklists

APPENDIX 9 - Emergency Operations Center Forms

APPENDIX 10 - Glossary and Acronym List

APPENDIX 11 - OCMVCD / Public Health Collaboration Agreement

ANNEXES

ANNEX A - OCMVCD Integrated Vector Management and Response Plan

ANNEX B - OCMVCD West Nile Supplemental Plan

ANNEX C - *DRAFT* OCMVCD Aedes Mosquito Response Plan

ANNEX D - CDPH Mosquito-borne Virus Response Plan

ANNEX E - *DRAFT* 2021 Orange County LHMP Vector Mitigation Issues

ANNEX F - Disease Outbreak Communication Plan

ANNEX G - Southern California Mosquito & Vector Control District Mutual Aid Plan 2020

ANNEX H - Disaster Service Worker Policy

ANNEX I - Board Duties and Responsibilities

ANNEX J - IIPP Covid 19 Supplement

ANNEX K - Orange County Operational Area Agreement

ANNEX L - Incident Command System

SECTION 1

THE EMERGENCY OPERATIONS PLAN

Promulgation

Letter of Promulgation

The preservation of life, environment, and property is an inherent responsibility of local, state, and federal government. The Orange County Mosquito and Vector Control District has prepared this Emergency Operations Plan to ensure the most effective and economical allocation of resources for the maximum benefit and protection of the community in time of emergency.

While no plan can completely prevent death and destruction, good plans carried out by knowledgeable and well-trained personnel can and will minimize losses. This plan establishes the emergency organization, assigns tasks, specifies policies, and general procedures, and provides for coordination of planning efforts of the various emergency staff and service elements utilizing the Standardized Emergency Management System (SEMS). The plan also meets requirements established by the National Incident Management System (NIMS).

The objective of this Plan is to incorporate and coordinate all agencies and personnel of the District into an efficient organization capable of responding to any emergency.

This Emergency Response Plan is an extension of the *California Emergency Plan*. It will be reviewed, exercised periodically, and revised as necessary to meet changing conditions.

The Board gives its full support to this plan and urges all officials, employees, and citizens, individually and collectively, to do their share in the total emergency effort of the Orange County Mosquito and Vector Control District.

Concurrence of this promulgation letter constitutes the adoption of the Standardized Emergency Management System and the National Incident Management System by the Orange County Mosquito and Vector Control District. This Emergency Operations Plan will become effective on approval by the Board.

Richard J. Howard
District Manager
EOC Director

The Emergency Response Plan

The Emergency Response Plan addresses the District's responsibilities in emergencies associated with natural disaster, disease outbreaks, human-caused emergencies and technological incidents. It provides a framework for coordination of response and recovery efforts within the District in coordination and with local, State, and federal agencies. The Plan establishes an emergency organization to direct and control operations during a period of emergency by assigning responsibilities to specific personnel.

The Plan:

- Conforms to the State mandated Standardized Emergency Management System (SEMS), the National Incident Management System (NIMS), and effectively structures emergency response at all levels in compliance with the Incident Command System (ICS).
- Establishes response policies and procedures, providing the District clear guidance for planning purposes.
- Describes and details procedural steps necessary to protect lives and property.
- Outlines coordination requirements.
- Provides a basis for unified training and response exercises to ensure compliance.

Requirements

The Plan meets the requirements of the State's policies on Emergency Response and Planning, the Standardized Emergency Management System (SEMS), and the National Incident Management Plan (NIMS).

Purpose and Scope

Purpose

The purpose of the Emergency Response Plan is to protect the safety and welfare of the residents of Orange County, as well as the employees and contractors of the Orange County Mosquito and Vector Control District.

Scope

The scope encompasses a broad range of emergencies, such as vector and public health events, as well as major region-wide disasters, flooding, earthquakes, hazardous materials incidents, severe storms, wildfires, and human-caused events. Also included are procedures for emergencies that may or may not require the full or partial activation of the District's Emergency Operations Center (EOC), which will coordinate with other local jurisdiction's Emergency Operation Centers.

Overall Emergency Planning Assumptions

Assumptions of the Plan include:

- Incidents mean an occurrence or event (natural, technological, or human-caused) that requires a response to protect life, property, or the environment. These may include vector and/or public health emergencies, earthquakes, terrorist incidents, wildland and urban fires, winter storms and flooding, hazardous materials (HAZMAT) spills, or other occurrences requiring an emergency response.
- Incidents may occur at any time with little or no warning in the context of a general or specific threat or hazard, and they may involve single or multiple geographic and jurisdictional areas.
- All incidents begin and end locally and are typically managed at the lowest possible geographic, organizational, and jurisdictional level.
- Government at all levels must continue to function under all threats, emergencies, and disaster conditions.
- Local governments possess varying levels of capabilities, plans, procedures, and resources to provide for the safety and welfare of their people. They also vary in their capacity to protect property and the environment in times of emergency or disaster.
- Incidents may cause significant alterations and damage to the environment resulting in numerous casualties and fatalities, displaced individuals, property loss, disruption of normal life support systems, disruption of essential public services, and damage to basic infrastructure.
- Incidents pose a challenge for the whole community but specifically the special needs population which includes children, individuals with disabilities and others with access and functional needs, diverse communities, the elderly, and people with limited English proficiency. These groups may be lacking in resources such as food, shelter, and transportation.
- Emergency efforts will enable people with disabilities to evacuate, use emergency transportation, stay in shelters, and participate in all emergency and disaster related programs.

- Incidents may attract a sizeable influx of independent, spontaneous volunteers and supplies and may require prolonged, sustained incident management operations and support activities.
- Individuals, community based organizations, and businesses will offer services and support in time of disaster.
- The greater the complexity, impact and geographic scope of an emergency, the more multi-agency coordination will be required.

Objectives

The objectives of the Plan are to:

- Protect the safety and welfare of the overall community, as well as the employees of the Orange County Mosquito and Vector Control District.
- Provide for a safe and coordinated response to emergency situations.
- Protect the District's facilities and equipment.
- Enable the District to restore normal conditions with minimal confusion in the shortest time possible.
- Provide for interface and coordination between incident sites and the District's Emergency Operations Center (EOC) as well as other city and county Emergency Operation Centers.

Specific goals falling within the objectives include:

- Rapidly restore vector control services after an emergency.
- Minimize negative impacts on public health and employee safety.
- Provide emergency public information concerning vector control issues.

Standardized Emergency Management System (SEMS)

What is SEMS?

The Standardized Emergency Management System (SEMS) is the system required by Government Code §8607(a) for managing response to multi-agency and multi-jurisdiction emergencies in California. SEMS consists of five organizational levels that are activated as necessary:

- Field Response
- Local Government (Cities and Special Districts)
- Operational Area (County)
- Regional
- State

SEMS incorporates the use of the Incident Command System (ICS), the Master Mutual Aid Agreement, existing mutual aid systems, the Operational Area concept, and multi-agency or inter-agency coordination. Local governments and special districts must use SEMS to be eligible for funding of their personnel related costs under State Disaster Assistance programs.

Purpose of SEMS

SEMS has been established to provide an effective response to multi-agency and multi-jurisdiction emergencies in California. By standardizing key elements of the emergency management system, SEMS is intended to:

- Facilitate the flow of information within and between levels of the system,
- Facilitate coordination among all responding agencies.

Use of SEMS improves the mobilization, deployment, utilization, tracking, and demobilization of needed mutual aid resources. Use of SEMS reduces the incidence of poor coordination and communications, and reduces resource ordering duplication on multi-agency and multi-jurisdiction responses. SEMS is flexible and adaptable to the varied disasters that occur in California and to the needs of all emergency responders.

Organizational / Response Levels and Activation Requirements

The five SEMS organizational / response levels are described below. The levels are activated as needed for an emergency.

Field Response Level

The field response level is where emergency response personnel and resources, under the command of an appropriate authority, carry out tactical decisions and activities in direct response to an incident or threat. SEMS regulations require the use of ICS at the field response level of an incident.

Local Government Level

Local governments include cities, counties, and special districts. Local governments manage and coordinate the overall emergency response and recovery activities within their jurisdiction. The Orange County Mosquito and Vector Control District is a special district, and therefore falls into this level. Local governments are required to use SEMS when their Emergency Operations Center is activated or a local emergency is declared or proclaimed in order to be eligible for State and federal funding of response-related costs. In SEMS, the local government emergency management organization and its relationship to the field response level may vary depending upon factors related to geographical size, population, function, and complexity.

Operational Area Level

Under SEMS, the Operational Area means an intermediate level of the State's emergency services organization which encompasses the County and all political subdivisions located within the County. The Operational Area manages and/or coordinates information, resources, and priorities among local governments within the Operational Area, and serves as the coordination and communication link between the local government level and the regional level.

It is important to note, that while the Operational Area always encompasses the entire County area, it does not necessarily mean that the County government manages and coordinates the response and recovery activities within the county. The decision on organization and structure within the Operational Area is made by the governing bodies of the county and the political subdivisions with the county.

In Orange County, the emergency management organization of each incorporated city and each special district is responsible for coordination and direction of response and recovery operations within their respective jurisdictions, while the Orange County Sheriff's Office Emergency Management Division serves a support role. The County is responsible for coordinating and directing response and recovery operations in the unincorporated areas of the County, including

certain services in Orange County Mosquito and Vector Control District, and with the cities providing support and mutual aid as needed.

The County is the Operational Area, and will be the focal point for information transfer and support requests by cities within the County. The County Administrator is in charge of the Operational Area. In the event of a major disaster, the County emergency organization will operate under a Unified Command Structure. For additional information, refer to **ANNEX - K**, the Orange County Operational Area Agreement.

Regional Level

Because of its size and geography, the state has been divided into three Regions. The purpose of the Regions is to provide for the more effective application and coordination of mutual aid and other emergency related activities. The Orange County Mosquito and Vector Control District is in the Southern Region, which has its Regional Emergency Operations Center (REOC) in Los Alamitos. In SEMS, the regional level manages and coordinates information and resources among operational areas within the Region, and also between the Operational Areas and the State level. The regional level also coordinates overall State agency support for emergency response activities within the Region.

State Level

The State level of SEMS manages state resources in response to the emergency needs of the other levels, and coordinates mutual aid among the Regions and the State. The State level also serves as the coordination and communication link between the State and the federal disaster response system.

In addition, the State of California's Department of Public Health (CDPH) has developed a statewide Mosquito-borne Virus Surveillance and Response Plan to meet several objectives. Specifically, the Plan:

- Provides guidelines and information on the surveillance and control of endemic mosquito-borne viruses in California, including West Nile, St. Louis encephalitis, and western equine encephalitis viruses;
- Incorporates surveillance data into risk assessment models;
- Prompts surveillance and control activities associated with virus transmission risk level;
- Provides local and state agencies with a decision support system; and
- Outlines the roles and responsibilities of local and state agencies involved with mosquito-borne virus surveillance and response.

Refer to **ANNEX D** to review a copy of the CDPH plan.

Features Common to all Organizational Response Levels

SEMS has several features based on the Incident Command System (ICS). The field response level uses functions, principles, and components of ICS as required in SEMS regulations. Many of these field response level features are also applicable at local government, Operational Area, Regional and State levels. In addition, there are other ICS features that have application to all SEMS levels. Described below are the features of ICS that are applicable to all SEMS levels.

Essential Management Functions

SEMS has five essential functions adapted from ICS. Field Response uses the five primary ICS functions: Command, Operations, Planning / Intelligence, Logistics and Finance / Administration. In an Emergency Operations Center at local government, Operational Area, and Regional / State levels, the term Management is used instead of Command. The titles of the other functions remain the same at all levels.

Management by Objectives

The Management by Objectives feature of ICS as applied to SEMS means that each SEMS level establishes, for a given operational period, measurable and attainable objectives to be achieved.

An objective is an aim or end of an action to be performed. Each objective may have one or more strategies and performance actions needed to achieve the objective. The operational period is the length of time set by command at the field level, and by management at other levels to achieve a given set of objectives. The operational period may vary in length from a few hours to days, and will be determined by the situation.

Action Planning

Action planning should be used at all SEMS levels. There are two types of action plans in SEMS:

Incident Action Plans: At the field response level, written or verbal incident action plans contain objectives reflecting the overall incident strategy and specific tactical action and supporting information for the next operational period. Incident action plans are an essential and required element in achieving objectives under ICS.

EOC Action Plans: At local, Operational Area, Regional and State levels, the use of EOC action plans provide designated personnel with knowledge of the objectives to be achieved and the steps required for achievement. Action plans not only provide direction, but they also serve to provide a basis for measuring achievement of objectives and overall system performance.

After Action Reporting

After Action Reports are required by the National Incident Management System any time the Emergency Operations Center is activated. The EOC Director will ensure that all responsible persons (Section Chiefs) will attend a critique or "Hot Wash" within 48 hours of the closing of the operation. As a result of this meeting, individual reports will be submitted no later than 30 days after the closing of the EOC. The reports must include Corrective Actions, including who is

responsible for the actions and when they are to be completed. A copy of the After Action Report must be sent to the Orange County Sheriff's Office Emergency Management Division within 90 days of the EOC deactivation.

Organizational Flexibility - Modular Organization

The intent of this SEMS feature is that at each SEMS level: 1) only those functional elements that are required to meet current objectives need to be activated, and 2) that all elements of the organization can be arranged in various ways within or under the five SEMS essential functions. The functions of any non-activated element will be the responsibility of the next highest element in the organization. Each activated element must have a person in charge of it. However, one supervisor may be in charge of more than one functional element.

Organizational Unity and Hierarchy of Command or Management

Organizational Unity means that every individual within an organization has a designated supervisor. Hierarchy of command / management means that all functional elements within each activated SEMS level are linked together to form a single overall organization within appropriate span-of-control limits.

Span of Control

Maintaining a reasonable span of control is the responsibility of every supervisor at all SEMS levels. The optimum span of control is one to five, meaning that one supervisor has direct supervisory authority over five positions or resources. The recommended span of control for supervisory personnel at the field response level and all EOC levels should be in the one-to-three to one-to-seven range. A larger span of control may be acceptable when the supervised positions or resources are all performing a similar activity.

Personnel Accountability

An important feature of ICS applicable to all SEMS levels is personnel accountability. This is accomplished through the Organizational Unity and Hierarchy of Command or Management feature along with the use of check-in forms, position logs and various status keeping systems. The intent in bringing this ICS feature into SEMS is to ensure that there are proper safeguards in place so all personnel at any SEMS level can be accounted for at any time.

Common Terminology

In ICS, common terminology is applied to functional elements, position titles, facility designations and resources. The purpose of having common terminology is to rapidly enable multi-agency, multi-jurisdiction organizations and resources to work together effectively. This feature, as applied to all SEMS levels, would ensure that there is consistency and standardization in the use of terminology within and between all five SEMS levels.

Resources Management

In ICS, resource management describes the ways in which field level resources are managed and how status is maintained. At all SEMS levels, there will be some functional activity related to managing resources. This will vary from level to level in terms of directing and controlling, to coordination, to resource inventorying. Procedures for effective resources management must be geared to the function and the level at which the function is performed.

Integrated Communications

This feature of ICS relates to: hardware systems; planning for system selection and linking; and the procedures and processes for transferring information. At the field response level, integrated communications is used on any emergency. At all EOC levels, and between all SEMS levels, there must be a dedicated effort to ensure that communications systems, planning and information flow are being accomplished in an effective manner.

Mutual Aid

What is Mutual Aid?

Incidents frequently require responses that exceed the resource capabilities of the affected response agencies and jurisdictions. When this occurs Mutual Aid is provided by other agencies, local governments, and the state. Mutual Aid is voluntary aid and assistance by the provision of services and facilities including but not limited to: fire, police, medical and health, communications, transportation, and utilities. Mutual Aid is intended to provide adequate resources, facilities, and other support to jurisdictions whenever their own resources prove to be inadequate to cope with a given situation.

Mutual Aid is provided between and among local jurisdictions and the State under the terms of the California Disaster and Civil Defense Master Mutual Aid Agreement. This agreement was developed in 1950 and has been adopted by California's incorporated cities, all 58 counties, and the State.

Southern Region Vector Control District's Mutual Aid Agreement

In 2020, the OCMVCD entered into an agreement with other Southern California Vector Control Districts to provide and receive mutual aid in times of emergency. This specific agreement will assist the District in facilitating mutual aid assets in a timelier manner. Refer to **ANNEX G** for a copy of the agreement.

Mutual Aid Systems

The mutual aid program in California has developed statewide mutual aid systems. These systems, operating within the framework of the Master Mutual Aid Agreement, allow for the progressive mobilization of resources to and from emergency response agencies, local governments, operational areas, regions, and state with the intent to provide requesting agencies with adequate resources.

Several discipline-specific mutual aid systems have been developed, including fire and rescue, law, medical, and public works. The adoption of SEMS does not alter existing Mutual Aid systems. These systems work through local government, Operational Area, Regional and State levels consistent with SEMS.

Mutual aid may also be obtained from other states. Inter-state Mutual Aid may be obtained through direct state-to-state contacts, pursuant to inter-state agreements and compacts, or may be coordinated through federal agencies.

Mutual Aid Coordinators

The basic role of a Mutual Aid Coordinator is to receive Mutual Aid requests, coordinate the provision of resources from within the coordinator's geographic area of responsibility, and to pass on unfilled requests to the next level. Mutual Aid requests that do not fall into one of the discipline-specific Mutual Aid systems are handled through the Emergency Services Mutual Aid System by emergency management staff at the local government, Operational Area, Regional, and State levels. Agencies may be requested to send representatives to the Regional EOC to assist OES regional staff in handling mutual aid requests for disciplines or functions that do not have designated Mutual Aid Coordinators.

Participation of Volunteer and Private Agencies

Volunteer agencies and private agencies may participate in the Mutual Aid system along with governmental agencies. For example, the Disaster Medical Mutual Aid system relies heavily on private sector involvement for medical / health resources. Some volunteer agencies such as the American Red Cross, the Salvation Army and others are an essential element of the statewide emergency response to meet the needs of disaster victims. Volunteer agencies mobilize volunteers and other resources through their own systems. They also may identify resource needs that are not met within their own systems that would be requested through the Mutual Aid system. Volunteer agencies with extensive involvement in the emergency response should be represented in EOCs.

Some private agencies have established mutual aid arrangements to assist other private agencies within their functional area. For example, electric and gas utilities have Mutual Aid agreements within their industry and established procedures for coordinating with governmental EOCs. In some functional areas, services are provided by a mix of special districts, municipal, and private agencies. Mutual aid arrangements may include both governmental and private agencies. Liaison should be established between activated EOCs and private agencies involved in a response. Where there is a need for extensive coordination and information exchange, private agencies should be represented in activated EOCs at the appropriate SEMS level.

Emergency Facilities used for Mutual Aid

In-coming Mutual Aid resources may be received and processed at several types of facilities including: marshalling areas, mobilization centers, and incident facilities. Each type of facility is described briefly below:

Marshalling Area: Defined in the National Response Framework as an area used for the complete assemblage of personnel and other resources prior to their being sent directly to the disaster area. Marshalling areas may be established in other states for a catastrophic California earthquake.

Mobilization Center: Off-incident location at which emergency service personnel and equipment are temporarily located pending assignment, release, or reassignment. For major area-wide disasters, mobilization centers may be located in, or on the periphery of, the disaster area.

Incident Facilities: Incoming resources may be sent to staging areas, other incident facilities, or directly to an incident depending on the circumstances.

Staging Areas: Temporary locations at an incident where personnel and equipment are kept while awaiting tactical assignments.

Overview of SEMS Response

The following describes generally how SEMS is intended to work for various emergency situations. The situations are described in terms of the involvement and interactions of the five SEMS levels, and are intended to apply to all types of disasters that may occur in California, such as, earthquakes, floods, fires, and hazardous materials incidents.

This discussion assumes that appropriate emergency declarations and proclamations are made. It also assumes that multi-agency or inter-agency coordination is accomplished at each level as required by SEMS regulations.

Note that SEMS may be activated and resources mobilized in anticipation of possible disasters. Such anticipatory actions may be taken when there are flood watches, severe weather, earthquake advisories, or other circumstances that indicate the increased likelihood of a disaster that may require emergency response and mutual aid. The extent of actions taken will be decided at the time based on the circumstances.

Local Incident within Capability of Local Government

Field Response: Field units respond as needed using the Incident Command System. Resources are requested through local government dispatch centers.

Local Government: Supports field response as needed. Small incidents generally do not require activation of the local government Emergency Operations Center. Emergency management staff

may monitor the incident for possible increase in severity. Larger incidents may necessitate activation of the EOC. Local governments will notify the operational area if the EOC is activated.

Operational Area: Activation of the Operational Area EOC is generally not needed for small incidents, but consideration should be given to possibility of the incident becoming larger. The Operational Area EOC would be activated if the local government activates its EOC and requests Operational Area EOC activation.

Single Jurisdiction Incident - Local Government Requires Additional Resources

Field Response: Field units respond as needed using the Incident Command System. Resources are requested through dispatch centers, Department Operations Centers, or in some cases, the EOC.

Local Government: Supports incident commanders with available resources. The local government Emergency Operations Center is activated. Local government and special districts notify the Operational Area. Resources are requested through Operational Area emergency management staff and appropriate Mutual Aid Coordinators. (In some cases, Mutual Aid may be obtained directly from neighboring local governments under local Mutual Aid agreements.) Local government and special districts retain responsibility for managing the response.

Operational Area: Operational Area emergency management staff and Mutual Aid coordinators locate and mobilize resources requested by local government or special districts. Emergency management staff and Mutual Aid Coordinators generally operate from normal departmental locations for handling limited resource requests, and the EOC is not activated. Emergency management staff and Mutual Aid Coordinators will communicate with each other as needed to coordinate resource mobilization. If requested by the affected local government, emergency management staff will activate the operational area EOC.

Major Single Jurisdiction Disaster - Local Government Requires Additional Resources

Field Response: Field units respond as needed using the Incident Command System. One or more Incident Commands may be established depending upon the size and nature of the disaster. Resources are requested through dispatch centers, Department Operations Centers (DOCs), or the EOC.

Local Government: Supports Incident Commanders with available resources. Local governments activate their Emergency Operations Centers and notify the Operational Area lead agency. Resources are requested through Operational Area emergency management staff and Mutual Aid Coordinators. Local governments retain responsibility for managing the response.

Operational Area: Lead agency activates Operational Area Emergency Operations Center. Operational Area emergency management staff and Mutual Aid Coordinators locate and mobilize resources requested by Local government and special districts. Mutual Aid Coordinators go to the EOC or send representatives depending on circumstances. Resources not available within the Operational Area are requested through the California Office of Emergency Services Regional Administrator and Regional Mutual Aid Coordinators.

Regional: The California Office of Emergency Services Regional Administrator activates the Regional Emergency Operations Center (REOC) and notifies headquarters. The Regional Administrator and Regional Mutual Aid Coordinators locate and mobilize resources requested by the Operational Area.

State: State Operations Center is activated. The California Office of Emergency Services staff monitors the situation.

Major Area - Wide Disaster - Damage in Multiple Operational Areas

Field Response: Field units from the affected jurisdictions respond as feasible using the Incident Command System. Incident Command Posts may be established at various sites throughout the disaster area. Resources are requested through dispatch centers, Department Operations Centers (DOCs), or EOCs.

Local Government: Ability to respond may be severely impaired. Local governments assess capability and report situation to operational area. Local governments mobilize all available resources. EOCs establish priorities, allocate available resources to support the field response, and request assistance through the Operational Area. Local governments and special districts retain responsibility for managing the response within their jurisdictions.

Operational Areas: Lead agency activates Emergency Operations Center and notifies the California Office of Emergency Services Regional Administrator. Emergency Operations Center assesses situation and reports information to the Regional Emergency Operations Center (REOC). The emergency management staff and Mutual Aid Coordinators mobilize available resources in the Operational Area, request additional resources through the REOC and Regional Mutual Aid Coordinators, and provide overall situation information to local governments and special Districts.

Regional: The California Office of Emergency Services Regional Administrator activates Regional Emergency Operations Center (REOC) and notifies State Headquarters. REOC staff and Regional Mutual Aid Coordinators locate and mobilize resources available within the Region and from State agencies. Additional resources are requested through the State Operations Center.

State: The State Operations Center (SOC) is activated and State agency representatives are requested to staff the SOC. SOC coordinates State agency response and mobilization of mutual aid resources from unaffected regions. SOC may direct activation of other California Office of Emergency Services REOCs to assist in resource mobilization. State agency department operations centers are activated. If needed, federal assistance is requested using the National Response Framework. The SOC continuously monitors the situation.

State of California

California Government Code, Section 3100, Title 1, Division 4, Chapter 4

States that public employees are Disaster Service Workers (DSW), subject to such disaster service activities as may be assigned to them by their superiors or by law. The term “public employees” includes all persons employed by the State; or any county, city, or special district, excluding aliens legally employed. The law applies when:

- A local emergency has been proclaimed.
- A state of emergency has been proclaimed.
- A federal disaster declaration has been made.

The California Emergency Plan

Promulgated by the Governor, and published in accordance with the Act and provides overall statewide authorities and responsibilities, and describes the functions and operations of government at all levels during extraordinary emergencies, including wartime. Section 8568 of the Act states, in part, that: “...the State Emergency Plan shall be in effect in each political subdivision of the state, and the governing body of each political subdivision shall take such action as may be necessary to carry out the provisions thereof.” Local emergency plans are, therefore, considered to be extensions of the California Emergency Plan.

Definitions

Incidents, Emergencies, and Disasters

Incident

An *incident* is an occurrence or event, either human-caused or caused by natural phenomena, that requires action by emergency response personnel to prevent or minimize loss of life or damage to property and/or natural resources.

Incidents may result in extreme peril to the safety of persons and property and may lead to, or create conditions of disaster. Incidents may also be rapidly mitigated without loss or damage. While not yet meeting disaster level definition, larger incidents may call for managers to proclaim a "Local Emergency".

Incidents are usually a single event that may be small or large. They occur in a defined geographical area and require local resources or, sometimes, mutual aid. There are usually one to a few agencies involved in dealing with an ordinary threat to life and property and to a limited population. Usually a local emergency will not be declared and the jurisdictional EOC will not be activated. Incidents are usually of fairly short duration, measured in hours or, at most, a few days. Primary command decisions are made at the scene along with strategy, tactics, and resource management decisions

Emergency

The term *emergency* is used in several ways. It is a condition of disaster or of extreme peril to the safety of persons and property. In this context, an emergency and an incident could mean the same thing, although an emergency could have more than one incident associated with it.

Emergency is also used in Standardized Emergency Management System (SEMS) terminology to describe agencies or facilities, e.g., Emergency Response Agency, Emergency Operations Center, etc.

Emergency is also used to define a conditional state such as a proclamation of "Local Emergency". The California Emergency Services Act, of which SEMS is a part, describes three states of emergency:

- State of War Emergency
- State of Emergency
- State of Local Emergency

Disaster

A *disaster* is defined as a sudden calamitous emergency event bringing great damage, loss, or destruction. Disasters may occur with little or no advance warning, e.g., an earthquake or a flash flood, or they may develop from one or more incidents, and e.g., a major wildfire or hazardous materials discharge.

Disasters are either single or multiple events that have many separate incidents associated with them. The resource demand goes beyond local capabilities and extensive mutual aid and support are needed. There are many agencies and jurisdictions involved including multiple layers of government. There is usually an extraordinary threat to life and property affecting a generally widespread population and geographical area. A disaster's effects last over a substantial period of time (days to weeks) and local government will proclaim a Local Emergency. Emergency Operations Centers are activated to provide centralized overall coordination of jurisdictional assets, departments and incident support functions. Initial recovery coordination is also a responsibility of the EOCs.

Response Levels

Response Levels are used to describe the type of event:

Area(s) affected and extent of coordination or assistance needed, and degree of participation expected from the District.

Response Level 1 - Major Disaster

District and other local resources are overwhelmed, and the District declares a State of Emergency because extensive outside resources are required. A Local Emergency and a State of Emergency are proclaimed, and a Presidential Declaration is requested. The emergency operation is centralized. The EOC is activated and all coordination and direction activities are done from there. There may be several incidents and the managers of each incident would, as much as possible, report to and receive direction from the EOC. During war, a Statewide Emergency Management System will be fully activated and the State will coordinate emergency operations from Sacramento.

Response Level 2 - Local Disaster

Local resources are not adequate and mutual aid may be required on a regional or even statewide basis. A Local Emergency is proclaimed and a State of Emergency might be proclaimed. Several departments as well as other jurisdictional agencies need close coordination.

The Emergency Operations Center is activated to coordinate emergency response. EOC activities may include but are not limited to:

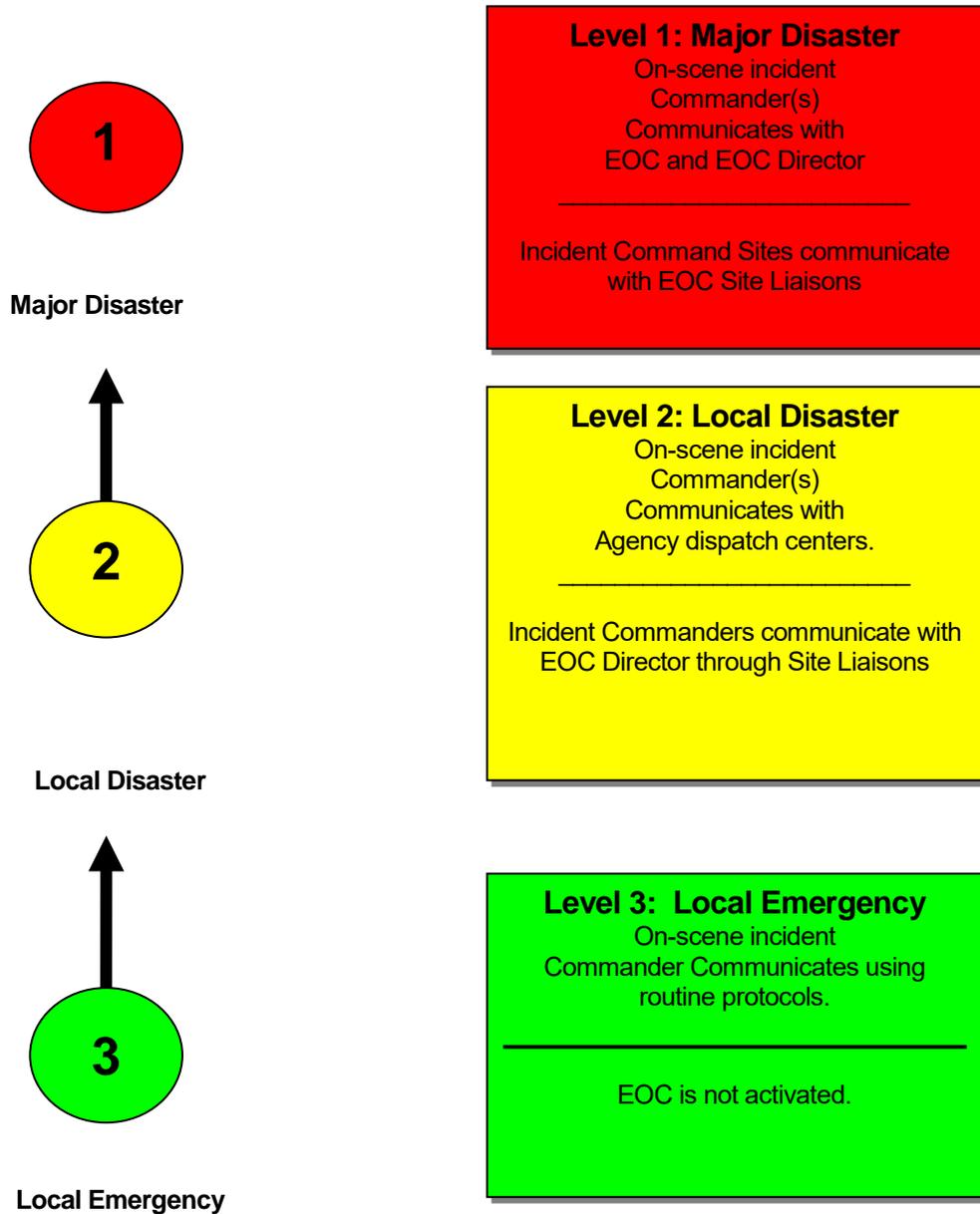
- Establishing a District-wide situation assessment function,
- Establishing a District-wide public information function,
- Determining resource requirements for the affected area and coordinating resource requests,
- Establishing and coordinating the logistical systems necessary to support multi-incident management,
- Establishing priorities for resource allocation.

Direction is decentralized: Incident Command Systems are established and continue to report through agency dispatch centers. Agency dispatch centers or liaison personnel provide information to the Emergency Operations Center.

Response Level 3 – Local Emergency

This type of situation is managed in a normal manner from a command post at the scene. Local resources are adequate and available; a local emergency is declared. Both coordination and direction are centralized: the Emergency Operations Center is not activated and public safety personnel provide necessary support, as established by agreements and ordinances. Police, fire and other responders coordinate via established telephones, radio systems and dispatch centers.

Response Level Diagram



General Information Regarding Emergencies

Some emergencies will be preceded by a build-up or warning period, providing sufficient time to warn the population and implement mitigation measures designated to reduce the loss of life and property damage. Other emergencies occur with little or no advance warning, thus requiring immediate activation of the Emergency Response Plan and commitment of resources. All employees must be prepared to respond promptly and effectively to any foreseeable emergency, including the provision and use of mutual aid.

Emergency management activities during peacetime and national security emergencies are often associated with the phases indicated below. However, not every disaster necessarily includes all indicated phases.

Prevention Phase

Prevention focuses on preventing human hazards, primarily from potential natural disasters or terrorist (both physical and biological) attacks. Preventive measures are designed to provide more permanent protection from disasters; however, not all disasters can be prevented. The risk of loss of life and injury can be limited with good evacuation plans, environmental planning, and design standards.

Mitigation Phase

Mitigation is perhaps the most critical phase of emergency management. However, it is often the least used and generally the most cost-effective. Mitigation is often thought of as taking actions to strengthen facilities, reduction of nearby hazards, and reducing the potential damage either to structures or their contents.

While it is not possible to totally eliminate either the destructive force of a potential disaster or its effects, doing what can be done to minimize the effects may create a safer environment that will result in lower response costs and fewer casualties.

Preparedness Phase

The preparedness phase involves activities taken in advance of an emergency. These activities develop operational capabilities and responses to a disaster. Those identified in this plan as having either a primary or support mission relative to response and recovery should review this document, its procedures and checklists that detail personnel assignment, policies, and resource lists. Personnel should be acquainted with these SOPs and checklists and periodically should be trained in activation and execution.

Response Phase

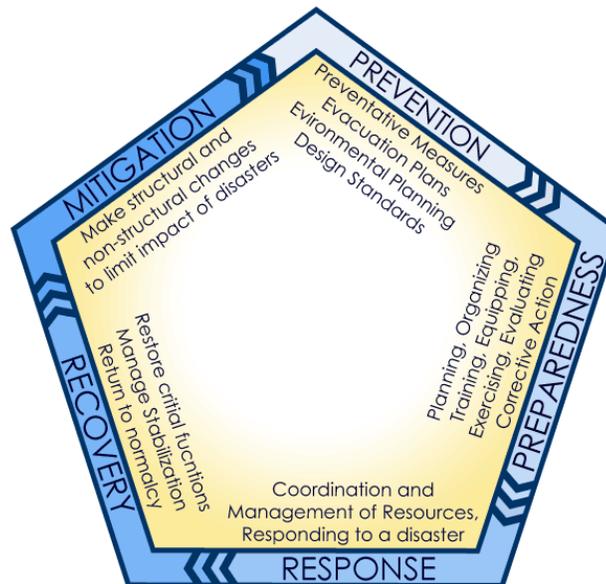
Pre-Impact: Recognition of the approach of a potential disaster where actions are taken to save lives and protect property. Warning systems may be activated, and resources may be mobilized, EOCs may be activated, and evacuation may begin.

Immediate Impact: Emphasis is placed on saving lives, controlling the situation, and minimizing the effects of the disaster. Incident Command Posts and EOCs may be activated, and emergency instructions may be issued.

Sustained: As the emergency continues, assistance is provided to victims of the disaster, and efforts are made to reduce secondary damage. Response support facilities may be established. The resource requirements continually change to meet the needs of the incident.

Recovery Phase

Recovery is taking all actions necessary to restore the area to pre-event conditions or better, if possible. Therefore, mitigation for future hazards plays an integral part in the recovery phase for many emergencies. There is no precise time separation between response and recovery. In fact, planning for recovery should be a part of the response phase.



Emergency Proclamations

Local Emergency

A Local Emergency may be proclaimed by the District Board, or by the District Manager, as specified by the California Government Code. A Local Emergency declared by the District Manager must be ratified by the Board within seven days. The Board must review the need to continue the declaration at least every fourteen days until the Local Emergency is terminated.

The Local Emergency must be terminated by resolution as soon as conditions warrant. Declarations are normally made when there is a threat or an actual disaster or extreme peril to the safety of persons and property within the city, caused by natural or human created situations.

The declaration of a Local Emergency provides the District Board with the legal authority to:

- Request that the Governor declare a State of Emergency
- Promulgate or suspend orders and regulations necessary to provide for the protection of life and property, including issuing orders or regulations imposing a curfew within designated boundaries.
- Exercise full power to provide mutual aid to any affected area in accordance with local ordinances, resolutions, emergency plans, or agreements.
- Request state agencies and other jurisdictions to provide mutual aid.
- Require the emergency services of any local official or employee.
- Requisition necessary personnel and materials from any local department or agency.
- Obtain vital supplies and equipment and, if required, immediately commandeer the same for public use.
- Impose penalties for violation of lawful orders.
- Conduct emergency operations without incurring legal liability for performance, or failure to perform. (Note: Article 17 of the Emergency Services Act provides for certain privileges and immunities.)

State of Emergency

A State of Emergency may be declared by the Governor when:

- Conditions of a disaster or extreme peril exist that threaten the safety of persons and property within the state caused by natural or human-caused incidents.
- The Governor is requested to do so by local authorities.
- The Governor finds that local authority is inadequate to cope with the emergency.

When the Governor declares a State of Emergency:

- Mutual aid shall be rendered in accordance with approved emergency plans when the need arises in any city or county.
- The Governor shall, to the extent deemed necessary, have the right to exercise all police power vested in the State by the Constitution and the laws of the State of California within the designated area.
- Jurisdictions may command the aid of citizens as deemed necessary to cope with the emergency.
- The Governor may suspend the provisions of orders, rules, or regulations of any state agency, any regulatory statute, or statute prescribing the procedure for conducting state business.
- The Governor may commandeer or make use of any private property or personnel (other than the media) in carrying out the responsibilities of the office.
- The Governor may promulgate, issue, and enforce orders and regulations deemed necessary.

State of War Emergency

When the Governor declares a State of War Emergency or a State of War Emergency exists, all provisions associated with a State of Emergency apply, plus:

- All state agencies and political subdivisions are required to comply with the lawful orders and regulations of the Governor that are made or given within the limits of the Governor's authority as provided for in the Emergency Services Act.

Sample Proclamation

**PROCLAMATION DECLARING THE EXISTENCE
OF A LOCAL EMERGENCY**

WHEREAS, the EOC Director for the Orange County Mosquito and Vector Control District (Special District) does hereby find:

That conditions of extreme peril to the safety of persons and property have arisen within the District, as a result of:

_____;

And that the Board of the Orange County Mosquito and Vector Control District is not in session;

NOW, THEREFORE, IT IS HEREBY PROCLAIMED that a local emergency now exists throughout the District; and

IT IS FURTHER PROCLAIMED AND ORDERED that a copy of this declaration be forwarded to the Governor of California with the request that he proclaim a State of Emergency for the Orange County Mosquito and Vector Control District (Special District), and further that the Governor request a Presidential Declaration; and

IT IS FURTHER PROCLAIMED AND ORDERED that during the existence of said local emergency the powers, functions and duties of the emergency services organization of this District shall be those prescribed by law, by ordinances and resolutions of this District, and by the Orange County Mosquito and Vector Control District Emergency Response Plan.

BY: _____

EOC DIRECTOR

Date: _____ Time: _____

Attest: _____

District Clerk

Hazard Risks

The Orange County Mosquito and Vector Control District recognizes that the planning process must address each vector and natural hazard that threatens the County. Orange County is vulnerable to a wide range of threats. For the District, there are four broad categories of hazards: vector, natural, technological or human-caused, and national security. Orange County, with its varying topography and mix of urban and semi-rural areas, is subject to a wide variety of negative impacts from these hazards. The vector, natural hazards, and technological or man-made hazards that confront Orange County are as follows:

Vector Hazards

- Mosquito-borne Disease
- West Nile Virus
- Saint Louis encephalitis (SLE)
- Invasive *Aedes* Diseases: Chikungunya, Dengue, Zika, and Yellow Fever Viruses
- Malaria
- Flea-borne Diseases (Typhus, Plague)
- Hantavirus

Natural Hazards

- Earthquakes
- Landslides
- Floods
- Wildland fires
- Extreme weather and storms

Technological and Human-Caused Hazards

- Hazardous materials (HazMat)
- Major vehicle accident
- Airplane crash
- Civil disturbance
- Terrorism

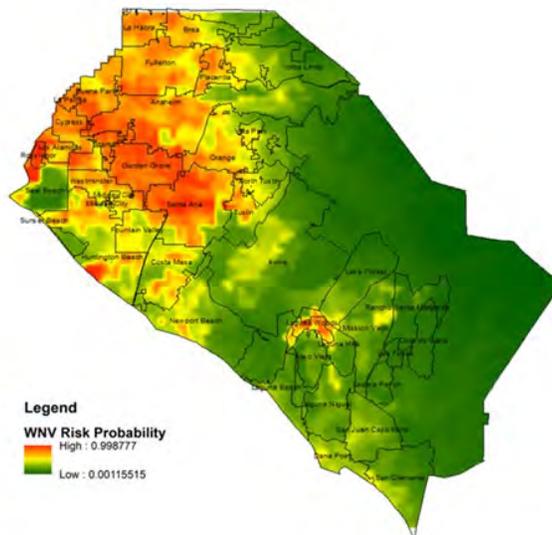
Mosquito-borne Disease

The District's surveillance and mosquito control efforts are focused on the following mosquito-borne diseases; 1) West Nile virus (WNV), 2) Saint Louis encephalitis (SLE), 3) invasive *Aedes* diseases (chikungunya, dengue, Zika, yellow fever), and 4) malaria. In 2015, two invasive *Aedes* mosquito species were detected in multiple locations in Orange County. The presence of *Aedes albopictus* and *Aedes aegypti* mosquitoes in the County indicates that chikungunya, dengue, Zika, and yellow fever viruses could possibly be transmitted in Orange County. The District expects the populations of these mosquitoes to increase and expand their distribution in Orange County.

West Nile Virus (WNV)

West Nile Virus has been present in Orange County since 2003. In 2014 and 2015, the District experienced super epidemics of WNV resulting in 377 human infections with 17 deaths. The area in Orange County with the highest risk of WNV is seen in the map below. Because WNV is a disease of birds, a bird die-off could indicate increased risk to residents. For this reason, the District maintains a dead bird surveillance program where dead birds can be reported to the District for testing. In response to the super epidemic of WNV in 2014 and 2015, the District expanded the adult mosquito control program to include the use of backpacks, trucks, and airplanes to control infected, adult mosquitoes in Orange County.

West Nile virus High Risk Area Based on Environmental and Historical Surveillance Factors, 2004-2013



Saint Louis encephalitis (SLE)

This was the first (1933) recognized neuroinvasive arbovirus in the United States. Sporadic human cases have been diagnosed in southern California, and the virus and antibodies have been recovered from wild birds during surveillance studies. In 2015, SLE was detected in mosquitoes in Riverside County, Calif. The most recent, large-scale outbreaks of SLE occurred in southern California in 1983-1984 (26 cases, five in Orange County), the San Joaquin Valley in 1989 (29 cases), with sporadic cases reported in the Los Angeles Basin from 1990-1997. SLE virus activity has not been detected in Orange County following the introduction of WNV into the County in late 2003.

Invasive *Aedes* Diseases: Chikungunya, Dengue, Zika, and Yellow Fever Viruses

In 2015, invasive *Aedes* mosquitoes (*Aedes aegypti* and *Aedes albopictus*) were detected infesting multiple neighborhoods in Orange County, Calif. Previous to the 2015 detections, *Aedes aegypti* had never been collected in Orange County and *Aedes albopictus* had not been detected since 2004 when it was considered eradicated from Orange County. As of 2016, the invasive *Aedes* mosquito species were detected in multiple neighborhoods of Orange County. The detection of the invasive *Aedes* mosquitoes indicates that disease transmission of chikungunya, dengue, Zika and/or yellow fever is possible in Orange County. Under the joint procedure with OCHCA, the District receives reports of human cases of travel-acquired *Aedes* vectored diseases. The District will respond to the following situations involving invasive *Aedes* including: 1) reports of nuisance biting; 2) travel-acquired disease cases; 3) locally acquired disease cases; 4) positive mosquito samples. In the event that multiple human cases of an invasive *Aedes* disease were detected, the District would use backpacks, trucks and aerial application of pesticides in a phased response to control infected mosquitoes and break disease transmission.

Malaria

Malaria is a serious infectious disease transmitted by *Anopheles* mosquitoes and is caused by single-celled animals (protists) in the genus *Plasmodia*. The species of mosquito, *Anopheles hermsi*, present in Orange County that could potentially be involved in transmission of *Plasmodia* to humans is largely restricted to wetland habitats. Major reclamation and drainage projects to produce more arable and livable land have reduced the malaria transmission potential in many areas of Orange County. However, imported malaria cases among military personnel and overseas travelers returning home have the potential to reintroduce malaria among the County's *Anopheles* mosquitoes. In some circumstances, according to the joint procedure with the OCHCA, the District will respond to travel-acquired malaria cases returning home to Orange County.

Flea-borne Diseases

Flea-borne Typhus

Flea-borne typhus is caused by *Rickettsia felis* and/or *R. typhi*, two closely-related gram-negative bacteria. The cat flea, *Ctenocephalides felis*, commonly found on cats, dogs, opossums, and outdoor wildlife, is considered the primary vector of the flea-borne typhus bacteria in Southern California. Testing of small mammals and the fleas they carry by the District has demonstrated a high prevalence of flea-borne typhus bacteria in fleas (> 40%) collected from areas with human cases. From 2006-2016, over 136 human cases of flea-borne typhus were reported in Orange County. The District maintains a surveillance and education program for flea-borne typhus, but does not routinely conduct flea abatement or animal removal. The District advocates for “No Feeding of Wildlife” policies, including feral cats, on publically owned lands in Orange County. The District recognizes that feeding of wildlife and feral cats (feral cat colony maintenance) can increase the population of cat fleas and flea-borne typhus disease transmission in communities in Orange County. The District works collaboratively with local governments, code-enforcement officials, and animal care agencies to reduce flea-borne typhus disease transmission in Orange County.

Plague

Plague is a naturally-occurring bacterial disease associated with wild rodents and fleas. The causative organism *Yersinia pestis* can be transmitted to humans through the bite of an infected flea, causing swelling (“buboes”; i.e., bubonic plague), but also infection of the bloodstream and even lungs. Plague has a very high fatality rate in humans if cases are not diagnosed and treated with antibiotics in a timely manner. Plague remains endemic in ground squirrel populations in many areas of California. Outbreaks of bubonic plague have been linked to rodent die-offs in California. If multiple dead ground squirrels, rabbits, or rats are detected in Orange County, they should be reported to the District immediately for testing. The California Department of Public Health, Vector-Borne Disease Section lists the Santa Ana Mountains as a plague endemic area. Plague has been detected in Orange County sporadically. In the early 1980s ground squirrels in Tonner Canyon and Anaheim Hills tested positive for plague, and in 1998 a roof rat in the city of Orange tested plague positive. Plague in Southern California is typically associated with ground squirrels and wood rats, and is only rarely associated with roof rats. The District routinely traps and tests ground squirrels and fleas, as well as roof rats, from residential areas near historically positive plague detection sites. Rats, squirrels, and other small mammals from Orange County tested by the District laboratory have all tested negative since 1998.

Other Diseases

Hantavirus

Hantavirus Pulmonary Syndrome (HPS) is a human disease caused by a viral pathogen found in rodent urine and excrement that affects humans by attacking the lungs and producing a fatal pneumonia in nearly 40% of cases. Humans become infected with the virus when they inhale aerosol particles contaminated from deer mouse fecal pellets (droppings) and urine. The two strains of hantaviruses encountered locally are the Sin Nombre Virus (SNV) and El Morro Canyon Virus. Although these strains have been found in local deer mice, no residents have been diagnosed with hantavirus in Orange County. The deer mouse is widely distributed in neighborhoods of Orange County that border natural areas. To prevent infection with hantavirus, the California Department of Public Health recommends spraying deer mouse droppings and urine with a 10% bleach and water disinfection solution prior to clean up.

The District's response to these vector hazards is outlined in **Section 3** (EOC Checklists) as well as in:

Appendix 6 - OCMVCD WNV and Aedes Operational Response Guidelines

Appendix 7 - OCMVCD Typhus Response Guidelines

Annex A - Integrated Vector Management and Response Plan

Annex B - West Nile Virus Supplemental Plan

Annex C - *DRAFT* Aedes Mosquito Response Plan

Annex D - CDPH Mosquito-borne Virus Plan

Annex E - *DRAFT* Orange County LHMP Vector Mitigation Plan

Annex F - Disease Outbreak Communications Plan

Information Regarding Natural Hazards in Orange County

A hazard matrix listed on the next page outlines the natural and human-caused hazards and identifies their likelihood of occurrence and severity.

County Hazard Identification

Hazard Threat	Probability of Occurrence			Severity		
	Likely	Possible	Unlikely	High	Average	Low
Flood / Storm	X				X	
Hazmat	X					X
Wildland Fire	X				X	
Earthquake		X		X		X
Civil Disturbance		X			X	
Aircraft Accident		X			X	
Oil Spill		X			X	
Train Accident		X			X	
Dam Failure			X	X		
Disease Outbreak			X	X		X
Drought		X			X	
SONGS			X	X		
Terrorism			X	X		
High Winds	X					X
Extreme Heat	X					X
Urban Fire		X	X			X
Vector Control (Pests)		X				X
Landslides		X				X
Energy Failures		X				X
Tornado		X				X
Tsunami			X			X

Source: County of Orange Emergency Operations Plan

Information on Some of the Hazards Facing the OCMVCD

Earthquakes

Orange County, like most regions that border the Pacific Ocean, is a region of high seismic activity and, therefore, is subject to potentially destructive earthquakes. Earthquakes are the result of an abrupt release of energy stored in the earth. This energy is generated from the forces which cause the continents to change their relative position on the earth's surface; this process is called "plate tectonics." Large earthquakes are caused by the rupturing of great rock masses under strain within the earth's crust. This usually takes the form of abrupt slipping or sliding along a rupture plane (fault). Each time two segments of the earth's crust suddenly shift past one another along a fault, an earthquake occurs. Major earthquakes are commonly accompanied by foreshocks and aftershocks that are usually less intense and represent local yielding and adjustments of rock masses along the main zone of faulting.

Earthquake Size Descriptions		
Descriptive Title	Richter Magnitude	Intensity Effects
Minor Earthquake	1 to 3.9	Only observed instrumentally or felt only near the epicenter.
Small Earthquake	4 to 5.9	Surface fault movement is small or does not occur. Felt at distances of up to 20 or 30 miles from the epicenter. May cause damage.
Moderate Earthquake	6 to 6.9	Moderate to severe earthquake range; fault rupture probable.
Major Earthquake	7 to 7.9	Landslides, liquefaction and ground failure triggered by shock waves.
Great Earthquake	8 to 8+	Damage extends over a broad area, depending on magnitude and other factors.

Earthquakes create two types of hazards: Primary and Secondary. Primary seismic hazards include ground shaking, ground displacement, subsidence, and uplift due to the seismic episode. Primary hazards can, in turn, induce secondary hazards.

These include the following: ground failure (lurch cracking, lateral spreading, and slope failure), liquefaction, seismically induced water waves (tsunamis and seiches), movement on nearby independent faults (sympathetic fault movement), and dam failure.

Orange County residents are exposed to other geologic hazards not necessarily associated with earthquakes. Landslides result from the movement of slope-forming earth or rock materials downward under the influence of gravity. A landslide may take the form of a flow, slide, fall, or a combination of the three. This form of earth movement is the most costly of the non-seismic geologic hazards. Two other geologic hazards, subsidence and uplift, are caused by vertical mass movements of earth materials with little or no lateral movement. Erosion of fields, cliffs, and stream channels has been of concern to man for centuries. The process of erosion occurs naturally in nature; however, it can be induced and encouraged by man's activities. One example is river channelization which impedes transportation of sediments to the coast. Since beaches depend on sediments to replenish sand supply, sediment reduction leads to beach and cliff erosion, a major County safety concern. A final non-seismic hazard described in this section is associated with soil characteristics.

Additional, up-to-date information on seismic and geologic hazards in Orange County can be obtained through the State Department of Conservation, California Geological Survey. Website: www.conservation.ca.gov/cgs/

Specifically, two publications from the State Department of Conservation, "Guidelines for Evaluating and Mitigating Seismic Hazards in California" (1997) and "Fault-Rupture Hazard Zones in California" (Special Publication 42) contain detailed information about liquefaction and geo-technical issues in Orange County and are available without charge through the website.

Landslides

Landslides may be divided principally into three overlapping categories: surficial failures, rotational slides, and planar slides. Surficial failures the most common failures, occur generally within four to five feet of ground surface. In rotational slides the failure surface takes an arcuate shape both in horizontal and vertical profile. Planar slides result when natural planes of weakness within a rock formation are exposed either by the natural process of erosion or during grading operations. A major factor contributing to these three types of slides is the process of grading.

The lack of precautionary measures to stabilize slopes or cutting into the failure plane of an existing landslide can result in the failure of material or slopes. Another common thread of similarity among all three categories of slides is that as the water saturation of soil occurs, the soil's bearing capacity is decreased. This weakening, coupled with gravitational factors

and the various characteristics of the soil material, leads to destructive outcomes. Other types of sliding that occur are mudflows, debris avalanches, rockslides, and gravity sliding. These landslides are either variations between or gradations within the three individual categories

Flood Hazards

Orange County's geography and climate increase its susceptibility to flooding. Commonly, where a broad alluvial plain exists, such as the one created by the Santa Ana River, there has been and is a continual expansion of urban development. The change from agriculture to urban development increases the amount of impermeable surfaces and raises flood potential. Whenever ground surfaces are covered by pavement or other impermeable surfaces, direct absorption of precipitation by the underlying soil is precluded and runoff increases and creates a potential threat of flooding. This condition is further aggravated during peak rain periods when absorptive ground becomes saturated, increasing the rate of storm runoff. The hazard of dam failure is another major flood threat. The threat is primarily one of sudden downstream flooding, which could be disastrous if it occurs when a dam's impoundment volume is near capacity.

Disaster potential is high since flood inundation could occur with minimal warning. Another type of flooding occurs from the blockage of a flowing stream by a landslide. A natural dam may be created by the landslide temporarily impounding water. As a result of erosion, these flood flows are released downstream. A Seiche, an earthquake-induced wave within a lake, reservoir or harbor, may cause flooding, though its occurrence in Orange County would be considered rare. Coastal flood inundation is another hazard.

Fire Hazards

A relatively large portion of the County is covered by natural (though modified) vegetation. Of these different vegetation types, coastal sage scrub, chaparral, and grasslands reach some degree of flammability during the dry summer months and, under the right conditions, during the winter months. Topography has considerable effect on wildland fire behavior and on the ability of firefighters and their equipment to take action to suppress those fires. A fire starting in the bottom of a canyon may rush quickly to the ridge and become large, before initial attack forces can arrive, simply because of topography.

Rough topography greatly limits road construction and road standards and accessibility by ground equipment. Steep topography also channels air flow, creating extremely erratic winds on slopes and in canyons. Many wildland fires have been associated with adverse weather conditions.

Information Regarding Human-caused Hazards in Orange County

Hazardous Materials

Orange County, among the most rapidly growing counties in California, continues to experience residential, employment, and economic growth. However, this growth does have its costs. Virtually all sectors of the County's economy are users of materials that, if improperly handled, stored, or disposed of, can pose health and environmental problems. No master list of hazardous materials exists which can be agreed upon by all agencies that manage or regulate them. Lists which exist will change as more is learned about the effects of hazardous substances or as new substances become part of our technology. In addition, definitions of hazardous materials also vary from source to source. The current descriptions used in Federal and State legislation include the following:

- a) A hazardous material is one which is either ignitable, reactive, corrosive, toxic, or any combination of these properties (Resource Conservation and Recovery Act).
- b) A hazardous material is a substance or combination of substances which, because of its quantity, concentration or physical, chemical, or infectious characteristics may either:
 - Cause, or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or
 - Pose a substantial present or potential hazard to humans or the environment (State Health and Safety Code, Chapter 6.5).
- c) A hazardous material is an injurious substance, including pesticides, herbicides, toxic metals and chemicals, liquefied material gas, explosives, volatile chemicals, and nuclear fuels (California Government Code).

Exposure to some hazardous substances can result in acute or chronic health effects for the public such as respiratory problems or carcinogenicity. For example, over a long period of time, ingestion of drinking water contaminated by accidentally or illegally discharged hazardous waste can result in adverse health effects. Recognizing, therefore, the importance of providing for the safe management of hazardous materials, it is the purpose of this section of the Safety Element to discuss five major aspects of the broad hazardous materials environment: hazardous materials, hazardous waste, medical waste, and nuclear materials.

Hazardous Materials Transportation

The major transportation routes in Orange County include the freeway system, surface streets, pipelines, and railroads. These routes are used daily to transport hazardous materials

from suppliers to users. On these routes, transportation accidents involving hazardous materials can occur. The threats posed by a transportation accident involving hazardous materials include explosions, physical contact by emergency response personnel, environmental degradation, and exposure to the public via airborne exposure.

Terrorism Event

According to the FEMA publication *Principal Threats Facing Communities and Local Emergency Management Coordinators*, most terrorist activities are bombing attacks. Principal targets include military personnel and facilities, commercial establishments, and federal government buildings and property. However, based on the events surrounding September 11, 2001, there is an increasing threat of WMD (Weapons of Mass Destruction) incidents, including Nuclear, Biological, and Chemical attacks against civilian targets.

The District's response to both Natural and Human-caused hazards is outlined in **SECTION 3**, EOC Checklists, and **APPENDIX 8**, Natural Hazard Specific Checklists.

Plan Maintenance and Training

Emergency Response Plan Maintenance

The Orange County Mosquito and Vector Control District Emergency Response Plan is designed for efficient update and additions. The responsibility of maintaining the document is assigned to the District Manager.

The District Manager will conduct a thorough review of the plan annually. Updates shall be distributed every year as needed or when there are significant changes.

This Plan is a management tool. It supports, and is integrated with, District operations. Sections of the Plan can be easily updated with minor modifications when there are changes to the District organization, systems and/or new functional positions are added. It does not need to be updated every time procedures change.

Individuals with emergency assignments are to review their procedures and related information after every activation; either simulated in drills or as an actual response. Individual Checklists are to be revised as needed. Additionally, individual users are encouraged to add supplemental materials to their Sections for a complete “response ready” plan.

The Checklists are designed to be used as worksheets. New and revised Checklists can be reprinted after each activation. It is not necessary to reprint the entire document each time it is updated. The footer date should always be kept current and can include the word “Revised” to indicate the update.

Orientation

All new District supervisory and management employees should review the Plan upon hire, and attend field or EOC training when practical.

Training Program

This Plan is consistent with the Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS) guidelines. The guidelines provide standardized training modules with competency requirements for each level of activation and responsibility. The District will need to review the guidelines to identify competency requirements based on this Plan.

Suggested NIMS training helps develop District personnel in performing emergency functions and assisting when mutual aid is necessary. Because incident personnel have diverse responsibilities and different knowledge and skill requirements, the NIMS Training Program noted below provides

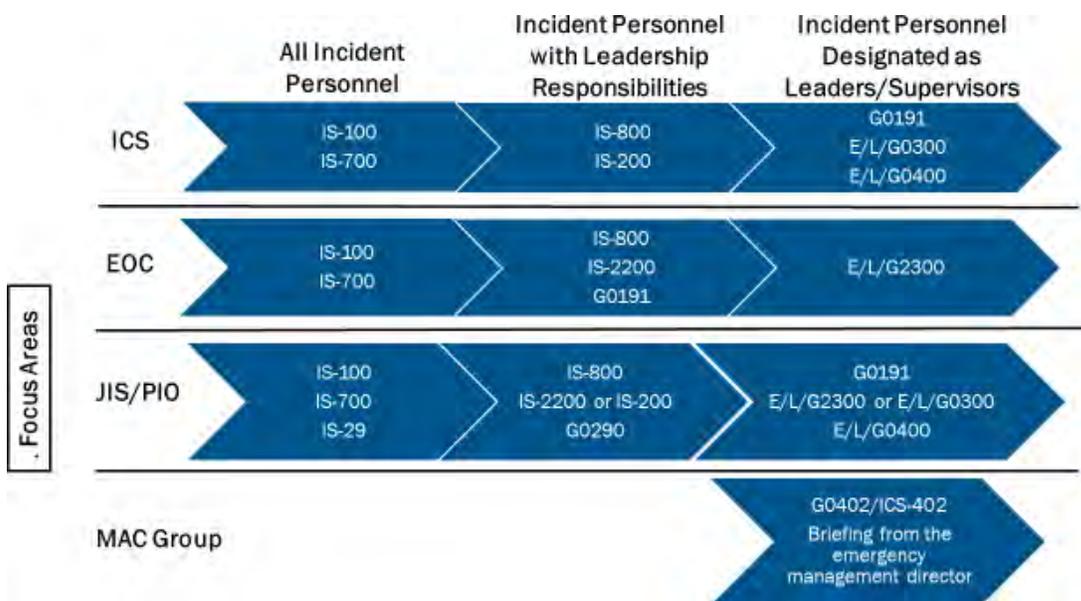
customized training progressions for personnel in each of the four NIMS Command and Coordination systems:

1. Incident Command System (ICS) - Responsible for tactical activities on-scene
2. Emergency Operations Center (EOC) - Responsible for operational and strategic coordination, resource acquisition, and information gathering, analysis, and sharing.
3. Public Information Officers (PIO) - Operating within the Joint Information System (JIS), responsible for outreach and communication to the media and public
4. Multiple Agency Coordination (MAC) Groups - Responsible for policy guidance and senior-level decision-making

These systems guide how District personnel would work together during emergencies or disasters. Courses for these systems are organized into Focus Areas. Focus Area training progressions include baseline training for all personnel, multiple levels of supervisory training based on an individual’s level of incident responsibility, and advanced training for individuals seeking advanced position qualifications.

The District may determine that additional, advanced training is necessary to meet the requirements or specific individuals within the organization. An example would be personnel who are responsible for coordinating emergency management activities for the District. However, FEMA does not require this additional training for preparedness grant eligibility.

NIMS Training Matrix



Suggested NIMS Training Courses

Field and EOC Personnel

All incident personnel working within the ICS should complete the following courses for foundational knowledge of incident response:

IS-100: Introduction to the Incident Command System, ICS 100. This course introduces ICS and provides the foundation for higher-level ICS training.

IS-700: National Incident Management System, an Introduction. This course introduces NIMS concepts and principles.

Field and EOC Personnel with Leadership Responsibilities

Supervisory personnel working within the ICS should complete the following courses for additional background in incident management systems with leadership responsibilities:

IS-800: National Response Framework, An Introduction – This course introduces participants to the concepts and principles of the National Response Framework (NRF).

IS-200: Basic Incident Command System for Initial Response, ICS-200 – This course enables personnel to operate efficiently within the ICS during an incident or event.

Field and EOC Personnel with Management Responsibilities

District Managers who could be responsible in complex incidents should complete this level of training. These courses apply higher-level concepts, methods, and tools for larger, more complex incidents:

G0191: Emergency Operations Center/Incident Command System Interface. This course provides an opportunity for emergency management and response personnel to begin developing an ICS/EOC interface for their communities.

E/L/G0300: Intermediate Incident Command System for Expanding Incidents, ICS-300. This course provides training for personnel who require advanced ICS knowledge.

FEMA recommends that students take the two-day classroom version of ICS-200 before attending ICS-300 to ensure they have the foundational knowledge necessary to be successful in ICS-300.

E/L/G0400: Advanced Incident Command System for Command and General Staff–Complex Incidents, ICS-400. This course provides training in managing large, complex incidents or events.

FEMA recommends that students not take ICS-400 immediately following ICS-300 but instead wait to take ICS-400 after gaining additional ICS experience.

SEMS Required EOC Exercises and After Action Reports

The District will conduct an EOC table top or an EOC functional exercise at least once a year, simulating an actual incident or disaster, as required by SEMS. This serves to practice policies, procedures and decision-making skills. The exercise may involve District staff alone, or it can be held in conjunction with other jurisdictions. These exercises are the most effective method of training the District's staff. Shortly after the annual exercise, the District will prepare an After Action Report (including Corrective Actions) as required by NIMS.

In addition, should the EOC be activated for a declared emergency; the District will also prepare an After Action Report that includes Corrective Actions as required by SEMS and NIMS. All After Action Reports will indicate who is responsible for completing the Corrective Actions and when they are to be completed. These reports will be forwarded to the Orange Sheriff's Office Emergency Management Division.

Continuity of Government

General

A major emergency could result in loss of key District officials, loss of function of the established seat of government, and destruction of public and private records. Authority for policies and procedures associated with continuity of government is derived from the California State Constitution, the Emergency Services Act, and Orange County Mosquito and Vector Control District Board Policies.

Succession of District Officials

The District Board shall meet as soon as possible after a disaster. If necessary, it reconstitutes itself and fills appointive District offices. Section 8635 et seq., Article 15, Chapter 7, Division 1, Title 2 of the California Government Code establishes a method of reconstituting the District Board and appointing District offices.

If the EOC Director (District Manager) is not available, he or she is succeeded by an individual who is permanently appointed to the following positions in city government. The successor serves until an appointment has been made by the District Board and the appointee has been seated:

First Alternate: Director of Operations

Second Alternate: Director of Scientific Technical Services

Succession of Emergency Operations Center Sections and Branches are provided for in the procedures and checklists that support this plan.

Temporary Seat

The seat of government is the Orange County Mosquito and Vector Control District Office, 13001 Garden Grove Blvd., Garden Grove, CA 92843. The alternate seat of government is the District's Operations Office at 12898 Haster Street, Garden Grove, CA 92843.

Preservation of Essential Records

Essential District records comprise only a small amount of all the records of the District and meet one or more of the following criteria:

- Records necessary to conduct emergency operations. Records in this category include utility systems maps, locations of emergency supplies and equipment, Emergency Response Plans and procedures, lists of regular and auxiliary personnel.
- Records required to restore day-to-day District operations. Records in this category include state statutes, District ordinances, resolutions, official proceedings, and financial records.

- Records necessary for the protection of rights and interests of individuals and government. Records in this category include land and tax records, license registers, and articles of incorporation.

Essential District records may be protected at any point in their life cycle, i.e., from their creation to final disposition. Acceptable methods of preserving essential records include dispersal, duplication, on-site storage, off-site storage. The District currently preserves essential records by reproducing them electronically on digital drives.

REVISION LOG

Date	Summary of Revisions

SECTION 2

EMERGENCY OPERATIONS CENTER

Emergency Organization

Overall Emergency Structure

SEMS requires that all public agencies use the five designated functions to serve as the basis for organizing emergency planning and response. The Orange County Mosquito and Vector Control District's emergency response organization is based on these functions. The Emergency Operations Center is located at the District Office at 13001 Garden Grove Blvd., Garden Grove, CA 92843. A secondary EOC can be activated at the District's Operations Office at 12898 Haster Street, Garden Grove, CA 92843.

Emergency Operations Center (EOC)

Explanation of the EOC

The Emergency Operations Center (EOC) is the location from which centralized management of an emergency response is performed. The use of EOCs is a standard practice in emergency management.

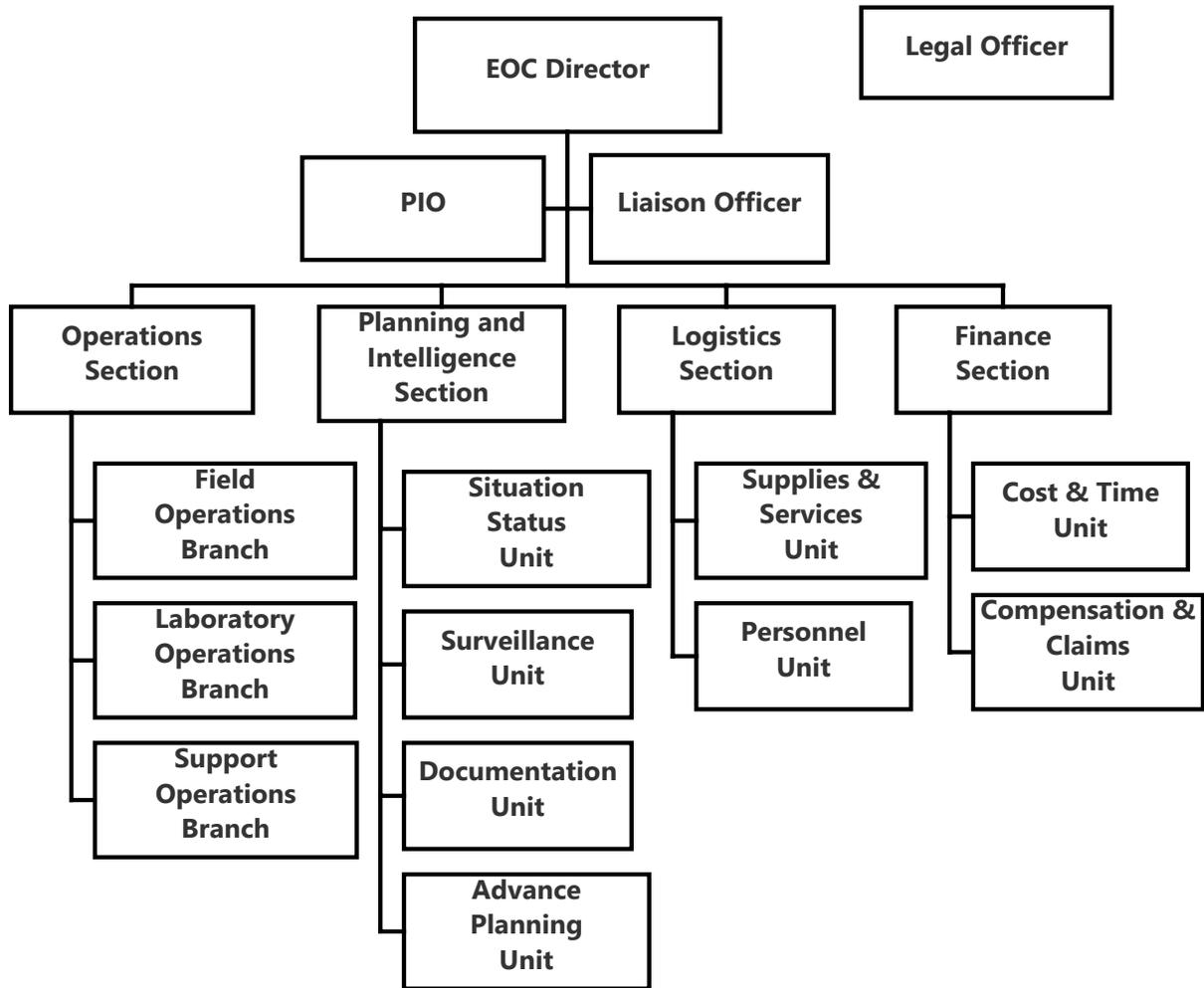
The EOC Director and key decision-making personnel operate from the EOC during the emergency response, establishing policy and priorities. It serves as the central point for information gathering, processing, and dissemination; coordination of all District emergency operations; and coordination with the County and other agencies. The EOC is partially or fully activated by the EOC Director, according to the requirements of the situation.

The EOC is organized according to SEMS, as noted earlier in this plan. The Management Group and the Section Chiefs serve as the EOC Team.

Unless otherwise specified, the EOC should not be providing tactical direction to the various incidents that are being conducted in the field using the Incident Command System.

It is recommended that the EOC be configured as closely as possible to the diagram listed in this Section. However, in the event of a disaster where the District's Office is not accessible, the EOC may be moved to the Operations Office, or any other safe location at the discretion of the EOC Director.

EOC Organizational Chart



EOC Positional Definitions

EOC Director

The EOC Director determines strategy for implementing the Action Plan to handle the incident and monitors how the plan is working. The Director coordinates all response activities through the EOC Sections, keeps the Board informed of the progress and strategies being implemented during the response, and ensures that the response is being fully documented for legal and financial reasons.

Public Information Officer

The PIO is responsible for the formulation and release of information about the event, as well as the point of contact for news media and other appropriate agencies and organizations. The PIO is authorized to speak for the District as directed by the EOC Director.

Liaison Officer

The Liaison Officer is a direct representative of the EOC Director. The Liaison Officer is the conduit for information flow between the District and other jurisdictions, notably the Orange County Health Care Agency. They also act as point of contact for personnel who have been assigned to the event response from assisting or cooperating agencies. The Liaison Officer ensures that these organizations are informed of the District's response.

Legal Officer

The Legal Officer is the District's Legal Counsel. As required, the Legal Officer provides advice to the EOC Director in all legal matters relating to the emergency. The Legal Officer assists the Director in declaring a local emergency and the implementation of emergency powers if required.

Operations Section Chief

The Operations Chief is responsible for activating the operational element of the EOC Action Plan. They manage the strategic operation that directs the primary mission. They are responsible for coordinating the Section's branches: Field Operations, Laboratory Operations, and Support Operations in accordance with the Action Plan.

Field Operations Branch

The mission of the Field Operations Branch is to provide mosquito, rat, fly, and Red Imported Fire Ant control services to the District's 19 zones; as well as County-wide control and all forms of vector control in the County's flood channels, canyons, and marsh areas.

Laboratory Operations Branch

The Laboratory Operations Branch is responsible for continued laboratory operations during emergencies and disasters, whether it be a localized vector emergency or laboratory operations during a regional disaster situation.

Support Operations Branch

The Support Branch is responsible for maintaining the District's vehicle fleet and facilities. They will coordinate the repair and maintenance of vehicles and buildings during emergency and/or disaster situations

Planning and Intelligence Section Chief

The Planning and Intelligence Section is managed by the Section Chief, who is responsible for the collection, evaluation, documentation, and dissemination of incident information and intelligence within the EOC. Also, the Planning and Intelligence Section Chief is responsible for preparation of the Action Plan and the After Action Report, as well as other reports that may be required.

Situation Status Unit

The Situation Status Unit gathers information and intelligence about the emergency or disaster and displays it in the EOC. It collects event information and prepares an assessment report for other EOC Sections, including outside agencies who also require the information. It makes predictions and provides other information and intelligence as necessary. The Unit works with the other EOC Sections to set priorities and plan strategy.

Surveillance Unit

If activated, the Surveillance Unit collects information on any insect or other arthropod, rodent or other animal of public health significance capable of harboring or transmitting the causative agents of human disease, or capable of causing human discomfort and injury. In conjunction with the Orange County Health Care Agency, the Unit would monitor related disease outbreaks such as West Nile Virus, Flea-borne Typhus, Spotted Fever, and Lyme disease. They ensure that this information is coordinated with the Situation Status Unit.

Documentation Unit

The Documentation Unit maintains and stores all documents relating to the emergency and maintains copies of all EOC messages. It also maintains the official history of the emergency and assists in the preparation of the Action Plan, Situation Reports, Even Assessment Reports, and other reports and intelligence summaries as required. The Unit provides duplication services and prepares an After Action Report at the deactivation of the EOC.

Advance Planning Unit

Responsible for the development of an Advance Plan that includes potential response and recovery likely to occur beyond the next operational period, generally within 36 to 72 hours. In addition, the Advance Planning Unit may aid the other EOC Sections by developing a Demobilization Plan.

Logistics Section Chief

Responsible for all the services and support needs of the event. This includes procuring and maintaining essential personnel, facilities, equipment and supplies. They are also responsible for maintaining the EOC in operational order by procuring and repairing equipment, as well as obtaining supplies as needed. The Logistics Chief cooperates closely with the Operations Section to determine resources currently in place and what resources may be needed.

Supplies & Services Unit

The Supplies & Services Unit is under the direction of the Logistics Section Chief and is primarily responsible for ordering, receiving, inventory, storage and distribution of supplies needed for the District's disaster operations. The Unit is also responsible for providing procurement support for the District during the disaster. In addition, and working with the Support Operations Branch, the Unit is responsible for appropriating additional janitorial services, food and catering services, building maintenance services, and equipment repair services during the EOC activation.

Personnel Unit

The Personnel Unit supports human resource needs of the emergency, document names, assignments, and duty hours of all personnel committed to the operation, and provides staff support as needed. They work with the Claims and Compensation Unit on employee injury issues.

Finance and Administration Section Chief

The Finance and Administration Section Chief provides advice and support to the EOC Director regarding financial issues, and insures that adequate records are maintained to support requests for State and federal assistance. They also ensure that personnel time worked in the incident is tracked, while providing cost analysis and projections.

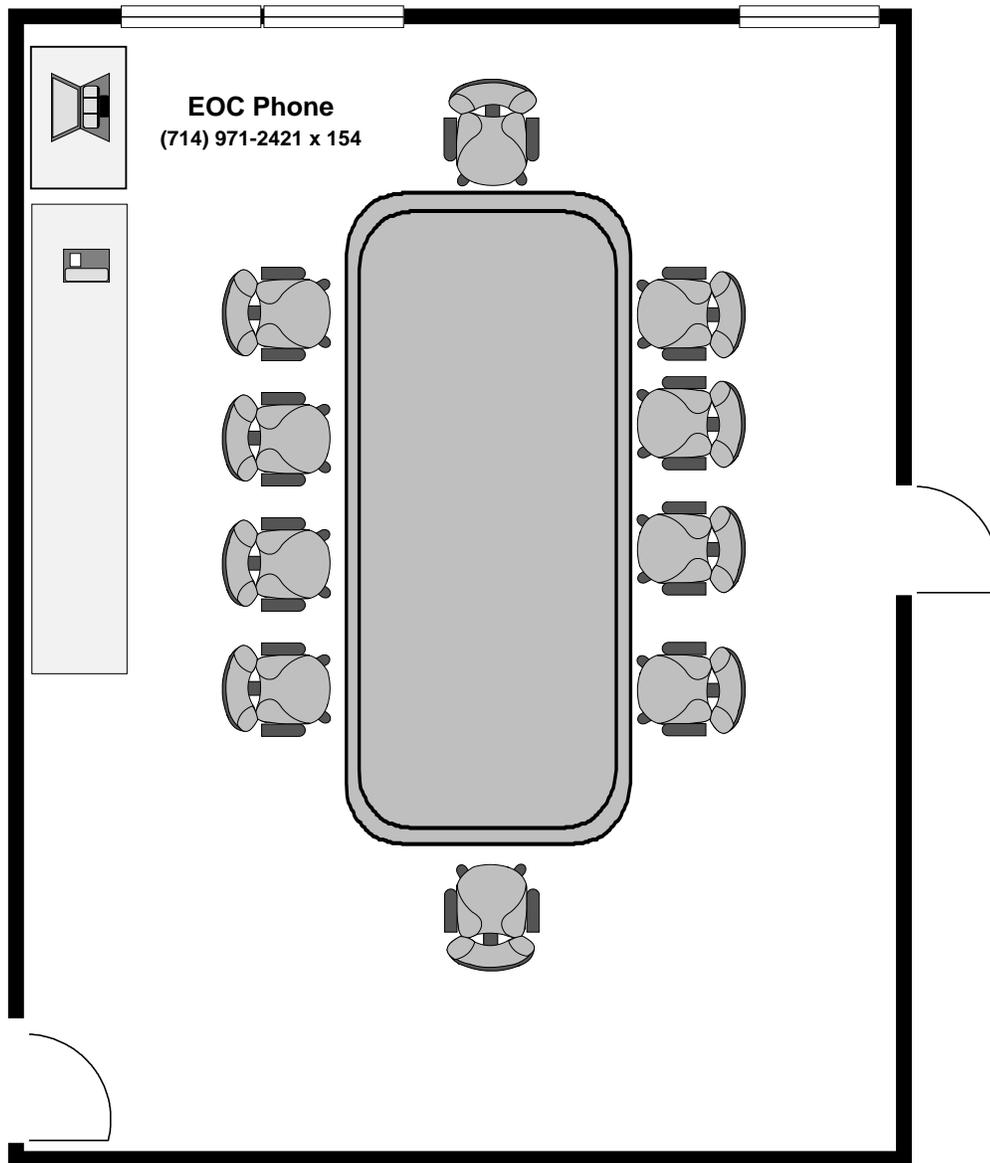
Cost Unit and Time Unit

The Cost and Time Unit is responsible for collecting all cost data, performing cost effectiveness analyses, providing cost estimates, and cost saving recommendations during the emergency or disaster. The Unit also maintains records of all personnel time worked during the emergency.

Compensation and Claims Unit

The Compensation and Claims Unit manages all legal claims for compensation filed against the District. It advises the Director of Emergency Services in areas of claims for bodily injury and property damage compensation presented to the District.

Emergency Operations Center Diagram - OCMVCD Conference Room



EOC Activation and Set-Up Procedure

- Check in with EOC Director to determine level of EOC activation.
- EOC supplies are kept in the Conference Room cabinet.
- Set up the table with the equipment from the appropriately labeled container in the cabinet.
- Read the position checklists for specific duties and begin EOC operations.

When the EOC is activated

Activation of Orange County Mosquito and Vector Control District's EOC means that at least one District official implements SEMS as appropriate to the scope of the emergency and the District's role in response to the emergency. The District's EOC is activated when routine use of resources needs support and/or augmentation. The official implementing SEMS may function from the EOC, or from other locations depending on the situation.

Activated EOCs may be partially or fully staffed to meet the demands of the situation. The District maintains three EOC staffing levels that can be applied to various situations. Activation criteria are as follows:

EOC Activation Guide				
Level	Conditions	EOC Duties	Activation	Actions
0	<ol style="list-style-type: none"> 1. No potential severe weather 2. No increasing probability of hazard 	<ol style="list-style-type: none"> 1. Monitor regional weather forecasts. 	<ol style="list-style-type: none"> 1. No to minimal staff in normal operations 	<ol style="list-style-type: none"> 1. No actions.
3	<ol style="list-style-type: none"> 1. Severe weather watch is issued 2. Situational conditions warrant 3. Small incidents involving one facility 4. Earthquake advisory 5. Flood watch 	<ol style="list-style-type: none"> 1. Continuous monitoring of event 2. Check & update all resource lists 3. Distribute status and analysis to EOC personnel 4. Receive briefing from field personnel as necessary 	<ol style="list-style-type: none"> 1. Only basic support staff or as determined by EOC Director 	<ol style="list-style-type: none"> 1. EOC Sections review Plan and Guidelines and check readiness of staff and resources.
2	<ol style="list-style-type: none"> 1. Situational conditions warrant 2. Severe weather warning issued 3. Moderate earthquake 4. Wildfire affecting specific areas 5. Incidents involving 2 or more facilities 6. Hazardous materials incident requiring evacuation 7. Imminent earthquake alert 	<ol style="list-style-type: none"> 1. Continuous monitoring of event 2. Initiate EOC start-up checklist 3. Facilitate field personnel 4. Provide status updates to EOC personnel 	<ol style="list-style-type: none"> 1. Staffed as situation warrants and liaison to other agencies 2. Primary EOC personnel will be available and check-in regularly 	<ol style="list-style-type: none"> 1. Briefings to District staff 2. EOC begins full operation
1	<ol style="list-style-type: none"> 1. Hazardous conditions that affect a significant portion of the District 2. Severe weather is occurring 3. Verified and present threat to critical facilities 4. Situational conditions warrant 5. Major emergency in the Area or Region 6. Incidents occurring involving heavy resource involvement 7. Major earthquake 	<ol style="list-style-type: none"> 1. Brief arriving staff on current situation 2. Facilitate EOC staff 	<ol style="list-style-type: none"> 1. As determined by the EOC Director 2. EOC essential and necessary staff 3. Key department heads 4. Required support staff 	<ol style="list-style-type: none"> 1. As situation warrants

EOC Closeout Checklist

- Notify appropriate agencies and individual sites that EOC is being closed.
- Collect data, logs, situation reports, message forms, and other significant documentation. Place in a secure file box.
- Deliver the information to the Finance Section Chief.
- Fold and repack re-usable maps, charts, materials.
- Collect and place all equipment and supplies in the cabinet.
- Make a list of all supplies that need replacement and forward to the Logistics Section Chief.
- Turn off all radios, computers, and other electronic equipment.
- Leave the Conference Room in good order.

SECTION 3

EMERGENCY OPERATIONS CENTER

POSITIONAL CHECKLISTS

EOC Director

(Assigned to: District Manager, Director of Operations, Director of Scientific Technical Services)

The EOC Director determines strategy for implementing the Action Plan to handle the incident and monitors how the plan is working. The Director coordinates all response activities through the EOC Sections, keeps the Board informed of the progress and strategies being implemented during the response, and ensures that the response is being fully documented for legal and financial reasons.

Action Checklist

- Identify yourself as the EOC Director.
- Read this entire Checklist.
- Obtain a briefing on the extent of the emergency and recommended initial objectives.
- Depending on the type of the incident and the information available, order partial or full activation of the EOC.
- Determine if all key personnel have been notified.
- Brief Section Chiefs and ensure that they utilize the EOP Checklists.
- If required, direct the Liaison Officer to report to the County EOC or to the County Health Care Agency's Department Operations Center (DOC).
- In the event of an earthquake, determine the need to evacuate any of the District's facilities.
- Consider declaring a local emergency. Distribute declaration to the County Office of Emergency Services.
- Establish the frequency of briefing sessions for EOC staff.
- Working with the Operations Section Chief, establish operational work periods for all EOC and field personnel.
- Direct Section Chiefs to maintain appropriate Unit Logs, charts, and records.
- Review and approve the EOC Action Plan developed by the Planning and Intelligence Chief.
- Working with the PIO and Operations Section Chief, ensure that proper warnings have been given to affected areas.
- Working with the PIO, issue special information releases addressing rumors. Identify them as such, and provide correct information, if available.
- Ensure that separate voice mail telephone hotlines are set up for the media and public use.
- Working with the PIO, arrange for briefings for the media and VIPs.

- If there is little or no damage to the District's infrastructure, prepare to provide mutual aid to neighboring jurisdictions. Coordinate this with the Public Works Branch at the County EOC.
- Make sure that the Liaison Officer is a point of contact for other Agency Representatives.
- Ensure that the Liaison Officer maintains a list of assisting and cooperating agencies and Agency Representatives.
- Assist in establishing and coordinating interagency contacts.
- Be sure that the agencies supporting the incident are aware of its status.
- Keep the Board informed of all major problems and decisions.
- Maintain a Management Section Log noting messages received; decisions made and actions taken.
- Ensure that an After Action Report is completed at the deactivation of the EOC, and that Corrective Actions are noted, including who is responsible for the actions and when they are to be completed. The Director is to ensure that the Corrective Actions are completed by whom they were assigned, and that they are completed in the time allocated in the report.

Public Information Officer

The PIO is responsible for the formulation and release of information about the event, as well as the point of contact for news media and other appropriate agencies and organizations. The PIO is authorized to speak for the District as directed by the EOC Director.

(Assigned to: Director of Communications, Public Affairs Coordinator)

Action Checklist

- Identify yourself as the Public Information Officer.
- Read this entire Checklist.
- Obtain a briefing from the EOC Director.
- Prepare an initial information summary as soon as possible after arrival.
- Observe constraints on the release of all information imposed by the EOC Director.
- Establish contacts with the media and provide whatever assistance is required.
- Establish an Information Center for the media. Schedule regular briefings. Post briefing schedule.
- Establish separate voice mail telephone hotlines for media and public use. Update regularly.
- If required, establish a field PIO team, including those from other jurisdictions to assist.
- Gather and disseminate instructions, warnings, and announcements.
- Release news and information. Post the information in the EOC and Media Center. Ensure that field units receive copies of all releases.
- In the case of a multi-jurisdictional event, coordinate the release of public information through a Joint Information Center (JIC).
- Arrange for escort and briefing service for the media and VIPs.
- Attend all EOC briefings and meetings. Update information releases.
- Schedule expert speakers for media briefings.
- Monitor television and radio transmissions.
- Working with the County, coordinate communications systems to issue warnings.
- Issue special information releases addressing rumors. Identify them as such, and provide correct information, if available.
- Ensure that announcements and information are translated for special populations.
- Maintain a log noting messages received; releases published; interviews granted; and other activities.

- ❑ Complete an After Action Report that should include a brief overview of support provided during the operation and suggested Corrective Actions to improve operations. Use the following format:
 - Issue
 - Corrective Action
 - Assigned to and due date for completion

Liaison Officer

The Liaison Officer is a direct representative of the EOC Director. The Liaison Officer is the conduit for information flow between the District and other jurisdictions, notably the Orange County Health Care Agency. They also act as point of contact for personnel who have been assigned to the event response from assisting or cooperating agencies. The Liaison Officer ensures that these organizations are informed of the District's response.

(Assigned to: District Staff as Required by the Event)

Action Checklist

- Identify yourself as the Liaison Officer.
- Read this entire Checklist.
- Obtain a briefing on the extent of the emergency and recommended initial objectives from the EOC Director.
- Maintain a Unit Log noting messages received; decisions made and actions taken.
- If necessary, report to the County EOC or the Orange County Health Care Agency DOC at the direction of the EOC Director.
- Be a point of contact for other Agency Representatives.
- Maintain a list of assisting and cooperating agencies and Agency Representatives.
- Assist in establishing and coordinating interagency contacts.
- Keep agencies supporting the incident aware of the event's status.
- Monitor incident operations to identify current or potential inter-organizational issues.
- Participate in planning meetings, providing current resource status, including limitations and capability of assisting agency resources.
- Assign assistants as needed.
- Complete an After Action Report that should include a brief overview of support provided during the operation and suggested Corrective Actions to improve operations. Use the following format:
 - Issue
 - Corrective Action
 - Assigned to and due date for completion

Legal Officer

The Legal Officer is the District's Legal Counsel. As required, the Legal Officer provides advice to the EOC Director in all legal matters relating to the emergency. The Legal Officer assists the Director in declaring a local emergency and the implementation of emergency powers if required.

(Assigned to: General Counsel)

Action Checklist

- Identify yourself as the Legal Officer.
- Read this entire Checklist.
- Obtain a situation briefing on the extent of the emergency from the EOC Director.
- Advise EOC Director on declaring an emergency and/or issuing special orders.
- Monitor response effort and advise the EOC Director regarding liability exposures and protection against such exposures.
- Prepare proclamations, emergency ordinances, and other legal documents as required by the EOC Director.
- Develop rules and regulations required for acquisition and/or control of critical resources.
- Maintain a log noting messages received; decisions made; actions taken; and personnel on duty.
- Complete an After Action Report that should include a brief overview of support provided during the operation and suggested Corrective Actions to improve operations. Use the following format:
 - Issue
 - Corrective Action
 - Assigned to and due date for completion

Operations Section Chief

The Operations Chief is responsible for activating the operational element of the EOC Action Plan. They manage the strategic operation that directs the primary mission. They are responsible for coordinating the Section's branches: Field Operations, Laboratory Operations, and Support Operations in accordance with the Action Plan.

(Assigned to: Director of Operations, District Staff as Required by the Event)

Action Checklist

- Identify yourself as the Operations Section Chief.
- Read this entire Checklist.
- Obtain a briefing from the EOC Director.
- Evaluate the field conditions associated with the emergency.
- In the event of an earthquake, ensure that all District facilities are being checked for damage and problems.
- Manage the overall Operations related response.
- Determine what District resources are committed to the event.
- Coordinate the need for mutual aid for priority problems.
- Coordinate with the Orange County Public Works Branch at the EOC on major problems, actions taken, and resources available or needed.
- Coordinate internal resource needs with the Logistics Section Chief.
- If required, establish and maintain staging areas for operations related equipment and personnel.
- Assist the Planning and Intelligence Chief in the development of the Action Plan.
- In the event of an earthquake or other large event, prepare the initial damage estimate to the District's facilities. Collect and record the type and estimated value of damage.
- Working through either the City of Garden Grove's EOC or the Orange County EOC, request structural inspection personnel if needed.
- Set priorities for utility requirements to support immediate and extended operations. Coordinate with the City of Garden Grove, Southern California Edison, or Southern California Gas Company to correct deficiencies.
- Coordinate with the Liaison Officer and the Orange County Health Care Agency to determine public health hazards and establish standards for control of public health issues related to vector control issues.
- Establish additional field communications using interoperable systems as available.

- Develop a follow-up briefing for the EOC Director.
- Maintain an Operations Section Log noting messages received, decisions made, actions taken, and other activities. Maintain a record of personnel on duty.
- Complete an After Action Report to include a brief overview of support provided during the operation and suggested Corrective Actions to improve operations. Use the following format:
 - Issue
 - Corrective Action
 - Assigned to and due date for completion

Field Operations Branch

The mission of the Field Operations Branch is to provide mosquito, rat, and ant control services to the District's 19 zones; as well as County-wide Red Imported Fire Ant control and all forms of vector control in the County's flood channels, canyons, and marsh areas.

(Assigned to: District Staff as Required by the Event)

Action Checklist

- Identify yourself as the Field Operations Branch Manager.
- Read this entire Checklist.
- Obtain a briefing on the extent of the emergency from the Operations Section Chief.
- Check telephones and radios.
- Establish Field Operations Branch and staff for extended operations.
- If appropriate, move District vehicles to open areas to avoid damage from aftershocks following an earthquake.
- If necessary, contact County OES for status on other agencies, special problems, and availability of response. Advise Operations Chief and Planning and Intelligence Section of major problems.
- Maintain a Field Operations Branch Incident Chart and Map record of all significant incidents and commitments.
- Complete a Field Operations Branch Situation Report at the end of each Operational Period or upon request of the Planning and Intelligence Section Chief. This report will be utilized to pass to your relief at the end of the work shift and in preparation of the Action Plan.
- Coordinate provision of mutual aid or contractors for priority problems.
- Check with the other Operations Section units for a briefing on the status of the emergency.
- Obtain emergency traffic routes by coordinating with County and city public works agencies, CHP, and other law enforcement agencies.
- In coordination with the Operations Section Chief, keep the Orange County EOC advised of overall situation.
- In order to keep District field personnel informed after a major disaster, advise them of roadway conditions, evacuation zones, shelter locations, first aid facilities, casualty collection points, and other facilities which may be established.
- Advise the Operations Section Chief and/or the EOC Director of the current situation as required.
- Assist in the preparation of the Action Plan.
- Arrange for feeding and sheltering of personnel as necessary with the Logistics Section.

- Maintain a Field Operations Branch Log noting messages received, decisions made, actions taken, and other activities. Maintain record of personnel on duty.
- Complete an After Action Report to include a brief overview of support provided during the operation and suggested Corrective Actions to improve operations. Use the following format:
 - Issue
 - Corrective Action
 - Assigned to and due date for completion

Laboratory Operations Branch

The Laboratory Operations Branch is responsible for continued laboratory operations during emergencies and disasters, whether it be a localized vector emergency or laboratory operations during a regional disaster situation.

(Assigned to: District Staff as Required by the Event)

Action Checklist

- Identify yourself as the Laboratory Operations Branch.
- Read this entire Checklist.
- Obtain a briefing on the extent of the emergency from the Operations Section Chief.
- Check all laboratory equipment for damage or failure. Request repair or augmentation from the Logistics Section.
- Establish Laboratory Operations for extended operations.
- Complete a Laboratory Operations Situation Report at the end of each Operational Period or upon request of the Planning and Intelligence Section Chief. This report will be utilized to pass to your relief at the end of the work shift and in preparation of the Action Plan.
- Check with the other Operations Section units for a briefing on the status of the emergency.
- Advise the Operations Section Chief and/or the EOC Director of the current situation as required.
- Assist in the preparation of the Action Plan.
- Arrange for feeding and sheltering of Laboratory Operations Branch personnel as necessary with the Logistics Section.
- Maintain a log noting messages received, decisions made, actions taken, and other activities. Maintain record of personnel on duty.
- Complete an After Action Report to include a brief overview of support provided during the operation and suggested Corrective Actions to improve operations. Use the following format:
 - Issue
 - Corrective Action
 - Assigned to and due date for completion

Support Operations Branch

The Support Branch is responsible for maintaining the District's vehicle fleet and facilities. They will coordinate the repair and maintenance of vehicles and buildings during emergency and/or disaster situations.

(Assigned to: District Staff as Required by the Event)

Action Checklist

- Identify yourself as the Support Operations Branch.
- Read this entire Checklist.
- Obtain a briefing on the extent of the emergency from the Operations Section Chief.
- Check the status, availability, and deployment of District vehicles and equipment.
- Insure that all District facilities are being checked for damage and problems.
- Check District telephones and radios. Request repair or augmentation from the Logistics Section.
- Establish Support Operations Branch for extended operations.
- If appropriate, move District vehicles and equipment to open areas to avoid damage from aftershocks after earthquakes.
- Contact all Support Operations personnel for status, special problems, and availability to respond.
- Contact utilities and other local agencies for their availability to respond.
- Working with the Logistics Section, arrange for repair and/or replacement of District equipment.
- Working with the Logistics Section, obtain needed supplies.
- Check with the other Operations Section branches for a briefing on the status of the emergency.
- Update and brief the Operations Chief on Support Operations Branch Issues.
- Arrange for the feeding and sheltering of Support Operations Branch personnel through the Logistics Section.
- Maintain a log noting messages received, decisions made, actions taken, and other activities.
- Maintain a record of personnel on duty.
- Complete an After Action Report to include a brief overview of support provided during the operation and suggested Corrective Actions to improve operations. Use the following format:
 - Issue
 - Corrective Action
 - Assigned to and due date for completion

Planning & Intelligence Section Chief

The Planning and Intelligence Section Chief is responsible for the collection, evaluation, documentation, and dissemination of incident information and intelligence within the EOC. Also, the Planning and Intelligence Section Chief is responsible for preparation of the Action Plan and the After Action Report, as well as other reports that may be required.

(Assigned to: Director of Scientific Technical Services, District Staff as Required by the Event)

Action Checklist

- Identify yourself as the Planning and Intelligence Section Chief.
- Read this entire Checklist.
- Obtain a briefing on the extent of the emergency from the EOC Director.
- Assess the impact of the emergency on the District including the initial damage assessment by District staff and other field units.
- Provide for an authentication process in case of conflicting status reports on events.
- Initiate a display indicating the condition of the District's infrastructure.
- Initiate a display of other significant events in and around the County, including transportation and life safety issues.
- Insure that situation maps and displays are continually posted with current information.
- Prepare a Situation Report, an evaluation of the disaster or emergency situation as it specifically relates to the District, including predictions on the course of the disaster or emergency, and forward it to the EOC Director to be used in briefings to the Board. In addition, a copy should be forwarded to the Orange County EOC for their information.
- Develop an Action Plan identifying EOC Section objectives, significant response needs, and other issues that would affect EOC operations in an 8 to 12 hour time frame.
- Establish incident files relating to the emergency, and check for the accuracy.
- Maintain a file on all EOC messages.
- Establish EOC meeting schedules for use in preparing future Action Plans.
- Complete an After Action Report, which should indicate what Corrective Actions are needed, including who is responsible for the actions and when they are to be completed.

Situation Status Unit

The Unit gathers information and intelligence about the disaster and displays it in the EOC. It collects damage information and prepares a damage assessment report for other EOC Sections, including other outside agencies who also require the information. It makes predictions and provides other information and intelligence as necessary. The Unit works with the other EOC Sections to set priorities and plan strategy.

(Assigned to: District Staff as Required by the Event)

Action Checklist

- Obtain briefing and special instructions from the Planning and Intelligence Section Chief or person in charge of planning activities when you arrive.
- Read this entire Checklist.
- Prepare and maintain the EOC display boards.
- Ensure that the position has all required support items for displays.
- Collect, organize, and display status of emergency or disaster events.
- Coordinate with the Surveillance Unit on specific vector and disease issues.
- Based on the nature of the emergency, coordinate with the Field Operations branch report on high priority areas (densely populated and critical service areas) first.
- Provide for an authentication process in case of conflicting status reports on events.
- Prepare and present an overview Situation Report, an evaluation of the disaster situation, and predictions on the course of the disaster event(s) before each planning meeting or upon request of the Planning and Intelligence Section Chief.
- Assist in strategy planning based on the evaluation of the disaster situation and predictions of the probable course of the event(s).
- Complete an After Action Report to include a brief overview of support provided during the operation and suggested Corrective Actions to improve operations. Use the following format:
 - Issue
 - Corrective Action
 - Assigned to and due date for completion

Surveillance Unit

If activated, the Surveillance Unit collects information on any insect or other arthropod, rodent or other animal of public health significance capable of harboring or transmitting the causative agents of human disease, or capable of causing human discomfort and injury. In conjunction with the Orange County Health Care Agency, the Unit would monitor related disease outbreaks such as West Nile Virus, Flea-borne Typhus, Spotted Fever, and Lyme disease. They ensure that this information is coordinated with the Situation Status Unit.

(Assigned to: District Staff as Required by the Event)

Action Checklist

- Obtain briefing and special instructions from the Planning and Intelligence Section Chief or person in charge of planning activities when you arrive.
- Read this entire Checklist.
- Prepare and maintain the EOC display boards.
- Activate elements of the Unit, establish work area, assign duties, and ensure Unit Log is maintained.
- Ensure that the position has all required support items for displays.
- Direct collection, organization, and display status of disaster events.
- Insure radio communications is established with Field personnel and that a log is maintained.
- Based on the nature of the emergency, ensure that the Field Operations Branch has its personnel report on high priority vector areas, (densely populated and critical service areas) first.
- Ensure "human" communications pathways with information sources in other Sections are initiated, particularly the Operations Section Staff, and direct and maintain individual logs.
- Provide for an authentication process in case of conflicting status reports on events.
- Prepare and present an overview Situation Report, an evaluation of the disaster situation, and predictions on the course of the disaster event(s) before each planning meeting or upon request of the Planning and Intelligence Section Chief.
- Assist in strategy planning based on the evaluation of the event and predictions of the probable course of the event.
- Complete an After Action Report to include a brief overview of support provided during the operation and suggested Corrective Actions to improve operations. Use the following format:
 - Issue
 - Corrective Action
 - Assigned to and due date for completion

Documentation Unit Leader

The Documentation Unit maintains and stores all documents relating to the emergency and maintains copies of all EOC messages. It also maintains the official history of the emergency and assists in the preparation of the Action Plan, Situation Reports, Damage Assessment Reports, and other reports and intelligence summaries as required. The Unit provides duplication services and prepares an After Action Report at the deactivation of the EOC.

(Assigned to: District Staff as Required by the Event)

Action Checklist

- Identify yourself as the Documentation Unit Leader.
- Read the entire Checklist.
- Obtain a briefing on the extent of the emergency from the Planning and Intelligence Section Chief.
- Establish incident files relating to the emergency.
- Check the accuracy and completeness of records submitted for file.
- Maintain a file on all EOC messages.
- Establish duplication services and provide as required (duplicate official forms, etc.)
- Correct any errors by checking with the appropriate EOC personnel.
- File, store and maintain files for legal, analytical and historical purposes.
- Coordinate with the units of the Planning and Intelligence Section.
- Maintain log of all messages received and sent and all significant actions taken. Maintain record of all personnel participating and their hours on duty.
- Complete an After Action Report to include a brief overview of support provided during the operation and suggested Corrective Actions to improve operations. Use the following format:
 - Issue
 - Corrective Action
 - Assigned to and due date for completion

Advance Planning Unit

Responsible for the development of an Advance Plan that includes potential response and recovery likely to occur beyond the next operational period, generally within 36 to 72 hours. In addition, the Advance Planning Unit may aid the other EOC Sections by developing a Demobilization Plan.

(Assigned to: District Staff as Required by the Event)

Action Checklist

- Obtain briefing and special instructions from the Planning and Intelligence Section Chief or person in charge of planning activities when you arrive.
- Read this entire Checklist.
- Establish work area, assign duties, and ensure Unit Log is maintained.
- Meet individually with the EOC staff and determine best estimates of the future direction and outcomes of the emergency.
- Develop an Advance Plan identifying future policy related issues, District resources, social impacts, significant response or recovery resource needs, and any other key issues likely to affect District operations within a 36 to 72 hour time frame.
- Submit the Advance Plan to the Planning & Intelligence Chief for review and approval prior to conducting briefings for the EOC Staff and EOC Director.
- Review all available status reports, Action Plans, and other significant documents. Determine potential future impacts of the emergency; particularly issues which might modify the overall strategic EOC objectives.
- Provide periodic briefings for the EOC Director and EOC Staff addressing Advance Planning issues.
- If a Demobilization Plan is required, develop the plan using detailed specific responsibilities, release priorities and procedures.
- Establish time tables for deactivating or downsizing personnel and equipment.
- Submit a formalized Demobilization Plan to the Planning and Intelligence Section Chief for approval.
- Monitor the implementation of the Demobilization Plan and be prepared to handle any demobilization issues as they occur.
- Maintain Unit records to include Unit Log.

- ❑ Complete an After Action Report to include a brief overview of support provided during the operation and suggested Corrective Actions to improve operations. Use the following format:
 - Issue
 - Corrective Action
 - Assigned to and due date for completion

Logistics Section Chief

Responsible for all the services and support needs of the event. This includes procuring and maintaining essential personnel, facilities, equipment and supplies. They are also responsible for maintaining the EOC in operational order by procuring and repairing equipment, as well as obtaining supplies as needed. The Logistics Chief cooperates closely with the Operations Section to determine resources currently in place and what resources may be needed.

(Assigned to: District Staff as Required by the Event)

Action Checklist

- Identify yourself as the Logistics Section Chief.
- Read this entire Action Checklist.
- Obtain a briefing on the extent of the emergency from EOC Director.
- Obtain initial instructions concerning Logistics work activities and priorities.
- Brief Logistics Section staff.
- Assign work locations and preliminary work tasks to Section personnel.
- Present procedures and limitations on purchasing or expenditures.
- Provide administrative and personnel reporting guidance.
- Review with other Section Chiefs of existing logistics resources and logistics requirements for planned and expected operations.
- Identify and coordinate for the procurement of additional service and support requirements of personnel, supplies and equipment to support planned and expected operations.
- Brief and update the EOC Director of all logistics resources and support concerns. Information that should be provided includes:
 - Priority logistics requirements filled/completed
 - Logistics shortfalls/unresolved problems
 - Major new problems since previous briefing
 - Assistance needed from other agencies and status of mutual aid
 - Information developed by the logistics section that should be passed to other EOC sections or to the public
- Assist in the initial development and review of the Action Plan.
- Prepare Logistics statements for inclusion in the Action Plan.
- Continually coordinate with the Operations Section Chief and Planning and Intelligence Section Chief to ensure timely and efficient logistical support.

- Ensure that Logistics Section staff maintain a Unit Log. All documents prepared by the Logistics Section should be passed to the Documentation Unit at the conclusion of the emergency. At a minimum the following records should be maintained:
 - Messages received and transmitted
 - Action Pending
 - Action Completed
 - Logistics EOC personnel and time on duty
 - Active Vendor Records
 - Non-Expendable Property Records
 - Expendable Property Purchase Records
 - Facility Records
 - Facility Rental Contracts/Inspection Reports
 - Vehicle Records
 - Vehicle Accident Reports
 - After Action Report

- Prior to the end of the operation obtain a Demobilization Plan from the Planning and Intelligence Section.

- Prepare a Logistics Demobilization Plan to ensure the efficient return of non-expendable property, the inventory and disposition of remaining expendable property, payment of vouchers and control of documentation.

- Prior to the end of the operation collect the logistics unit documentation and After Action Reports. Prepare and submit a consolidated Logistics After Action Report to the EOC Director.

- The After Action Report should include a brief overview of support provided during the operation and suggested Corrective Actions to improve operations. Use the following format:
 - Issue
 - Corrective Action
 - Assigned to and due date for completion

Supplies & Services Unit

The Supplies & Services Unit is under the direction of the Logistics Section Chief and is primarily responsible for ordering, receiving, inventory, storage and distribution of supplies needed for the District's disaster operations. The Unit is also responsible for providing procurement support for the District during the disaster. In addition, and working with the Support Operations Branch, the Unit is responsible for appropriating additional janitorial services, food and catering services, building maintenance services, and equipment repair services during the EOC activation.

(Assigned to: District Staff as Required by the Event)

Action Checklist

- Identify yourself as the Supplies & Services Unit Leader.
- Read this entire Action Checklist.
- Obtain a briefing on the extent of the disaster from the Logistics Section Chief and priorities of supplies and services required to support emergency operations.
- Participate in the Logistics Section planning.
- Provides office supplies and support as required to the EOC Sections.
- As needed, prepare inventory of all District supplies on-hand.
- Research the availability of obtaining outside services and prepare a report for the Logistics Chief. Areas should include food, catering, janitorial, equipment repair and maintenance, temporary employment, and any other service needed during disaster operations.
- Coordinate with the Finance Section for the administration of all financial matters pertaining to vendor contracts, open purchase orders, and service contracts.
- Stockpile, maintain, deploy and reserve critical supplies and equipment needed for District operations. Maintain an inventory of all supplies expended during the disaster operation.
- Maintain a list of all service vendors used during the disaster operation.
- Coordinate with outside companies and agencies about sources of services, equipment, and supplies.
- Alert personnel, contractors, and established vendors of any possible needs.
- Working with the Operations Section, provide a forecast of the District's ability to survive on current inventories and procured items.
- Process all administrative paperwork associated with equipment rental and supply & service contracts. Forward all this information to the Finance Section.

- Open and maintain a Unit Log. Insure that all documents prepared by the Logistics Section are given to the Documentation Unit in the Planning and Intelligence Section at the conclusion of the emergency. This will include:
 - Documented messages received/transmitted
 - Action taken.
 - Requests filled.
 - DOC personnel and time on duty.
 - Active Vendor Records
 - Non-Expendable Property Records
 - Expendable Property Purchase Records
 - Short-Term Service Contracts
 - Long-Term Service Contracts
- Prepare a deactivation plan to ensure return of non-expendable property, inventory and disposition of remaining expendable property, payment of vouchers and control of documentation.
- Upon completion of the operation, complete a Supplies & Services After Action Report.
- The After Action Report should include a brief overview of support provided during the operation and suggested Corrective Actions to improve operations. Use the following format:
 - Issue
 - Corrective Action
 - Assigned to and due date for completion

Personnel Unit

The Personnel Unit supports human resource needs of the emergency, document names, assignments, and duty hours of all personnel committed to the operation, and provides staff support as needed. They work with the Claims and Compensation Unit on employee injury issues.

(Assigned to: District Staff as Required by the Event)

Action Checklist

- Identify yourself as the Personnel Unit Leader.
- Read this entire Checklist.
- Obtain a briefing from the Logistics Section Chief.
- Canvas the Operations Section and Planning & Intelligence Section to determine immediate needs for personnel support. Determine what types of skills are needed, where, and for how long.
- Identify the number of "On Duty" personnel available for assignment.
- Determine the status of personnel in each department and request employees that can be utilized for more urgent assignments.
- Determine the number and location of District personnel assigned to field activities.
- Develop a relief plan and coordinate with all sections.
- Fill requests for personnel needs.
- Forward all personnel time records and documentation to the Cost & Time Unit of the Finance Section.
- Open and maintain a Unit Log.
- Insure that all documents prepared by the Logistics Section are given to the Documentation Unit in the Planning and Intelligence Section at the conclusion of the emergency:
 - Messages received and transmitted
 - Action Pending
 - Action Completed
 - Logistics EOC personnel and time on duty
- The After Action Report should include a brief overview of support provided during the operation and suggested Corrective Actions to improve operations. Use the following format:
 - Issue
 - Corrective Action
 - Assigned to and due date for completion

Finance and Administration Section Chief

The Finance and Administration Section Chief provides advice and support to the EOC Director regarding financial issues, and insures that adequate records are maintained to support requests for State and federal assistance. They also ensure that personnel time worked in the incident is tracked, while providing cost analysis and projections.

(Assigned to: District Staff as Required by the Event)

Action Checklist

- Identify yourself as the Finance Section Chief.
- Read this entire Checklist.
- Obtain a briefing on the extent of the emergency from the EOC Director.
- Obtain initial instructions concerning work activities and priorities.
- Establish sub-units as required: Cost & Time Unit and Compensation & Claims Unit.
- Obtain inputs from the various units to determine projected cost of supplies and materials to support the emergency.
- Collect cost data, complete cost effectiveness analysis and determine cost estimates and make recommendations for cost savings.
- Insure that the Cost & Time Unit maintains records of all personnel time worked during the emergency.
- Insure that Compensation & Claims Unit manages all legal claims for compensation filed against the District.
- Insure that a Finance Section log is maintained, noting messages received, decisions made and actions taken, and personnel on duty.
- Complete a Finance After Action Report that should include a brief overview of support provided during the operation and suggested Corrective Actions to improve operations. Use the following format:
 - Issue
 - Corrective Action
 - Assigned to and due date for completion

Cost and Time Unit

The Cost & Time Unit is responsible for collecting all cost data, performing cost effectiveness analyses, providing cost estimates, and cost saving recommendations during the emergency or disaster. The Unit also maintains records of all personnel time worked during the emergency.

(Assigned to: District Staff as Required by the Event)

Action Checklist

- Identify yourself as the Cost & Time Unit.
- Read this entire Checklist.
- Obtain briefing from Finance Section Chief.
- Coordinate with Finance Section on cost reporting procedures.
- Establish contact with appropriate agency supervisors to obtain data as needed.
- Obtain and record all cost data.
- Prepare incident cost summaries.
- Prepare resources-use cost estimates for planning.
- Determine incident requirements for time recording function.
- Insure that daily personnel time recording documents are prepared.
- If used, ensure that daily volunteer time is recorded and documented.
- Make recommendations for cost savings to Finance Section Chief.
- Maintain cumulative incident cost records.
- Insure that all cost documents are accurately prepared.
- Insure that all records are current or complete prior to demobilization.
- Provide for records security.
- Maintain Unit Log.
- Complete an After Action Report that should include a brief overview of support provided during the operation and suggested Corrective Actions to improve operations. Use the following format:
 - Issue
 - Corrective Action
 - Assigned to and due date for completion

Compensation and Claims Unit

The Compensation and Claims Unit manages all legal claims for compensation filed against the District. It advises the Director of Emergency Services in areas of claims for bodily injury and property damage compensation presented to the District.

(Assigned to: District Staff as Required by the Event)

Action Checklist

- Identify yourself as the Compensation & Claims Unit Leader.
- Read this entire Checklist.
- Obtain briefing from Finance Section Chief.
- Determine the need for contracted Compensation and Claims Specialist positions and obtain other personnel if needed.
- Obtain a copy of the Medical Plan if one is required.
- If obtained, brief Compensation & Claims Specialists on incident activity.
- Coordinate with the Finance Section Chief or the EOC Director on procedures for handling claims.
- Periodically review all logs and forms produced by compensation/claims specialists to insure:
 - Work is complete.
 - Entries are accurate and timely.
 - Work is in compliance with agency requirements and policies.
- Keep Finance Section Chief briefed on Unit status and activity.
- Obtain Demobilization Plan, and insure that Compensation and Claims Specialists are adequately briefed on Demobilization Plan.
- Insure that all Compensation and Claims Logs and forms are up-to-date, and routed to the proper agency for post-incident processing prior to demobilization.
- Demobilize Unit in accordance with Demobilization Plan.
- Maintain Unit Log.
- Complete an After Action Report that should include a brief overview of support provided during the operation and suggested Corrective Actions to improve operations. Use the following format:
 - Issue
 - Corrective Action
 - Assigned to and due date for completion

APPENDIX 1

EOC POSITION ASSIGNMENTS AND DISTRICT PERSONNEL CONTACT INFORMATION

District Emergency Personnel

Name:	EOC Role:
Title:	
Office Phone:	
Home Phone:	Mobile Phone:
E-mail:	Other Phone:

Name:	EOC Role:
Title:	
Office Phone:	Mobile Phone:
Home Phone:	Other Phone:
E-mail:	

Name:	EOC Role:
Title:	
Office Phone:	Mobile Phone:
Home Phone:	Other Phone:
E-mail:	

Name:	EOC Role:
Title:	
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Home Phone:	Other Phone:
E-mail:	

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Office Phone:	Mobile Phone:
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Office Phone:	Mobile Phone:
Home Phone:	Other Phone:
E-mail:	

Name:	EOC Role:
Title:	
Office Phone:	Mobile Phone:
Home Phone:	Other Phone:
E-mail:	

Name:	EOC Role:
Title:	
Office Phone:	Mobile Phone:
Home Phone:	Other Phone:
E-mail:	

District Mobile Phone Listing
March 2017

NUMBER	NAME	NUMBER	NAME
714-876-3857	ALLYSON REINIG	714-477-3296	FRITZ PETROPOULOS
714-876-3546	AMBER SEMROW	714-876-3887	FRONT DESK MOBILE
714-616-2585	ANTHONY DeLIRA	714-616-2003	HECTOR GONZALEZ
714-876-3847	BEATRIZ LOPEZ	714-616-2011	JARED DEVER
714-876-3001	BILL MUDGE	714-876-3865	JERRY SIMS
714-876-3879	BOB CUMMINGS	714-876-3886	JIM GREEN
714-876-3851	CARLOS MARTINEZ	714-876-3277	JODIE STODDARD
714-876-3220	CAROLINE REISINGER	714-876-3418	JOHN DRAKE
714-876-3862	CESAR SANCHEZ	714-616-2007	JOHN DREWS
714-876-3866	CHARLIE CASSIDY	714-876-3651	JOHN HILL
714-876-3890	CLARK PLUMMER	714-876-3844	JOHN NEWTON
714-876-3843	CORY HEARST	714-876-3413	JOHN SAVAGE
714-876-3874	CUBBY RINCON	714-616-2020	JOSE TORRES
714-876-3868	CYNTHIA ROSS	714-876-3274	JULIE ROMO
714-316-3007	D2D 01 -	714-616-2000	KIET NGUYEN
714-316-3090	D2D 02 -	714-876-3869	LAB 01 -
714-316-3289	D2D 03 -	714-876-4095	LAB 02 -
714-316-3300	D2D 04 -	714-876-3266	LAB 03 -
714-316-3823	D2D 05 -	714-876-3037	LAB 04 -
714-316-3952	D2D 06 -	714-616-2010	LAB 05 -
714-316-3992	D2D 07 -	714-876-3884	LAB 06 -
714-316-4047	D2D 08 -	714-616-2019	LAB 07 -
714-316-4057	D2D 09 -	714-876-3283	LAB 08 -
714-316-4117	D2D 10 -	714-876-3842	LARRY SHAW
714-316-4302	D2D 11 -	714-616-2008	LAURA KRUEGER
714-316-4341	D2D 12 -	714-876-3653	LESLY SABA
714-318-0406	D2D 13 -	714-477-3218	LUAN NGO
714-318-1094	D2D 14 -	714-477-3324	LUIS BRITO
714-318-1629	D2D 15 -	714-876-3240	MARY JOY COBURN
714-318-1863	D2D 16 -	714-876-3885	MATT ESELTINE
714-318-1872	D2D 17 -	714-876-3860	MIGUEL ARIAS
714-318-2652	D2D 18 -	714-876-3856	MIKE DuBOSE
714-876-3867	DANA ZAMORA	714-876-4053	MIKE SABA
714-616-2017	DANNY BUI	714-616-2586	NATE DINGMAN
714-876-3876	DAVE MILLER	714-876-3855	NICK MOREY
714-876-3845	EDDIE GARCIA	714-477-3786	PATRICK McCAFFREY
714-616-2001	FA 01 -	714-876-3846	PINO RODRIGUEZ
714-616-2002	FA 02 -	714-876-3859	RAY CAVILEER
714-616-2004	FA 03 -	714-876-3541	RICK ARNOLD
714-616-2005	FA 04 -	714-876-3848	ROLAND BAUSA

714-616-2006	FA 05 -	714-876-3850	ROLAND JEN
714-876-3065	FA 06 -	714-876-4168	SIMON DeLIRA
714-876-3408	FA 07 -	714-876-3861	SOKANARY SUN
714-876-3409	FA 08 -	714-876-3102	SPRAY ROUTE 01
714-876-3841	FA 09 -	714-876-3124	SPRAY ROUTE 02
714-876-3853	FA 10 -	714-876-3156	SPRAY ROUTE 03
714-876-3858	FA 11 -	714-876-3157	SPRAY ROUTE 04
714-876-3863	FA 12 -	714-876-3160	SPRAY ROUTE 05
714-876-3881	FA 13 -	714-876-3161	SPRAY ROUTE 06
714-876-4139	FA 14 -	714-876-3172	SPRAY ROUTE 07
714-876-4175	FA 15 -	714-876-3192	SPRAY ROUTE 08
714-616-2009	FA 16 -	714-876-3196	SPRAY ROUTE 09
714-876-3561	FANT 01 -	714-616-2570	SS ASST 01
714-876-3852	FANT 02 -	714-616-2571	SS ASST 02
714-876-3854	FANT 03 -	714-616-2579	SS ASST 03
714-616-2012	FANT 04 -	714-876-3872	TERESA OLIVAS
714-616-2575	FANT 05 -	714-876-3878	TIM MORGAN
714-616-2576	FANT 06 -	714-876-3873	TODD HARRIES
714-616-2577	FANT 07 -	714-616-2589	TONY MORENO
714-616-2578	FANT 08 -	714-616-2580	U.G. 01 -
714-876-3864	FLOOD CENTRAL 01	714-616-2581	U.G. 02 -
714-616-2014	FLOOD CENTRAL 02	714-616-2582	U.G. 03 -
714-876-3047	FLOOD MID SOUTH 01	714-616-2583	U.G. 04 -
714-616-2572	FLOOD MID SOUTH 02	714-616-2584	U.G. 05 -
714-876-3251	FLOOD NORTH 01	714-616-2015	U.G. 06 -
714-616-2013	FLOOD NORTH 02	714-876-3875	U.G. 07 -
714-876-3870	FLOOD SOUTH 01	714-616-2587	U.G. 08 -
714-616-2573	FLOOD SOUTH 02	714-876-3941	UG TRAPPING 01
714-616-2018	FRANCISCO GARCIA	714-616-2588	UG TRAPPING 02
714-876-3871	FREEWAY CREW 01	714-876-3217	URSZULA NIEWOLA
714-616-2574	FREEWAY CREW 02	714-876-3849	WILLY GARCIA

APPENDIX 2

OUTSIDE AGENCY CONTACT INFORMATION

Jurisdiction Cities		EOC Main Line	Operations Chief	Planning & Intel Chief	Logistics Chief	Finance Chief	Hotline / Media
Aliso Viejo 12 Journey, Aliso Viejo, Ca. 92656	Phone	949-425-2596	None	None	None	None	None
	E-mail	None	None	None	None	None	None
Anaheim 909 E Vermont St. Anaheim, Ca. 92805	Phone	714-765-6998	714-765-6982	714-765-6994	714-765-6980	714-765-6986	None
	E-mail	None	lwaterhouse@anaheim.net	jlutz@anaheim.net	ruPerez@anaheim.net	bwingenroth@anaheim.net	None
Brea 1 Civic Center Circle, Brea, Ca. 92821	Phone	714-671-3653	714-671-3648	714-671-3645 / 714-671-3647	714-671-3643	714-671-3644	None
	E-mail	None	None	None	None	None	None
Buena Park 6640 Beach Blvd, Buena Park, Ca. 90622	Phone	714-562-3902	714-562-3812	714-562-3814	714-562-3815	714-562-3817	None
	E-mail	None	None	None	None	None	None
Costa Mesa 99 Fair Drive, Costa Mesa, Ca. 92628	Phone	714-327-4108	None	None	None	None	None
	E-mail	None	None	None	None	None	None
Cypress 5285 Cypress St, Cypress, Ca. 90630	Phone	714-229-1105	714-229-1103	714-229-1109	714-229-1113	714-229-1115	None
	E-mail	None	None	None	None	None	None
Dana Point 33282 Golden Lantern, Dana Point, Ca 92629	Phone	949-234-2800	949-234-2803	949-234-2811	949-234-2807	949-234-2800	None
	E-mail	eocdirector@danapoint.org	opschief@danapoint.org	planningchief@danapoint.org	logisticschief@danapoint.org	financechief@danapoint.org	None
Emerald Bay Service District 600 Emerald Bay, Laguna Beach, Ca. 92651	Phone	949-494-6231	<u>None</u>	<u>None</u>	<u>None</u>	<u>None</u>	949-494-8571
	E-mail	certadmin@ebca.net	ebfirejim@aol.com	None	None	None	None
Environmental Health DOC 1241 East Dyer Road Santa Ana, Ca. 92705	Phone	714-433-6444	714-433-6443	714-433-6443	714-433-6443	714-433-6444	714-433-6422
	E-mail	EHDOCmanager@ochca.com	EHDOCoperation@ochca.com	EHDOCplanintel@ochca.com	EHDOClogistics@ochca.com	EHDOCfinance@ochca.com	<u>None</u>
Fountain Valley 10200 Slater Ave, Fountain Valley, Ca. 92708	Phone	None	714-964-0754	714-964-9873	714-964-9672	714-964-7502	None
	E-mail	None	None	None	None	None	None
Fullerton 2691 Rosecrans Fullerton, Ca. 92833	Phone	714-738-6519	714-738-5391	714-738-5383	714-738-6567	714-738-5388	None
	E-mail	None	None	None	None	None	None
Garden Grove 11222 Acacia Parkway, Garden Grove, Ca. 92842	Phone	714-741-5621	714-741-5620	714-741-5508	714-741-5109	714-741-5109	714-741-5510
	E-mail	<u>None</u>	davidba@ci.garden-grove.org	susan1@ci.garden-grove.org	keithi@ci.garden-grove.org	kingley@ci.garden-grove.org	None
Huntington Beach 2000 Main Street Huntington Beach, Ca. 92648	Phone	714-374-1565	None	None	None	None	None
	E-mail	None	None	None	None	None	None

Jurisdiction Cities		EOC Main Line	Operations Chief	Planning & Intel Chief	Logistics Chief	Finance Chief	Hotline / Media
Irvine One Civic Center Plaza, Irvine, Ca.	Phone	949-724-7585	949-724-7589	949-724-7570	949-724-7578	949-724-7526	None
	E-mail	WebEOC	None	None	None	None	None
Joint Forces Training Base Los Alamitos	Phone	None	562-795-2691	562-795-2096	None	None	None
	E-mail	None	william.d.mayhue@us.army.mil	joel.armstrong1@us.army.mil	none	None	None
La Habra 150 N. Euclid St, La Habra, Ca. 90631	Phone	562-905-9696	562-905-9696 EXT. 406	562-905-9696 Ext. 405	562-905-9696 Ext. 408	562-905-9696 Ext. 409	None
	E-mail	EOC@lahabracity.com	None	None	None	None	None
La Palma 7792 Walker La Palma, Ca. 90623	Phone	714-690-3368	None	None	None	None	None
	E-mail	None	None	None	None	None	None
Laguna Beach 505 Forset Avenue Laguna Beach, Ca. 92654	Phone	949-464-6610	949-464-6614	949-464-6698	949-464-6697	949-464-6699	949-464-6690
	E-mail	None	None	None	None	None	None
Laguna Hills 24035 El Toro Road Laguna Hills, Ca. 92653	Phone	949-707-5103	None	None	949-964-9672	949-964-7502	None
	E-mail	None	None	None	None	None	None
Laguna Niguel 27831 La Paz Road	Phone	949-362-4300	949-362-4310	949-362-4308	949-362-4312	949-362-4358	None
	E-mail	None	aferguson@ci.laguna-niguel.ca.us	imacpherson@ci.laguna-niguel.ca.us	imacpherson@ci.laguna-niguel.ca.us	cdyas@ci.laguna-niguel.ca.us	None
Laguna Woods 24264 El Toro Road Laguna Woods, Ca. 92637	Phone	949-431-2255	None	None	None	None	None
	E-mail	None	None	None	None	None	None
Lake Forest 25550 Commercentre Drive Lake Forest, Ca. 92630	Phone	949-461-3400	949-461-3413	949-461-3463	949-461-3485	949-461-3431	949-461-3400
	E-mail		gmagill@lakeforestca.gov	gackerman@lakeforestca.gov	lestevez@lakeforestca.gov	eandrew@lakefoerstca.gov	None
Los Alamitos 3201 Katella Ave Los Alamitos 90720	Phone	562-431-2255	None	None	None	None	None
	E-mail	None	None	None	None	None	None
Mission Viejo 200 Civic Center Mission Viejo, Ca. 92691	Phone	None	949-639-0471	949-639-0438	949-639-0436	949-639-0442	None
	E-mail	None	None	None	None	None	None
Newport Beach 3300 Newport Blvd Newport Beach, Ca. 92663	Phone	949-795-9782	949-644-3737	949-644-3633	949-644-3632	949-644-3630	949-644-3620
	E-mail	None	None	None	None	None	None
Orange 1107 N. Batavia Orange Ca. 92867	Phone	None	714-744-7425	714-744-7423	714-744-7497	714-744-7431	714-744-7574
	E-mail	None	None	None	None	None	None

Jurisdiction Cities		EOC Main Line	Operations Chief	Planning & Intel Chief	Logistics Chief	Finance Chief	Hotline / Media
Orange County Cemetery District 25751 Trabuco Road, Lake Forest, Ca. 92630	Phone	949-951-0631	None	None	None	None	None
	E-mail	t.deutsch@orccd.com	None	None	None	None	None
Orange County Department of Education 200 Kalmus Drive, Costa Mesa Ca. 92626	Phone	714-327-1071	<u>None</u>	<u>None</u>	<u>None</u>	None	714-966-4444
	E-mail	acummins@ocde.us	<u>None</u>	<u>None</u>	<u>None</u>	None	None
Orange County Fire Authority 1 Fire Authority road Irvine Ca. 92602	Phone	714-573-6535	714-573-6536	714-573-6537	714-573-6538	714-573-6533	714-357-7782
	E-mail	eccsupp@ocfa.org	None	None	None	None	marcstone@ocfa.org

Orange County Health EMS DOC 405 W. 5th St. Santa Ana, Ca. 92701	Phone	None	714-288-6933	714-288-6915	714-288-6957	None	None
	E-mail	None	emsdocops@ochca.com	emsdocplans@ochca.com	emsdoclogis@ochca.com	None	None
Orange County Health Care Agency's HEOC 2228 S. Ritchey St, Santa Ana, Ca.	Phone	714-415-8980	714-560-6121	714-560-6120	714-560-6126	714-560-6127	800-564-8448
	E-mail	HDMDOfficer@ochca.com	None	None	HEOCLOGCHIEF@ochca.com	HEOCFINCHIEF@ochca.com	publicinfo@ochca.com
Orange County Transit Authority	Phone	714-530-6060	714-539-2461	714-539-2566	714-539-2394	714-539-2384	714-539-2416
	E-mail	acc@octa.net		None	None	None	None
Placentia 401 E. Chapman Ave Placentia, Ca. 92870	Phone	None	None	None	714-964-9672	714-964-7502	None
	E-mail	None	None	None	None	None	None
Rancho Santa Margarita City Hall 22112 El Paseo RSM, Ca. 92688	Phone	949-635-1670	949-635-1671	949-635-1672	949-635-7951	949-635-1673	None
	E-mail	None	None	None	None	None	None
Saddleback Valley Unified School District 25631 Peter A Hartman Way, Mission Viejo, 92691	Phone	949-584-2359	949-838-6806	949-525-6475	949-533-4234	949-580-3333	949-584-2359
	E-mail	manzo@svusd.org	scardonek@svusd.org	simonej@svusd.org	rommejg@svusd.org	morini@svusd.org	EOC@svusd.org
San Clemente 380 Ave. Pico Bld. N, San Clemente, Ca. 92763	Phone	949-366-4700	949-366-4773	949-366-4774	949-366-4775	949-366-4700	None
	E-mail	None	EOCOpsChief@san-clemente.org	EOCPlanChief@san-clemente.org	EOCLogChief@san-clemente.org	EOCFinChief@san-clemente.org	None
San Juan Capistrano 32400 Paseo Adelanto San Juan Capistrano, Ca. 92675	Phone	949-443-3020	949-443-3006	949-443-3004	949-443-3013	None	None
	E-mail	None	opschief@sanjuancapistrano.org	planschief@sanjuancapistrano.org	logschief@sanjuancapistrano.org	None	None

Jurisdiction Cities		EOC Main Line	Operations Chief	Planning & Intel Chief	Logistics Chief	Finance Chief	Hotline / Media
Santa Ana 220 S. Daisy St, Santa Ana, Ca.	Phone	714-647-3391	714-834-0409	714-547-1107	714-547-0992	714-834-0644	714-647-3533
	E-mail	SART-Data@santa.ana.org	WebEOC	WebEOC	WebEOC	WebEOC	SART-Data@santa-ana.org
Seal Beach 911 Seal Beach Blvd. Seal Beach, Ca. 90740	Phone	562-799-4100 x 1131	562-799-4100 x 1190	562-799-4100 x 1191	562-799-4100 x 1192	562-799-4100 x 1193	None
	E-mail	tdevoe@ci.seal-beach.ca.us	None	None	None	None	None
Stanton 8100 Pacific Ave Stanton, Ca. 90680	Phone	714-379-9222	714-658-1235	None	None	None	None
	E-mail	None	None	None	None	None	None
Tustin 300 Centinal Way Tustin, Ca. 92780	Phone	714-573-3220	None	None	None	None	None
	E-mail	None	None	None	None	None	None
University of California Irvine University of California, Irvine Ca. 92697	Phone	949-824-3615	949-824-3607	949-824-3627	949-824-3612	949-824-3603	
	E-mail	awidney@uci.edu	None	None	None	None	None
Villa Park 17855 Santiago Blvd. Villa Park, Ca. 92861	Phone	714-998-1500	None	None	None	None	None
	E-mail	None	None	None	None	None	None
WERO North 9737 Peters Canyon Road, Orange, 92667	Phone	714-288-8200	None	714-288-8201	714-288-8202	714-288-8204	None
	E-mail	WEROManager@gmail.com	None	WEROPlans@gmail.com	WEROLogistics@gmail.com	WEROFinance@gmail.com	None
WERO South 26081 Via Pera, Mission Viejo, 92691	Phone	949-455-4493	None	949-455-4458	949-455-4459	949-455-4457	None
	E-mail	WEROManager@gmail.com	None	WEROPlans@gmail.com	WEROLogistics@gmail.com	WEROFinance@gmail.com	None
Westminster 8200 Westminster Blvd Bld 5 Westminster, Ca. 92683	Phone	714-897-2511	None	None	None	None	None
	E-mail	None	None	None	None	None	None

APPENDIX 3

VENDOR CONTACT INFORMATION

APPENDIX 4

DISTRICT SPRAY EQUIPMENT AND VEHICLE LIST

District Spray Equipment

- Truck mounted A1 Super Duty larvicide applicator
- Truck mounted Grizzly ULV applicator x 1
- Four (4) Truck mounted Whispermist ULV applicators
- Fifty Five (55) 42- Maruyama MD300
- Eight (8) Maruyama MD155DX
- Four (4) Maruyama MD159D
- Ten (10) Arrogun Bullet handheld foggers
- Two (2) Curtis Dynafog Mini Lite golf cart mounted ULV
- Six (6) Stihl SR450 backpack liquid misters
- Four (4) B&G Versafogger backpack ULV
- Nine (9) Curtis Dynafog Twister XL backpack ULV
- Four (4) Pioneer ULV cold foggers
- Thirteen (13) Maruyama backpack applicators

Pesticides and PPE will vary in quantity throughout the season.

**VEHICLE ASSIGNMENT SHEET
BY VEHICLE NUMBER**

	VEHICLE NUMBER	NAME	USE	YEAR	MAKE	MODEL
1	196	DAVE MILLER	SHOP TRUCK	1998	CHEVY	1500 1/2 TON
2	211	NOT ASSIGNED	LAB - SEASONAL	2002	TOYOTA	TACOMA
3	213	MIKE SABA	LAB - LARGE FISH TRUCK	2002	TOYOTA	TUNDRA
4	214	ROLAND JEN	WATER QUALITY	2002	FORD	EXPLORER 4X4
5	215	NOT ASSIGNED - TO BE AUCTIONED	NONE	2003	TOYOTA	TACOMA SR5 4X4
6	216	STAFF	YARD TRUCK	2005	TOYOTA	TACOMA 4X4
7	217	NOT ASSIGNED	S.S. U.G. TRUCK - SEASONAL	2005	TOYOTA	TUNDRA
8	218	NOT ASSIGNED	SPRAY ROUTE - SEASONAL	2006	JEEP	WRANGLER 4X4
9	219	NOT ASSIGNED	SPRAY ROUTE - SEASONAL	2006	JEEP	WRANGLER 4X4
10	220	NOT ASSIGNED	SPRAY ROUTE - SEASONAL	2006	JEEP	WRANGLER 4X4
11	221	NOT ASSIGNED	SPRAY ROUTE - SEASONAL	2006	JEEP	WRANGLER 4X4
12	222	NOT ASSIGNED	SPRAY ROUTE - SEASONAL	2006	JEEP	WRANGLER 4X4
13	223	NOT ASSIGNED	SPRAY ROUTE - SEASONAL	2006	JEEP	WRANGLER 4X4
14	224	STAFF	GRIZZLY U.L.V. TRUCK	2003	TOYOTA	TUNDRA 4X4
15	226	JESSICA SAUZ	D2D - SEASONAL	2006	TOYOTA	TACOMA
16	227	JAMES GUYMON	D2D - SEASONAL	2006	TOYOTA	TACOMA
17	228	ENRIQUE LOPEZ	D2D - SEASONAL	2006	TOYOTA	TACOMA
18	229	NOT ASSIGNED	D2D - SEASONAL	2006	TOYOTA	TACOMA
19	230	NOT ASSIGNED	D2D - SEASONAL	2006	TOYOTA	TACOMA
20	231	KIET NGUYEN	LAB	2006	TOYOTA	TACOMA 4X4
21	234	AMANDA PENICKS	LAB - SEASONAL	2006	TOYOTA	TACOMA
22	235	KYLIE PHAM	LAB - SEASONAL	2006	TOYOTA	TACOMA
23	236	ERIC PAQUETTE	LAB - ASST BIOLOGIST	2006	TOYOTA	TACOMA 4X4
24	237	SOKANARY SUN	LAB - SEASONAL	2006	TOYOTA	TACOMA
25	239	NOT ASSIGNED	FIREANTS - SEASONAL	2006	TOYOTA	TACOMA
26	240	LINDSIE MERRICK	D2D - SEASONAL	2006	TOYOTA	TACOMA
27	241	NOT ASSIGNED	FIREANTS - SEASONAL	2006	TOYOTA	TACOMA
28	242	LUIS GARCIA	D2D - SEASONAL	2006	TOYOTA	TACOMA
29	243	STAFF	WISPER MIST	2006	TOYOTA	TACOMA
30	244	NOT ASSIGNED	FIREANTS - SEASONAL	2006	TOYOTA	TACOMA
31	245	STAFF	WISPER MIST	2006	TOYOTA	TACOMA
32	246	PHILIP SHIN	LAB - SMALL FISH TRUCK	2006	TOYOTA	TACOMA
33	247	NOT ASSIGNED	FIREANTS - SEASONAL	2006	TOYOTA	TACOMA
34	248	CARLOS MARTINEZ	ZONE 10	2006	TOYOTA	TACOMA 4X4
35	249	NOT ASSIGNED	FIREANTS - SEASONAL	2006	TOYOTA	TACOMA
36	250	NOT ASSIGNED	S.S. FLOOD TRUCK - SEASONAL	2007	TOYOTA	TACOMA
37	251	DAVE MILLER	LOANER TRUCK	2007	TOYOTA	TACOMA
38	254	NOT ASSIGNED	SPRAY ROUTE - SEASONAL	2008	JEEP	WRANGLER 4X4
39	255	NOT ASSIGNED	S.S. U.G. TRUCK - SEASONAL	2008	TOYOTA	TUNDRA 4X4
40	256	NOT ASSIGNED	S.S. FLOOD TRUCK - SEASONAL	2008	TOYOTA	TACOMA PRE-RUNNER
41	257	JOSEPH DELIRA	S.S. FLOOD TRUCK - SEASONAL	2008	TOYOTA	TACOMA 4X4
42	258	NOT ASSIGNED	S.S. FLOOD TRUCK - SEASONAL	2008	TOYOTA	TACOMA 4X4
43	259	NOT ASSIGNED	S.S. U.G. TRUCK - SEASONAL	2008	TOYOTA	TUNDRA
44	260	TONY MORENO	S.S.TECH 3	2008	TOYOTA	TUNDRA 4X4
45	261	NOT ASSIGNED	SPRAY ROUTE - SEASONAL	2008	JEEP	WRANGLER 4X4
46	262	NOT ASSIGNED	S.S. FREEWAY TRUCK - SEASONAL	2010	FORD	RANGER 4X4
47	263	TYLER MEHRBRODT	LAB - ASST VECTOR ECOLOGIST	2010	FORD	RANGER 4X4
48	264	JOHN DRAKE	I.V.M.	2012	FORD	F150

**VEHICLE ASSIGNMENT SHEET
BY VEHICLE NUMBER**

	VEHICLE NUMBER	NAME	USE	YEAR	MAKE	MODEL
49	265	DANA ZAMORA	ZONE 13	2013	TOYOTA	TACOMA
50	266	NOT ASSIGNED	S.S. FLOOD TRUCK - SEASONAL	2013	TOYOTA	TACOMA
51	267	NOT ASSIGNED	ZONE 18	2013	TOYOTA	TACOMA
52	268	EDDIE SANCHEZ	S.S. FLOOD TRUCK - SEASONAL	2013	TOYOTA	TACOMA 4X4
53	269	NOT ASSIGNED	S.S. FLOOD TRUCK - SEASONAL	2011	FORD	RANGER
54	270	JERRY SIMS	OPERATIONS SUPERVISOR	2014	TOYOTA	TACOMA
55	271	SCOTT CHAMBERS	ZONE 14	2014	TOYOTA	TACOMA
56	272	NOT ASSIGNED	S.S. FREEWAY TRUCK - SEASONAL	2014	TOYOTA	TACOMA
57	273	NOT ASSIGNED	FIREANTS - SEASONAL	2014	TOYOTA	TACOMA
58	274	TERESA OLIVAS	VECTOR ASSISTANT	2014	TOYOTA	TACOMA
59	275	WILLY GARCIA	ZONE 03	2014	TOYOTA	TACOMA
60	276	STAFF	COMMUNITY OUTREACH	2014	NISSAN	VAN
61	277	FRANK DIAZ	S.S. UNDERGROUND TRUCK	2013	TOYOTA	TUNDRA
62	278	NOT ASSIGNED	SPRAY ROUTE - SEASONAL	2003	JEEP	WRANGLER 4X4
63	279	NOT ASSIGNED	SPRAY ROUTE - SEASONAL	2003	JEEP	WRANGLER 4X4
64	280	DANNY BUI	ZONE 08	2016	TOYOTA	TACOMA
65	281	RICK ARNOLD	FIREANT TECH 2	2016	TOYOTA	TACOMA
66	282	BEATRIZ LOPEZ	FIREANT TECH 2	2016	TOYOTA	TACOMA 4X4
67	283	MATT ESELTINE	FIREANT TECH 3	2016	TOYOTA	TACOMA
68	284	FRITZ PETROPOULOS	COMMUNITY OUTREACH	2016	FORD	TRANSIT CONNECT
69	285	JOHN SAVAGE	S.S. MARSHES	2017	CHEVY	COLORADO
70	286	PINO RODRIGUEZ	ZONE 07	2017	CHEVY	COLORADO
71	287	JOHN HILL	ZONE 04	2017	CHEVY	COLORADO
72	288	BILL MUDGE	ZONE 19	2017	CHEVY	COLORADO
73	289	JULIE ROMO	ZONE 06	2018	CHEVY	COLORADO
74	290	EDDIE GARCIA	ZONE 01	2018	CHEVY	COLORADO
75	291	ROLAND BAUSA	FIREANT TECH 2	2018	CHEVY	COLORADO
76	292	FLEET	VARIOUS	2018	CHEVY	TRAVERSE
77	293	FLEET	VARIOUS	2018	CHEVY	TRAVERSE
78	294	LESLY SABA	ZONE 12	2019	CHEVY	COLORADO
79	295	NATE DINGMAN	ZONE 02	2019	CHEVY	COLORADO
80	296	MIKE DuBOSE	ZONE 16	2019	CHEVY	COLORADO
81	297	LUIS BRITO	S.S. UNDERGROUND TRUCK	2019	CHEVY	SILVERADO
82	298	CORY HEARST	ZONE 17	2019	FORD	RANGER 4X4
83	299	CESAR SANCHEZ	ZONE 09	2019	FORD	RANGER 4X4
84	300	JOHN DRAKE	SUPER DUTY A-1	2019	CHEVY	SILVERADO 4 X 4
85	301	NICK MOREY	ZONE 05	2019	FORD	RANGER
86	302	HECTOR GONZALEZ	S.S. UNDERGROUND TRUCK	2019	CHEVY	SILVERADO
87	303	JOHN DREWS	ZONE 15	2019	FORD	RANGER
88	304	ANTHONY DeLIRA	S.S. FLOOD TECH 2	2020	FORD	RANGER 4X4
89	305	TIM MORGAN	LAB	2020	FORD	RANGER
90	306	LAURA KRUEGER	LAB	2020	FORD	RANGER 4X4
91	307	FRANKIE GARCIA	S.S. CANYONS	2020	FORD	RANGER 4X4
92	308	TODD HARRIES	ZONE 11	2020	FORD	RANGER 4X4
93	A02	SIMON DeLIRA	FACILITIES	2000	FORD	EXPLORER
94	A13	NOT ASSIGNED	LAB	2000	FORD	RANGER
95	A15	STAFF	WISPER MIST	2000	FORD	RANGER
96	A16	NOT ASSIGNED - TO BE AUCTIONED	NONE	2000	FORD	RANGER
97	A18	STAFF	WISPER MIST	2000	FORD	RANGER

APPENDIX 5

CALIFORNIA VECTOR CONTROL DISTRICT INFORMATION

Mosquito and Vector Control Agencies of California

Coastal

Alameda County MAD

23187 Connecticut Street
Hayward, CA 94545

510-783-7744

acmad@mosquitos.org

Alameda County VCSD

1131 Harbor Bay Parkway
Alameda, CA 94502

510-567-6800

Robert.Gay@acgov.org

Contra Costa MVCD

155 Mason Circle
Concord, CA 94520

925-685-9301

pmacedo@contracostamosquito.com

Marin-Sonoma MVCD

595 Helman Lane
Cotati, CA 94931

707-285-2200

PhilS@msmosquito.com

Napa County MAD

PO Box 10053
American Canyon, CA 94503

707-553-9610

bugsydoc1@yahoo.com

No. Salinas Valley MAD

342 Airport Blvd
Salinas, CA 93905

831-422-6438

info@montereycountymosquito.com

San Benito County Agricultural
Commission

PO Box 699
Hollister, CA 95023

831-637-5344

rross@cosb.us

San Francisco Public Health,
Environmental Health Section

1390 Market Street, Suite 210
San Francisco, CA 94102

415-252-3887

helen.zverina@sfdph.org

San Mateo County MVCD

1351 Rollins Road
Burlingame, CA 94010

650-344-8592 x12

bweber@smcmvcd.org

Santa Clara County VCD

1580 Berger Dr.
San Jose, CA 95112

408-918-4770

russell.parman@deh.sccgov.org

<u>Santa Cruz County MVCD</u> 640 Capitola Road Santa Cruz, CA 95062	831-454-2590	agc020@agdept.com
<u>Solano County MAD</u> 2950 Industrial Court Fairfield, CA 94533	707-437-1116	solmad@aol.com

Sacramento Valley Region

<u>City of Alturas</u> 200 W. North Street Alturas, CA 96101	530-233-2377	crobertson@cityofalturas.org
<u>Burney Basin MAD</u> PO Box 1049 Burney, CA 96013	530-335-2133	manager@bbmad.org
<u>Butte County MVCD</u> 5117 Larkin Road Oroville, CA 95965	530-533-6038	matthewcball@att.net
<u>Colusa MAD</u> PO Box 208 Colusa, CA 95932	530-458-4966	colmad@frontiernet.net
<u>Durham MAD</u> PO Box 386 Durham, CA 95938	530-345-2875	aadmad@stormnet.com
<u>El Dorado County Environmental Management</u> 3368 Lake Tahoe Blvd. Suite 303 South Lake Tahoe, CA 96150	530-573-3450	karen.bender@edcgov.us
<u>Glenn County MVCD</u> 165 Co. Rd G Willows, CA 95988	530-934-4025	gcmvcd@northvalley.net
<u>Lake County VCD</u> PO Box 310 Lakeport, CA 95453	707-263-4770	jjscott@lcvcd.org
<u>Nevada County Community Development Agency</u> 950 Maidu Ave., Suite 170 Nevada City, CA 95959	530-265-1787	Peggy.zarriello@co.nevada.ca.us
<u>Oroville MAD</u> PO Box 940 Oroville, CA 95965	530-534-8383	orovillemad@yahoo.com

<u>Pine Grove MAD</u> PO Box 328 McArthur, CA 96056	530-336-5740	pinegrovemad@hotmail.com
<u>Placer MVCD</u> 2021 Opportunity Drive Roseville, CA 95678	916-380-5444	joelb@placermosquito.org
<u>Sacramento-Yolo MVCD</u> 8631 Bond Road Elk Grove, CA 95624	1-800-429-1022	info@fightthebite.net
<u>Shasta MVCD</u> 19200 Latona Rd. Anderson, CA 96007	530-365-3768	contact@shastamosquito.org
<u>Sutter-Yuba MVCD</u> PO Box 726 Yuba City, CA, 95992	530-674-5456 x101	mksymvcd@pacbell.net
<u>Tehama County MVCD</u> PO Box 1005 Red Bluff, CA 96080	530-527-1676	tcmvcd1676@gmail.com

North San Joaquin Valley Region

<u>East Side MAD</u> 2000 Santa Fe Avenue Modesto, CA 95357	209-522-4098	esmad@sbcglobal.net
<u>Merced County MAD</u> PO Box 909 Merced , CA 95341	209-722-1527	mcmadmanager@vtlnet.com
<u>Saddle Creek Community Services District</u> 1000 Saddle Creek Drive Copperopolis, CA 95228	209-785-0100	sccsd@caltel.com
<u>San Joaquin County MVCD</u> 7759 S. Airport Way Stockton, CA 95206	209-982-4675	elucchesi@sjmosquito.org
<u>Turlock MAD</u> 4412 North Washington Road Turlock, CA 95380	209-634-8331 x200	dheft@fire2wire.com

South San Joaquin Valley Region

Consolidated MAD

PO Box 278 559-896-1085 conmad@pacbell.net
Selma, CA 93662

Delano MAD

PO Box 220 661-725-3114 dmad1944@gmail.com
Delano, CA 93216

Delta VCD

PO Box 310 559-732-8606 alburnm@deltavcd.com
Visalia, CA 93279

Fresno MVCD

2338 E. McKinley Ave 559-268-6565 Admin@fresnomosquito.org
Fresno, CA 93703

Fresno Westside MAD

PO Box 125 559-659-2437 ecline@fresnowestmosquito.com
Firebaugh, CA 93622

Kern MVCD

4705 Allen Road 661-589-2744 kmvcd@sbcglobal.net
Bakersfield, CA 93314

Kings MAD

10871 Bonney View Lane 559-584-3326 cavanagh@kingmosquito.net
Hanford, CA 93230

Madera County MVCD

3105 Airport Drive 559-662-8880 leoi_mmvcd@sbcglobal.net
Madera, CA 93637

South Fork MAD

PO Box 750 760-376-3218 sfmadoffice@gmail.com
Kernville, CA 93238

Tulare Mosquito Abatement District (TMAD)

6575 Dale Fry Road 559-686-6628 tularemosquito@gmail.com
Tulare, CA 93274

West Side MVCD

PO Box 205 661-763-3510 wsm.mosq@wildblue.net
Taft, CA 93268

Southern California Region

Antelope Valley MVCD

PO Box 1192

661-942-2917

Leann@avmosquito.org

Lancaster, CA 93584

City of Blythe

440 S. Main Street

760-922-6161

phamblen@cityofblythe.ca.gov

Blythe, CA 92225

City of Moorpark/VC

799 Moorpark Avenue

805-517-6267

Moorpark, CA 93021

Coachella Valley MVCD

43-420 Trader Place

760-342-8287

cvmosquito@cvmvcd.org

Indio, CA 92201

Compton Creek MAD

1224 S. Santa Fe Ave

310-933-5321

comptoncreekmad@earthlink.net

Compton, CA 90221

Greater LA County VCD

12545 Florence Avenue

562-758-6501

tdever@glacvcd.org

Santa Fe Springs, CA 90670

Imperial County Vector Control

797 Main Street, Suite B

760-336-8530

timothyhodgkins@co.imperial.ca.us

El Centro, CA 92243

June Lake Public Utility District

PO Box 99

760-648-7778

pudgm@qnet.com

June Lake, CA 93529

Long Beach Vector Control Program

2525 Grand Avenue Room 220

562-570-4170

nelson.kerr@longbeach.gov

Long Beach, CA 90815

Los Angeles West Vector and Vector-borne Disease Control District

6750 Centinela Avenue

310-915-7370 x223

rsaviskas@lawestvector.org

Culver City, CA 90230

Mammoth Lakes MAD

P.O. Box 1943

760-924-8240

saganong@npgcable.com

Mammoth Lakes, CA 93548

Mosquito and Vector Management District of Santa Barbara County

805-969-5050 x225

mvmdistrict@mvmdistrict.org

PO Box 1389 Summerland, CA 93067 <u>Northwest MVCD</u> 1966 Compton Avenue Corona, CA 92881	951-340-9792	mdhillon@northwestmvcd.org
<u>Orange County Mosquito and Vector Control District</u> 13001 Garden Grove Blvd. Garden Grove, CA 92842	714-971-2421	ocvcd@ocvcd.org
<u>Owens Valley MAP</u> 207 W. South Street Bishop, CA 93514	760-873-7853	inyomonoag@gmail.com
<u>Pasadena Public Health Department</u> 1845 North Fair Oaks Avenue Room 1200 Pasadena, CA 91103	626-744-6004	rjanbek@cityofpasadena.net
<u>Riverside County, Dept of Environmental Health VCP</u> 4065 County Circle Drive Riverside, CA 92503	951-358-5172	svanstoc@co.riverside.ca.us
<u>San Bernardino County MVC</u> 2355 E. 5th Street San Bernardino, CA 92410	800-442-2283	jason.phillippe@dph.sbcounty.gov
<u>San Diego County Dept. of Environmental Health, Vector Control</u> 5570 Overland Avenue, Suite 102 San Diego, CA 92123	858-694-2888	Rebecca.Lafreniere@sdcounty.ca.gov
<u>San Gabriel Valley MVCD</u> 1145 N. Azusa Canyon Road West Covina, CA 91790	626-814-9466	eelliott@sgvmosquito.org
<u>Ventura County Environmental Health Division</u> 800 South Victoria Ave. Ventura, CA 93009	805-654-2816	Ron.Ventura@ventura.org
<u>West Valley MVCD</u> 1295 E. Locust Street Ontario, CA 91761	909-635-0307	wvmvcd@wvmvcd.org

Sustaining Members

ADAPCO

550 Aero Lane 800-367-0659 dcandito@myadapco.com
Sanford, FL 32771

Aerial Services

17605 Chateau Ct. 510-889-1453 robert_franklin@aerialservices.org
Castro Valley, CA 94552

Allpro Vector Group

9100 W/ Bloomington Fwy, Ste. 113 888-603-1008 info@allprovector.com
Bloomington, MN 55431

American Longray Company

1227 Hampshire St., Suite 37 415-830-9494
San Francisco, CA 94110

AMVAC

10808 NE 27th Court 772-205-5280 renniek@amvac-chemical.com
Vancouver, WA 98685

Application Dynamics

PO Box 152725 239-673-8328 williams@applicationdynamics.net
Cape Coral, FL 33915-2725 US

Bayer Crop Science

Alfred-Nobel-Str. 50 +49 (0) 21 73 – 38-0 gordon.morrison@bayer.com
40789 Monheim am Rhein, Germany

Central Life Sciences

1501 E. Woodfield Road, Suite 200 W. 847-330-5332 cdahl@central.com
Schaumburg, IL 60173

Clarke Mosquito Control Products, Inc.

110 E. Irving Park Rd. 630-894-2000 srodriguez@clarke.com
Roselle, IL 60172

Curtis Dyna-Fog

PO Box 297 317-896-2561 miker@dynafog.com
Westfield, IN 46074

Dynamic Aviation

1402 Airport Road Post Office Box 7 540-828-6070 info@dynamicaviation.com
Bridgewater, VA 22812-0007

Electronic Data Solutions

P.O. Box 31 208-324-8006 elecdata@elecdata.com
Jerome, ID 83338

Leading Edge Associates, Inc.
456 Walker Rd
Waynesville, NC 28786

828-926-6525

piper@leateam.com

MGK
810 10th ave.
N. Golden Valley, MN 55427

770-466-6092

Dale.Garner@MGK.com

SCI Consulting Group
4745 Mangels Boulevard
Fairfield, CA 94534

800-273-5167

info@sci-cg.com

Target Specialty Products
1155 Maybury Road
San Jose, CA 95133

408-293-6032

erik.records@target-specialty.com

Univar USA, Inc.
2893 North Miami Avenue
Fresno, CA 93727

559-577-8872

sandra.torry@univarusa.com

Valent BioSciences
1450 North 45th Street
Laramie, WY 82072

307-721-4335

stephanie.whitman@valent.com

APPENDIX 6

WEST NILE VIRUS AND AEDES RESPONSE GUIDELINES

OCMVCD WNV RESPONSE GUIDELINES

WNV Response			
	WNV High Risk Area (Pre-Peak Season) Priority 4	WNV Early Response- Single positive trap/HRA City; Multiple positive/any city; Positive trap adjacent to existing positive trap Priority 3	WNV Human Case Investigations Priority 5
Inspectors/Area Supervisors	Zone Inspector to check known ITs and pools. Review Zone heat maps of previous WNV activity (last 5 years), provided by lab. Seek out new potential breeding sources, such as commercial areas, construction sites or roof tops.	Zone Inspector will receive notice of an early response trigger from the Operations Supervisor. Coordinate Pool/IT assistance with FAA/D2D teams, as necessary.	Area Supervisor to inspect index and 4-6 adjacent properties. Set 1 gravid trap at index or adjacent. Check known IT's and pools. Coordinate D2D survey, if warranted. Complete WNV case report, to be turned in to Director of Operations.
FAA/D2D Teams	FAA team to assist Zone Inspectors with routine pools and ITs. D2D team will check hot-spot addresses. No yellow tags. Refer substantial finds to Zone Inspector. Distribute outreach materials to libraries, city halls, senior centers, etc.	FAA/D2D teams to perform area-wide inspections of larger potential sources, such as commercial areas, construction sites and cemeteries. Refer discoveries to Zone Inspector. Set 8 additional gravid traps, per Lab grid protocol. Distribute outreach materials.	D2D inspections 1/16 mile or 100 meters, if warranted. Yellow notices only if property warrants a closer inspection, using Area Supervisor's contact info. If Area Supervisor's trap is positive, set 9 additional gravid traps per lab grid protocol.
Outreach	Meet with staff in key HRA cities. Provide all cities with educational packets and mosquito repellants wipes. Coordinate with FAA/D2D teams for outreach materials distribution.	Notify trustee and city officials. Leverage city resources facilitate messaging. Coordinate with FAA/D2D teams for outreach materials distribution. Direct mail notifications, if warranted. Targeted social media placement, if warranted.	Notify trustee and city officials. Leverage city resources. Coordinate with FAA/D2D teams for outreach materials distribution. Direct mail notifications, if warranted. Targeted social media placement.
Lab	Produce and distribute WNV activity heat maps (last 5 years). ID/testing. Update abundance data on a weekly basis.	A positive trap result from the FAA/D2D placement will result in Lab staff setting 9 additional Gravid traps, per Lab grid protocol. Coordinate large area pesticide applications. ID/testing. Update abundance on a weekly basis.	Investigation support, if necessary. Lab to set 9 additional Gravid traps per lab grid protocol, if warranted. Coordinate large area pesticide applications. ID/testing. Update abundance on a weekly basis.

<p>Data Management</p>	<p>IForm- For any non-SR residential properties which may be inspected, enter data in Door to Door tab. Indicate Surveillance Type (“WNV”) on main form. Create a new main form and sub-form for each address inspected. Enter existing/new IT and pool sites in the routine manner.</p>	<p>FAA iForm- **Please see detailed procedure with new naming convention (see Operations Supervisor).</p>	<p>IForm- Enter residential inspections in Door to Door tab. Create a new main form and sub-form for each address inspected. Enter Extended Trapping information/naming convention grid number (provided by Operations Supervisor). Enter existing/new IT and pool sites in the routine manner.</p>
<p>Crews Underground Spray route Flood</p>	<p>Will be notified by Inspectors/Supervisors/Lab Staff of target areas (cc Supervisors) in order to maintain < 10 day cycle.</p>	<p>Will be notified by Operations Supervisor of target areas (cc Supervisors) in order to maintain < 10 day cycle.</p>	<p>Operations Supervisor to update crews in order to maintain < 10 day cycle.</p>

OCMVCD INVASIVE AEDES RESPONSE GUIDELINES

Invasive Aedes Response				
	Locally-Acquired Aedes Disease Cases Priority 1	Travel-Related Aedes Disease Cases Viremic Priority 2	Travel-Related Aedes Disease Cases Non-Viremic Priority 6	Aedes Detection at Vulnerable Population/Residential Sites Priority 7
Inspectors/Area Supervisors	<p>Area Supervisor to meet w/ Director/Ops, Lab Director, Ops Supervisor to discuss specifics, coordinate w/ HCA. Area Supervisor and Applicator to inspect/adulticide index and minimum 4-6 adjacent properties. Set 1 BG, 1 Gravid at index or adjacent. Expand surveillance to 200 meters from index, if warranted. Report findings to OCMVCD Directors. Further coordination w/ HCA by Operations Supervisor. Submit applicable reports to District Directors.</p>	<p>Area Supervisor to receive case details from Director of Ops. On first visit, Area Supervisor and applicator to adulticide a minimum of 4-6 index adjacent properties, broadening scope as necessary. Arrange D2D team inspection concurrently with inspection/adulticiding. Set 1 BG, 1 Gravid at index or adjacent and 3 Gravids in a triangular pattern 50' to 200' from index. Coordinate D2D activities based on trapping results. Submit summary report to Director of Operations</p>	<p>Area Supervisor to receive case details from Director of Operations. Area Supervisor to contact index property (if applicable) to coordinate inspection/trapping. Set 1 BG at index or adjacent. Arrange adulticiding, if warranted. Submit summary report to Director of Operations.</p>	<p>Zone Inspector to inspect potential sources at vulnerable population/residential sites. 1 BG trap to be set at VP sites (assisted living, clinics, etc) in conjunction w/ Prokopack and larval sample collection. Residential sites emphasize source reduction, including adjacent properties when possible. Set 1 BG trap + Prokopack + larval sample in currently non-infested Zones. Trap/collect in currently infested Zones at Inspector's discretion. Consider treatment options, as necessary. Coordinate/Report out as necessary. **See detailed protocol**</p>
FAA/D2D Teams	<p>D2D inspections 1/8 mile or 200 meters w/ immediate response, expanding as necessary. Larval/adult Aedes collection. Source reduction and larviciding. Leave yellow notices (Area Supervisor's extension). Post appropriate signage.</p>	<p>D2D inspections 1/16 mile or 100 meters w/ immediate response, concurrently with inspection/adulticiding. Larval/adult Aedes sample collection. Source reduction and larviciding. Leave yellow notices (Area Supervisor's extension). Post appropriate signage.</p>	<p>D2D inspections 1/16 mile or 100 meters, if warranted. Larval/adult Aedes sample collection. Source reduction and larviciding. Post appropriate signage, if warranted.</p>	<p>Vulnerable population sites trigger D2D inspection of 1/8 mile or 200 meters, Residential sites- Non-infested Zone D2D survey 1/8 mile or 200 meters. Larval/adult Aedes sample collection. Source reduction and larviciding.</p>

Outreach	Receive input from Lab and Operations. Notify trustee, cities and community partners. Targeted social media placement. Direct mail notifications. Press releases. Coordinate phone staffing for concerned citizen calls.	Receive general details from Lab and Operations. Notify trustee, city officials and community partners. Targeted social media placement. Direct mail notifications, if warranted. Press releases, if warranted.	Receive input from Lab and Operations. Notify trustee, city officials and community partners, if warranted. Targeted social media placement. Direct mail notifications, if warranted.	Receive input from Lab and Operations. Offer outreach presentations to vulnerable population sites. Notify trustee, city officials and community partners, if warranted. Targeted social media placement. Direct mail notifications for area treatments, if warranted
Lab	Lab Director to coordinate release of case details to all essential District staff. Delineate adulticide treatment area (truck, aerial). ID/disease testing. Field surveillance assistance. Coordinate use of Aedes disease warrant.	Lab Director to forward vetted details to Director of Ops and Director of Comm. Phone interview of patient prior to inspection, if applicable. Delineate adulticide treatment area (truck, aerial). ID/Disease testing. Field surveillance assistance. Coordinate use of Aedes disease warrant.	Lab Director to forward vetted details to Director of Operations and Director of Communications. ID/Disease testing. Field surveillance assistance.	ID/Disease testing. Update all relevant maps. Field surveillance assistance. Evaluate Aedes population density triggers and historic trends which may warrant area-wide control measures.
Data Management	IForm- Enter residential inspections in Door to Door tab. Create a new main form and sub-form for each address inspected. Enter Extended Trapping information/naming convention grid number (provided by Operations Supervisor) for each trap site. Enter existing/new IT and pool sites in the routine manner.	IForm- Enter residential inspections in Door to Door tab. Create a new main form and sub-form for each address inspected. Enter Extended Trapping information/naming convention grid number (provided by Operations Supervisor) for each trap site. Enter existing/new IT and pool sites in the routine manner.	IForm- Enter residential inspections in Door to Door tab. Create a new main form and sub-form for each address inspected. Enter Extended Trapping information/naming convention grid number (provided by Operations Supervisor). Enter existing/new IT and pool sites in the routine manner.	IForm- Complete SR calls in the routine manner, with all treatment and trapping information included. If a treatment is performed at an adjacent home, create a new SR in the field and note original SR address in the notes. For non-treatment adjacent property inspections, simply indicate inspection address in the notes of the original SR.
Crews Underground Spray route Flood	Will be notified by Operations Supervisor of target areas (cc Supervisors, Lab, Comm and Admin staff) in order to maintain < 10 day cycle.	Will be notified by Operations Supervisor of target areas (cc Supervisors, Lab, Comm and Admin staff) in order to maintain < 10 day cycle.	Will be notified by Operations Supervisor of target areas (cc Supervisors) in order to maintain < 10 day cycle.	Will be notified by Inspectors of target areas (cc Supervisors) in order to maintain < 10 day cycle, if warranted.

APPENDIX 7

TYPHUS RESPONSE GUIDELINES

OCMVCD TYPHUS RESPONSE

Typhus Response			
Fleas in public spaces		Single human typhus case	Cluster of 2 or more cases of 0.5 miles proximity within 6 months
Priority 3		Priority 2	Priority 1
Inspectors/Area Supervisors/ Operations Supervisor	<p>SR will be forwarded to Zone Inspector who will arrange initial inspection accompanied by Vector Ecologist. Area Supervisor will provide written findings and flea abatement recommendations to property management. Relay findings to Operations Supervisor, Zone Inspector and IVM team.</p>	<p>Cases received from OC Health will be forwarded to Operations Supervisor who will coordinate response with input from Vector Ecologist. Inspection of target property to be arranged with permission of case resident. Operations Supervisor will inspect for fleas and provide recommendations for abatement. Provide flea control medication for pets on site, if warranted. Coordinate pesticide application and schedule follow up treatment for two weeks, if warranted. Refer property owner to private pest control for any subsequent treatments. Leave informative material at 5-6 adjacent properties. Offer pet flea control medication to adjacent properties, if warranted. Relay findings to Area Supervisor, Zone Inspector, Vector Ecologist and IVM team. If warranted, arrange larger D2D response with FAA coordinator.</p>	<p>Case clusters received from OC Health will be forwarded to Operations Supervisor who will coordinate response with input and assistance from Vector Ecologist. Inspection of target properties to be arranged with permission of each case resident. If warranted, provide flea control medication for pets on site. Coordinate pesticide application and schedule follow up treatment for two weeks, if warranted. Refer property owner to private pest control for any subsequent treatments. Leave informative material at 5-6 adjacent properties at each case location. Offer pet flea control medication to adjacent properties, if warranted. Relay findings to Area Supervisor, Zone Inspector, Vector Ecologist and IVM team members. Arrange larger D2D response with FAA coordinator with input from Vector Ecologist and IVM team, if warranted.</p>
FAA/D2D Teams	<p>Conduct sign placement within 0.3 miles of a typhus-positive flea detection. Refer residents to Communications for further information.</p>	<p>Conduct sign placement within 0.3 miles of index property. Refer residents to Communications for further information.</p>	<p>For 2 cases, conduct sign placement in the entire 0.5 mile diameter that encompasses both cases. For 3 or more cases conduct sign placement in the entire 0.5 mile diameter that encompasses all cases and consider postcards/door hangers for all addresses within the signage area. Refer residents to Communications for further information.</p>

Outreach	<p>Notify trustee, city and local animal care officials, if warranted. Provide all stakeholders with links to OC Vector Scope of Service for flea infestations. Notify trustee, city, and local animal care officials of the outreach area, if warranted. Leverage city and animal care agencies to facilitate messaging. Coordinate with FAA team for outreach materials distribution, if warranted.</p>	<p>Notify trustee, city and local animal care officials, if warranted. Provide all stakeholders with links to OC Vector Scope of Service for flea infestations. Notify trustee, city, and local animal care officials of the outreach area, if warranted. Leverage city and animal care agencies to facilitate messaging. Coordinate with FAA team for outreach materials distribution, if warranted. Direct mail notifications, if warranted. Targeted social media placement, if warranted.</p>	<p>Notify trustee, city and local animal care officials, if warranted. Determine educational outreach area and materials with input from Vector Ecologist and IVM team. Provide all stakeholders with links to OC Vector Scope of Service for flea infestations. Notify trustee, city, and local animal care officials of the outreach area, if warranted. Leverage city and animal care resources, if warranted. Plan for direct mail notifications to educational target area, if warranted. Targeted social media placement, if warranted.</p>
Lab	<p>Vector Ecologist to accompany Zone Inspector for initial inspection. Provide input for recommendations to property owner and appropriate agencies, as necessary. Advise on PPE and safety issues.</p>	<p>Vector Ecologist to offer Operations Supervisor guidance and possible assistance for initial inspection. Provide input to Operations Supervisor for recommendations to property owner and appropriate agencies, as necessary. Advise on PPE and safety issues.</p>	<p>Investigation support coordinated with Vector Ecologist, if requested. Assist defining outreach target area with input from IVM team. Assist in providing outreach to public entities in target area that have specific concerns (churches, schools, health care facilities). Notify Southern California Veterinary Medical Association for outreach material distribution to veterinarians in area. Conduct flea and animal surveillance in neighborhood to determine risk.</p>
Data Management	<p>Record SR data as usual in the IWS system. Adjacent inspections will be recorded individually in the D2D tab with appropriate naming convention.</p>	<p>Record target address and adjacent addresses individually in the D2D tab with appropriate naming convention. Sign placements will be recorded in the Sign Posting tab.</p>	<p>Record target address and adjacent addresses individually in the D2D tab with appropriate naming convention. Sign placements will be recorded in the Sign Posting tab.</p>
Crews Underground Spray route Flood	<p>Operations Supervisor to update crews on flea-borne typhus outreach area.</p>	<p>Operations Supervisor to update crews on flea-borne typhus outreach area.</p>	<p>Operations Supervisor to update crews on flea-borne typhus outreach area.</p>

APPENDIX 8

NATURAL HAZARD SPECIFIC CHECKLISTS

Emergency Operating Procedures

Natural Hazard-Specific Checklists

All events are unique. Following are lists of various considerations for specific types of emergencies. These checklists are designed to be used in conjunction with the general duties of the positions outlined in **Section 3** (EOC Positional Checklists).

Table of Contents

Earthquake	5
Winter Storms	7
Wildland Fire	9
Hazardous Materials Incidents (HAZMAT)	11

Earthquake

- Determine the location of any structural damage to District facilities.
- Determine the status of District personnel and their locations.
- If evacuation of the OCMVCD facility is required, contact the EOC Director and Operations Section immediately. All evacuation activities should be coordinated throughout the Operations Section.
- Determine the status of District IT and communications systems.
- Remove critical equipment and supplies stored in damaged facilities to prevent further damage or deterioration due to aftershocks and/or weather exposure.
- Obtain Shake Map and the earthquake epicenter location from the USGS website to view the shaking intensity to gather information on potential damage from the event.
- Determine the status of transportation infrastructures, such as bridges and roadways that could hamper District operations.
- Determine the locations of major firefighting efforts, both controlled and out-of-control fires that could hamper District operations.
- Determine the locations and severity of Hazardous Material releases that could hamper District operations.
- In order to gain situational awareness of damage in the region, determine the operational capability of critical facilities, i.e., hospitals, government facilities, water and wastewater systems, electrical substations, etc.
- Coordinate with the County EOC and other public agencies as required.
- In the event of a significant aftershock, repeat the above steps.

Winter Storms

- Obtain information from the National Weather Service for timely watches and warnings affecting the County.
- Monitor television, internet and news radio reports on the condition of the storm.
- Stay in contact with the Orange County EOC for updated flood and damage information.
- Obtain a status report on area highways and roadways.
- In the event of an Emergency Alert System activation, monitor local broadcast media to obtain accurate information.
- Ensure that the EOC distributes downed power line information, other utility disruption information, and downed tree locations to field personnel that could pose a safety threat or hamper District operations.
- Remind field personnel not to drive through flooded areas on roadways.
- Floodwaters may carry additional health and safety risks, such as bacteria, raw sewage or hazardous substances. Also, sandbags tend to act as sponges for these hidden dangers. Remind field personnel to take precautions when handling them or coming into contact with the water itself.

Wildland Fire

- Determine the locations of major firefighting efforts that could hamper District operations.
- Determine the status of District personnel and their locations.
- Monitor television, internet and news radio reports on the condition of the fire.
- Monitor evacuation orders and locations of evacuation zones.
- Obtain information from the OC EOC for timely fire updates and warnings affecting the County.
- Determine the status of transportation infrastructure that could hamper District operations.
- Advise field personnel to be aware of the potential for toxic smoke or fumes.

Hazardous Materials Incidents (HAZMAT)

- ❑ If necessary, District personnel should establish a liaison with the Fire Incident Commander and / or Police Incident Commander (IC).
- ❑ Working through the Incident Command Post (ICP), determine the size of the involved area, both actual and potential.
- ❑ Working through the ICP, determine the apparent direction the plume (if one exists) is traveling and what lies in its path.
- ❑ Be aware that a sudden release of hazardous materials may allow little time for an organized response. Field personnel may take the action of locking down individuals or have them “shelter in place.”
- ❑ Ensure that field personnel stay upwind, uphill, and / or upstream from the HAZMAT location and at a safe distance.
- ❑ Field personnel should consult the orange Emergency Response Guidebook for specific warnings, cautions and handling guidelines.
- ❑ Determine the need to conduct evacuations and sheltering activities.
- ❑ As a point of reference, evacuation is the assisted removal of people before a threat arrives, while rescue is an issue that deals with the removal of persons once the threat is upon them.

APPENDIX 9

EOC FORMS

Orange County Mosquito and Vector Control District Emergency Operations Center Message Form

Message Information		Date:	Time:	Msg#:	Inc#:	Priority Check One <input type="checkbox"/> Life Threatening <input type="checkbox"/> Urgent <input type="checkbox"/> Non-Urgent
Received From: Telephone <input type="checkbox"/> Fax <input type="checkbox"/> Gov't Radio <input type="checkbox"/> Other Agency <input type="checkbox"/> Walk In <input type="checkbox"/>		Message To:			Phone:	
Message From:		Phone:				
Received/Sent By:		Phone:				
ROUTING OF FORM				Message		
Section / Branch / Unit						
Management		ACTION	INFO			
EOC Director						
Public Information Officer						
Liaison Officer						
Legal Officer						
Operations		ACTION	INFO			
Operations Section Chief						
Field Operations Branch						
Laboratory Operations Branch						
Support Operations Branch						
Planning & Intelligence		ACTION	INFO	Action Required		
P&I Section Chief						
Situation Status Unit						
Surveillance Unit						
Documentation Unit						
Advance Planning Unit						
Logistics		ACTION	INFO	Action Taken		
Logistics Section Chief						
Supplies and Services Unit						
Personnel Unit						
Resource Status Unit						
Finance		ACTION	INFO			
Finance Section Chief						
Cost & Time Unit						
Compensation & Claims Unit						

Original: Recipient Yellow: Sender Pink: Documentation Unit

EOC ACTION PLAN



Orange County
Mosquito and Vector Control District

A Public Health Agency Serving Orange County Since 1947

OPERATIONAL PERIOD	
DATE:	TIME:

- EVENT BRIEFING -

EVENT NAME:

DATE PREPARED:

TIME PREPARED:

CURRENT OPERATIONAL PERIOD (DATE/ TIME):

Scotts Valley Water District

Special District

MAP SKETCH:

PREPARED BY:

APPROVED BY:

- SUMMARY OF PRIORITIES, OBJECTIVES & ACTIONS -

OVERALL EVENT PRIORITIES

MANAGEMENT SECTION OBJECTIVES

OPERATIONS SECTION OBJECTIVES

PLANNING & INTELLIGENCE SECTION OBJECTIVES

LOGISTICS SECTION OBJECTIVES

FINANCE SECTION OBJECTIVES

ADDITIONAL INFORMATION:

- ORGANIZATION ASSIGNMENTS LIST -

EVENT NAME:	DATE PREPARED:	TIME PREPARED:
--------------------	-----------------------	-----------------------

CURRENT OPERATIONAL PERIOD (DATE/ TIME):

ACTIVATION LEVEL:
 LEVEL ONE **LEVEL TWO** **LEVEL THREE**

EOC STAFFING		
EOC POSITION	INDIVIDUAL'S NAME	PHONE NUMBER
EOC Director		
Public Information Officer		
Liaison Officer		
Legal Officer		
Operations Section Chief		
Field Operations Branch Manager		
Laboratory Operations Branch Manager		
Support Operations Branch Manager		
Planning and Intelligence Section Chief		
Situation Status Unit Leader		
Surveillance Unit Leader		
Documentation Unit Leader		
Advance Planning Unit Leader		
Logistics Section Chief		
Supplies & Services Unit Leader		
Personnel Unit Leader		
Resource Status Unit Leader		
Finance Section Chief		
Cost & Time Unit Leader		
Compensation & Claims Unit Leader		

Current Actions:

WEATHER FORECAST:

TEMPERATURE: _____ WIND SPEED: _____

ADDITIONAL FORECAST INFORMATION:

ATTACHMENTS:

Other Other

Other Other

PREPARED BY:	APPROVED BY (EOC Director):
---------------------	------------------------------------



Orange County
Mosquito and Vector Control District
A Public Health Agency Serving Orange County Since 1947

Emergency Operations Center Situation Status Report

Date:

Time:

1. SITUATION SUMMARY

(Narrative)

2. FACILITY STATUS:

3. INJURIES or FATALITIES:

(Informational Purposes Only)

4. COMMUNICATION SYSTEM STATUS:

5. LIST OF DISTRICT ISSUES TO BE ADDRESSED:

6. ADDITIONAL PERSONNEL & EQUIPMENT REQUIREMENTS:

7. ADDITIONAL INFORMATION:

By (EOC Director): _____

APPENDIX 10

GLOSSARY AND ACRONYMS LIST

A

Action Plan: See Incident Action Plan.

Agency: An agency is a division of government with a specific function, or a nongovernmental organization (e.g., private contractor, business, etc.) that offers a particular kind of assistance. In ICS, agencies are defined as jurisdictional (having statutory responsibility for incident mitigation) or assisting and/or cooperating (providing resources and/or assistance). (See Assisting Agency, Cooperating Agency, Jurisdictional Agency, and Multiagency Incident.)

Agency Administrator or Executive: Chief executive officer (or designee) of the agency or jurisdiction that has responsibility for the incident.

Agency Dispatch: The agency or jurisdictional facility from which resources are allocated to incidents.

Agency Representative: An individual assigned to an incident from an assisting or cooperating agency who has been delegated authority to make decisions on matters affecting that agency's participation at the incident. Agency Representatives report to the Incident Liaison Officer.

Air Operations Branch Director: The person primarily responsible for preparing and implementing the air operations portion of the Incident Action Plan. Also responsible for providing logistical support to helicopters operating on the incident.

Allocated Resources: Resources dispatched to an incident.

All-Risk: Any incident or event, natural or human-caused, that warrants action to protect life, property, environment, and public health and safety, and minimize disruption of governmental, social, and economic activities.

Area Command (Unified Area Command): An organization established to oversee the management of (1) multiple incidents that are each being handled by an ICS organization, or (2) large or multiple incidents to which several Incident Management Teams have been assigned. Area Command has the responsibility to set overall strategy and priorities, allocate critical resources according to priorities, ensure that incidents are properly managed, and ensure that objectives are met and strategies followed. Area Command becomes Unified Area Command when incidents are multijurisdictional. Area Command may be established at an emergency operations center facility or at some location other than an Incident Command Post.

Assigned Resources: Resources checked in and assigned work tasks on an incident.

Assignments: Tasks given to resources to perform within a given operational period, based upon tactical objectives in the Incident Action Plan.

Assistant: Title for subordinates of the Command Staff positions. The title indicates a level of technical capability, qualifications, and responsibility subordinate to the primary positions.

Assisting Agency: An agency or organization providing personnel, services, or other resources to the agency with direct responsibility for incident management.

Available Resources: Resources assigned to an incident, checked in, and available for a mission assignment, normally located in a Staging Area

B

Base: The location at which primary Logistics functions for an incident are coordinated and administered. There is only one Base per incident. (Incident name or other designator will be added to the term Base.) The Incident Command Post may be collocated with the Base.

Branch: The organizational level having functional or geographic responsibility for major parts of the Operations or Logistics functions. The Branch level is organizationally between Section and Division/Group in the Operations Section, and between Section and Units in the Logistics Section. Branches are identified by the use of Roman numerals or by functional name (e.g., medical, security, etc.).

C

Cache: A pre-determined complement of tools, equipment, and/or supplies stored in a designated location, available for incident use.

Camp: A geographical site, within the general incident area, separate from the Incident Base, equipped and staffed to provide sleeping, food, water, and sanitary services to incident personnel.

Chain of Command: A series of management positions in order of authority.

Check-In: The process whereby resources first report to an incident. Check-in locations include: Incident Command Post (Resources Unit), Incident Base, Camps, Staging Areas, Helibases, Helispots, and Division Supervisors (for direct line assignments).

Chief: The ICS title for individuals responsible for functional Sections: Operations, Planning, Logistics, and Finance/Administration.

Clear Text: The use of plain English in radio communications transmissions. No Ten Codes or agency-specific codes are used when utilizing clear text.

Command: The act of directing and/or controlling resources by virtue of explicit legal, agency, or delegated authority. May also refer to the Incident Commander.

Command Post: See Incident Command Post.

Command Staff: The Command Staff consists of the Public Information Officer, Safety Officer, and Liaison Officer. They report directly to the Incident Commander. They may have an Assistant or Assistants, as needed.

Communications Unit: An organizational Unit in the Logistics Section responsible for providing communication services at an incident. A Communications Unit may also be a facility (e.g., a trailer or mobile van) used to provide the major part of an Incident Communications Center.

Compacts: Formal working agreements among agencies to obtain mutual aid.

Compensation/Claims Unit: Functional Unit within the Finance/Administration Section responsible for financial concerns resulting from property damage, injuries, or fatalities at the incident.

Complex: Two or more individual incidents located in the same general area that are assigned to a single Incident Commander or to Unified Command.

Cooperating Agency: An agency supplying assistance other than direct operational or support functions or resources to the incident management effort.

Coordination: The process of systematically analyzing a situation, developing relevant information, and informing appropriate command authority of viable alternatives for selection of the most effective combination of available resources to meet specific objectives. The coordination process (which can be either intra- or interagency) does not involve dispatch actions. However, personnel responsible for coordination may perform command or dispatch functions within the limits established by specific agency delegations, procedures, legal authority, etc.

Coordination Center: A facility that is used for the coordination of agency or jurisdictional resources in support of one or more incidents.

Cost Sharing Agreements: Agreements between agencies or jurisdictions to share designated costs related to incidents. Cost sharing agreements are normally written but may also be oral between authorized agency or jurisdictional representatives at the incident.

Cost Unit: Functional Unit within the Finance/Administration Section responsible for tracking costs, analyzing cost data, making cost estimates, and recommending cost-saving measures.

Crew: See Single Resource.

D

Delegation of Authority: A statement provided to the Incident Commander by the Agency Executive delegating authority and assigning responsibility. The Delegation of Authority can include objectives, priorities, expectations, constraints, and other considerations or guidelines as needed. Many agencies require written Delegation of Authority to be given to Incident Commanders prior to their assuming command on larger incidents.

Demobilization Unit: Functional Unit within the Planning Section responsible for assuring orderly, safe, and efficient demobilization of incident resources.

Deputy: A fully qualified individual who, in the absence of a superior, could be delegated the authority to manage a functional operation or perform a specific task. In some cases, a Deputy could act as relief for a superior and therefore must be fully qualified in the position. Deputies can be assigned to the Incident Commander, General Staff, and Branch Directors.

Director: The ICS title for individuals responsible for supervision of a Branch.

Dispatch: The implementation of a command decision to move a resource or resources from one place to another.

Dispatch Center: A facility from which resources are ordered, mobilized, and assigned to an incident.

Division: Divisions are used to divide an incident into geographical areas of operation. A Division is located within the ICS organization between the Branch and the Task Force/Strike Team. (See Group.) Divisions are identified by alphabetic characters for horizontal applications and, often, by floor numbers when used in buildings.

Documentation Unit: Functional Unit within the Planning Section responsible for collecting, recording, and safeguarding all documents relevant to the incident.

E

Emergency: Absent a Presidentially declared emergency, any incident(s), human-caused or natural, that requires responsive action to protect life or property. Under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, an emergency means any occasion or instance for which, in the determination of the President, Federal assistance is needed to supplement State and local efforts and capabilities to save lives and to protect property and public health and safety, or to lessen or avert the threat of a catastrophe in any part of the United States.

Emergency Management Coordinator/Director: The individual within each political subdivision that has coordination responsibility for jurisdictional emergency management.

Emergency Operations Centers (EOCs): The physical location at which the coordination of information and resources to support domestic incident management activities normally takes place. An EOC may be a temporary facility or may be located in a more central or permanently established facility, perhaps at a higher level of organization within a jurisdiction. EOCs may be organized by major functional disciplines (e.g., fire, law enforcement, and medical services), by jurisdiction (e.g., Federal, State, regional, county, city, tribal), or some combination thereof.

Emergency Operations Plan (EOP): The plan that each jurisdiction has and maintains for responding to appropriate hazards.

Event: A planned, non-emergency activity. ICS can be used as the management system for a wide range of events, e.g., parades, concerts, or sporting events.

F

Facilities Unit: Functional Unit within the Support Branch of the Logistics Section that provides fixed facilities for the incident. These facilities may include the Incident Base, feeding areas, sleeping areas, sanitary facilities, etc.

Federal: Of or pertaining to the Federal Government of the United States of America.

Field Operations Guide: (FOG) A pocket-size manual of instructions on the application of the Incident Command System.

Finance/Administration Section: The Section responsible for all incident costs and financial considerations. Includes the Time Unit, Procurement Unit, Compensation/Claims Unit, and Cost Unit.

Food Unit: Functional Unit within the Service Branch of the Logistics Section responsible for providing meals for incident personnel.

Function: Function refers to the five major activities in ICS: Command, Operations, Planning, Logistics, and Finance/Administration. The term function is also used when describing the activity involved, e.g., the planning function. A sixth function, Intelligence, may be established, if required, to meet incident management needs.

G

General Staff: A group of incident management personnel organized according to function and reporting to the Incident Commander. The General Staff normally consists of the Operations Section Chief, Planning Section Chief, Logistics Section Chief, and Finance/Administration Section Chief.

Ground Support Unit: Functional Unit within the Support Branch of the Logistics Section responsible for the fueling, maintaining, and repairing of vehicles, and the transportation of personnel and supplies.

Group: Groups are established to divide the incident into functional areas of operation. Groups are composed of resources assembled to perform a special function not necessarily within a single geographic division. (See Division.) Groups are located between Branches (when activated) and Resources in the Operations Section.

H

Hazard: Something that is potentially dangerous or harmful, often the root cause of an unwanted outcome.

Helibase: The main location for parking, fueling, maintenance, and loading of helicopters operating in support of an incident. It is usually located at or near the incident Base.

Helispot: Any designated location where a helicopter can safely take off and land. Some Helispots may be used for loading of supplies, equipment, or personnel.

Hierarchy of Command: See Chain of Command.

I

Incident: An occurrence or event, either natural or human-caused that requires an emergency response to protect life or property. Incidents can, for example, include major disasters, emergencies, terrorist attacks, terrorist threats, wildland and urban fires, floods, hazardous materials spills, nuclear accidents, aircraft accidents, earthquakes, hurricanes,

tornadoes, tropical storms, war-related disasters, public health and medical emergencies, and other occurrences requiring an emergency response.

Incident Action Plan (IAP): An oral or written plan containing general objectives reflecting the overall strategy for managing an incident. It may include the identification of operational resources and assignments. It may also include attachments that provide direction and important information for management of the incident during one or more operational periods.

Incident Base: Location at the incident where the primary Logistics functions are coordinated and administered. (Incident name or other designator will be added to the term Base.) The Incident Command Post may be collocated with the Base. There is only one Base per incident.

Incident Commander (IC): The individual responsible for all incident activities, including the development of strategies and tactics and the ordering and the release of resources. The IC has overall authority and responsibility for conducting incident operations and is responsible for the management of all incident operations at the incident site.

Incident Command Post (ICP): The field location at which the primary tactical-level, on-scene incident command functions are performed. The ICP may be collocated with the incident base or other incident facilities and is normally identified by a green rotating or flashing light.

Incident Command System (ICS): A standardized on-scene emergency management construct specifically designed to provide for the adoption of an integrated organizational structure that reflects the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries. ICS is the combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, designed to aid in the management of resources during incidents. It is used for all kinds of emergencies and is applicable to small as well as large and complex incidents. ICS is used by various jurisdictions and functional agencies, both public and private, to organize field-level incident management operations.

Incident Communications Center: The location of the Communications Unit and the Message Center.

Incident Management Team (IMT): The Incident Commander and appropriate Command and General Staff personnel assigned to an incident.

Incident Objectives: Statements of guidance and direction necessary for the selection of appropriate strategy(ies), and the tactical direction of resources. Incident objectives are based on realistic expectations of what can be accomplished when all allocated resources have been effectively deployed. Incident objectives must be achievable and measurable, yet flexible enough to allow for strategic and tactical alternatives.

Incident Types: Incidents are categorized by five types based on complexity. Type 5 incidents are the least complex and Type 1 the most complex.

Incident Support Organization: Includes any off-incident support provided to an incident. Examples would be Agency Dispatch Centers, Airports, Mobilization Centers, etc.

Initial Action: The actions taken by resources that are the first to arrive at an incident site.

Initial Response: Resources initially committed to an incident.

Intelligence Officer: The intelligence officer is responsible for managing internal information, intelligence, and operational security requirements supporting incident management activities. These may include information security and operational security activities, as well as the complex task of ensuring that sensitive information of all types (e.g., classified information, law enforcement sensitive information, proprietary information, or export-controlled information) is handled in a way that not only safeguards the information, but also ensures that it gets to those who need access to it to perform their missions effectively and safely.

J

Joint Information Center (JIC): A facility established to coordinate all incident-related public information activities. It is the central point of contact for all news media at the scene of the incident. Public information officials from all participating agencies should collocate at the JIC.

Joint Information System (JIS): Integrates incident information and public affairs into a cohesive organization designed to provide consistent, coordinated, timely information during crisis or incident operations. The mission of the JIS is to provide a structure and system for developing and delivering coordinated interagency messages; developing, recommending, and executing public information plans and strategies on behalf of the Incident Commander; advising the Incident Commander concerning public affairs issues that could affect a response effort; and controlling rumors and inaccurate information that could undermine public confidence in the emergency response effort.

Jurisdiction: A range or sphere of authority. Public agencies have jurisdiction at an incident related to their legal responsibilities and authority. Jurisdictional authority at an incident can be political or geographical (e.g., city, county, tribal, State, or Federal boundary lines) or functional (e.g., law enforcement, public health).

Jurisdictional Agency: The agency having jurisdiction and responsibility for a specific geographical area, or a mandated function.

K

Kinds of Resources: Describe what the resource is (e.g., medic, firefighter, Planning Section Chief, helicopters, ambulances, combustible gas indicators, bulldozers).

L

Landing Zone: See Helispot.

Leader: The ICS title for an individual responsible for a Task Force, Strike Team, or functional unit.

Liaison: A form of communication for establishing and maintaining mutual understanding and cooperation.

Liaison Officer (LNO): A member of the Command Staff responsible for coordinating with representatives from cooperating and assisting agencies. The Liaison Officer may have Assistants.

Logistics: Providing resources and other services to support incident management.

Logistics Section: The Section responsible for providing facilities, services, and materials for the incident.

Local Government: A county, municipality, city, town, township, local public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government; an Indian tribe or authorized tribal organization, or in Alaska a Native village or Alaska Regional Native Corporation; a rural community, unincorporated town or village, or other public entity. See Section 2 (10), Homeland Security Act of 2002, Public Law 107-296, 116 Stat. 2135 (2002).

M

Major Disaster: As defined under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5122), a major disaster is any natural catastrophe (including any hurricane, tornado, storm, high water, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, or drought), or, regardless of cause, any fire, flood, or explosion, in any part of the United States, which in the determination of the President causes damage of sufficient severity and magnitude to warrant major disaster assistance under this Act to supplement the efforts and available resources of States, tribes, local governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby.

Management by Objective: A management approach that involves a four-step process for achieving the incident goal. The Management by Objectives approach includes the following: establishing overarching objectives; developing and issuing assignments, plans, procedures, and protocols; establishing specific, measurable objectives for various incident management functional activities and directing efforts to fulfill them, in support of defined strategic objectives; and documenting results to measure performance and facilitate corrective action.

Managers: Individuals within ICS organizational Units that are assigned specific managerial responsibilities, e.g., Staging Area Manager or Camp Manager.

Medical Unit: Functional Unit within the Service Branch of the Logistics Section responsible for the development of the Medical Emergency Plan, and for providing emergency medical treatment of incident personnel.

Message Center: The Message Center is part of the Incident Communications Center and is collocated or placed adjacent to it. It receives, records, and routes information about resources reporting to the incident, resource status, and administrative and tactical traffic.

Mitigation: The activities designed to reduce or eliminate risks to persons or property or to lessen the actual or potential effects or consequences of an incident. Mitigation measures may be implemented prior to, during, or after an incident. Mitigation measures are often formed by lessons learned from prior incidents. Mitigation involves ongoing actions to reduce exposure to, probability of, or potential loss from hazards. Measures may include zoning and building codes, floodplain buyouts, and analysis of hazard-related data to determine where it is safe to build or locate temporary facilities. Mitigation can include efforts to educate governments, businesses, and the public on measures they can take to reduce loss and injury.

Mobilization: The process and procedures used by all organizations (Federal, State, and local) for activating, assembling, and transporting all resources that have been requested to respond to or support an incident.

Mobilization Center: An off-incident location at which emergency service personnel and equipment are temporarily located pending assignment, release, or reassignment.

Multiagency Coordination (MAC): The coordination of assisting agency resources and support to emergency operations.

Multiagency Coordination Systems (MACS): Multiagency coordination systems provide the architecture to support coordination for incident prioritization, critical resource allocation, communications systems integration, and information coordination.

Multiagency Incident: An incident where one or more agencies assist a jurisdictional agency or agencies. May be single or unified command.

Mutual-Aid Agreement: Written agreement between agencies and/or jurisdictions that they will assist one another on request, by furnishing personnel, equipment, and/or expertise in a specified manner.

N

National Incident Management System (NIMS): A system mandated by HSPD-5 that provides a consistent nationwide approach for Federal, State, local, and tribal governments; the private sector; and nongovernmental organizations to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity. To provide for interoperability and compatibility among Federal, State, local, and tribal capabilities, the NIMS includes a core set of concepts, principles, and terminology. HSPD-5 identifies these as the ICS; multiagency coordination systems; training; identification and management of resources (including systems for classifying types of resources); qualification and certification; and the collection, tracking, and reporting of incident information and incident resources.

O

Officer: The ICS title for the personnel responsible for the Command Staff positions of Safety, Liaison, and Public Information.

Operational Period: The period of time scheduled for execution of a given set of operation actions as specified in the Incident Action Plan. Operational Periods can be of various lengths, although usually not over 24 hours.

Operations Section: The Section responsible for all tactical operations at the incident. Includes Branches, Divisions and/or Groups, Task Forces, Strike Teams, Single Resources, and Staging Areas.

Out-of-Service Resources: Resources assigned to an incident but unable to respond for mechanical, rest, or personnel reasons.

P

Planning Meeting: A meeting held as needed throughout the duration of an incident, to select specific strategies and tactics for incident control operations, and for service and support planning. On larger incidents, the Planning Meeting is a major element in the development of the Incident Action Plan.

Planning Section: Responsible for the collection, evaluation, and dissemination of information related to the incident, and for the preparation and documentation of Incident Action Plans. The Section also maintains information on the current and forecasted situation, and on the status of resources assigned to the incident. Includes the Situation, Resources, Documentation, and Demobilization Units, as well as Technical Specialists.

Preparedness: The range of deliberate, critical tasks and activities necessary to build, sustain, and improve the operational capability to prevent, protect against, respond to, and recover from domestic incidents. Preparedness is a continuous process. Preparedness involves efforts at all levels of government and between government and private-sector and nongovernmental organizations to identify threats, determine vulnerabilities, and identify required resources. Within the NIMS, preparedness is operationally focused on establishing guidelines, protocols, and standards for planning, training and exercises, personnel qualification and certification, equipment certification, and publication management.

Preparedness Organizations: The groups that provide interagency coordination for domestic incident management activities in a nonemergency context. Preparedness organizations can include all agencies with a role in incident management, for prevention, preparedness, response, or recovery activities. They represent a wide variety of committees, planning groups, and other organizations that meet and coordinate to ensure the proper level of planning, training, equipping, and other preparedness requirements within a jurisdiction or area.

Prevention: Actions to avoid an incident or to intervene to stop an incident from occurring. Prevention involves actions to protect lives and property. It involves applying intelligence and other information to a range of activities that may include such countermeasures as deterrence operations; heightened inspections; improved surveillance and security operations; investigations to determine the full nature and source of the threat; public health and agricultural surveillance and testing processes; immunizations, isolation, or

quarantine; and, as appropriate, specific law enforcement operations aimed at deterring, preempting, interdicting, or disrupting illegal activity and apprehending potential perpetrators and bringing them to justice.

Procurement Unit: Functional Unit within the Finance/Administration Section responsible for financial matters involving vendor contracts.

Public Information Officer (PIO): A member of the Command Staff responsible for interfacing with the public and media or with other agencies with incident-related information requirements.

R

Recognition Primed Decision Making: A model that describes how experts make decisions under stressful situations that are time critical and rapidly changing.

Recorders: Individuals within ICS organizational units who are responsible for recording information. Recorders may be found in Planning, Logistics, and Finance/Administration Units.

Reinforced Response: Those resources requested in addition to the initial response.

Reporting Locations: Location or facilities where incoming resources can check in at the incident. (See Check-In.)

Resources: Personnel and major items of equipment, supplies, and facilities available or potentially available for assignment to incident operations and for which status is maintained. Resources are described by kind and type and may be used in operational support or supervisory capacities at an incident or at an EOC.

Recovery: The development, coordination, and execution of service- and site-restoration plans; the reconstitution of government operations and services; individual, private-sector, nongovernmental, and public-assistance programs to provide housing and to promote restoration; long-term care and treatment of affected persons; additional measures for social, political, environmental, and economic restoration; evaluation of the incident to identify lessons learned; post-incident reporting; and development of initiatives to mitigate the effects of future incidents.

Resource Management: Efficient incident management requires a system for identifying available resources at all jurisdictional levels to enable timely and unimpeded access to resources needed to prepare for, respond to, or recover from an incident. Resource management under the NIMS includes mutual-aid agreements; the use of special Federal, State, local, and tribal teams; and resource mobilization protocols.

Resources Unit: Functional Unit within the Planning Section responsible for recording the status of resources committed to the incident. The Unit also evaluates resources currently committed to the incident, the impact that additional responding resources will have on the incident, and anticipated resource needs.

Response: Activities that address the short-term, direct effects of an incident. Response includes immediate actions to save lives, protect property, and meet basic human needs. Response also includes the execution of emergency operations plans and of mitigation activities designed to limit the loss of life, personal injury, property damage, and other unfavorable outcomes. As indicated by the situation, response activities include applying intelligence and other information to lessen the effects or consequences of an incident; increased security operations; continuing investigations into nature and source of the threat; ongoing public health and agricultural surveillance and testing processes; immunizations, isolation, or quarantine; and specific law enforcement operations aimed at preempting, interdicting, or disrupting illegal activity, and apprehending actual perpetrators and bringing them to justice.

S

Safety Officer: A member of the Command Staff responsible for monitoring and assessing safety hazards or unsafe situations, and for developing measures for ensuring personnel safety. The Safety Officer may have Assistants.

Section: The organizational level having responsibility for a major functional area of incident management, e.g., Operations, Planning, Logistics, Finance/Administration, and Intelligence (if established). The section is organizationally situated between the Branch and the Incident Command.

Segment: A geographical area in which a Task Force/Strike Team Leader or Supervisor of a single resource is assigned authority and responsibility for the coordination of resources and implementation of planned tactics. A segment may be a portion of a Division or an area inside or outside the perimeter of an incident. Segments are identified with Arabic numbers.

Service Branch: A Branch within the Logistics Section responsible for service activities at the incident. Includes the Communication, Medical, and Food Units.

Single Resource: An individual, a piece of equipment and its personnel complement, or a crew or team of individuals with an identified work Supervisor that can be used on an incident.

Situation Unit: Functional Unit within the Planning Section responsible for the collection, organization, and analysis of incident status information, and for analysis of the situation as it progresses. Reports to the Planning Section Chief.

Span of Control: The number of individuals a supervisor is responsible for, usually expressed as the ratio of supervisors to individuals. (Under the NIMS, an appropriate span of control is between 1:3 and 1:7.)

Staging Area: Location established where resources can be placed while awaiting a tactical assignment. The Operations Section manages Staging Areas.

Standard Operating Procedure (SOP): Complete reference document or an operations manual that provides the purpose, authorities, duration, and details for the preferred method of performing a single function or a number of interrelated functions in a uniform manner.

State: When capitalized, refers to any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and any possession of the United States. See Section 2 (14), Homeland Security Act of 2002, Public Law 107-296, 116 Stat. 2135 (2002).

Strategy: The general direction selected to accomplish incident objectives set by the Incident Commander.

Strategic: Strategic elements of incident management are characterized by continuous long-term, high-level planning by organizations headed by elected or other senior officials. These elements involve the adoption of long-range goals and objectives, the setting of priorities, the establishment of budgets and other fiscal decisions, policy development, and the application of measures of performance or effectiveness.

Strike Team: A specified combination of the same kind and type of resources with common communications and a Leader.

Supervisor: The ICS title for individuals responsible for a Division or Group.

Supply Unit: Functional Unit within the Support Branch of the Logistics Section responsible for ordering equipment and supplies required for incident operations.

Support Branch: A Branch within the Logistics Section responsible for providing personnel, equipment, and supplies to support incident operations. Includes the Supply, Facilities, and Ground Support Units.

Supporting Materials: Refers to the several attachments that may be included with an Incident Action Plan, e.g., Communications Plan, Map, Safety Plan, Traffic Plan, and Medical Plan.

Support Resources: Non-tactical resources under the supervision of the Logistics, Planning, or Finance/Administration Sections, or the Command Staff.

T

Tactical Direction: Direction given by the Operations Section Chief that includes the tactics required to implement the selected strategy, the selection and assignment of resources to carry out the tactics, directions for tactics implementation, and performance monitoring for each operational period.

Tactics: Deploying and directing resources on an incident to accomplish incident strategy and objectives.

Task Force: A combination of single resources assembled for a particular tactical need with common communications and a Leader.

Team: See Single Resource.

Technical Specialists: Personnel with special skills that can be used anywhere within the ICS organization.

Threat: An indication of possible violence, harm, or danger.

Time Unit: Functional Unit within the Finance/Administration Section responsible for recording time for incident personnel and hired equipment.

Type: A classification of resources in the ICS that refers to capability. Type 1 is generally considered to be more capable than Types 2, 3, or 4, respectively, because of size, power, capacity, or, in the case of Incident Management Teams, experience and qualifications.

Tools: Those instruments and capabilities that allow for the professional performance of tasks, such as information systems, agreements, doctrine, capabilities, and legislative authorities.

Tribal: Any Indian tribe, band, nation, or other organized group or community, including any Alaskan Native Village as defined in or established pursuant to the Alaskan Native Claims Settlement Act (85 Stat. 688) (43 U.S.C.A. and 1601 et seq.), that is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians.

U

Unified Area Command: A Unified Area Command is established when incidents under an Area Command are multijurisdictional. (See Area Command and Unified Command.)

Unified Command: An application of ICS used when there is more than one agency with incident jurisdiction or when incidents cross political jurisdictions. Agencies work together through the designated members of the Unified Command, often the senior person from agencies and/or disciplines participating in the Unified Command, to establish a common set of objectives and strategies and a single Incident Action Plan.

Unit: The organizational element having functional responsibility for a specific incident Planning, Logistics, or Finance/Administration activity.

Unity of Command: The concept by which each person within an organization reports to one and only one designated person. The purpose of unity of command is to ensure unity of effort under one responsible commander for every objective.

List of NIMS and Emergency Management Acronyms

ALS - Advanced Life Support

COG - Continuity of Government

CONOPS - Concept of Operations

COOP - Continuity of Operations

DES - Department of Emergency Services

DHS - Department of Homeland Security

DOC - Department Operations Center

EMAC - Emergency Management Assistance Compact

EMD - Emergency Medical Dispatch

EMI - Emergency Management Institute

EOC - Emergency Operations Center

EOP - Emergency Operations Plan

ERT - Emergency Response Team

FD - Fire Department

FEMA - Federal Emergency Management Agency

FOG - Field Operations Guide

GIS - Geographic Information System

GPS - Global Positioning System

HAZMAT - Hazardous Material

HSPD-5 - Homeland Security Presidential Directive-5

HSC - Homeland Security Council

HSOC - Homeland Security Operations Center

HSPD-8 - Homeland Security Presidential Directive-8

IAEM - International Association of Emergency Managers

IAFF - International Association of Firefighters (union)

IAFC - International Association of Fire Chiefs (non-union)

IAP - Incident Action Plan

IC - Incident Commander

ICP - Incident Command Post

ICS - Incident Command System

IC or UC - Incident Command or Unified Command

IMAT - Incident Management Assistance Team

IS - Independent Study

JIC - Joint Information Center

JIS - Joint Information System

JOC - Joint Operations Center

LEOP - Local Emergency Operations Plan

LNO - Liaison Officer

NEMA - National Emergency Managers Association

NDMS - National Disaster Medical System

NFA - National Fireman's Association

NGO - Nongovernmental Organization

NIC - NIMS Integration Center

NIMS - National Incident Management System

NIMSCAST - National Incident Management System Capability Assessment Tool

NRCC - National Response Coordination Center

NRP - National Response Plan

ODP -Pollution Report

PIO - Public Information Officer

PVO - Private Voluntary Organizations

R&D - Research and Development

RESTAT - Resources Status

ROSS - Resource Ordering and Status System

RRCC - Regional Response Coordination Center

SDO - Standards Development Organizations

SEOP - State Emergency Operations Plan

SITREP - Situation Report

SO - Safety Officer

SOP - Standard Operating Procedure

UAC - Unified Area Command

UC - Unified Commander

US&R - Urban Search and Rescue

WMD - Weapons of Mass Destruction

APPENDIX 11

OCMVCD / PUBLIC HEALTH CALLOBORATION AGREEMENT

OCVCD Collaboration with the Public Health and Medical Response to Vector-Borne Disease Emergencies in Orange County

Procedures for Communication with the Medical Health Operational Area Coordinator (MHOAC)

As a part of the Orange County Health Care Agency (OCHCA) Emergency Operations Plan MHOAC Annex and OCVCD Integrated Vector Management & Response Plan, following the recommendations of the California Public Health and Medical Emergency Operations Manual, and in coordination with the Orange County Medical Health Operational Area Coordinator, the following operational procedure for the Orange County Vector Control District (OCVCD) has been developed.

In the event of a local, State, or federal declaration of emergency, the Orange County Vector Control District shall assist the MHOAC with investigation and control of vector-borne diseases. The OCVCD will notify the County Epidemiology Program of any unusual event or finding related to vector-borne diseases. Examples of an unusual event include OCVCD's intention of applying a mosquito adulticide to control vector-borne diseases; presence of a recently introduced vector of concern, and surveillance data indicating increased risk of vector-borne disease transmission to residents of Orange County. Epidemiology will notify the MHOAC as needed of any situations affecting human health. OCVCD will update the MHOAC, if requested, of current vector surveillance, intended applications of area wide adult mosquito control, testing volumes and capacity, and of any needs for supplies, equipment or personnel due to the emergency. OCVCD may request assistance through the MHOAC to minimize and respond to vector borne disease events. Standard forms have been developed for these updates.

Primary OCVCD point of contact: (24/7)

John Newton, <i>GIS Coordinator</i> jnewton@ocvcd.org	(714)971-2421x102	Cell: (714)876-3844
Larry Shaw, Director of Operations lshaw@ocvcd.org	(714)971-2421x121	Cell: (714)876-3842

OCHCA Contact Information:

Epidemiology

Matthew Zahn, MD, Medical Director mzahn@ochca.com	(714)834-8024	Cell: (714)720-1323
Michele Cheung, MD, Dpty Med Dir mcheung@ochca.com	(714)834-7729	Cell: (714)720-1470
Marc Meulman, DC&E Division Mgr mmeulman@ochca.com	(714)834-8025	Cell: (657)600-7648
Public Health Services On-Call Official (after hours):	714-628-7008	
Health Disaster Management Duty Officer (MHOAC):	(24/7) Cell (714) 415-8980	

ANNEX A

INTEGRATED VECTOR MANAGEMENT AND RESPONSE PLAN



Integrated Vector Management & Response Plan

May 11, 2010

Integrated Vector Management & Response Plan

Preface

The purpose of the Integrated Vector Management and Response Plan is to provide guidelines to Orange County Vector Control District (District) staff and information to stakeholders regarding the various responses made to prevent and control disease vectors as well as introduced diseases and vectors in Orange County. A vector is any insect or arthropod, rodent or other animal of public health significance capable of harboring or transmitting the causative agents of human disease, or capable of causing human discomfort or injury. This document details the roles and responsibilities of Management, Administration, Public Information, Laboratory, and Operations staff in responding to vector-borne disease threats. The responses are organized by vector species that cause illnesses in humans, domestic animals, and wildlife. This Response Plan also includes contingencies for targeting control of newly introduced disease vectors that are nonnative in Orange County. The formation of this document is guided by the following principles: The application of professional knowledge and judgment for the protection of public health, the use of integrated vector management (IVM) concepts, partnerships with stakeholders, and continuous assessment and improvement.

Protection of Public Health

The mission of the Orange County Vector Control District is to provide the citizens of Orange County with the highest level of protection from vectors and vector-borne diseases. This mission is achieved by being proactive in response to current and future vector threats; responding effectively and courteously to the needs of the public; informing and educating the public about the shared responsibility of vector control; utilizing the most effective and safest methods available for the control of vectors; and providing vector control services in the most cost-effective manner.

Integrated Vector Management

The District's vector control activities are based solely on Integrated Vector Management principles. These principles serve as the foundation for developing vector control activities. Vector population and pathogen monitoring are integral to the control program and are used to generate criteria to implement mosquito management. The District recognizes that utilizing IVM principles will reduce the use of pesticides.

Professional Knowledge and Judgment

The District applies professional knowledge and judgment when necessary. Although this document represents the District's best efforts to delineate the District's response for reasonably foreseeable situations, it is recognized that management of vector populations and vector diseases is part of a natural process; and, therefore, very complex and not completely understood. In addition, site specific and incident specific conditions are highly variable and unpredictable. Therefore, District management and staff are allowed and expected to exercise professional knowledge and judgment in implementation of these policies and procedures. Deviation from these guidelines is, therefore, allowable when deemed necessary by District management or

authorized staff, based on available information and conditions, to meet the District's primary goal of protecting the public from vector-borne diseases.

Stakeholder Partnerships

The District works actively and cooperatively with stakeholder groups to help ensure that vector production is avoided or minimized; and, when necessary, controlled to protect both human and environmental health. The District aims to engage the public in the shared responsibility of vector control. The District identifies Federal Government agencies, State of California, Orange County, incorporated city and local government officials and agencies, agricultural producers, environmental groups, community groups and leaders, and citizens within the District's jurisdiction as stakeholders.

Continuous Improvement

The District regularly researches and tests new and innovative vector monitoring and management techniques. Staff is encouraged to investigate methods to improve vector and vector-borne disease management tools and incorporate them into activities as necessary. For this purpose, this document will be reviewed as necessary by District staff and approved by the Board of Trustees.

The effective cooperation and communication among collaborative agencies is critical to the success of these responses to prevent or stop the spread of vector-borne disease. Included in this response as an appendix is the "California Mosquito-Borne Virus Surveillance and Response Plan" prepared jointly by the California Department of Public Health, Mosquito and Vector Control Association of California, and the University of California.

5/11/10

**Integrated Vector Management Response & Guidelines
Orange County Vector Control District**

TABLE OF CONTENTS

Preface	2
List of Abbreviations.....	5
Integrated Vector Management Response Plan	6
Immature Mosquito Guidelines.....	23
Adult Mosquito Guidelines.....	32
Surveillance Indicators	41
Black Fly Guidelines	42
Fly Control Guidelines.....	44
Red Imported Fire Ant Guidelines	45
Rat Control Guidelines & Rodent Disease Surveillance	50
Appendix I: Rat Control Release of Liability.....	53
Appendix II: California Mosquito-Borne Virus Surveillance and Response Plan.....	54

List of Abbreviations

BMP	–	Best Management Practice for stormwater and urban runoff.
CAC	–	County Agricultural Commissioner Office.
CDC	–	Center for Disease Control and Prevention.
CDPH	–	California Department of Public Health.
CO ₂	–	Carbon dioxide.
GIS	–	Geographical Information System.
HCPS	–	Hantavirus Cardiopulmonary Symptom.
IVM	–	Integrated Vector Management.
OCHCA	–	Orange County Health Care Agency.
OCVCD	–	Orange County Vector Control District.
PCO	–	Pest Control Operator.
PHP	–	Public Health Pesticide.
RIFA	–	Red Imported Fire Ant.
SLE	–	St. Louis Encephalitis.
ULV	–	Ultra Low Volume.
USDS	–	Underground Storm Drain System.
WEE	–	Western Equine Encephalitis.
WNV	–	West Nile virus, On-Going Mosquito Control Activities.

Integrated Vector Management Response Plan

On-Going Mosquito Control Activities

Standard mosquito control activities follow the Immature Mosquito Management Guidelines and the Adult Mosquito Management Guidelines and generally consist of the components listed below. This level is equivalent to the “California Mosquito-Borne Virus Surveillance and Response Plan” Level 1 – Normal Season.

- Increase public education and awareness through the regular distribution of media releases, attendance at public events, public lectures, and other similar outreach mechanisms.
- Monitor mosquito, mosquito-borne disease, and public health pesticide efficacy surveillance activities using the following:
 - a. Mosquito and insect identification.
 - b. CDC/CO₂-baited traps.
 - c. Gravid traps.
 - d. Encephalitis virus testing in mosquitoes, dead birds, and wild birds.
 - e. Sentinel chicken testing.
 - f. Develop GIS maps.
 - g. Monitor Public Health Pesticide Efficacy.
- Conduct routine immature mosquito identification and management (See Immature Mosquito Management Guidelines).
 - a. Evaluate sites for immature mosquito threshold densities by species.
 - b. Maintain continuous surveillance for potential mosquito development sites.
 - c. Conduct aerial surveillance for residential green pools.
 - d. Evaluate environmental and regulatory conditions and requirements.
 - e. Determine the possibility of source reduction by drainage or modification of site.
 - f. Introduce biological control measures (such as mosquito fish) if appropriate.
 - g. Apply public health pesticides when necessary.
 - h. Maintain larval treatment cycle time between 7-30 days.
- Routine adult mosquito management (See Adult Mosquito Management Guidelines).
 - a. Control in urban areas will be on an as needed basis, as determined by the Director of Operations and resident requests.
 - b. Initiate adult mosquito management when threshold criteria are met or exceeded.
 - c. Utilize historical mosquito distribution and abundance data to make control decision.

Detection of a Dead Bird/Mosquito Pool/ Sentinel Chicken/Animal with a Mosquito-borne Virus

The following responses are initiated when the District’s Scientific and Technical Services Laboratory detects a mosquito-borne virus (WNV, WEE, SLE) or when CDPH notifies the District of a mosquito-borne virus from dead bird(s), mosquito pool(s), sentinel chicken(s), or animal(s) within District boundaries. This level is equivalent to the “California Mosquito-Borne Virus Surveillance and Response Plans” Level 2 Normal Season and Emergency Planning Rating.

<p>Management Responsibility Notify the District Board of Trustees. Evaluate District staffing and program needs.</p>	<p>Communications Department Responsibility Distribute a News Release.</p>
<p>Scientific and Technical Services Responsibility Notify County Public Health Officials. Notify County and City Animal Services. Provide additional localized disease surveillance to determine scope of virus activity. Continue to collect mosquito pools for isolation of virus as scheduled. Continue to bleed sentinel chickens as scheduled. Provide GIS maps.</p>	<p>Control Operations Management Responsibility Prepare for controlling adult mosquitoes when initiation criteria are met.</p>
<p>Control Operations Zone Responsibility Inspect and treat mosquito larval development sites. Investigate mosquito service requests from the public. Assess adult mosquito populations. Inspect known green pool locations in area.</p>	<p>Control Operations Special Services Responsibility Inspect flood channels in area. Inspect problem underground water storage devices and BMPs in the area. Inspect possible breeding sites (Canyon Drains\Marshes\Reservoirs) in area. Inspect historical breeding sites. Inspect other tracked sources in the area.</p>

Locally Acquired Human Case of a Mosquito-borne Virus

The following responses are initiated when the OCHCA, or CDPH notifies the District that a human has acquired a mosquito-borne infection(s) within Orange County. This level is equivalent to the “California Mosquito-Borne Virus Surveillance and Response Plans” Level 3 Emergency Planning and Epidemic Rating.

<p>Management Responsibility Notify the District Board of Trustees. Evaluate District staffing and program release needs.</p>	<p>Communications Department Responsibility Coordinate the distribution of a news with OCHCA.</p>
<p>Scientific and Technical Services Responsibility Coordinate with County Public Health USDS Officials. Determine scope of virus activity to support control efforts. Continue to collect mosquito pools for isolation of virus as scheduled. Continue to bleed sentinel chickens as scheduled. Provide GIS maps.</p>	<p>Control Operations Management Responsibility Consider reducing the spray route and cycle time to 8-10 days. Consider controlling adult mosquitoes when initiation criteria are met.</p>
<p>Control Operations Zone Responsibility Inspect and treat mosquito larval development sites. Investigate mosquito service requests from the public. Assess adult mosquito populations. Inspect known green pool locations in area.</p>	<p>Control Operations Special Services Responsibility Inspect flood channels in area. Inspect problem underground water storage devices and BMPs in the area. Inspect possible breeding sites (Canyon Drains\Marshes\Reservoirs) in area. Inspect historical breeding sites. Inspect other known sources in the area.</p>

Epidemic Conditions of a Mosquito-borne Virus

The following responses are initiated when OCHCA or CDPH officials notify the District that multiple infections have occurred within a specific area, or there is evidence that an epidemic condition exists. The epidemic area is defined as the geographic region in which human cases are clustered (incorporated city, community, neighborhood, or Zip Code). This level is equivalent to the “California Mosquito-Borne Virus Surveillance and Response Plans” Level 2 Normal Season and Emergency Planning Rating.

<p>Management Responsibility Consider holding a special Board of Trustee meeting. Shift District staffing and resources to meet program needs.</p>	<p>Communications Department Responsibility Distribute a News Release. If truck mounted ULV is necessary, include additional information in News Release.</p>
<p>Scientific and Technical Services Responsibility Coordinate with County Public Health Officials. Determine scope of virus activity to support control efforts. Continue to collect mosquito pools for isolation of virus as scheduled. Continue to bleed sentinel chickens as scheduled. If truck mounted ULV is appropriate, evaluate the control program. Provide GIS maps.</p>	<p>Control Operations Management Responsibility Consider reducing the treatment cycle time below 8-10 days. Consider controlling adult mosquitoes when initiation criteria are met. Delineate and map the treatment area. As necessary, contact and coordinate with other local agencies.</p>
<p>Control Operations Zone Responsibility Inspect and treat mosquito larval development sites. Investigate mosquito service requests from the public. Assess adult mosquito populations. Inspect known green pool locations in area. Provide educational materials to affected area. Distribute information to collaborating agencies and stakeholders in the area.</p>	<p>Control Operations Special Services Responsibility Inspect flood control channels in area. Inspect problematic underground water storage devices and BMPs in the area. Inspect possible breeding sites (Canyon Drains\Marshes\Reservoirs) in area. Inspect historical breeding sites. Inspect other known sources in the area.</p>

Response to Imported Malaria Case

The following responses are initiated when OCHCA notifies the District of an imported malaria case(s) within the District boundaries. District response to a reported malaria case(s) is determined by the vector activity period, difference between the date of diagnosis and the current date, mosquito population, and the date of the reported case.

<p>Scientific and Technical Services Responsibility Determine scope of activity. Identify adult mosquitoes collected. Determine if <i>Anopheles</i> spp. are infected with malaria parasites.</p>	<p>Control Operations Management Responsibility Determine if adult mosquito control is necessary if initiation criteria are met in area. Delineate treatment area, as necessary.</p>
<p>Control Operations Zone Responsibility Inspect <i>Anopheles</i> mosquito development sites in area. Assess adult mosquito population.</p>	<p>Control Operations Special Services Responsibility Inspect <i>Anopheles</i> breeding sites (Canyon Drains\Marshes\Reservoirs) in area. Inspect problem underground water storage devices and BMPs in the area. Inspect other known sources in the area.</p>

Response to a Locally Acquired Malaria Case and/or Infected Mosquitoes

The following responses are initiated when Orange County Health Care Agency notifies the District of a locally acquired malaria case(s) and or when *Anopheles* spp. are found infected with malaria parasites within the District boundaries. District response is determined by the vector activity period, difference between the date of diagnosis and the current date, mosquito population, and the date of the reported case.

<p>Management Responsibility Notify District Board of Trustees President. Evaluate District staffing and program needs.</p>	<p>Communications Department Responsibility Prepare educational materials. Coordinate the distribution of a news release with OCHCA. Consider a region-wide press conference.</p>
<p>Scientific and Technical Services Responsibility Determine scope of activity. Identify adult mosquitoes collected. Analyze climate and meteorological data to determine if conditions are favorable for Anopheline development. Determine if <i>Anopheles</i> are infected with malaria parasites. Provide GIS maps.</p>	<p>Control Operations Management Responsibility Contact County Agricultural Commissioner. Delineate and map the treated area. Coordinate response with other local vector control agencies.</p>
<p>Control Operations Zone Responsibility Inspect <i>Anopheles</i> mosquito development sites in area. Assess adult mosquito population. Conduct surveillance for <i>Anopheles</i> at local airports. Distribute educational materials.</p>	<p>Control Operations Special Services Responsibility Inspect <i>Anopheles</i> breeding sites (Canyon Drains\Marshes\Reservoirs) in area. Inspect problem underground water storage devices and BMPs in the area. Inspect historical breeding sites. Inspect other known sources in the area.</p>

Critical Response to the Detection of an Introduced, Non-Native Disease or Disease Vector Within Orange County

The following response is initiated when the District detects an introduced, nonnative disease, or disease vector within Orange County. The District recognizes that a quick, efficacious response is necessary to prevent the vector or disease from becoming established in Orange County and Southern California.

<p>Management Responsibility Notify District Board of Trustees. Contact and coordinate response with other stakeholders.</p>	<p>Communications Department Responsibility Conduct a press conference and distribute a news release. Prepare educational materials. If truck mounted ULV spraying is necessary, include additional information in news release.</p>
<p>Scientific and Technical Services Responsibility Notify County Public Health Officials. Train District staff about the disease or disease vector. Identify insect vectors and develop a surveillance strategy. Determine scope of infestation. Sample vectors for the presence of disease organism. If truck mounted ULV is necessary, evaluate the control program. Provide GIS maps.</p>	<p>Control Operations Management Responsibility Contact County Agricultural Commissioner. Determine a control strategy. Delineate and map the treatment area. Coordinate control of disease vector when initiation criteria are met. As necessary, contact and coordinate with other local agencies.</p>
<p>Control Operations Zone Responsibility Assess adult population. Conduct a thorough inspection for and treat mosquito development sites. Control adult mosquitoes. Distribute educational materials.</p>	<p>Control Operations Special Services Responsibility Inspect flood control channels in area. Inspect problem underground water storage devices and BMPs in the area. Inspect possible breeding sites (Canyon Drains\Marshes\Reservoirs) in area. Inspect other known sources in the area.</p>

Black Fly Control Operations

Standard black fly activities follow Black Fly Management Guidelines and generally consist of the components listed below.

- Routine public education and awareness through the distribution of media releases, attendance at public events, public lectures, and other similar outreach mechanisms.
- Routine black fly and public health pesticide efficacy surveillance activities.
Occurrence of black flies may also be noted by resident complaints.
 - a. Black fly Identification.
 - b. CDC/CO₂-baited traps.
 - c. Prepare GIS maps.
 - d. Conduct posttreatment surveillance.
- Routine immature black fly management.
 - a. Evaluate the site for immature black fly habitat.
 - b. Evaluate environmental and regulatory conditions and requirements.
 - c. If appropriate, apply PHP.
 - d. Apply PHP again, if needed, at time interval noted on PHP label.

Fly Control Operations

Fly control is initiated when the District is notified of an infestation occurring within District boundaries. The response follows Fly Control Guidelines. The District only uses pesticides to control fly infestations where source reduction is not possible, in situations that are deemed significant, and considered a threat to public health and safety.

- Fly control is instigated only after a thorough evaluation of the site is conducted and should include:
 - a. Identification of pest fly species and estimation of population density.
 - b. Identification of larval breeding source.
 - c. Reduction of larval breeding source through habitat and source reduction, when possible.

- If reduction of larval breeding source is conducted, but a significant population of flies remains, the use of a public health pesticide may be necessary to control the population.

Scientific and Technical Services Responsibility Identify fly species and estimate population density. Determine scope of infestation. Conduct posttreatment evaluation of fly population. If necessary, provide GIS maps detailing surveillance and control activities.	Control Operations Management Responsibility Determine a control strategy. Delineate treatment area. As necessary, contact and coordinate with other local agencies.
Control Operations Zone Responsibility Distribute educational materials.	Control Operations Special Services Responsibility Distribute educational materials. Assist in source removal, if necessary. Apply pesticides to control flies, if necessary.

Response to a Flea-borne Typhus Case

The following responses are initiated when the District is notified of a human case of flea-borne typhus occurring within Orange County. The District recognizes that a quick response is necessary to instigate a reduction of the flea population in the area.

- A comprehensive flea-borne typhus risk evaluation of the area is warranted and should include:
 - a. Notification of surrounding residents that a flea-borne typhus case has occurred in the area and what can be done to reduce the flea population in the area (use of flea control measures on pets).
 - b. Live-trapping of opossums to determine the flea species and flea load per animal and the collection of whole blood for assessment of transmission activity.
 - c. Assessing the flea abundance on backyard wildlife and pets.
 - d. Assessing the potential for humans to be exposed to vector fleas.
 - e. Reviewing the past history of flea-borne typhus activity and/or flea-borne typhus cases in the region.

<p>Management Responsibility Notify District Board of Trustees. Contact and coordinate response with other stakeholders.</p>	<p>Communications Department Responsibility Conduct a press conference and distribute a news release.</p>
<p>Scientific and Technical Services Responsibility Notify County Public Health Officials. Conduct comprehensive flea-borne typhus risk assessment. Determine scope of infestation. Sample vectors for the presence of disease organism. Provide GIS maps detailing surveillance and control activities.</p>	<p>Control Operations Management Responsibility As necessary, contact and coordinate with other local agencies.</p>
<p>Control Operations Zone Responsibility Distribute educational materials and assist with surveillance activities. Assist with comprehensive flea-borne typhus risk assessment.</p>	

Response to a Tick-borne Disease Case (Lyme Disease, Rocky Mountain Spotted Fever, Tularemia)

The following responses are initiated when the District is notified of a human case of tick-borne disease occurring within Orange County.

- A comprehensive tick-borne disease risk evaluation of the area is warranted and should include:
 - a. Live-trapping (flagging) ticks to estimate tick density and the presence and/or prevalence of pathogens within the tick population.
 - b. Assessing the potential for humans to be exposed to ticks.
 - c. Reviewing the past history of tick populations and tick-borne disease in the area.
 - d. Distribution of tick-borne disease educational materials to landholders and/or the affected population.

Ongoing RIFA Activities

Standard RIFA control activities follow Red Imported Fire Ant Guidelines and generally consist of the components listed below.

- Routine public education and awareness through the distribution of educational DVDs and flyers and attendance at public events. Education of maintenance staff at infested sites, such as schools, parks, golf courses, and nurseries. Distribution of educational material to residents in affected neighborhoods.
- Routine RIFA surveillance activities and public health pesticide efficacy.
 - a. Insect identification.
 - b. Inspection for mounds, foraging ants, and other signs of RIFA infestation around residential treatment sites and adjacent to large treatment sites.
 - c. Placement of RIFA surveillance lures.
 - d. Evaluation of new sites in Orange County for RIFA populations.
 - e. Monitor pesticide efficacy.
- Routine RIFA Residential Site Management (Residential RIFA Treatment Cycle).
 - a. Initial report is followed up by District staff who conduct RIFA surveillance and identification, and apply a pesticide ant bait.
 - b. 2nd Residential treatment is conducted by a local Pest Control Operator (PCO) after 3 months of initial treatment.
 - c. 3rd Residential treatment is conducted by the same PCO after 3 months of the 2nd treatment.
 - d. Posttreatment survey is conducted at selected sites by the District. If RIFA are identified, the site begins the treatment cycle again.
 - e. If a residence reports RIFA activity while on a RIFA treatment cycle, the District will respond and treat the site.
- Routine RIFA Large-Site Management (Large-Site RIFA Treatment Cycle)
 - a. Specific guidelines are in place for large sites such as sites >1 acre, parks, schools, golf courses, and rights-of-way.
 - b. Initial report is followed up on by District staff who conduct RIFA surveillance, identification, and apply a pesticide ant bait.
 - c. 2nd, 3rd, and posttreatment surveys are conducted by District staff.
 - d. If a large site reports RIFA activity while on a RIFA treatment cycle, the District will respond and treat the site.

5/11/10

RIFA Activities in Response to a Stinging Incident

The following response is instigated when the District is notified of a RIFA stinging incident within county boundaries. The District recognizes that a quick and efficacious response is necessary.

- RIFA treatment in response to a stinging incident.
 - a. The District will respond to a stinging incident as quickly as possible.
 - b. Advise persons to stay away from the area and post area conspicuously to keep others away.
 - c. Staff will identify ant species and bring a sample to the District for confirmation.
 - d. Staff will treat the mound.
 - e. If ants are confirmed as RIFA, a residential or large site RIFA treatment cycle will be initiated.

Ongoing Rat Control Activities

Standard rat control activities (*Rattus* spp.) follow the Rat Management Guidelines and generally consist of the components listed below.

- Routine public education and awareness through the education of residents by responding to service requests, attendance at public events, public lectures, and other similar outreach mechanisms.
- Rat inspections and control.
 - a. Inspections for rat activity around residences, businesses, parks, schools, city, county, state, and federal lands in Orange County.
 - b. Recommendations to abate rat harborage, food sources, and modify rat entry points in homes and structures.
 - c. Placement of rodenticide in tamper-resistant bait stations around exterior of residences.

Ongoing Rodent Surveillance Activities

Standard rodent surveillance activities generally consist of the components listed below.

- Routine rodent and rodent-borne disease surveillance and rodenticide efficacy.
 - a. Rodent trapping and identification (rats, mice, and ground squirrels).
 - b. Rodent parasite identification.
 - c. Testing of rodents for rodent-borne diseases, such as bubonic plague, Hantaviruses, and additional diseases as needed.
 - d. Testing of squirrels for WNV.
 - e. Monitoring rodenticide efficacy.

Response to a Human or Animal Plague Case

The following response is initiated when the District is notified of a human or rodent plague case within county boundaries. The District recognizes that a quick and efficacious response is necessary to control rodents and their parasites that can further transmit the pathogen. This response is equivalent to recommendations set forth in the “California Department of Public Health 2008 Compendium for Plague Control.”

- A comprehensive plague risk evaluation of the area is warranted and should include:
 - a. Live-trapping rodents to estimate the population densities of known plague-amplifying species and the collection of serum specimens for assessment of plague transmission activity.
 - b. Assessing the extent and phase of the outbreak.
 - c. Evaluating the abundance and infectivity of known vector fleas (flea index and flea pools for plague testing).
 - d. Assess the potential for humans to be exposed to vector fleas.
 - e. Review the past history of plague activity and/or human plague cases in the region.
 - f. Collaborate with CDPH and the County Agricultural Commissioner’s Office.

- A decision to suppress vector fleas on rodents or rodents is based on:
 - a. The presence and prevalence of susceptible rodents and vector fleas in areas of human activity.
 - b. A high potential for humans to be exposed to vector fleas.
 - c. Confirmation of plague activity among susceptible rodents and/or fleas in areas of human activity.
 - d. A history of plague activity and/or human cases in the area.

Management Responsibility Notify District Board of Trustees. Contact and coordinate response with other stakeholders.	Communications Department Responsibility Conduct a press conference and distribute a news release. Prepare educational materials. If burrow dusting flea control is necessary, include additional information in news release.
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Response to a Human or Animal Plague Case - cont'd.

<p>Scientific and Technical Services Responsibility Notify County Public Health Officials. Conduct comprehensive plague risk assessment. Train staff about the disease and disease vector. Identify fleas and develop a surveillance strategy. Determine scope of infestation. Sample vectors for the presence of disease organism. If burrow dusting flea control is necessary, conduct a posttreatment evaluation. Provide GIS maps detailing surveillance and control activities.</p>	<p>Control Operations Management Responsibility Contact County Agricultural Commissioner. Determine a control strategy with Scientific and Technical Services. Delineate and map the treatment area. Coordinate burrow dusting flea control as necessary. As necessary, contact and coordinate with other local agencies.</p>
<p>Control Operations Zone Responsibility Distribute educational materials. Assist with comprehensive plague risk assessment.</p>	<p>Control Operations Special Services Responsibility Distribute educational materials. Assist with burrow dusting flea control as necessary.</p>

Response to a Human Hantavirus Cardiopulmonary Symptom (HCPS) Case

The following response is initiated when the District is notified of a human HCPS case within county boundaries. The District recognizes that a quick response is necessary to educate the public and determine the prevalence of the virus in vector species. This response is equivalent to recommendations set forth in the “California Department of Public Health “Guidelines for conducting surveillance for hantavirus in rodents in California, 2004.”

- A comprehensive HCPS risk evaluation of the area is warranted and should include:
 - a. Live-trapping rodents to estimate the population densities of known HCPS amplifying species and the collection of specimens for assessment of HCPS prevalence.
 - b. Assessing the extent and phase of the infestation.
 - c. Assessing the potential for humans to be exposed to rodent vectors.
 - d. Reviewing the past history of HCPS activity in the region.

- A decision to suppress rodents is based on:
 - a. The presence and prevalence of susceptible rodents in areas of human activity.
 - b. A high potential for humans to be exposed to rodents.
 - c. Confirmation of HCPS activity among susceptible rodents in areas of human activity.
 - d. A history of HCPS activity in the area.

<p>Management Responsibility Notify District Board of Trustees. Contact and coordinate response with other stakeholders.</p>	<p>Communications Department Responsibility Conduct a press conference and distribute a news release. Prepare educational materials including transmission and prevention information. If rodent suppression is necessary, include additional information in news release.</p>
<p>Scientific and Technical Services Responsibility Notify County Public Health Officials. Conduct comprehensive HCPS assessment. Train staff about the disease and hosts. Determine scope of infestation. Sample hosts for the presence of disease organism. If rodent suppression is necessary, conduct a posttreatment evaluation. Provide GIS maps detailing surveillance and control activities.</p>	<p>Control Operations Management Responsibility Contact County Agricultural Commissioner. Determine a control strategy with Scientific and Technical Services. As necessary, contact and coordinate with other local agencies.</p>
<p>Control Operations Zone Responsibility Distribute educational materials. Assist with comprehensive HCPS risk assessment.</p>	<p>Control Operations Special Services Responsibility Distribute educational materials.</p>

Integrated Vector Management Immature Mosquito Guidelines

Definitions

Catch basin – Curbside opening that collects water runoff from streets and serves as an entry point to the storm drain system.

Endangered Species – This is a list of animals found within California or off the coast of the State that have been classified as Endangered or Threatened by the California Fish & Game Commission (State list) or by the U.S. Secretary of the Interior or the U.S. Secretary of Commerce (Federal list).

Environmentally sensitive habitats – Wetlands, riparian areas, organic producers, State, Federal, local wildlife area, or other areas posted as such.

Flood control channel - Open waterway that is designed to carry large amounts of rain water.

Freeway drain – A ditch or drain used to collect water from freeways.

Green pool – A pool that is not serviced, allowing for mosquito larvae development.

Gutter –The edge of a street (below the curb) designed to drain water runoff from streets, driveways, parking lots, etc., into catch basins. Area formed by the curb and the street to prevent flooding by channeling runoff to the storm drains.

Mosquito breeding site – A location where mosquitoes can complete their lifecycle.

Public Health Pesticide (PHP) – A pesticide registered by the Environmental Protection Agency and the California Department of Pesticide Regulation for use against insects of public health importance in California.

Underground Storm Drain System (USDS) – A network of conveyance systems that includes catch basins, grates, gutters, underground pipes, creeks, or open channels designed to transport rain from developed areas and discharged to a receiving body of water.

Larvicide - General term used to describe immature mosquito control.

Additional Technical Considerations

USDS, Flood Channels, and Freeway Drains

These sites have unique properties that make it impossible to conduct surveillance for immature mosquitoes prior to every treatment. During the breeding season, nighttime temperature, historical surveillance data, response to arboviral activity, and complaints by residents initiate larval treatment.

Larval Sampling

Due to the skittish nature of some larval species, such as *Cx. erythrothorax*, visual counts of larvae on the water surface, instead of collections, are considered acceptable to consider larvicide applications.

PHP Use and Resistance Management

The PHP's label must be consulted prior to every treatment. PHPs will be rotated at the Operations Director's discretion. If resistance is suspected in the field, laboratory and operations staff should be notified for follow-up.

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5/11/10

Immature Mosquito Guidelines - cont'd.

Factors or conditions that may modify the Immature Mosquito Management Guidelines

Human malaria or encephalitis occurrence.

Encephalitis or malaria mosquito pool isolation.

Sentinel chicken seroconversion.

Cluster of dead animals indicating arboviral activity.

Unforeseen biological or environmental conditions.

Introduction of an invasive disease vector.

Legislation, regulation or precedential legislation.

Availability of District funding, resources, or equipment.

Availability of suitable larvicides.

Susceptibility of immature mosquito populations to larvicides.

Environmental condition not listed in the program.

Continued occurrence of immatures in a development site.

Natural Disasters.

Integrated Vector Management Immature Mosquito Guidelines

Site Assessment

<i>Criteria</i>	<i>Evaluation</i>	<i>Decision</i>
Is site a historical mosquito producer?	Yes→	Collect mosquito larvae samples. Consider source reduction .
No ↓		
Is site a mitigation wetland?	Yes→	Consult with Supervisor and District Biologist prior to treatment. Consider larvae sampling criteria .
No ↓		
Is breeding site an USDS, flood channel, or freeway drain?	Yes→	See technical considerations for USDS, flood channels, and freeway drains .
No ↓		
Environmentally sensitive habitat?	Yes→	Consult supervisor about habitat. Avoid damage to sensitive areas. Consider larvae sampling criteria .
No ↓		
Are there active bird nests?	Yes→	Do not disturb habitat. Consult with District Biologist.
No ↓		
Are endangered species present?	Yes→	Consult Supervisor about habitat. Avoid taking endangered species.
No ↓		
Vernal pool?	Yes→	Consult Supervisor about habitat. Avoid taking endangered species.
No ↓		
Will mosquitoes develop in the habitat?	No→	Consult Supervisor about habitat. Consider reducing site surveillance. Consider source reduction .
Yes ↓		
Sample mosquito breeding site and then consider source reduction .		

5/11/10

Integrated Vector Management Immature Mosquito Guidelines

Source Reduction

<i>Criteria</i>	<i>Evaluation</i>	<i>Decision</i>
Can I eliminate the mosquito breeding site? Can I remove the water? Can I drain the mosquito breeding site?	Yes→	Institute necessary source reduction .
No ↓		
Can habitat be modified to reduce mosquito breeding?	Yes→	Consult with Special Services Institute necessary source reduction .
No ↓		
Consider biorational control measures .		

Integrated Vector Management Immature Mosquito Guidelines

Biorational Control Measures

<i>Criteria</i>	<i>Evaluations</i>	<i>Decision</i>
Will habitat support immature mosquitoes?	No →	Do not apply biorationals. Set a return inspection date.
Yes ↓		
Time water will remain in breeding site?	< 96 hours →	Consider larvae sampling criteria .
Semi-permanent or permanent (> 96 hours)		
Yes ↓		
Environmentally sensitive habitat?	Yes →	Consult with supervisor before release of mosquitofish or larvicide application .
No ↓		
Water quality?	Highly organic →	Consider larvae sampling criteria . Consider stocking mosquito fish. Consider larvicide application .
Fresh ↓		
Swimming pool or backyard pond?	Yes →	Can stock mosquitofish. Add to pool list and set a return inspection date.
No ↓		
Can apply mosquito fish if applicable. Set a return inspection date. Consider larvae sampling criteria .		

**Integrated Vector Management
Immature Mosquito Guidelines**

Larvae Sampling Criteria	Criteria	Evaluation	Decision
	Mosquito stages present?	none→	Do not treat. Set a return inspection date.
	eggs to pupa ↓		
	Number of immature mosquitoes?	<i>Anopheles</i> spp. = 0 immature/40 dips→ <i>Culex</i> spp. = 0 immature/20 dips→ <i>Aedes</i> spp. or <i>Culiseta</i> spp. = 0 immature/10 dips→	Do not treat. Set a return inspection date.
	<i>Anopheles</i> spp. ≥ 1 immature/40 dips <i>Culex</i> spp. ≥ 1 immature/20 dips <i>Aedes</i> spp. or <i>Culiseta</i> spp. ≥ 1 immature/10 dips ↓		
	Mosquitofish present with immature mosquitoes?	<i>Anopheles</i> spp. ≤ 1 immature/40 dips→ <i>Culex</i> spp. ≤ 1 immature/20 dips→ <i>Aedes</i> spp. or <i>Culiseta</i> spp. ≤ 1 immature/10 dips→	Do not treat. Set a return inspection date.
	<i>Anopheles</i> spp. ≥ 2 immatures/40 dips <i>Culex</i> spp. ≥ 2 immatures/20 dips <i>Aedes</i> spp. or <i>Culiseta</i> spp. ≥ 2 immatures/10 dips ↓		
	Consider larvicide application.		

Integrated Vector Management Immature Mosquito Guidelines

Larvicide Application

<i>Criteria</i>	<i>Evaluation</i>	<i>Decision</i>
Is development site an USDS, flood channel, or freeway drain?	Yes→	See technical considerations for USDS, flood channels, and freeway drains.
No ↓		
Mosquito development site size?	more than 1 acre→	Consult with Special Services for treatment.
less than 1 acre ↓		
Water quality	moderate to highly organic <i>Culex</i> spp.→	Apply appropriate larvicide and consider treatment methods.
Fresh ↓		
Majority of immature stages present?	late 4th to pupae stages→	Apply appropriate larvicide and consider treatment methods.
eggs to early 4th larval stages ↓		
Vernal pool?	Yes→	Consult supervisor and consider treatment methods.
No ↓		
Fairy shrimp present?	Yes→	Consult supervisor and consider treatment methods.
No ↓		
Apply appropriate larvicide and consider treatment methods.		

5/11/10

Integrated Vector Management Immature Mosquito Guidelines

Treatment Method

<i>Criteria</i>	<i><u>Evaluation</u></i>	<i>Decision</i>
Distribution of immatures?	Isolated locations→	Treat selective areas.
Throughout source ↓		
Treat entire mosquito development site.		

Integrated Vector Management Immature Mosquito Guidelines

USDS, Catch Basin and Freeway Drain Treatment Criteria

<i>Criteria</i>	<i>Evaluation</i>	<i>Decision</i>
Historical mosquito breeding site? No ↓	Consult historical records, if yes →	Treat with appropriate larvicide every 10-14 days during mosquito season
Standing water present and/or water flowing into site? No ↓	Yes→	Treat with appropriate larvicide and schedule inspection in 10-14 days.
Adult mosquitoes seen leaving system. No ↓	Yes→	Adulticide storm drain and schedule additional treatment for 10-14 days.
Inspect channel every 10-14 days during mosquito breeding season and consider ecologic criteria.		

Flood Channel Treatment Criteria

<i>Criteria</i>	<i>Evaluation</i>	<i>Decision</i>
Historical mosquito breeding site? No ↓	Consult historical records, if yes →	Collect and identify larvae from site at beginning of mosquito season. Treat with appropriate larvicide every 10-14 days during mosquito season.
Standing water present? No ↓	Yes→	Consider ecologic criteria. Treat with appropriate larvicide and schedule inspection in 10-14 days.
Inspect channel every 10-14 days during mosquito breeding season and consider ecologic criteria.		

5/11/10

Integrated Vector Management

Adult Mosquito Guidelines

Definitions

Adult Mosquito Control

The management of adult mosquitoes may consist of application of a PHP by ultra low volume (ULV) application equipment or direct application (barrier treatments) to residences, outbuildings, other structures and mosquito resting sites.

Continuance Criteria

Criteria that trigger additional applications in an area that has previously attained an initiation criterion. These criteria are considered until a termination criterion is achieved for a treatment area.

Initiation Criteria

Criteria that when achieved trigger the initial adult mosquito application measures. At present, the District recognizes eight separate conditions to be adult mosquito control application triggers.

Termination Criteria

Criteria that conclude adult mosquito application measures in a treatment area until initiation criteria are again achieved.

Additional Technical Information

1. Adult Mosquito Surveillance Devices

Each year, a surveillance device and/or method may be selected to measure the adult mosquito population. This device and/or method can be altered at the discretion of the Operations Manager and/or Laboratory Director.

2. USDS, Catch basins, and Freeway Drains.

Adult mosquito control is initiated year round in these habitats when adult mosquitoes are seen flying from manhole covers upon inspection, and based on historical surveillance data.

3. Evidence of a non-native, mosquito disease vector within District boundaries.

In the event a non-native, mosquito disease vector is introduced into Orange County the District will consider a single female specimen the trigger point for adult mosquito management.

4. Delineate treatment area

The Operations Manager has the flexibility to delineate the treatment area for adult mosquito control when mosquito trigger points have been reached. Knowledge gained from surveillance and research can change the phased response recommendations. In the District treatment area, the primary goal of the adult mosquito management program is to maintain *Cx. tarsalis*, *Cx. quinquefasciatis*, *Cx. Stigmatostoma*, and *Cx. erythrothorax* populations below disease transmission levels. These species are the primary target for control because they vector mosquito-borne arboviruses like West Nile virus (WNV), western equine encephalitis (WEE), Saint Louis encephalitis (SLE), or California encephalitis (CE) in Southern California, and may play a role in other diseases, such as dog heartworm. *Anopheles freeborni* is targeted for management because it is a vector of malaria. These additional species are targeted because their biting habits also create a public nuisance. The boundaries of the area to be treated are determined by the mosquito species that achieved the

Adult Mosquito Guidelines - cont'd.

criterion, species biology and flight range, and the infested area. Defining a boundary does not imply that all or part of that area can or will be treated and that the mosquito species targeted will be eradicated within those boundaries.

Public Health Pesticide Use and Resistance Management

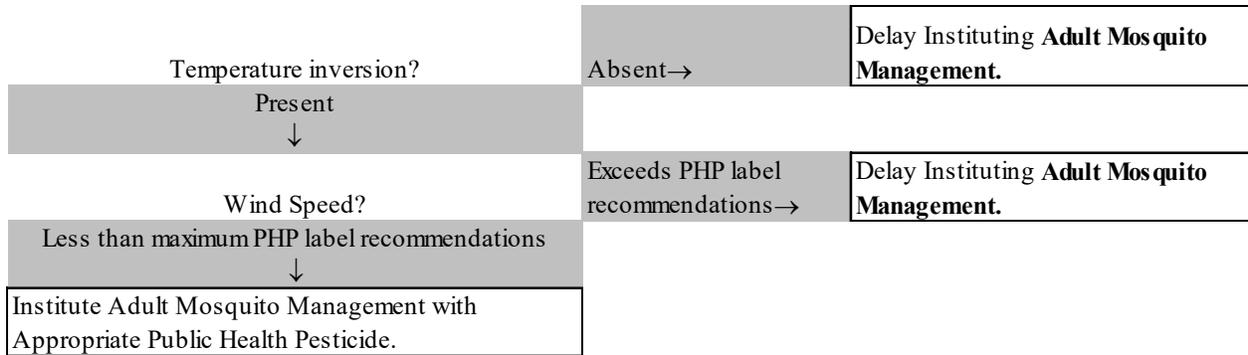
1. Consult Public Health Pesticide (PHP) label before treatment.
2. Apply PHPs within the same class or mode of activity on a rotational basis as determined by the Director of Operations.
3. If resistance is suspected in the field, laboratory and operations staff should be notified for follow-up.

Factors That May Influence the Implementation or Modify the Program

1. Availability of a suitable adulticiding material.
2. Susceptibility of mosquito populations to adulticiding materials.
3. Environmental conditions not listed in the program.
4. Availability of District funding or resources.
5. Legislation, regulation or precedential case authority.
6. Unforeseen biological conditions.
7. Presence or absence of mosquito-borne disease.
8. Introduction of an invasive disease vector of public health importance.

Integrated Vector Management Adult Mosquito Guidelines

Meteorological Conditions for Ground Applications



Integrated Vector Management Adult Mosquito Guidelines

<u>Delineate Treatment Area</u>	Is the initiation or continuance criteria met?	Yes →	Define the boundaries of the Treatment Area and consider Agricultural and Land Use Practices .
<u>Agricultural and Land Use Practices</u>			
No ↓	Are endangered or threatened species present?	Yes →	Consider the presence of Endangered or Threatened Species, then consider Meteorological Conditions within the Delineated Treatment Area .
No ↓	Environmentally sensitive habitat?	Yes →	Consider treatments compatible with an environmentally sensitive habitat, then consider Meteorological Conditions within the Delineated Treatment Area .
No ↓	Organically grown crops?	Yes →	Consider treatments that meet Organic Standards, then consider Meteorological Conditions within the Delineated Treatment Area .
Consider Meteorological Conditions within the Delineated Treatment Area .			

Integrated Vector Management Adult Mosquito Guidelines

USDS, Catch Basin and Freeway Drain Treatment Criteria

<i>Criteria</i>	<i>Evaluation</i>	<i>Decision</i>
Historical mosquito breeding site? No ↓	Consult historical records, if yes →	Treat with appropriate larvicide every 10-14 days during mosquito season
Standing water present and/or water flowing into site? No ↓	Yes→	Treat with appropriate larvicide and schedule inspection in 10-14 days.
Adult mosquitoes seen leaving system. No ↓	Yes→	Adulticide storm drain and schedule additional treatment for 10-14 days.
Inspect channel every 10-14 days during mosquito breeding season and consider ecologic criteria.		

Flood Channel Treatment Criteria

<i>Criteria</i>	<i>Evaluation</i>	<i>Decision</i>
Historical mosquito breeding site? No ↓	Consult historical records, if yes →	Collect and identify larvae from site at beginning of mosquito season. Treat with appropriate larvicide every 10-14 days during mosquito season.
Standing water present? No ↓	Yes→	Consider ecologic criteria. Treat with appropriate larvicide and schedule inspection in 10-14 days.
Inspect channel every 10-14 days during mosquito breeding season and consider ecologic criteria.		

Integrated Vector Management Adult Mosquito Guidelines

Initiation Criteria

<i>Criteria</i>	<i>Evaluation</i>	<i>Decision</i>
#1 Human illness caused by a mosquito-borne pathogen within the District boundaries?	Yes→	Determine level of mosquito activity.
No ↓		
#2 Mosquito-borne pathogen detected in a dead or live bird or another animal within the District boundaries?	Yes→	Determine level of mosquito activity.
No ↓		
# 3 Evidence of a recent serological conversion by a mosquito-borne pathogen in a sentinel chicken or other animal within the District boundaries?	Yes→	Determine level of mosquito activity.
No ↓		
#4 Mosquito-borne pathogen isolated from a mosquito within the District boundaries.	Yes→	Determine level of mosquito activity.
No ↓		
#5 Evidence of a non-native, introduced mosquito species within District boundaries.	Yes→	Determine level of mosquito activity.
No ↓		
	50 or more female <i>Cx. tarsalis</i> , and/or 75 female <i>Cx. quinquefasciatus</i> , <i>Cx. stigmastoma</i> <i>Cx. erythrothorax</i> , or <i>Anopheles</i> per collection per trap nights , and/or→ 5 or more female of any <i>Aedes</i> or 10 of a <i>Culiseta</i> species per collection per trap nights , and/or→ 100 or more total female mosquitoes per collection per trap nights →	Delineate treatment area and consider treatment method.
#6 CDC/CO ₂ trap or Gravid Trap collection within the District boundaries of: 50 female <i>Cx. tarsalis</i> , and/or less than 75 female <i>Cx. erythrothorax</i> , <i>Cx. stigmastoma</i> , <i>Cx. quinquefasciatus</i> or <i>Anopheles</i> per collection per trap nights , and/or less than 5 female of any <i>Aedes</i> or 10 of a <i>Culiseta</i> species per collection per trap nights , and/or less than 100 or more total female mosquitoes per collection per trap nights .		
↓		
#7 Presence of adult mosquitoes in an USDS, catch basin, or freeway drain.	1 or more <i>Culex</i> species →	USDS Treatment Criteria.
↓		
#8 Mosquitoes creating a public health nuisance at a residence.	1 or more female mosquito(s) collected by a homeowner or on a homeowner's property→	Delineate treatment area and consider treatment method.
↓		
Adult mosquito sample not collected.		
Do Not Initiate Adult Mosquito Management		

5/11/10

Integrated Vector Management Adult Mosquito Guidelines

Continuance Criteria

<i>Criteria</i>	<i>Evaluation</i>	<i>Decision</i>
<p>CDC/CO₂ trap or Gravid Trap collection with</p>	<p>25 or more female <i>Cx. tarsalis</i>, <i>Cx. erythorathorax</i>, <i>Cx. stigmatostoma</i>, <i>Cx. quinquefasciatus</i>, or <i>Anopheles</i> per collection per trap night, and/or →</p> <p>5 or more female of any <i>Aedes</i> or 10 <i>Culiseta</i> per collection per trap night, and/or →</p> <p>25 or more total female mosquitoes per collection per trap night →</p>	<p>Consider Meteorological Conditions in the Treatment Area.</p>
<p>less than 25 female <i>Cx. tarsalis</i>, <i>Cx. erythorathorax</i>, <i>Cx. stigmatostoma</i>, <i>Cx. quinquefasciatus</i>, or <i>Anopheles</i> per collection per trap night, and/or</p> <p>less than 5 female of any <i>Aedes</i> or 10 <i>Culiseta</i> per collection per trap night, and/or</p> <p>less than 25 total female mosquitoes per collection per trap night</p> <p style="text-align: center;">↓</p>	<p>Presence of adult mosquitoes in an USDS, catch drains</p> <p style="text-align: center;">↓</p>	<p>1 or more <i>Culex</i> species →</p>
<p>Do Not Institute Adult Mosquito Management</p>		<p>USDS Treatment Criteria.</p>

Integrated Vector Management Adult Mosquito Guidelines

Termination Criteria

<i>Criteria</i>	<i>Evaluation</i>	<i>Decision</i>
Date?	after December 1st →	Terminate Adult Mosquito Control Applications within the delineated treatment area.
before December 1st ↓		
CDC/CO ₂ Light trap or Gravid Trap collection with	less than 15 or more female <i>Cx. tarsalis</i> , <i>Cx. quinquefasciatus</i> , <i>Cx. erythrothorax</i> , or <i>Cx. stigmatostoma</i> , or <i>Anopheles</i> per collection for per trap night , and/or → less than 1 female of any <i>Aedes</i> or 5 <i>Culiseta</i> species per collection for per trap night , and/or → less than 25 total female mosquitoes per collection for per trap night →	Terminate Adult Mosquito Control Applications within the delineated treatment area.
15 or more female <i>Cx. tarsalis</i> , <i>Cx. quinquefasciatus</i> , <i>Cx. erythrothorax</i> , or <i>Cx. stigmatostoma</i> per collection per trap night , and/or 1 or more female of any <i>Aedes</i> or 5 <i>Culiseta</i> species per collection per trap night , and/or 25 or more total female mosquitoes per collection per trap night ↓		
Environmental conditions?	10 consecutive nights unfavorable for ULV treatments →	Terminate Adult Mosquito Control Applications within the delineated treatment area.
Favorable for adult mosquito management ↓		
Continue to Consider Continuance Criteria		

5/11/10

Integrated Vector Management Adult Mosquito Guidelines

Determine Level of Mosquito Activity

<i>Criteria</i>	<i>Evaluation</i>	<i>Decision</i>
Malaria case? Mosquito Not Present ↓	<i>Anopheles freeborni</i> present in a trap within 1/4 mile radius of human case	Delineate Treatment Area.
↓ Do Not Initiate Adult Mosquito Management		
WNV, WEE, SLE, or other mosquito-borne virus case? Mosquito Not Present ↓	<i>Cx. tarsalis</i> , <i>Cx. quinquefasciatus</i> , or another mosquito species that can vector a virus pathogen within a one mile radius of a human case.	Delineate Treatment Area.
↓ Do Not Institute Adult Mosquito Management		
Collection of an invasive disease vector within District boundaries.	1 specimen of a female invasive disease vector.	Delineate Treatment Area.

Integrated Vector Management

Surveillance Indicators

WNV, SLE or, WEE

<i>Criteria</i>	<i>Critical Value</i>
Positive mosquito pool	Ct value <30 for E Primer set or < 35 for NS1 Primer set
Positive dead bird (kidney)	Ct value <30 for E Primer set or < 37 for NS1 Primer set
Positive dead bird (BIC)	Ct value <30 for E Primer set or < 37 for NS1 Primer set
Wild bird seroconversion rate	> 5% of population sampled from a site
Human infection/blood donor	Determined by OCHCA and reported to OCVCD

Malaria

<i>Criteria</i>	<i>Critical Value</i>
Malaria parasite.	1 <i>Plasmodium</i> spp. as determined by appropriate analysis.

Mosquito Abundance

<i>Criteria</i>	<i>Definition</i>
Historical mosquito breeding site.	Consistant mosquito collections at a site in previous years.
Trap night	One trap set for one night. Ten trap nights equals one trap set for ten nights or ten traps set for one night.

Integrated Vector Management Black fly Guidelines

Black Fly Site Assessment

<i>Criteria</i>	<i>Evaluation</i>	<i>Decision</i>
Have black flies been identified by laboratory staff?	No→	Do not treat.
Yes ↓		
Does development site contain black fly habitat (flowing water)?	No→	Do not treat.
Yes ↓		
Are there active bird nests?	Yes→	Do not disturb habitat. Consult with District Biologist.
No ↓		
Are endangered species present?	Yes→	Consult supervisor about habitat. Avoid taking endangered species. Sample development site.
No ↓		
Environmentally sensitive habitat?	Yes→	Consult supervisor about habitat. Avoid damage to sensitive areas. Sample development site.
No ↓		
Consider black fly treatment		

Integrated Vector Management Black fly Guidelines

Black Fly Site Treatment

<i>Criteria</i>	<u><i>Evaluation</i></u>	<i>Decision</i>
Does development site contain black fly habitat (flowing water)?	No→	Do not treat.
Yes ↓		
Water quality		
Fresh ↓		
Apply appropriate Public Health Pesticide.		

Integrated Vector Management Fly Control Guidelines

Fly Site Assessment

<i>Criteria</i>	<i><u>Evaluation</u></i>	<i>Decision</i>
Have fly larvae been identified from source?	No→	Collect larvae at source for identification.
Yes ↓		
Can source be modified or reduced?	No→	Treat with PHP.
Yes ↓		
Modify or reduce fly source. Return to monitor fly production in 3-5 days.		

Integrated Vector Management Red Imported Fire Ant Control Guidelines

Definitions

Large treatment site – A RIFA treatment site that is > 1 acre: school, park, golf course, rights-of-way, or multiple family housing such as apartments, duplexes, townhomes, condominiums, or mobile homes.

Mound treatment – A pesticide application of ant bait that eliminates a RIFA colony within 1-3 days.

Mound drench treatment – A pesticide application of a liquid residual insecticide that eliminates a RIFA colony immediately.

PCOs – A Pest Control Operator as licensed by the California Department of Consumer Affairs, Structural Pest Control Board.

Residential site – A single-family home RIFA treatment site.

Stinging incident – An incident where a person is stung multiple times by ants.

Additional Technical Considerations

RIFA Treatment Manual

The RIFA Treatment Manual contains more details and technical specifications for RIFA surveillance, site assessment and treatment. The Manual is provided to all technicians treating for RIFA and is available from the Operations Department on request.

RIFA Public Health Pesticide Use and Resistance Management

1. Consult pesticide label before treatment.
2. Apply pesticides on a rotational basis, as determined by the Director of Operations.
3. If resistance and/or bait aversion is suspected in the field, laboratory and operations staff should be notified for follow-up.

Factors That May Influence the Implementation or Modification of the Program

1. Availability of suitable pesticide bait.
2. Susceptibility of RIFA populations to pesticide bait.
3. Environmental conditions not listed in the guidelines.
4. Availability of District funding or resources.
5. Legislation, regulation, or precedential case authority.
6. Unforeseen biological conditions.
7. Presence or absence of swarming ants and/or a stinging incident.
8. Introduction of an invasive disease vector of public health importance.

5/11/10

Integrated Vector Management Red Imported Fire Ant Control Guidelines

RIFA Site Assessment & Treatment

<i>Criteria</i>	<i>Evaluation</i>	<i>Decision</i>
Is property adjacent to waters of the United States?	Yes	Conduct surveillance for RIFA, refer to RIFA treatment manual, and consult management before treatment
No ↓		
Is property considered an environmentally sensitive site or adjacent to an environmentally sensitive site?	Yes	Conduct surveillance for RIFA, refer to RIFA treatment manual, and consult management before treatment
No ↓		
Are endangered species present?	Yes	Conduct surveillance for RIFA, confirm identification of RIFA, refer to RIFA treatment manual, and consult management before treatment.
No ↓		
Is property a single-family residence?	Yes	Conduct surveillance for RIFA, confirm identification of RIFA, refer to RIFA treatment manual, and apply PHPs according to residential treatment guidelines.
No ↓		
Is property a large treatment site (> 1 acre): park, golf course, apartment complex, or condominium complex?	Yes	Conduct surveillance for RIFA, confirm identification of RIFA, consult RIFA treatment manual, and apply PHPs according to large treatment site guidelines.
No ↓		
Is property a school?	Yes	Conduct surveillance for RIFA, confirm identification of RIFA, consult RIFA treatment manual, and apply PHPs according to school treatment site guidelines.
No ↓		
Conduct surveillance for RIFA and consult manager for site treatment protocol.		

Integrated Vector Management Red Imported Fire Ant Control Guidelines

RIFA Surveillance

<i>Criteria</i>	<i><u>Evaluation</u></i>	<i>Decision</i>
Fire ant mounds visible at site	Yes	Collect a sample and submit to laboratory for identification.
No ↓		
Foraging ants visible at site	Yes	Collect a sample and submit to laboratory for identification.
No ↓		
Place RIFA surveillance lure to collect foraging ants.	Ants on lure	Collect a sample and submit to laboratory for identification.
No ants found on lure ↓		
Site considered free of RIFA		

Integrated Vector Management Red Imported Fire Ant Control Guidelines

Residential Treatment

<i>Criteria</i>	<i>Evaluation</i>	<i>Decision</i>
Is site a single-family residence?	No	Refer to District RIFA program.
Yes ↓		
The District RIFA Program conducts initial inspection and treatment within 3 business days.		Conduct site assessment . Collect ant sample to confirm RIFA identification by the District. Broadcast treatment with RIFA pesticide ant bait in accordance with pesticide label.
↓		
Referral to PCO for 2nd treatment (month 3)		Broadcast treatment with RIFA pesticide ant bait in accordance with pesticide label.
↓		
RIFA complaint by resident	Yes	OCVCD conducts treatment in accordance with pesticide label.
No ↓		
3rd treatment by PCO (month 6)		Broadcast treatment with RIFA pesticide ant bait in accordance with pesticide label.
↓		
The District post-treatment survey (month 9-12). RIFA present ↓	RIFA Absent	Site is removed from the residential treatment cycle.
Begin Residential Treatment Cycle		

Integrated Vector Management Red Imported Fire Ant Control Guidelines

Large Area RIFA Treatment

<i>Criteria</i>	<i>Evaluation</i>	<i>Decision</i>
Is site > 1 acre: school, golf course, park, apartment, condominium or rights-of-way?	No	The District RIFA staff will investigate site and determine treatment protocol.
Yes ↓		
Conduct site assessment & RIFA surveillance.	RIFA not present	Provide education to property owner.
RIFA present at site ↓		
Initial treatment ↓		Collect sample to confirm identification. Apply RIFA pesticide bait according to label specifications.
2nd treatment ↓		Apply RIFA pesticide bait according to label specifications.
3rd treatment ↓		Apply RIFA pesticide bait according to label specifications.
The District posttreatment survey (month 9-12).	RIFA Absent	Site is removed from the RIFA Large Site Treatment Cycle.
RIFA present ↓		
Begin RIFA Large-Site Treatment Cycle.		

5/11/10

Integrated Vector Management Rat Control Guidelines

Additional Technical Considerations

Bait Station Placement – Generally, only two bait stations are placed on a property after the property owner has been instructed to abate rodent harborage and food sources, and signed a Release of Liability form (Appendix I). Bait stations should be placed outside of structures in areas accessible only to rodents. Bait stations should be appropriately labeled and tamper-proof in accordance with rodenticide label requirements. Bait stations should be serviced every six months.

Rat Control & Rodent Disease Surveillance – The District only provides control for rats (*Rattus* spp.) to residents in Orange County. The District conducts surveillance for rodent-borne diseases in Orange County.

Environmentally Sensitive Areas - When properties are adjacent to environmentally sensitive areas, traps should be used prior to bait station placement.

Rodenticide Use and Resistance Management

1. Consult rodenticide label before treatment.
2. Apply rodenticides on a rotational basis as determined by the Director of Operations.
3. If resistance is suspected in the field, laboratory and operations staff should be notified for follow-up.

Factors That May Influence the Implementation or Modify the Program

1. Availability of a suitable rodenticide.
2. Susceptibility of rodent populations to rodenticides.
3. Environmental conditions not listed in the guidelines.
4. Availability of District funding or resources.
5. Legislation, regulation, or precedential case authority.
6. Unforeseen biological conditions.
7. Presence or absence of rodent-borne disease.
8. Introduction of an invasive disease vector of public health importance.

Integrated Vector Management Rat Control Guidelines

Rodent Control Site Assessment

<i>Criteria</i>	<i>Evaluation</i>	<i>Decision</i>
Is homeowner, or adult > 18 years old, available for consultation?	No	Reschedule inspection if possible.
Yes ↓		
Interview homeowner about rat activity on their property.		
↓		
Conduct inspection of property looking specifically for rodent harborage, food sources, structural issues allowing rodents access to home, and rodent droppings.	Yes	Discuss findings with homeowner, provide educational materials, consider rodent bait station placement .
No ↓		
Do not install bait stations and/or remove bait stations and schedule an inspection for 6 months.		

Integrated Vector Management Rat Control Guidelines

Rodent Bait Station Placement

<i>Criteria</i>	<i>Evaluation</i>	<i>Decision</i>
Are rats entering the building?	Yes	Do not place bait station.
No ↓		
Signs of active rodent infestation	Yes	Distribute educational materials and encourage abatement of rodent harborage and food source. Consider rodent bait station placement only after abatement and Release of Liability Form is signed.
No ↓		
Does property have pets and/or small children?	Yes	Distribute educational materials and only place bait station out of reach of pets and small children after Release of Liability Form is signed.
No ↓		
Is adjacent property contributing to a rodent infestation?	Yes	Distribute educational materials and attempt contact of neighbor. Consider rodent bait station placement only after Release of Liability Form is signed.
No ↓		
Is the property adjacent to an environmentally sensitive habitat?	Yes	Distribute educational materials and encourage abatement of rodent harborage and food source. Consider rodent bait station placement only after abatement and after Release of Liability Form is signed.
No ↓		
Consider rodent bait station placement only after abatement and after Release of Liability Form is signed.		

Rat Control Release of Liability

K'WEST PRINTING (714) 997-9630



ORANGE COUNTY VECTOR CONTROL DISTRICT
 13001 Garden Grove Blvd., Garden Grove, CA 92843-2102
 Phone: (714) 971-2421 • (949) 654-2421
 www.ocvcd.org

Date	
ZONE NO.	MAP AREA
Thomas Bros. Guide	
PAGE NO.	GRID
SERVICE REQUEST NUMBER	

RELEASE OF LIABILITY

The undersigned does hereby RELEASE the ORANGE COUNTY VECTOR CONTROL DISTRICT and its officers, agents, and employees from any and all liability arising out of claims or damage pertaining to the placement of rodenticide on the property address listed below.

The undersigned acknowledges that the rodenticide is a poison that should be considered dangerous and may be lethal. Keep all children and pets away from this rodenticide bait.

X _____
 Occupant's Signature

WARNING AND AGREEMENT

THE RODENTICIDE BAITS USED IN ROOF RAT EXTERMINATION CONTAIN POISONS AND SHOULD BE CONSIDERED DANGEROUS AND CAN BE LETHAL IF INGESTED. KEEP ALL CHILDREN AND PETS AWAY FROM PLACED RODENTICIDE BAIT.

If accidentally swallowed by humans, domestic animals, or pets, rodenticides used in roof rat control can reduce the clotting ability of blood and cause internal hemorrhaging. In such cases, immediate medical help should be sought. The antidote recommended for this type of anticoagulant rodenticide is intravenous and oral administrations of Vitamin K combined with blood transfusions. This is the indicated treatment for hemorrhage caused by accidental ingestion of anticoagulant rodenticides.

<input type="checkbox"/> Dog(s) and/or other domestic pet(s) presently reside on this property. I have been warned of the dangers of this rodenticide being ingested by dog(s) and other domestic pet(s). I will keep my pets away from the rodenticide bait and containers.	<input type="checkbox"/> No dogs reside on property.
X _____ Occupant's Signature	

I request that the ORANGE COUNTY VECTOR CONTROL DISTRICT take such steps as are necessary to control roof rat infestation and give my permission for the use of rodenticide bait on my property. I have read the warnings as to the dangers inherent with the use of rodenticide bait and hereby release the ORANGE COUNTY VECTOR CONTROL DISTRICT from any liability for injury, death, and/or damage that may arise from such use.

I agree to warn all persons coming on to my property of the presence of rodenticide thereon, and also agree to indemnify, defend, and hold ORANGE COUNTY VECTOR CONTROL DISTRICT harmless from any claim, liability, injury, death, and/or damage resulting from or caused by the use of said rodenticide.

I further agree to follow the recommendations made by the VECTOR CONTROL INSPECTOR in regard to roof rat control and prevention. In the event that I sell or vacate this property, or feel that the rat problem has abated, I will notify the ORANGE COUNTY VECTOR CONTROL DISTRICT for proper disposal of any existing rodenticide placed on my property.

I understand that in the event that the recommendations presented by the VECTOR CONTROL INSPECTOR are not followed, that no further rat control measures will be taken by the ORANGE COUNTY VECTOR CONTROL DISTRICT.

I have been advised to rat-proof the structures on my property and agree that the ORANGE COUNTY VECTOR CONTROL DISTRICT has no obligation to remove any carcasses from my property.

X _____
 Occupant's Signature

 Occupant's Name (Please Print)

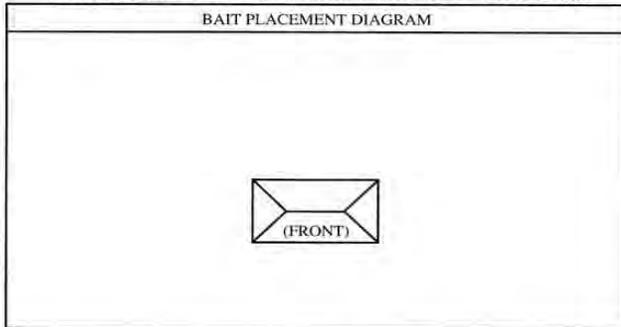
 Street Address Apt. No.

 City Zip Code

 Telephone Number

 Inspector's Name Phone Ext. No.

DO NOT RELOCATE BAIT BLOCKS OR BAIT STATIONS.



Date Replaced _____ Date Removed _____

Number of Bait Blocks Placed: Chlorophacinone _____ Bromadiolone _____

Number of Bait Stations Placed: Number of Bait Stations Replaced: Number of Bait Stations Removed:

White Copy - Administrative

Yellow Copy - Occupant

Pink Copy - Inspector

Appendix II

California Mosquito-Borne Virus Surveillance and Response Plan

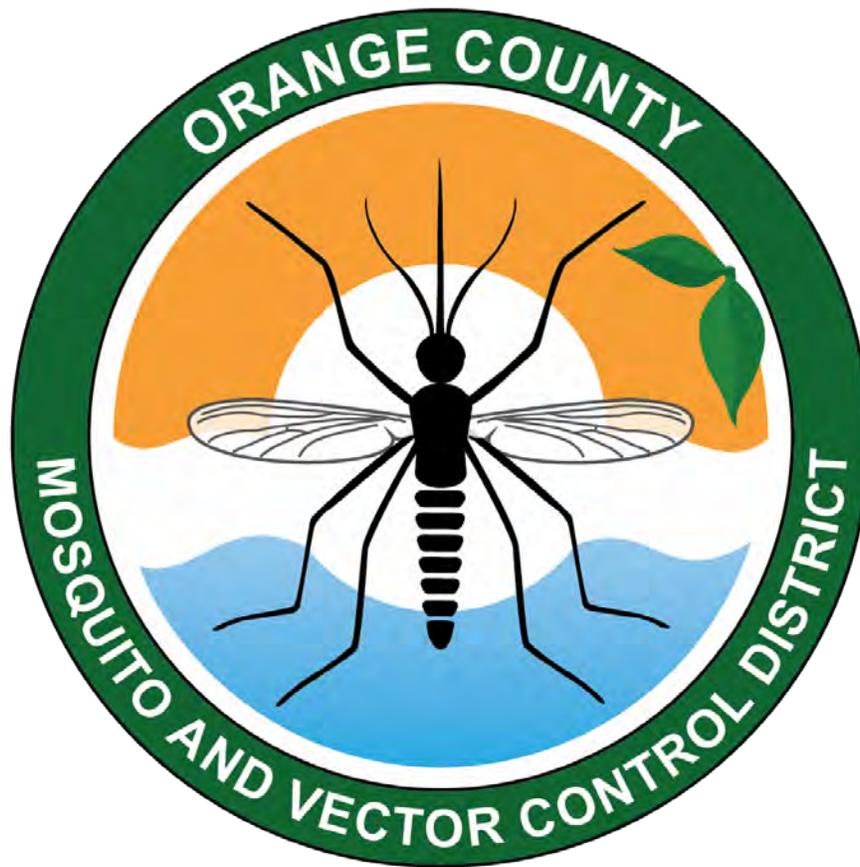
Separate Document

ANNEX B

WEST NILE VIRUS SUPPLEMENTAL PLAN

**TO THE INTEGRATED VECTOR MANAGEMENT
AND RESPONSE PLAN**

ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
INTEGRATED VECTOR MANAGEMENT AND RESPONSE PLAN
*SUPPLEMENTAL CHANGES TO THE 2010 INTEGRATED VECTOR MANAGEMENT
AND RESPONSE PLAN AS IT RELATES TO
WEST NILE VIRUS EMERGENCY MOSQUITO RESPONSE*



Orange County Mosquito and Vector Control District
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August 20, 2015

WEST NILE VIRUS EMERGENCY MOSQUITO RESPONSE PLAN

Introduction

The Orange County Mosquito and Vector Control District (OCMVCD), previously known as the Orange County Vector Control District (OCVCD), was originally formed in 1947 as a mosquito abatement district. Over time, the OCMVCD's mosquito surveillance plan has changed following the introduction of West Nile virus (WNV) in 2003, and because of the on-going threat from invasive mosquitoes and other vector-borne diseases. The present program has been in place since 2008 when in-house real-time reverse transcription PCR (PCR) testing was added to the surveillance program. This plan was initially adopted by the OCMVCD Board of Trustees in May, 2010. Changes were made to the plan following the 2014 WNV super epidemic that resulted in 280 human infections and nine deaths. Since its introduction to Orange County, a total of 532 people have been confirmed infected with WNV and 18 have died.

This document describes an enhanced surveillance and response program for Orange County, which is dependent on the risk level of mosquito-borne virus transmission to humans. The Mosquito-borne Virus Surveillance & Response Plan, 2015 (Appendix A), was generated by the California Department of Public Health (CDPH), Mosquito & Vector Control Association of California and the University of California. This plan constitutes the core of the OCMVCD's WNV Risk Assessment (Table 1). The California Plan's WNV Risk Assessment assigns values to various benchmarks within multiple Surveillance Factor categories. In the OCMVCD's West Nile Virus Risk Assessment worksheet, adjustments were made to the WNV Surveillance Factors to make categories relative to the conditions specific to Orange County.

The risk ratings generated from this assessment can be used to communicate levels of WNV activity to the Local Health Officer to determine whether a declaration of a local public health emergency should be considered. The risk ratings can be used as a basis to communicate risk to the Orange County Emergency Operation Center (EOC). Additionally, the risk rating can be used as justification to request Federal public health exemptions from FIFRA (40 CFR 166) and emergency pesticide tolerance exemptions (40 CFR 176).

In conjunction with the Orange County Health Care Agency (OCHCA) Emergency Operations Plan (EOP), and the OCMVCD Integrated Vector Management (IVM) & Response Plan (Appendix B), the following operational procedure for the OCMVCD has been developed. This follows the recommendations of the California Public Health and Medical Emergency Operations Manual, and the procedure is in coordination with the Orange County Medical Health Operational Area Coordinator (MHOAC) Annex to the OCHCA EOP.

In the event of a local, state, or federal declaration of emergency, the OCMVCD shall assist the MHOAC with investigation and control of vector-borne diseases. The OCMVCD will notify the County Epidemiology Program of any unusual event or finding related to vector-borne diseases. Examples of an unusual event include surveillance data indicating an increased risk of vector-borne disease transmission to residents of Orange County, OCMVCD's intention to implement

area-wide adult mosquito control to target vector-borne diseases in high risk areas, or the presence of a recently introduced vector or disease agent of concern. Epidemiology will notify the MHOAC as needed of any situations affecting human health. The OCMVCD will update the MHOAC, as necessary and if requested, of current vector surveillance, testing volumes and capacity, intended applications of area-wide adult mosquito control, and of any needs for supplies, equipment or personnel due to the emergency or unusual event. OCMVCD may request assistance through the MHOAC to minimize and respond to vector-borne disease events.

WEST NILE VIRUS RISK ASSESSMENT

Response Levels

The OCMVCD's IVM & Response Plan is based on conditions that exist at three response levels: 1) Normal Season, 2) Elevated Risk, and 3) High Risk. Six WNV surveillance factors are analyzed to determine the appropriate response level and include:

1. Environmental conditions (temperature)
2. Adult mosquito abundance
3. WNV infection rate in mosquitoes
4. Number of WNV-positive dead birds
5. WNV antibody seroprevalence in free-ranging birds
6. Human infections of WNV

The majority of the factors listed above are rated on a scale of 1 to 5 with 5 representing conditions indicative of a high risk of human infection with WNV. Factors 5 (seroprevalence) and 6 (human infections) are weighted differently than the other four factors and are rated on adjusted scales of 2 to 5 and 3 to 5, respectively. An overall rating is determined by computing the mean of the six risk factors and is correlated with the response level as follows:

Level 1: Normal Season (Rating – 1.0 to 2.5)

Level 2: Elevated Risk (Rating – 2.6 to 4.0)

Level 3: High Risk (Rating – 4.1 to 5.0)

The West Nile Virus Risk Assessment worksheet (Table 1) is designed to determine the appropriate rating for each of the risk factors for the entire County. These ratings are used to trigger the response levels listed above. Supporting reference documentation can be found in Tables 2 through 9 and Figures 1 through 5. In the event that WNV surveillance factors values are elevated in the historically high WNV risk area of Orange County, additional risk assessment ratings will be calculated for that specific area to generate an appropriate response level (Figure 5). Roles and responsibilities of key agencies involved in implementing the surveillance and response plan are outlined in OCMVCD Response Levels to Risk Ratings. The appropriate

response implemented at each level shall be determined based on the degree and magnitude of risk factors presenting. The WNV surveillance factors used to determine the response level are described below.

Guidelines for adult mosquito surveillance, processing mosquitoes for arbovirus detection, testing of dead birds, as well as information regarding human case definitions and public health pesticides approved for mosquito control in California are part of the State of California Mosquito-Borne Virus Surveillance & Response Plan, 2015 (Appendix A). Specific triggers for mosquito operational decisions can be found in the IVM & Response Plan (Appendix B).

West Nile Virus Surveillance Factors

Environmental Conditions

OCMVCD reviews weather reports from local, state, and federal agencies biweekly to assess current conditions and analyze the potential influence on mosquito breeding and virus replication. The average high, low, and mean temperatures by month from 2010 through 2014 are found in Table 2 (UCIPM Online, 2015). Total precipitation is also considered but has not been found to be a critical factor in mosquito-borne disease outbreaks in southern California.

Additional websites related to weather conditions can be found in the California State Mosquito-Borne Virus Surveillance & Response Plan, 2015 (Appendix A).

Adult *Culex quinquefasciatus* and *Culex tarsalis* Mosquito Abundance

Adult mosquito surveillance in Orange County is conducted by setting 63 carbon dioxide (CO₂) baited traps and 33 gravid traps on a weekly basis during the warm months of March through November and by setting 21 carbon dioxide (CO₂) baited traps and 15 gravid traps on a biweekly basis during cooler weather from December – March (Table 3 and Table 4). Additional adult mosquito surveillance is conducted after the detection of WNV-positive dead birds, human infections, and in response to nuisance biting complaints from the public. Only routinely trapped locations using CO₂ and gravid traps are used to generate a five-year average for abundance, which is then used as a baseline to compare current mosquito abundance. Mosquito trap locations (Tables 3 and 4; Figures 1 and 2) and average monthly *Cx. quinquefasciatus* abundance can be found in Table 5 (*Cx. tarsalis* averages not shown). *Cx. tarsalis* and *Cx. quinquefasciatus* abundance is scored separately when calculating the WNV Risk Assessment ratings and response level.

Guidelines for mosquito surveillance are summarized in the California State Mosquito-Borne Virus Surveillance & Response Plan, 2015 (Appendix A).

Infection Rates in *Culex quinquefasciatus* and *Culex tarsalis* Mosquitoes

Adult mosquito abundance and their WNV infection rates are the key factors used to evaluate the risk of disease transmission to humans. Once collected in CO₂-baited and gravid traps, mosquitoes are pooled into variable sized samples containing five (5) to 50 mosquitoes. Pooled

samples are then tested at OCMVCD using real time PCR. Results are generated up to two times per week during the months of high mosquito activity. Infection rates [calculated using the Maximum Likelihood Estimator (MLE), Biggerstaff, 2003] are determined biweekly and represent the number of WNV-positive mosquito pools found in collections of a particular mosquito species over a defined time period. The OCMVCD's current system is designed to detect WNV in real time, with retrospective testing of samples for other arboviruses, such as St. Louis encephalitis (SLE) and western equine encephalomyelitis (WEE).

Procedures for processing mosquitoes for virus infection are summarized in the California State Mosquito-Borne Virus Surveillance & Response Plan, 2015 (Appendix A).

Dead Bird WNV Infection

The OCMVCD began testing dead birds for WNV in 2003. Currently, dead birds are reported to OCMVCD for collection and tested in-house by PCR. The OCMVCD works with the public, local animal control agencies, and wildlife rehabilitators to coordinate collection of dead birds. Dead birds are necropsied at OCMVCD and the kidney is removed for WNV testing. The number of dead birds tested and positive for WNV is updated weekly on the OCMVCD website. The number of WNV-positive dead birds collected in Orange County summarized biweekly over the last five years can be found in Table 6.

Guidelines for Procedures for Testing Dead Birds are found in California State Mosquito-Borne Virus Surveillance & Response Plan, 2015 (Appendix A).

WNV Antibody Seroprevalence in Free-Ranging Birds

Detection of WNV transmission in avian populations can be achieved by collecting, and testing the samples obtained from free-ranging birds to detect anti-WNV antibodies and circulating viral RNA. Currently, the OCMVCD operates multiple bird traps within historically defined areas of moderate-to-high WNV activity (Table 8). Traps are baited with bird seed on a biweekly basis and birds are captured, held overnight, bled and released. This activity is permitted by the United States Geological Survey (Permit #23547) and the California Department of Fish and Wildlife Scientific Collecting Permit (Permit ID Number 009202). Protocols for bleeding and testing of free-ranging birds can be found in Fair et al. 2010, Hall 1995, and Lanciotti et al. 2000. Patterns observed in avian herd immunity to WNV (i.e., seroprevalence) show that in some years when seroprevalence is less than 10 percent in late winter and spring, outbreaks of West Nile virus neuroinvasive disease occurred in the ensuing summer (Kwan et al. 2012). Based on the analysis of eleven years of serological data (2004-2014), similar patterns of "herd" immunity are observed in avian populations in Orange County. Thus, free-ranging bird seroprevalence has been incorporated as a surveillance factor in the OCMVCD's West Nile Virus Risk Assessment worksheet. Seroprevalence data from 2008 to 2014 are included in Table 7. Locations of bird traps are listed in Table 8 and shown in Figure 3.

Human Infections

In general, human infections are not a sensitive surveillance indicator of neurotropic arbovirus activity, such as WNV, SLE, WEE, because most human infections (> 80%) have no, or only mild, symptoms. Communication with key hospitals and local health officials has been enhanced following the super epidemic of WNV in 2014. Rapid detection and reporting of confirmed human cases of WNV and of other arboviral diseases is crucial to local mosquito control agencies in planning and expending emergency control activities to prevent additional human infections. Human infections by year of onset are listed in Table 9 for 2004 - 2014. Human infections by week of onset for 2004 – 2014 are depicted in Figure 4.

More information about human case reporting and testing are found in the California State Mosquito-Borne Virus Surveillance and Response Plan, 2015 (Appendix A).

Historical Risk Area Consideration

Spatial and Temporal Predictors of High WNV Risk in Orange County

Orange County has been recognized as a hotspot of WNV activity since 2004. An analysis of WNV surveillance factors throughout Orange County from 2004 to 2013 produced a spatial model (Figure 5) that captured 84.4% of all WNV human cases (Liao et al. 2014). When comparing years with high WNV activity (2004, 2008, 2012, and 2014) to years with low WNV activity (2005 to 2007; 2009 to 2011; and 2013), several indicators have emerged as reliable predictors of an impending WNV epidemic:

- Low (< 10%) winter/spring WNV antibody seroprevalence rates in wild birds;
- Early season (May/June) detection of WNV-positive dead birds at infection rates > 20%;
- Early season (May/June) detection WNV-positive mosquito pools at MLE infection rates > 2.1;
- Early season (March - June) detection of WNV human infections.

In the event that WNV surveillance factors are occurring in the historically high WNV risk area of Orange County, especially from May through June, additional Risk Assessment ratings for that area will be calculated and presented to determine an appropriate OCMVCD response (Figure 5).

OCMVCD Response Levels to Risk Ratings

Normal Risk Rating: 1.0 – 2.5

General Conditions
<ul style="list-style-type: none"> • Cool to moderate seasonal temperatures (< 65°F) • Mosquito abundance at or below five year average (key indicator = adults of vector species) • Mosquito infection rates (0 – 1.0 MLE) • None or 1 (or more) WNV positive dead bird(s) in neighboring county • Approximately 20-30% antibody seroprevalence in free-ranging birds • No human cases
Response Activities by Role
<p>District Manager</p> <ul style="list-style-type: none"> • Ensure adequate emergency funding • Establish and maintain routine communication with the Emergency Operations Center personnel
<p>Director of Communications</p> <ul style="list-style-type: none"> • Conduct routine public education (eliminate standing water around homes, use personal protection measures) • Release routine press notices • Inform the public about adult mosquito control pesticide applications, if appropriate • Notify OCHCA of the need to alert physicians and/or veterinarians of the surveillance activity
<p>Director of Scientific and Technical Services</p> <ul style="list-style-type: none"> • Compile data for West Nile Virus Risk Assessment worksheet • Conduct routine mosquito and virus surveillance activities • Evaluate pesticide resistance in vector species
<p>Director of Operations</p> <ul style="list-style-type: none"> <input type="checkbox"/> Coordinate routine mosquito larval control activities <input type="checkbox"/> Define target area for potential adult mosquito control activities <input type="checkbox"/> Inventory pesticides and equipment <input type="checkbox"/> Ensure aerial adulticide contract is current <input type="checkbox"/> Contact OC Agricultural Commissioner to obtain current list of registered organic growers <input type="checkbox"/> Establish communication chain between OCHCA and OCMVCD for potential distribution of ecologic investigations of human exposure sites

Elevated Risk Rating 2.6-4.0

General Conditions
<ul style="list-style-type: none"> • Temperatures above average (66-79° F) • Adult mosquito abundance average within 91 – 150 % of 5-year average • One or more WNV positive mosquito collections (MLE < 5) • Multiple WNV positive dead birds distributed broadly throughout the County • Late winter and early spring avian WNV seroprevalence ranging from 10 to 20% or evidence of recent infection in wild birds including WNV isolation, multiple seroconversions in hatch-years, or notable seroprevalence increase in the wild bird population • One human case in Orange County • Viral activity (mosquito pools and dead birds) occurring in historical high risk area
Response Activities by Role
<p>District Manager</p> <ul style="list-style-type: none"> • Review epidemic response plan • Notify Board of Trustees of increased WNV risk • Prepare to coordinate epidemic response in consultation with management team • Consider suspending other District programs as needed or necessary
<p>Director of Communications</p> <ul style="list-style-type: none"> • Review epidemic response plan • Enhance public education, coordinate with OCHCA to distribute messages on signs and symptoms of encephalitis and recommend medical care if needed • Inform public about adult mosquito control pesticide applications, if appropriate • Enhance information to public health providers • Notify key agencies and impacted cities of presence of viral activity, including the EOC
<p>Director of Scientific and Technical Services</p> <ul style="list-style-type: none"> • Compile data for West Nile Virus Risk Assessment • Review epidemic response plan • Increase adult mosquito surveillance • Increase number of mosquito pools tested for virus • Review candidate pesticides for availability and susceptibility of vector mosquito species • Identify any special environmental compliance concerns in affected area and communicate with Lead District staff
<p>Director of Operations</p> <ul style="list-style-type: none"> • Coordinate routine ecologic investigations of human exposure sites and report to OCHCA • Review epidemic response plan • Increase surveillance and control of mosquito larvae by decreasing cycle times • Coordinate localized chemical control of adult mosquitoes • Brief aerial adulticide contractor about the current status of WNV surveillance factors

High Risk Rating 4.1-5.0

General Conditions	
<ul style="list-style-type: none"> • Temperatures well above average (>79° F) • Adult vector population above 5-year average (>150%) • Multiple WNV positive mosquito collections (MLE > 5.0) • Multiple clusters of WNV positive dead birds throughout the County • One or more WNV positive human cases within the County • Late winter and early spring avian WNV seroprevalence below 10% or evidence of recent infection in wild birds including WNV isolation, multiple seroconversions in hatch-years, or notable seroprevalence increase in the wild bird population • Temporal and spatial clustering of viral activity (mosquito pools and dead birds) occurring in historical high risk area 	
Response Activities by Role	
<p>District Manager</p> <ul style="list-style-type: none"> • Ensure adequate emergency funding • Coordinate epidemic response and communicate plan with Board of Trustees • Discuss with OCHCA anticipated need for area-wide adult mosquito control and request notification of the MHOAC • Notify Orange County Agricultural Commissioner of area-wide adult mosquito control • Schedule adult mosquito control as appropriate by ground-based equipment or aircraft • Contact aerial mosquito control contractor; schedule aerial application, if appropriate • Discuss with local Health Officer whether declaration of a local public health emergency should be considered • Coordinate the response with the Emergency Operations Center • Provide situational status updates to MHOAC if requested • Request public health exemptions from FIFRA (40 CFR 166) and emergency tolerance exemptions (40 CFR 176) 	
<p>Director of Administrative Services</p> <ul style="list-style-type: none"> • Secure state funds and resources, if available, to assist epidemic control efforts • Work with aerial mosquito control contractor to schedule payment for control efforts 	
<p>Director of Communications</p> <ul style="list-style-type: none"> • Conduct full scale media campaign • Implement campaign to notify residents of area-wide adult mosquito control pesticide application • Continue mosquito education and control programs until mosquito abundance or mosquito infection rates are substantially reduced and no additional human cases are detected 	
<p>Director of Scientific and Technical Services</p> <ul style="list-style-type: none"> • Determine flight plan for aerial pesticide application, if appropriate • Continue to compile data for WNV Risk Assessment • Ensure remaining environmental compliance requirements are met • Deploy surveillance equipment for evaluation of pesticide applications 	

- Notify registered organic growers of area-wide application of public health pesticides

Director of Operations

- Coordinate ecologic investigations of human exposure sites and reporting to OCHCA
- Continue enhanced larval surveillance/ control and reduce larviciding cycle times
- Coordinate adult mosquito control efforts in high risk areas
- Determine target area for ground-based public health pesticide application, if appropriate.
- Determine flight plan for aerial public health pesticide application, if appropriate

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Table 1 – Orange County Mosquito and Vector Control District West Nile Virus Risk Assessment

Table 1. WNV Surveillance Factor	Assessment Value	Benchmark	Value	
1. Environmental Conditions Favorable environmental conditions in Orange County for WNV multiplication/transmission. Considers temperature for prior 2 week period.	1	Average daily temperature ≤ 56°F		
	2	Average daily temperature 57 - 65°F		
	3	Average daily temperature 66 - 72°F		
	4	Average daily temperature 73 - 79°F		
	5	Average daily temperature > 79°F		
			Cx.	Cx.
			quinq.	tarsalis
2. Abundance of adult <i>Culex quinquefasciatus</i> and/or <i>Culex tarsalis</i> Area wide average of adult mosquitoes the last 5 years = mosquitoes/trap night by month.	1	Vector abundance well below average (≤ 50%)		
	2	Vector abundance below average (51 - 90%)		
	3	Vector abundance average (91 - 150%)		
	4	Vector abundance above average (151 - 300%)		
	5	Vector abundance well above average (> 300%)		
3. WNV Infection rate (MLE) in variable pool sizes of <i>Culex quinquefasciatus</i> and <i>Culex tarsalis</i> mosquitoes. Considers pooled data for prior 1 or 2 week period.	1	MLE = 0		
	2	MLE ≥ 0.001 – 1.0		
	3	MLE = 1.1 – 2.0		
	4	MLE = 2.1 - 5.0		
	5	MLE > 5.0		
4. Dead Bird WNV Infection Number of birds that have tested positive (recent infections only) for WNV during the prior 30 days.	1	No WNV-positive dead birds in Southern California		
	2	One or more WNV-positive dead birds in neighboring county		
	3	One WNV-positive dead bird in Orange County		
	4	Multiple WNV-positive dead birds in broad region of Orange County		
	5	Multiple WNV-positive dead birds in specific region of Orange County		
5. Seroprevalence of WNV in free-ranging birds WNV antibody-positive/total sampled biweekly.	2	> 30% seroprevalence		
	3	21 - 30% seroprevalence		
	4	11 - 20% seroprevalence		
	5	< 10% seroprevalence		
6. Human WNV Infections This factor is not included in calculations if no cases are detected in region	3	One or more human WNV infections in neighboring county		
	4	One or more human WNV infections in Orange County		
	5	Multiple human WNV infections in specific region of Orange County		
			Cx.	Cx.
			quinq.	tarsalis
WNV Response Level/Average Rating Normal Season (1.0 to 2.5) Elevated Risk (2.6 to 4.0) High Risk (4.1 to 5.0)	TOTAL			
	AVERAGE			

Table 2 – Average Minimum and Maximum Temperatures (°F) in Orange County, California.

Time Period (biweekly)	2010			2011			2012			2013			2014			5-Year Average		
	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min
Jan 1-15	76	63	49	65	54	43	73	58	42	61	49	37	72	59	45	70	56	43
Jan 16-31	65	56	46	73	59	45	68	56	43	71	58	45	72	59	47	70	58	45
Feb 1-14	66	57	47	69	55	41	69	57	44	62	52	41	67	57	46	67	55	44
Feb 15-28	70	59	48	60	50	41	65	54	42	67	54	40	72	60	48	67	55	44
Mar 1-15	64	54	45	70	57	45	71	57	44	71	58	45	74	62	51	70	58	46
Mar 16-31	74	61	48	66	55	45	64	55	45	69	58	47	71	61	51	69	58	47
Apr 1-15	67	57	47	68	58	47	69	56	43	69	59	49	75	62	49	70	58	47
Apr 16-30	67	58	48	72	62	51	73	62	51	73	61	49	75	64	53	72	61	50
May 1-15	72	61	51	74	61	49	71	61	51	77	65	54	82	69	55	75	64	52
May 16-30	70	61	52	70	60	50	74	64	53	74	65	55	77	67	57	73	63	53
Jun 1-15	74	66	58	73	65	56	73	64	55	74	66	57	78	68	58	75	66	57
Jun 16-31	74	65	56	76	66	56	77	66	54	80	69	57	79	69	59	77	67	56
Jul 1-15	76	67	58	81	71	60	79	68	58	82	72	61	84	73	63	80	70	60
Jul 16-31	78	68	59	79	68	58	79	68	57	78	68	59	84	73	62	80	69	59
Aug 1-15	77	66	55	80	69	57	86	74	62	83	69	55	84	73	63	82	70	58
Aug 16-31	85	71	58	84	70	57	86	75	63	87	74	61	85	73	61	85	73	60
Sep 1-15	79	67	54	82	69	56	88	74	61	88	75	62	90	76	63	85	72	59
Sep 16-30	84	70	55	77	67	57	86	72	58	81	68	56	84	73	61	82	70	57
Oct 1-15	76	67	57	79	65	51	80	68	56	78	66	53	86	72	58	80	67	55
Oct 16-31	70	62	55	74	62	50	77	65	53	75	63	51	79	68	56	75	64	53
Nov 1-15	79	64	50	68	57	45	73	60	47	78	64	50	77	65	53	75	62	49
Nov 16-30	63	52	42	69	58	46	69	59	48	67	58	49	76	63	50	69	58	47
Dec 1-15	71	57	44	63	52	41	66	57	49	65	54	42	69	61	53	67	56	46
Dec 16-30	61	53	46	68	54	41	60	51	41	70	58	45	66	56	46	65	54	44

Table 3 – List of Gravid Trap Locations in Orange County, 2015.

Site Name	City	LATITUDE	LONGITUDE
39 Marsh	Huntington Beach	33.652188	-117.987509
Central Park	Huntington Beach	33.70633	-118.001806
Seal Beach - Hellman	Seal Beach	33.749845	-118.099752
Seal Beach - Leisure World	Seal Beach	33.773958	-118.095089
Pett's Residence	Huntington Beach	33.681454	-117.991867
Fairview Park	Costa Mesa	33.666769	-117.940251
Seal Beach NWS - Nature Center	Seal Beach	33.744892	-118.080668
Westminster Cemetery	Westminster	33.74818	-117.994807
Fairhaven Cemetery	Santa Ana	33.769162	-117.841918
Centennial Park	Santa Ana	33.72119	-117.910417
Grijalva Park	Orange	33.792321	-117.819961
Holy Sepulcher Cemetery	Orange	33.81407	-117.766031
W MAIN STREET	TUSTIN	33.741344	-117.827109
OCMVCD	Garden Grove	33.775497	-117.903915
SJWS	Irvine	33.660505	-117.841037
Aliso Creek	Laguna Hills	33.595058	-117.710332
IVC, Irvine Valley College	Irvine	33.676322	-117.77922
Modjeska Park	Anaheim	33.815466	-117.954318
La Habra (Osornio Park Creek)	La Habra	33.944906	-117.966635
Los Alamitos Race Track	Los Alamitos	33.806482	-118.046184
Anaheim Cemetery	Anaheim	33.843172	-117.900118
Craig Park	Fullerton	33.894518	-117.885981
Forest Lawn Cemetery	Cypress	33.834147	-118.059148
Memory Gardens Cemetery	Brea	33.934612	-117.902757
Miller Basin	Anaheim	33.866413	-117.856114
Ralph B. Clark Regional Park	Fullerton	33.89256	-117.975951
Muckenthaler Cultural Center	Fullerton	33.875414	-117.944426
Oso Creek	Mission Viejo	33.575091	-117.672476
Ortega Equestrian Center	San Juan Capistrano	33.49953	-117.655236
Saddleback College	Mission Viejo	33.547222	-117.661944
San Clemente Skeet Club	San Clemente	33.409465	-117.592236
Vista Terrace	Lake Forest	33.667811	-117.663571
Michelson Dr.	Irvine	33.673654	-117.843569

Table 4 – List of CO2 Trap Locations, Orange County 2015.

Site Name	City	LATITUDE	LONGITUDE
39 Marsh	Huntington Beach	33.652188	-117.987509
(BC) South	Huntington Beach	33.684587	-118.025231
(BC) Harriet Wieder Park	Huntington Beach	33.68896	-118.019877
(BC) North	Huntington Beach	33.708072	-118.040666
Central Park	Huntington Beach	33.70633	-118.001806
Kadane Marsh-LC	Costa Mesa	33.643377	-117.945098
Kadane Marsh-Central	Costa Mesa	33.643377	-117.945098
Pett's Residence	Huntington Beach	33.681454	-117.991867
Fairview Park	Costa Mesa	33.666769	-117.940251
Seal Beach NWS - Torpedo 88	Seal Beach	33.745951	-118.072744
Seal Beach NWS - Gun Range	Seal Beach	33.743059	-118.085266
Seal Beach NWS - Nature Center	Seal Beach	33.744892	-118.080668
Centennial Park	Santa Ana	33.72119	-117.910417
W MAIN STREET	TUSTIN	33.741344	-117.827109
OCMVCD	Garden Grove	33.775497	-117.903915
Peter's Canyon	Orange	33.784894	-117.758989
Villa Park	Orange	33.81407	-117.766031
SJWS	Irvine	33.660505	-117.841037
Bayview Park	Newport Beach	33.653122	-117.868002
Big Canyon – Back Bay	Newport Beach	33.631582	-117.884634
Moulton Res	Laguna Hills	33.621102	-117.73149
Carlson Marsh	Irvine	33.662975	-117.848811
Harvard X University	Irvine	33.657253	-117.838397
Laguna Lakes	Laguna Beach	33.610764	-117.755176
Mason Park	Irvine	33.653493	-117.828902
UCIM #13	Irvine	33.66228	-117.850016
UCIM #14	Irvine	33.663	-117.852
UCIM #20	Irvine	33.655323	-117.85342
UCIM #5	Irvine	33.660195	-117.854598
University at La Vida	Newport Beach	33.647924	-117.864769
Modjeska Park	Anaheim	33.815466	-117.954318
La Habra (Osornio Park Creek)	La Habra	33.944906	-117.966635
Los Alamitos Race Track	Los Alamitos	33.806482	-118.046184
Muckenthaler Cultural Center	Fullerton	33.875414	-117.944426
Arroyo Trabuco G.C., Trabuco Creek	Mission Viejo	33.545719	-117.659839
Coto de Caza - South	Rancho Santa Margarita	33.563714	-117.58829
Coto de Caza North	Rancho Santa Margarita	33.564936	-117.587779

Table 4 Cont. – List of CO2 Trap Locations, Orange County 2015.

Site Name	City	LATITUDE	LONGITUDE
Horno Creek	San Juan Capistrano	33.526194	-117.648425
Ladera Ranch - Arroyo Trabuco Marsh	Ladera Ranch	33.569793	-117.644967
Nichols Institute	Unincorporated OC	33.564205	-117.545294
Oso Creek	Mission Viejo	33.575091	-117.672476
San Clemente Skeet Club	San Clemente	33.409465	-117.592236
Trestles	San Clemente	33.387137	-117.594023
Arroyo Trabuco G.C., Trabuco Creek	Mission Viejo	33.545719	-117.659839
Vista Terrace	Lake Forest	33.667811	-117.663571
Shadow Rock Marsh	Rancho Santa Margarita	33.661392	-117.564722
Serrano Creek	Lake Forest	33.649256	-117.689534
Kite Hill	Laguna Niguel	33.543176	-117.71591
Oso Res	Mission Viejo	33.65987	-117.627349
Severyns Rd	Tustin	33.717077	-117.825311
Robinson Ranch, Plano Trabuco	Rancho Santa Margarita	33.651982	-117.597164
21st and Alona	Santa Ana	33.763257	-117.89359
Romneya Dr. and N West St	Anaheim	33.850771	-117.932236
N. Bristol St & W Park Ln	Santa Ana	33.771996	-117.884815
Townley St & Marty Ln	Santa Ana	33.769379	-117.90684
W. Civic Center Dr. & English St	Santa Ana	33.751474	-117.89665
Monarch St & Blades Av	Garden Grove	33.791689	-118.006764
Burning Tree Rd & Moore Av	Fullerton	33.875828	-117.973553
S Manchester Av & City Bl W	Orange	33.787531	-117.8932
Markon Dr & Patterson Dr	Garden Grove	33.798364	-118.008114
W Chapman Av & N Basque Av	Fullerton	33.873761	-117.950633
Walnut St	La Habra	33.939778	-117.950458
N Schaffer St & E Cumberland Rd	Orange	33.825314	-117.849045

Table 5 – Average Number of *Culex quinquefasciatus* Mosquitoes in Gravid Traps by Month, 2010-2014.

Month	2010	2011	2012	2013	2014	5 Year Average
Jan	9.33	1.17	5.25	7.63	18.56	8.76
Feb	4.98	1.50	6.66	2.25	2.60	4.75
Mar	18.01	0.30	6.02	17.13	2.20	10.82
Apr	19.63	4.13	19.31	18.36	40.56	19.85
May	35.27	6.77	21.24	22.62	18.56	22.12
Jun	42.30	17.53	24.60	21.56	31.21	27.50
Jul	39.55	34.94	22.15	15.93	27.28	27.39
Aug	12.05	34.50	22.25	22.77	43.18	28.54
Sep	5.65	20.33	17.70	16.13	32.15	18.39
Oct	5.00	18.45	14.60	23.76	39.62	22.50
Nov	6.13	17.19	16.67	22.47	33.23	21.59
Dec	3.69	7.58	13.67	16.88	22.83	11.78

Table 6 – West Nile Virus Positive Dead Bird Collections, 2010-2014.

	2010	2011	2012	2013	2014	5 YEAR AVG
Jan 1-15	0	0	0	0	1	0.2
Jan 16-31	0	0	0	0	0	0
Feb 1-14	0	0	0	0	0	0
Feb 15-28	0	0	0	0	0	0
Mar 1-15	0	0	0	0	0	0
Mar 16-31	0	0	0	0	0	0
Apr 1-15	0	0	0	0	0	0
Apr 16-30	0	0	0	0	0	0
May 1-15	0	1	0	0	0	0.2
May 16-31	1	1	0	0	0	0.4
Jun 1-15	0	0	0	1	6	1.4
Jun 16-31	0	2	0	0	3	1
Jun 1-15	1	0	1	1	9	2.4
Jun 16-30	1	0	0	1	12	2.8
Jul 1-15	1	6	3	1	30	8.2
Jul 16-31	2	2	5	10	77	19.2
Aug 1-15	2	3	13	6	82	21.2
Aug 15-31	5	6	31	2	45	17.8
Sep 1-15	0	13	25	6	53	19.4
Sep 16-30	0	9	15	3	68	19
Oct 1-15	3	2	13	3	24	9
Oct 15-30	0	2	2	4	14	4.4
Nov 1-15	1	1	2	1	11	3.2
Nov 15-30	0	0	0	0	4	0.8
Dec 1-15	0	0	0	0	0	0
Dec 16-31	0	0	0	0	4	0.8

Table 7 – Herd Immunity (% seropositive) for House Finches by Quarter and Number of Human Infections (2008-2014), Orange County.

Year	Quarter	% WNV-Seropositive	Number of Human Cases with Known Onset Date
2008	Jan-Mar	9.91	0
	Apr-Jun	2.39	2
	Jul-Sep	8.12	68
	Oct-Dec	18.90	1
2009	Jan-Mar	13.02	0
	Apr-Jun	5.18	1
	Jul-Sep	3.30	2
	Oct-Dec	3.16	1
2010	Jan-Mar	2.42	0
	Apr-Jun	4.49	0
	Jul-Sep	0.00	1
	Oct-Dec	3.23	0
2011	Jan-Mar	11.90	0
	Apr-Jun	6.28	0
	Jul-Sep	11.84	8
	Oct-Dec	22.46	2
2012	Jan-Mar	16.00	0
	Apr-Jun	7.78	0
	Jul-Sep	9.75	36
	Oct-Dec	28.21	7
2013	Jan-Mar	20.21	0
	Apr-Jun	14.95	0
	Jul-Sep	8.43	6
	Oct-Dec	12.50	4
2014	Jan-Mar	7.38	1
	Apr-Jun	9.09	2
	Jul-Sep	45.19	232
	Oct-Dec	60.78	14

Table 8 – Location of Free-Ranging Bird Traps, Orange County 2010-1015.

Location	City	Latitude	Longitude
OCMVCD	Garden Grove	33.775497	-117.903915
Modjeska Park	Anaheim	33.815466	-117.954318
Anaheim Cemetery	Anaheim	33.843172	-117.900118
Blooms	Tustin	33.765149	-117.806015

Table 9 – Human West Nile Virus Infections, Orange County, 2004-2014.

Year	Total Human Infections (Deaths)
2004	64 (4)
2005	17 (0)
2006	7 (0)
2007	10 (0)
2008	79 (3)
2009	4 (0)
2010	1 (0)
2011	10 (0)
2012	48 (2)
2013	12 (0)
2014	280 (9)
Grand Total	532 (18)

Figure 1 – Map of Gravid Trap Locations in Orange County, 2014.



Figure 2 – Map of CO2 Trap Locations in Orange County, 2014.



Figure 3 – Map of Free-Ranging Bird Traps, Orange County, 2014.



Figure 4 – Historical Human WNV Infections by Disease Onset Week, Orange County, 2004 – 2014.

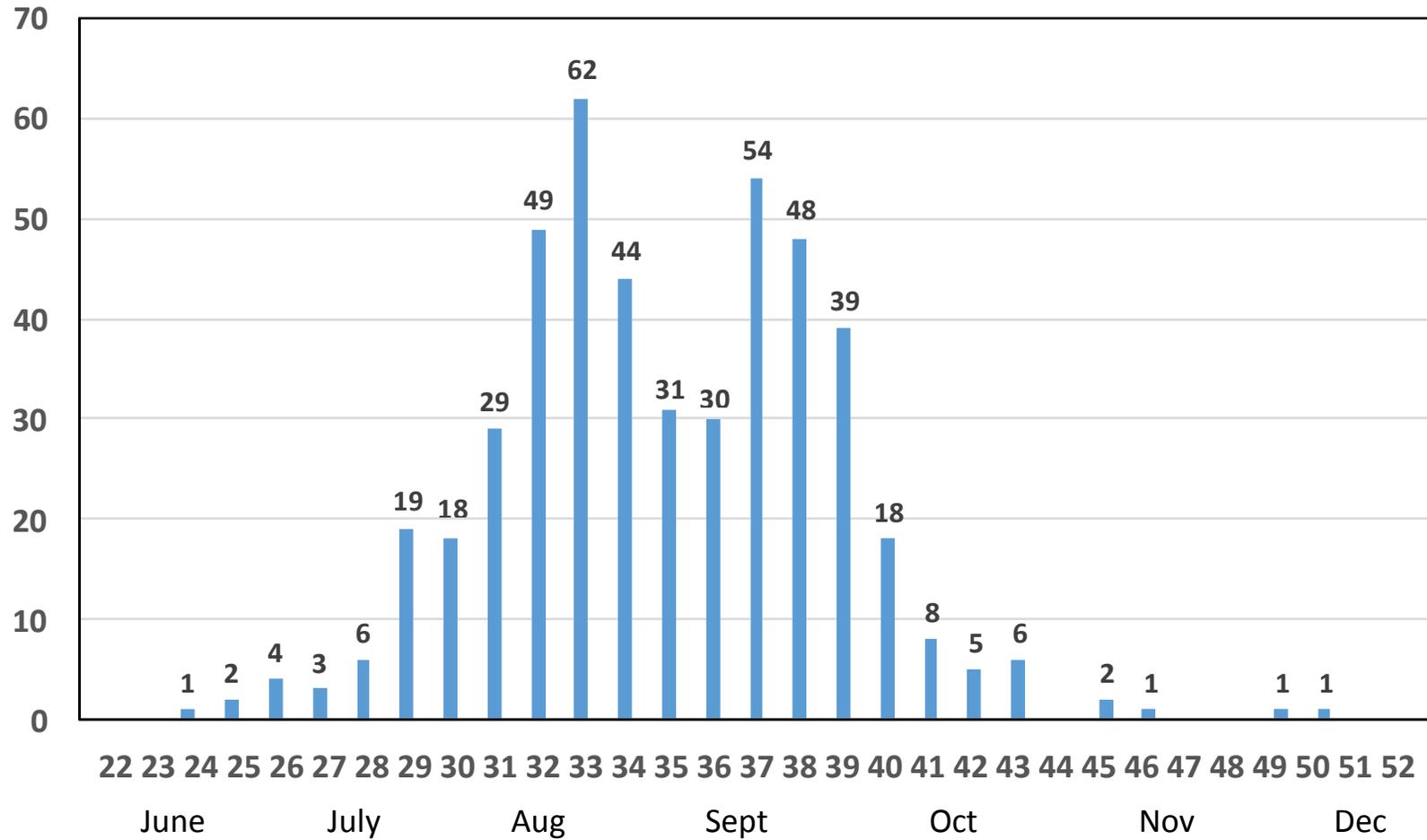
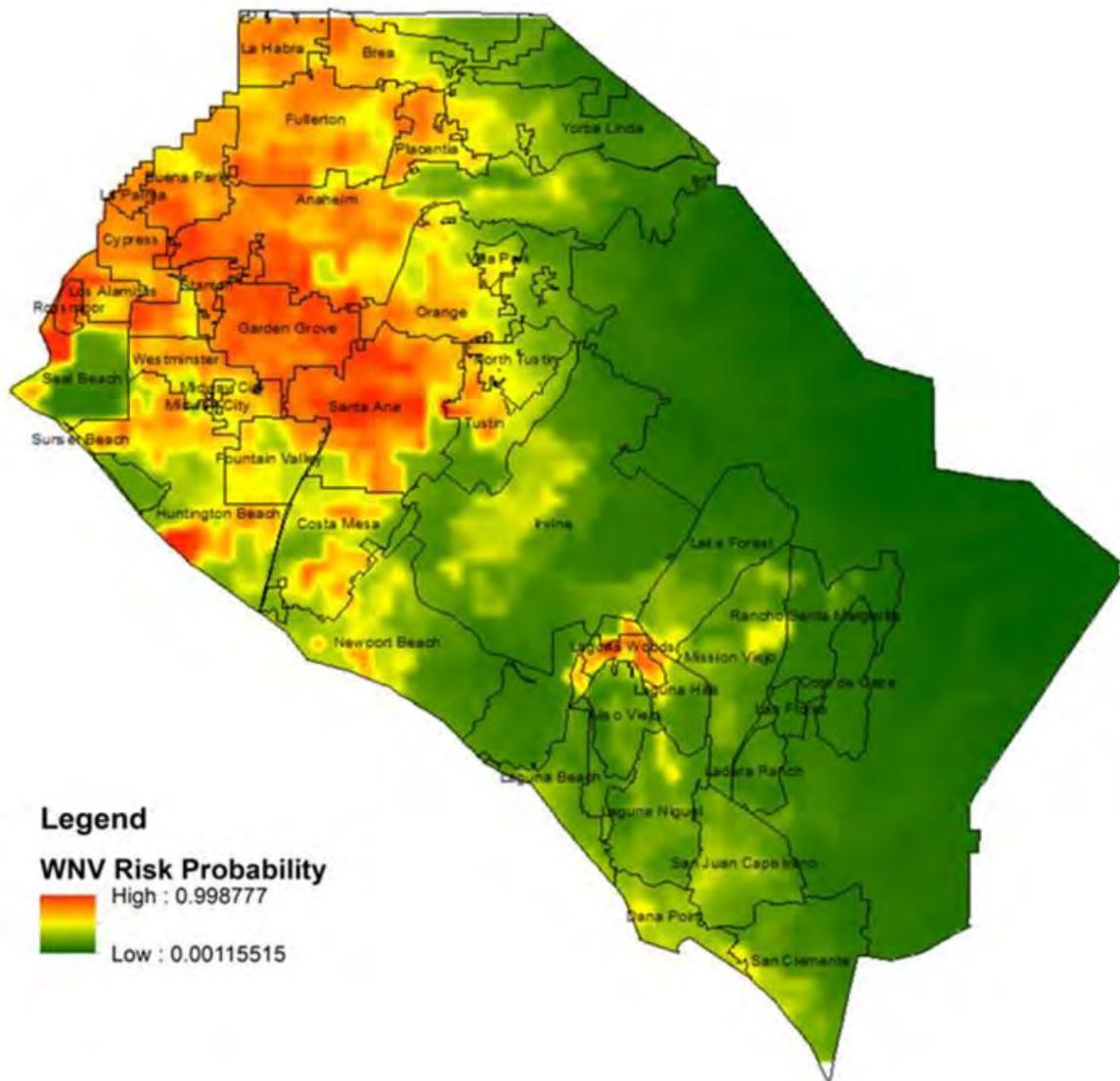


Figure 5 – WNV High Risk Area Based on Environmental and Historical Surveillance Factors, 2004-2013.



ANNEX C

DRAFT

AEDES MOSQUITO

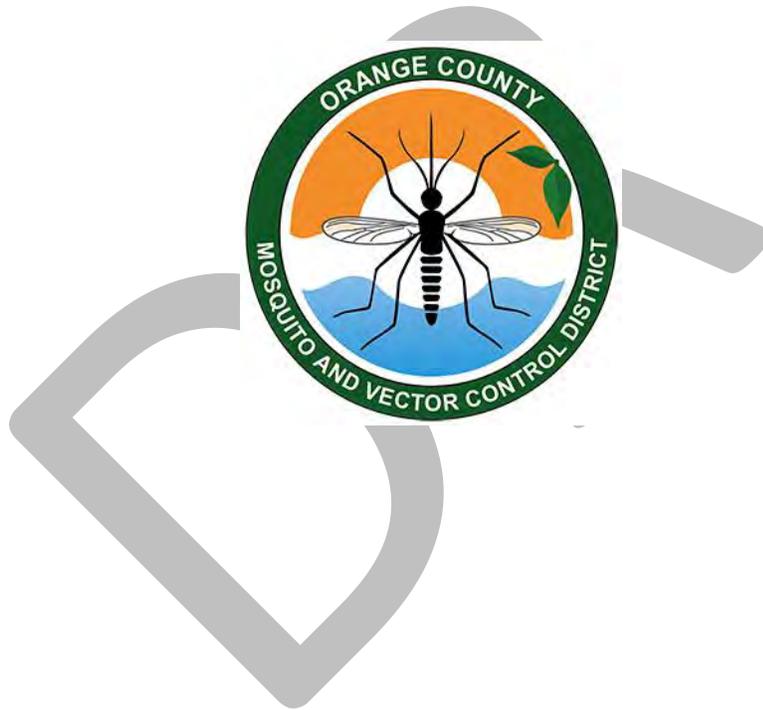
RESPONSE

PLAN

Orange County Mosquito and Vector Control District

DRAFT Response Plan for Invasive *Aedes* Mosquitoes and the Diseases They Vector (Zika/dengue/chikungunya/yellow fever)

Supplement to Integrated Vector Management & Response Plan



Contact: Robert Cummings, Director of Scientific & Technical Services
rcummings@ocvcd.org

OBJECTIVE

This document was prepared to provide guidance to Orange County Mosquito and Vector Control District (OCMVCD) staff on how to respond to detections of invasive *Aedes* mosquitoes in Orange County (County) under different scenarios including nuisance biting, travel-related human disease cases, virus positive *Aedes* mosquitoes without a known human case, and local outbreaks of *Aedes*-borne viral diseases, such as Zika, dengue, chikungunya, and yellow fever. This document is also intended to provide city, county, and other stakeholders with OCMVCD's framework for the response to public health threats related to invasive *Aedes* mosquitoes that are now persisting in the County.

The OCMVCD's *Plan for Invasive Aedes Mosquitoes and the Diseases They Vector (Zika/dengue/chikungunya/yellow fever)* is based on principles and guidelines put forth in the Centers for Disease Control and Prevention's (CDC) *Zika CDC Interim Response Plan* (October 2016) [Appendix A] and the California Department of Public Health's (CDPH) *Guidance for Surveillance of and Response to Invasive Aedes Mosquitoes and Dengue, Chikungunya, and Zika in California* (updated August 2016) [Appendix B]. The "Draft *Aedes* Response Plan" described in this document operates using the same considerations and assumptions listed in the *Zika CDC Interim Response Plan*. Furthermore, this plan compliments and aligns with the objectives put forth in the Orange County Operational Area's Disease Outbreak Response Annex (in draft) which details coordination between the Orange County Health Care Agency (OCHCA) and OCMVCD during vector-borne disease epidemics.

BACKGROUND

Invasive mosquitoes capable of transmitting disease causing agents to humans and animals, including the yellow fever mosquito (*Ae. aegypti*), Asian tiger mosquito (*Ae. albopictus*) and Australian backyard mosquito (*Ae. notoscriptus*) are now present in California. Vector-borne pathogens that cause diseases, such as Zika, dengue, chikungunya and yellow fever can be acquired by a mosquito when it feeds on a person with the pathogen circulating in their blood. An infected mosquito can then transmit the pathogen when it bites another person.

In 2001 and later in 2004, *Ae. albopictus* were detected in several Orange County neighborhoods and were then presumed eradicated after periods of intensive control efforts followed by what was thought at the time to be unsuitable winter weather conditions. Not until April of 2015 were invasive *Aedes* mosquitoes detected again in the County. Since then, *Ae. aegypti* or *Ae. albopictus* have been detected in 12 of the County's 34 cities. Currently *Ae. notoscriptus* has not been detected in Orange County but is present in neighboring Los Angeles County.

Invasive *Aedes* are expected to persist and spread throughout the County despite ongoing control efforts. These invasive mosquitoes bring with them a reproductive strategy that is unlike that of the County's most common urban-adapted mosquito species, the southern house mosquito (*Culex quinquefasciatus*), and one that is difficult to combat using customary larviciding control techniques. Rather than depositing eggs in a cluster on the surface of water like the southern house mosquito, where larvae hatch within a couple of days, invasive *Aedes* mosquitoes lay their

eggs singly on the inner surface of small water holding structures above the water line. The eggs often remain viable for extended periods of time; once submerged in water the larvae then hatch and develop quickly in the often short-lived water source. The invasive mosquitoes' use of cryptic breeding sources, often containing only small volumes of water, requires detailed and time consuming searches and the use of control methods and products which have not been previously used by the OCMVCD. These invasive mosquito species will be challenging to eradicate or prevent from spreading as evidenced by the recent and rapid spread of the invasive mosquitoes within California.

AUTHORITY

The OCMVCD will respond to invasive *Aedes* mosquito issues associated with nuisance biting reports, travel-related human disease cases, locally acquired human disease cases, and the detection of vector-borne pathogens in mosquito populations. Operating under a Memorandum of Understanding (MOU) between OCMVCD and Orange County Health Care Agency (OCHCA), the OCMVCD receives information regarding confirmed, *Aedes* mosquito-vectored, human disease cases residing in the County. In accordance with the MOU, OCMVCD will conduct a timely investigation for the presence of invasive mosquitoes at the case's place of residence and implement surveillance and control measures if necessary, which may include educational outreach, property inspections, and immature or adult stage mosquito treatments in affected areas within and beyond the case's property. In order to reduce or eliminate disease transmission risk to the public, the OCMVCD shall take measures aimed at eradicating local invasive *Aedes* populations around travel-related and locally acquired cases, which may require unrestricted access to all exterior areas of properties in the impacted area and possibly indoors if disease vectors are present. OCMVCD is authorized by statute to abate vector conditions when identified (Health and Safety Code [HSC] §2040), to abate conditions as a public nuisance (HSC §2060 *et seq.*) when necessary, and to enter property to inspect for vectors or nuisances and take action to control vectors (HSC §2053). It has been OCMVCD's experience, through a cooperative approach with residents forged on integrated vector management principles, that an effective and long-lasting vector management solution designed to reduce disease transmission risk can be achieved.

TRAINING

The Vector Ecologist or Vector Control Inspector III will provide annual and as needed training to staff and seasonal employees on the biology and control of invasive *Aedes* mosquitoes. Employees will be trained on the appropriate personal safety measures that should be taken when conducting invasive *Aedes* work. OCMVCD personnel responding to impacted areas will take precautions to minimize contact with mosquitoes including wearing pants, long-sleeved shirts, and protective footwear and have EPA approved mosquito repellent available for use at all times. OCMVCD employees who are pregnant or planning to have children will have the option of not working in areas where active Zika transmission is occurring or in areas where travel-related Zika cases are being investigated and invasive *Aedes* mosquitoes are present.

RESPONSE TO INVASIVE *Aedes*: SCENARIOS 1-4

1. Nuisance invasive *Aedes*

OCMVCD will respond to reports of nuisance biting in Orange County, as resources allow. In a nuisance scenario, the mosquitoes that are biting are not known to be infected with disease causing pathogens. Residents in communities where invasive *Aedes* mosquitoes have been detected will most likely be impacted by nuisance biting. Nuisance biting is defined as the level of mosquito biting that is not acceptable to an individual or community. Tolerance to mosquito biting will vary from one individual and community to another.

Communications and Outreach

When invasive *Aedes* are detected during a response to a nuisance biting service request, the OCMVCD will conduct outreach pursuant to the OCMVCD's Communications Plan [Appendix C] including, but not limited to;

- Posting of informational signs in the affected areas asking for residents to report day-biting, black-and-white mosquitoes. Public reports of invasive *Aedes* mosquitoes are highly encouraged to help assist the OCMVCD in delineating the extent of infestations.
- Disseminate printed educational materials to residents and property owners.
- Prepare and distribute digital communication announcements and awareness messaging.
- Provide City and County stakeholders with printed and digital materials to be distributed to affected residents and property owners within their jurisdiction.
- Notify designated City and County officials when new detections are made in a city.

Control Operations

The OCMVCD will evaluate nuisance biting reports in a localized area by conducting an inspection of the reporting person's (RP) property. If invasive *Aedes* mosquitoes are detected on the property, by the presence of eggs, larvae, pupae or adults, then a broader investigation will occur, and include the surrounding area that is encircled by a 100 meter (1/16 mile) radius (buffer zone) centered on the positive detection. Underground infrastructure will also be examined. Additional mosquito detections on surrounding properties, within the initial buffer zone, will prompt the expansion of the investigation to include uninspected areas within new 100 meter buffer zones centered on additional detections.

The inspection process will include a systematic search for mosquito breeding sources within the buffer zone using a door-to-door approach. The primary objectives of the door-to-door effort, for nuisance biting, will be to reduce mosquito breeding, collect samples of immature and adult mosquitoes, and disseminate educational information and materials to affected residents. The focus of the educational outreach component of the door-to-door effort will be to encourage property owners to reduce or remove breeding and resting sources and advise on personal and community level measures that can be taken to reduce mosquito-human contact.

An affected area's assigned Vector Control Inspector or a Vector Ecologist will set three traps, a Biogents (BG)-Sentinel (operating for up to 7 days), Reiter-Cummings modified gravid trap (operating for 1 day), and an EVS carbon dioxide-baited trap (operating for 1 day), at the RP's property. Additional traps may be placed on adjoining and/or nearby properties if suitable mosquito breeding or resting habitat is likely to be present.

Door-to-door *Aedes* teams will empty, relocate, remove, or modify containers that are holding or may potentially hold water and treat larger or numerous small sources that cannot be discarded or easily made to exclude water, with an appropriate ovicide or larvicide. Hand-held or backpack ULV pyrethrin/pyrethroid adulticide applications may be made on problematic properties where invasive *Aedes* are detected. Lethal oviposition traps designed to attract egg depositing invasive mosquitoes may also be utilized on problematic properties [See Appendix D; *Mosquito Traps and Descriptions; Aedes Trapping Protocol for Technicians and Aedes Teams*].

Laboratory

Field collected mosquito samples will be identified and processed at the OCMVCD. Invasive *Aedes* mosquito distribution maps will be updated upon new detections and based primarily on data obtained from door-to-door mosquito sampling and routine mosquito surveillance traps.

Seasonal invasive mosquito activity is common in Orange and surrounding Counties. However, in locations where year-round activity has been detected, those locations will be monitored by routine mosquito trapping. The surveillance strategy will include the deployment of invasive *Aedes* surveillance type traps including the BG-Sentinel in addition to low-maintenance lethal mosquito traps, such as the Trap-N-Kill lethal oviptrap, Biogents Gravid *Aedes* Trap (BG-GAT) and the CDC Autocidal Gravid Ovitrap (AGO), that are designed to be left on-site for extended periods of time operating simultaneously as a surveillance and control device. Collected invasive adult *Aedes* around nuisance biting service requests will be preserved for pesticide resistance and pathogen testing.

2. Response to travel-acquired human disease case of Zika, chikungunya, dengue fever, or yellow fever

Each year since 2013 the number of travelers returning home to Orange County, infected with *Aedes*-vectored viruses has increased. The potential for local transmission occurs if a viremic traveler returns to reside in an area where invasive *Aedes* mosquitoes are active. The OCMVCD will respond to travel-acquired *Aedes*-vectored disease cases that reside in the County during any portion of their estimated infectious period. If invasive *Aedes* mosquitoes are present, within 200 meters (1/8 mile) of the case's residence, the OCMVCD will continue to conduct mosquito surveillance up to 30 days after a case's infectious period has ceased. Thirty days is the estimated average life span of invasive *Aedes* mosquitoes and is the period when a potentially infected *Aedes* mosquito could transmit virus to a human. The duration of the OCMVCD's response to a travel-acquired case may last up to 45 days (i.e. human viremic period + adult *Aedes* life span). Through an MOU between OCMVCD and OCHCA, human case information will be provided to the OCMVCD through a confidential process and the response plan outlined below will be implemented.

Communications and Outreach

When invasive *Aedes* mosquitoes are detected within a 200 meter (1/8 mile) radius of a confirmed *Aedes*-vectored disease case's place of residence, OCMVCD will conduct public outreach pursuant to the OCMVCD's Communications Plan [Appendix C], including, but not limited to;

- Posting of informational signs in the affected areas asking for residents to report day-biting, black-and-white mosquitoes. Public reports of invasive *Aedes* mosquitoes are highly encouraged to help assist the OCMVCD in delineating the extent of infestations.
- Disseminate printed educational materials to residents and property owners.
- Prepare and distribute digital communication announcements and awareness messaging.
- Provide County and City stakeholders with written and digital materials to be distributed to affected residents and property owners within their jurisdiction.
- Notify designated City and County officials when new detections are made in a city.
- Notify property owners and local stakeholders of pending ground-based area-wide larvicide and ULV adulticide applications.

Control Operations

The OCMVCD will evaluate travel-related disease cases by conducting an inspection of the case's property and adjoining properties and expand the inspection to include surrounding areas if a competent vector is detected. An impacted area's assigned Vector Control Technician or Vector Ecologist will set three traps, a BG-Sentinel (operating up to 7 days), a Reiter-Cummings modified gravid trap (operating for 1 day), and an EVS carbon dioxide baited trap (operating for 1 day), on the case's place of residence. Four additional BG-Sentinel traps will be placed on the adjoining properties. If contact cannot be made with the case, traps will be set at the nearest cooperating residence or property.

The detection of invasive *Aedes* eggs, larvae, pupae or adults, will prompt a broader investigation that will include an area that is encircled by a 200 meter (1/8 mile) radius buffer zone centered on the case's place of residence. Underground infrastructure will also be examined. Additional mosquito detections within the buffer zone will prompt the expansion of the inspection area to include uninspected areas within a 200 meter buffer zone centered on additional detections. However, the immediate focus of this response will not be to delineate the infestation area, but will be to suppress or eradicate the *Aedes* population within the original buffer zone area surrounding the case home, which will likely require retreatments over time to minimize the potential for disease transmission.

The inspection process will include a thorough search for mosquito breeding sources within the buffer zone using a door-to-door approach. The primary objectives of the door-to-door effort for a travel-related case will be to reduce and treat breeding sources and adult populations if present, collect samples of immature and adult mosquitoes, and disseminate educational information and materials to affected residents. The focus of the educational outreach component of the door-to-door effort will be to encourage property owners to reduce and remove mosquito breeding and

resting sources and recommend personal and community level measures that can be taken to reduce mosquito-human contact.

Door-to-door *Aedes* teams will empty, relocate, remove, or modify containers that are holding or may potentially hold water and treat larger or numerous small sources that cannot be easily made to exclude water with an appropriate ovicide or larvicide.

If adult invasive mosquitoes are detected within the 200 meter (1/8 mile) radius of the case's place of residence, the OCMVCD will conduct ULV pyrethrin/pyrethroid backpack applications, either with backpacks or by truck, with a goal of treating all properties within the buffer zone. Larvicides, lethal mosquito traps, and residual and space spray adulticides will be used in combination in impacted areas.

Laboratory

Field samples will be identified and processed at the OCMVCD. Invasive *Aedes* mosquito distribution maps will be updated upon new detections and be based primarily on data obtained from door-to-door mosquito sampling and routine mosquito surveillance. Seasonal invasive *Aedes* activity is now common in certain cities within the County. Seasonal surveillance locations will be selected based on areas of known *Aedes* activity and may be temporary based on property owners willingness to participate. However, in some locations, year-round activity has been observed; these locations will be monitored as part of a weekly surveillance trapping program. Despite the year-round presence of invasive *Aedes* mosquitoes in some areas of the County, seasonal temperature changes will limit the risk of year-round *Aedes*-vectored virus transmission. Therefore, surveillance frequency and intensity may vary depending on the present environmental conditions and mosquito abundance.

The surveillance strategy will include the deployment of effective invasive *Aedes* surveillance traps in addition to lethal mosquito traps that are designed to be left on-site for extending periods of time operating simultaneously as a surveillance tool and a control device. Adult invasive *Aedes* and any other mosquito species that may be implicated in the disease transmission cycle, that are collected within the 200 meter buffer zone around the case's residence, will be preserved for virus testing.

3. Response to a single (or multiple within single residence) locally-acquired *Aedes*-vectored disease case or multiple, geographically dispersed, locally-acquired cases.

The OCMVCD will respond aggressively to a single or multiple geographically dispersed human cases of *Aedes* disease in the County with evidence of local transmission. A locally-acquired disease case will be determined by OCHCA Public Health staff through interviews with the patient about previous travel history. OCHCA verifies whether or not the patient has traveled outside of the County within the incubation period or has been infected through sexual transmission (Zika) or other transmission routes. Through an MOU between OCMVCD and OCHCA, human case information will be provided to the OCMVCD through a confidential process and the response plan outlined below will be implemented.

Communications and Outreach

If a single *Aedes*-vectored disease case or multiple cases within a household are determined to have been locally-acquired, the OCMVCD will conduct public outreach pursuant to the OCMVCD's Communications Plan [Appendix C], including, but not limited to;

- Posting of informational signs in the affected areas asking for residents to report day-biting, black-and-white mosquitoes. Public reports of invasive *Aedes* mosquitoes are highly encouraged to help assist the OCMVCD in delineating the extent of infestations.
- Disseminate printed educational materials to residents and property owners.
- Prepare and distribute digital communication announcements and awareness messaging.
- Provide County and City stakeholders with written and digital materials to be distributed to affected residents and property owners within their jurisdiction.
- Notify designated City and County officials when new detections are made in a city.
- Notify property owners and local stakeholders of pending ground-based area-wide adulticide applications.
- Notify and consult with CDPH and CDC and distribute a press release.

Control Operations

The OCMVCD will respond aggressively to the determination that a resident of Orange County developed disease after exposure to mosquitoes infected with one of the aforementioned viruses in the County. The OCMVCD will operate on the assumption that virus positive mosquitoes will be present around a suspect or confirmed locally-acquired case and will conduct area-wide mosquito control (ULV adulticiding) using an EPA-approved public health pesticide within the 200 meter radius buffer zone centered around the putative exposure site, with or without the presence of invasive *Aedes*. ULV applications may be conducted with handheld equipment, trucks, or aircraft, with a goal of treating all properties within the target area in order to rapidly reduce the adult mosquito population and the risk of virus transmission. Multiple area-wide adulticide treatments may be conducted if virus-positive mosquitoes persist in the same area. The selection of public health pesticides for application in the outbreak area will be based on pesticide resistance testing and may include pyrethrins, synthetic pyrethroids, *Bacillus thuringiensis* or other microbial insecticides, or organophosphates. Larvicide, lethal mosquito traps, and residual and space spray adulticide applications will be used in combination in impacted areas.

Surveillance for virus positive mosquitoes and door-to-door investigations will be conducted within the 200 meter buffer zone after the first area-wide treatment. Door-to-door inspections, adult mosquito surveillance, and adult mosquito control efforts will be expanded to include uninspected areas within a 200 meter radius centered upon any new positive mosquito detections.

The inspection process will include a thorough search for mosquito breeding sources within the buffer zone using a door-to-door approach. The objectives of the door-to-door effort for locally acquired disease cases will be to eliminate or treat breeding sources, collect samples of immature and adult mosquitoes, conduct adult mosquito control, and disseminate educational information and materials to affected residents. The focus of the educational outreach component of the door-

to-door effort will be to encourage property owners to reduce and remove breeding and resting sources and recommend personal and community level measures that can be taken to reduce mosquito-human contact and disease transmission.

Door-to-door *Aedes* teams will empty, relocate, remove, or modify containers that are holding or may potentially hold water and treat larger or numerous small sources that cannot be easily made to exclude water with an ovicide or larvicide.

Laboratory

Field samples will be identified and processed at the OCMVCD. Invasive *Aedes* mosquito distribution maps and virus positive mosquito activity will be updated immediately upon detection and will be based primarily on data obtained from door-to-door mosquito sampling and routine and expanded mosquito surveillance. Areas where virus positive mosquitoes are detected will be included in a long-term weekly mosquito trapping program.

The surveillance strategy in areas where local transmission has occurred will include the deployment of effective invasive *Aedes* surveillance traps in addition to lethal mosquito traps that are designed to be left on-site for extending periods of time operating simultaneously as a surveillance tool and a control device. Adult invasive *Aedes* and any other mosquito species that may be implicated in the disease transmission cycle that are collected within a 200 meter buffer zone around all cases residences will be preserved and sent to the UC Davis Arbovirus Research and Training (DART) Laboratory for virus testing. Locations where positive mosquitoes are detected will be included as surveillance sites and be routinely monitored throughout an epidemic.

4. Response to the detection of Zika, chikungunya, dengue fever, and yellow fever pathogens in local mosquito samples in the absence of a reported human disease case.

Adult mosquitoes, especially invasive *Aedes*, collected during door-to-door inspections and surveillance related activities, will be sent to the UC DART for testing on a bi-weekly basis and may result in positive virus detections. Given the transmission cycle of the aforementioned diseases, unexpected virus positive mosquito detections would indicate that an unreported human case is present within the area. In this situation, OCHCA and CDPH will be notified immediately of the positive findings and actions listed under response scenario Number 3 above will be initiated.

Response Prioritization

During periods of high invasive *Aedes* activity, the OCMVCD shall prioritize actions based on the severity of the public health threat, which may require concentrating resources on responses to imported disease cases or local disease transmission; whereby, the OCMVCD's response to nuisance biting mosquitoes may be temporarily curtailed.

Considerations and Assumptions of the OCMVCD Invasive *Aedes* Response Plan:

- The lifetime flight range of *Aedes aegypti* and *Aedes albopictus* will typically be less than 100 meters from the site of emergence; therefore, timely adult mosquito control within 150 meters of a case should reduce or eliminate the risk of virus transmission.
- The probability of transovarial passage of Zika virus between generations, for both *Ae. aegypti* and *Ae. albopictus*, is unknown but, based on other related viruses, is expected to be insignificant. Control of adult mosquitoes is necessary to minimize or halt active transmission.
- The lifespan of *Ae. aegypti* and *Ae. albopictus* in nature is not expected to exceed 30 days. Therefore, assuming a maximum viremic period of two weeks from symptom onset for an infected person, the longest interval between symptom onset of one case and acquisition of infection in a secondary case is estimated to be approximately six weeks.
- The rates of mutation conferring insecticide resistance are slow enough that testing once in a season should be sufficient to base that year's insecticide selection on.

REFERENCES

California Department of Public Health. August 2016. Guidance for Surveillance of and Response to Invasive *Aedes* Mosquitoes and Dengue, Chikungunya, and Zika in California. <http://www.cdph.ca.gov/HealthInfo/discond/Documents/2016InvasiveAedesSurveillanceandResponseinCA.pdf> Accessed 11/10/16

Centers for Disease Control and Prevention. October 2016. Zika Interim Response Plan. <http://www.cdc.gov/zika/pdfs/zika-draft-interim-conus-plan.pdf> Accessed 11/10/16

Orange County Mosquito and Vector Control District's Communication Plan (Draft)

Orange County Health Care Agency: Orange County Operational Area's Disease Outbreak Response Annex, Attachment 2. *Vector-borne diseases causing epidemics or emerging in Orange County*. Draft February 2017

ANNEX D

2021 CDPH MOSQUITO RESPONSE PLAN

CALIFORNIA MOSQUITO-BORNE VIRUS SURVEILLANCE & RESPONSE PLAN

Gavin Newsom, Governor



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May 2021

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CALIFORNIA MOSQUITO-BORNE VIRUS SURVEILLANCE AND RESPONSE PLAN

TABLE OF CONTENTS

Objectives	3
Introduction	3
Background	4
Education	4
Surveillance	5
Mosquito Control	8
Response Levels	10
Characterization of Conditions and Responses for State and Local Agencies	17
Key Agency Responsibilities	20
 <u>Appendices</u>	
Appendix A: Guidelines for Adult Mosquito Surveillance	23
Appendix B: Procedures for Processing Mosquitoes	29
Appendix C: Procedures for Maintaining and Bleeding Sentinel Chickens.....	31
Appendix D: Registration of Agencies and Surveillance Sites	33
Appendix E: Procedures for Testing Dead Birds	34
Appendix F: Procedures for Testing Equines.....	40
Appendix G: Protocol for Submission of Specimens from Humans.....	41
Appendix H: West Nile Virus Surveillance Case Definition	42
Appendix I: Compounds Approved for Mosquito Control in California	44
Appendix J: Adult Mosquito Control in Urban Areas	46
Appendix K: Websites Related to Arbovirus Surveillance in California	50
Appendix L: Reference List.....	52

Objectives

The California Mosquito-borne Virus Surveillance and Response Plan was developed to meet several objectives. Specifically, the Plan:

- Provides guidelines and information on the surveillance and control of endemic mosquito-borne viruses in California, including West Nile, St. Louis encephalitis, and western equine encephalitis viruses;
- Incorporates surveillance data into risk assessment models;
- Prompts surveillance and control activities associated with virus transmission risk level;
- Provides local and state agencies with a decision support system; and
- Outlines the roles and responsibilities of local and state agencies involved with mosquito-borne virus surveillance and response.

This document provides statewide guidelines but can be modified to meet local or regional conditions. For response to non-endemic mosquito-borne viruses, see [Guidance for Surveillance of and Response to Invasive Aedes Mosquitoes and Dengue, Chikungunya, and Zika in California](#).

Introduction

California has a comprehensive mosquito-borne disease surveillance, prevention, and control program that has monitored mosquito abundance and mosquito-borne virus activity since 1969 (Reeves et al. 1990). Surveillance and interagency response guidelines have been published previously by the California Department of Public Health (Walsh 1987) and the Mosquito and Vector Control Association of California (Reisen 1995). The detection of West Nile virus (WNV) in New York, a virus not recognized in the Western Hemisphere prior to 1999, prompted the review and enhancement of existing guidelines to ensure that surveillance, prevention, and control activities were appropriate for WNV. From New York, WNV spread rapidly westward and by 2004 had been detected in all 48 of the continental United States. In addition to WNV, California is vulnerable to the introduction of other highly virulent mosquito-borne viruses of public and veterinary health concern, including Japanese encephalitis, dengue, Zika, chikungunya, yellow fever, Rift Valley fever, and Venezuelan equine encephalitis viruses. If an existing or introduced virus is detected, it is critical that local and state agencies are prepared to respond in a concerted effort to protect people and animals from infection and disease. This document describes an enhanced surveillance and response program for mosquito-borne viruses in the State of California. Its contents represent the collective effort of the California Department of Public Health (CDPH), the Mosquito and Vector Control Association of California (MVCAC), and the University of California at Davis (UCD).

Background

Mosquito-borne viruses belong to a group of viruses commonly referred to as arboviruses (for arthropod-borne). Although 15 mosquito-borne viruses are known to occur in California, only WNV, St. Louis encephalitis virus (SLEV), and western equine encephalitis virus (WEEV) have caused significant human disease. WNV continues to seriously impact the health of humans, horses, and wild birds throughout the state. From 2003 to 2020, there have been 7,255 WNV human cases with 320 deaths and 1,334 horse cases reported in CA. In addition, since the reemergence of SLEV in California in 2015, 24 human cases of SLEV disease have also been identified. Consequently, the California Arbovirus Surveillance Program emphasizes monitoring and providing early detection of temporal and spatial activity of WNV, SLEV, and WEEV. These viruses are maintained in wild bird-mosquito cycles that do not depend upon infections of humans or domestic animals to persist. Surveillance and control activities focus on this maintenance cycle, which primarily involves *Culex* mosquitoes, such as the western encephalitis mosquito, *Culex tarsalis*, and birds such as crows, jays, house finches, and house sparrows.

Immature stages (called larvae and pupae) of *Cx. tarsalis* can be found throughout California in a wide variety of aquatic sources, ranging from clean to highly-polluted waters. Most water sources are associated with irrigation of agricultural crops or urban wastewater. Other mosquito species, such as *Cx. pipiens*, *Cx. quinquefasciatus*, and *Cx. stigmatosoma*, play an important role in the transmission cycles of WNV, and potentially SLEV, in both urban and suburban areas. Additional mosquitoes such as *Aedes vexans* and *Cx. erythrothorax* may be important bridge vectors (i.e., bird to mammal).

Mosquito control is the most practical method of protecting the human population from arbovirus infection. There are no specific treatments or cures for diseases caused by these viruses, and presently there are no vaccines that have been approved for human use. WNV also kills a wide variety of native and non-native birds. Vaccines for WNV and WEEV are available to protect horses from severe neurological disease caused by these viruses. Mosquito-borne disease prevention strategies must be based on a well-planned integrated pest management (IPM) program that uses near-real-time surveillance to detect problem areas, focus control, and evaluate operational efficacy. The primary components of an IPM program include education, surveillance, and mosquito control.

Education

Residents, farmers, and wetland managers can play an important role in reducing the number of adult mosquitoes by eliminating standing water that may support the development of immature mosquitoes. For instance, residents can help by properly disposing of discarded tires, cans, or buckets; emptying plastic and other swimming pools when not in use; and unclogging blocked rain gutters around homes and businesses. Farmers and ranchers can be instructed to use irrigation practices that do not allow water to stand for extended periods, while wetland managers or duck club owners can work with mosquito control agencies to determine optimal flooding schedules. Educating the general public to curtail outdoor activities during peak

mosquito biting times, use insect repellents, and wear long-sleeved clothing can help reduce exposure to mosquitoes. Clinical surveillance is enhanced through education of the medical and veterinary communities to recognize the symptoms of WNV, SLEV, and WEEV, and to request appropriate laboratory tests. Public health officials need to be alerted if mosquito-borne virus activity has been detected in an area, particularly if activity is elevated and widespread.

Surveillance

Surveillance includes monitoring, visualization, and analysis of data on climatic factors, immature and adult mosquito abundance, and arboviral testing in humans, mosquitoes, sentinel chickens, dead birds, and horses. For zoonotic viruses such as WNV, surveillance of the mosquitoes and vertebrate hosts (e.g., birds) that transmit the virus is particularly important as an early warning for disease risk in humans. Surveillance must focus not only on mosquito-borne viruses known to exist in California, but also be sufficiently broad to detect newly introduced viruses. This is especially important since the recent detection of the globally important arboviral vectors, *Ae. aegypti* and *Ae. albopictus*, in California.

Climate Variation

California's Mediterranean climate provides ideal opportunities for forecasting mosquito abundance and arbovirus activity because most precipitation occurs in winter, as rain at lower elevations or as snow at higher elevations. Spring and summer temperatures then influence the rate of snow melt and runoff, mosquito population growth, the frequency of blood feeding, the rate of virus development in the mosquito, and therefore the intensity of virus transmission. In the past, WEEV outbreaks have occurred in the Central Valley when wet winters were followed by warm summers, whereas SLEV and WNV outbreaks have been linked to warm, dry conditions that lead to large populations of urban *Culex*. Although climate variation may forecast conditions conducive to virus amplification, a critical sequence of events is required for amplification to reach outbreak levels.

Mosquito Abundance

Mosquito abundance can be estimated through collection of immature or adult mosquitoes. The immature stages (larvae and pupae) can be collected from water sources where mosquitoes lay their eggs. A long-handled ladle ("dipper") is used to collect water samples and estimate the number of immature mosquitoes per "dip." Most local mosquito control agencies have technicians search for new sources and inspect known habitats for mosquitoes on a 7 to 14-day cycle. These data are used to direct control operations. Maintaining careful records of immature mosquito occurrence and abundance, developmental stages treated, source sizes, and control effectiveness can be useful for estimating the expected size of future adult populations.

Adult mosquito abundance is a key factor contributing to the risk of virus transmission. Monitoring the abundance of adult mosquito populations provides important information on the size of the vector population as it responds to changing climatic factors and control efforts. Four adult mosquito sampling methods are currently used for *Culex* in California: New Jersey light traps, carbon dioxide-baited traps, gravid female traps, and

resting adult mosquito collections. The advantages and disadvantages of these sampling methods, and guidelines for the design, operation, and processing of the traps have been discussed in Guidelines for Integrated Mosquito Surveillance (Meyer et al. 2003) and are summarized in [Appendix A](#).

Mosquito Infections

Virus activity can be monitored by testing adult mosquitoes for virus infection. Because *Cx. tarsalis* is the primary rural vector of WNV, SLEV, and WEEV, and *Cx. quinquefasciatus* and *Cx. pipiens* are important urban vectors of WNV and SLEV, surveillance efforts emphasize the testing of these species. Another species that should be tested is *Cx. stigmatosoma*, which is a highly competent but less widely distributed vector of WNV and SLEV that feeds on birds and may be important in enzootic transmission where abundant. Female mosquitoes are trapped, usually using carbon dioxide-baited or gravid traps, identified to species, and counted into groups (pools) of ≤ 50 females each for testing at the Davis Arbovirus Research and Training (DART) laboratory at UC Davis or by local agencies that pass annual proficiency panel tests. Procedures for submitting and processing mosquitoes for virus testing are detailed in [Appendix B](#). The current surveillance system is designed to detect and measure levels of infection with WNV, SLEV, and WEEV. Mosquito testing typically begins early in the season during springtime and, with adequate trapping and testing effort, provides an early warning of virus activity. Testing adult mosquitoes for infection is also one of the best methods to detect newly introduced or emerging mosquito-borne viruses. Testing non-*Culex* mosquito species may be necessary to detect the introduction of viruses that do not have a primary *Culex*-bird transmission cycle, notably dengue, Zika, or chikungunya viruses transmitted person to person by *Ae. aegypti* and *Ae. albopictus*.

Avian Infections

Detection of arboviral transmission within bird populations can be accomplished by 1) using caged chickens as sentinels and bleeding them routinely to detect development of antiviral antibodies (seroconversion) and 2) testing dead wild birds reported by the public for WNV.

While chickens will mount an immune response to arboviruses, they do not develop sufficiently high viremia to infect mosquitoes, thus making them excellent sentinels. In California, flocks of 6-10 chickens, previously unexposed to arboviruses, are placed in locations where mosquito abundance is known to be high or where there is a history of virus activity. Each chicken is bled every two weeks by pricking the comb and collecting blood on a filter paper strip. The blood is tested at the CDPH Vector-Borne Disease Section for antibodies to WNV, SLEV, and WEEV. Some agencies conduct their own testing but send positive samples to CDPH for confirmation. Frequent testing of strategically placed flocks of sentinel chickens provides an effective method to monitor encephalitis virus transmission in an area, particularly as a surrogate for human disease risk because laboratory confirmation of human cases often arrives too late to effectively influence mosquito control decisions. Because chickens are continuously available to host-seeking mosquitoes, they are not subject to the night-to-night variations associated with mosquito trapping, while their fixed, permanent locations provide a specific spatial indication of transmission when seroconversions occur. Sentinel housing, bleeding

instructions, and testing protocols are provided in [Appendix C](#). [Appendix D](#) contains information detailing surveillance site registration for participating vector control agencies.

Unlike WEEV and SLEV, WNV frequently causes death in North American birds, especially those in the family Corvidae (e.g., crows, ravens, magpies, and jays). Dead bird surveillance was initiated by CDPH in 2000 to provide early detection of WNV. Dead bird surveillance has been shown to be one of the earliest and most cost-effective indicators of WNV activity where susceptible bird species are abundant and local agencies promote this program. Dead birds are reported by the public to CDPH's dead bird call center (1-877-WNV-BIRD) or via the [California West Nile virus website](#). Dead birds that meet criteria for species and condition are collected by local agencies for WNV testing. Agencies collect an oral sample by swabbing the oropharyngeal cavity of the bird and pressing the swab onto an RNA preservation card, which safely preserves nucleic acids. The cards are shipped to DART for WNV RNA testing by RT-qPCR. Local agencies may also test dead birds in-house using RT-qPCR provided they have passed an annual proficiency panel. The communication and testing algorithm for the dead bird surveillance program is detailed in [Appendix E](#).

Equine Infections

Currently, equine disease due to WNV and WEEV is no longer a sensitive indicator of epizootic activity (unusually high incidence of infections in animals other than humans) in California because of the widespread vaccination efforts in horses, donkeys, and mules. Nevertheless, confirmed horse cases can indicate that WNV or WEEV has amplified to levels where tangential transmission has occurred and the risk to humans is elevated in that region of the state. Numerous infectious and non-infectious causes, including other mosquito-borne viruses, can contribute to encephalitis and neurologic signs in horses. Testing of equine specimens for these possible etiologies is available through the California Animal Health and Food Safety Laboratory (CAHFS). Complete information on specimen collection and submission is available on the [California Department of Food and Agriculture \(CDFA\) website](#). See [Appendix F](#).

Human Infections

Local mosquito control agencies need information from the rapid detection and reporting of human infections to plan and implement emergency control activities to prevent additional infections. However, because most persons who become infected develop no or mild symptoms, human arboviral cases are an insensitive surveillance indicator for viral activity. Among individuals who do become ill, it may take up to two weeks for symptoms to appear, followed by additional time until the case is investigated and reported by health authorities. A total of 7,255 cases of WNV disease have been reported in California from 2003 to 2020. Twenty-four cases of SLEV disease have also been reported from 2016 to 2020. No cases of WEEV disease have been reported in California since 1986.

In 2002, a regional public health laboratory network was established to enhance human WNV testing and surveillance efforts throughout the state. This network consists of the CDPH Viral and Rickettsial Disease Laboratory (VRDL) as well as county public health

laboratories that conduct WNV testing. Healthcare providers are encouraged to submit specimens from suspect WNV cases to their local public health laboratories. Specimens from patients with encephalitis may also be submitted directly to VRDL, which offers diagnostic testing for many agents known to cause encephalitis, including WNV and other arboviruses. VRDL also works with commercial laboratories to confirm additional suspect WNV cases.

In accordance with Title 17 of the California Code of Regulations (Sections 2500 and 2505), healthcare providers and laboratories are required to report positive test results for WNV, SLEV, and WEEV in humans to the local health department with jurisdiction in the area where that patient resides. Positive arbovirus test results are investigated by local health department officials to determine whether a patient meets the clinical and laboratory criteria for diagnosis of arboviral disease. If so, the local health department collects demographic and clinical information on the patient using a standardized form and reports these data to the state health department. The local health department also determines whether the infection was acquired locally, imported from a region outside the patient's residence, or acquired by a non-mosquito route of transmission such as blood transfusion or organ transplantation. [Appendix G](#) details the protocol for submission of specimens to the regional public health laboratory network for WNV testing. For more information regarding guidelines and protocols for the investigation and submission of human WNV infection please refer to [West Nile and St. Louis Encephalitis Viruses in California: Guidelines for Human Testing, Surveillance, and Reporting](#). [Appendix H](#) provides the national surveillance case definitions for WNV, SLEV, and WEEV infections. For information on *Aedes*-transmitted diseases, such as Zika, dengue, and chikungunya, please refer to [Guidance for Surveillance of and Response to Invasive Aedes Mosquitoes and Dengue, Chikungunya, and Zika in California](#).

Mosquito Control

Disease risk detected by surveillance is mitigated through larval and adult mosquito control. Mosquito control is the most proven public health method to protect people from mosquito-borne disease. Mosquito control in California is conducted by approximately 80 local agencies, including mosquito and vector control districts, county environmental and health departments, and county agriculture departments. Agencies that apply pesticides directly to a body of water in the United States, or where deposition may ultimately enter a water of the United States, must obtain a [National Pollutant Discharge Elimination System \(NPDES\) permit](#) for Biological and Residual Pesticide Discharges to Waters of the United States from Vector Control Applications (Vector Control Permit). Agencies must comply with provisions of the permit.

Compounds generally used for larval and adult mosquito control in California are described in [Appendix I](#). Please refer to the Vector Control Permit for a list of vector control pesticides that may be applied to waters of the United States, unless the receiving water has an existing impairment from a pesticide with the same active ingredient. Please review the [California State Water Resources Control Board listing of impaired water bodies \(303d list\)](#) prior to applying any pesticide. Additional

considerations regarding adult mosquito control in urban areas are described in [Appendix J](#).

Larval Control

Mosquito larval and pupal control methods are target-specific and prevent the emergence of adult female mosquitoes which are capable of transmitting pathogens and becoming biting nuisances, and ultimately producing another generation of mosquitoes. For these reasons, most mosquito control agencies in California target the immature stages rather than the adult stage of the mosquito. Larval mosquito control has three key components: environmental management, biological control, and chemical control.

Environmental management decreases habitat availability or suitability for immature mosquitoes, and may include water management, such as increasing the water disposal rate through evaporation, percolation, recirculation, or drainage. Laser-leveling of fields minimizes pooling at low spots, allows even distribution of irrigation water, and precludes standing water for long periods. Controlled irrigation or the careful timing of wetland flooding for waterfowl can reduce mosquito production or limit emergence to cooler seasons of the year when virus activity is unlikely. Environmental management may include vegetation management because emergent vegetation provides food and refuge for mosquito larvae. Management strategies include the periodic removal or thinning of vegetation, restricting growth of vegetation, and controlling algae.

Biological control uses natural predators, parasites, or pathogens to reduce immature mosquito numbers. Mosquitofish, *Gambusia affinis*, are the most widely used biological control agent in California. These fish are released annually in a variety of habitats, such as rice fields, small ponds, and canals.

There are several mosquito control products that are highly specific and thus have minimal impact on non-target organisms. These include microbial control agents, such as *Bacillus thuringiensis israelensis* (Bti), *Bacillus sphaericus*, and spinosad; and insect growth regulators, such as methoprene, that prevent immature mosquitoes from developing into adults. Surface films are very effective against both larvae and pupae, but also may suffocate other surface-breathing aquatic insects. Organophosphate pesticides are used infrequently because of widespread resistance within mosquito populations and their impact on non-target organisms and the environment.

Adult Control

When larval control is not possible, or more immediate control measures are needed, adult mosquito control may be required to suppress populations of infected mosquitoes and interrupt epidemic virus transmission. Adult mosquito control products may be applied using ground-based equipment, fixed wing airplanes, or helicopters. Products applied in ultralow volume (ULV) formulations and dosages include organophosphates (e.g., malathion and naled), pyrethroids (e.g., resmethrin, sumithrin, and permethrin), and pyrethrins (e.g., Pyrenone crop spray). Factors to consider when selecting an adulticide include: 1) efficacy against the target species or life cycle stage, 2) resistance status, 3) pesticide label requirements, 4) availability of pesticide and application

equipment, 5) environmental conditions, 6) cost, and 7) toxicity to non-target species, including humans.

For more information about mosquito control please see [Best Management Practices for Mosquito Control in California](#).

Response Levels

The California Mosquito-borne Virus Surveillance and Response Plan was developed to provide a semi-quantitative measure of virus transmission risk to humans that could be used by local mosquito control agencies to plan and modulate control activities.

Independent models are presented for WNV, SLEV, and WEEV to accommodate the different ecological dynamics of these viruses (Barker et al. 2003). WNV and SLEV are closely related, require similar environmental conditions, and are transmitted by the same *Culex* vectors. Seven surveillance factors are measured and analyzed to determine the level of risk for human infection and thereby gauge the appropriate response level:

1. Environmental or climatic conditions (e.g., snowpack, rainfall, and temperature)
2. Adult *Culex* vector abundance
3. Virus infection rate in *Culex* mosquito vectors
4. Sentinel chicken seroconversions
5. Fatal infections in birds (WNV only)
6. Infections in humans
7. Proximity of detected virus activity to urban or suburban regions (WEEV only)

Each factor is scored on an ordinal scale from 1 (lowest risk) to 5 (highest risk). The mean score calculated from these factors corresponds to a response level as follows: normal season (1.0 to 2.5), emergency planning (2.6 to 4.0), and epidemic (4.1 to 5.0). [Table 1](#) provides a worksheet to assist in determining the appropriate rating for each of the risk factors for each of the three viruses. [Appendix K](#) shows sources of data useful for the calculation of risk in Table 1. Surveillance data can be managed and risk level calculated in time and space using the [CalSurv Gateway](#), a web-based data management system maintained by DART and utilized by California vector control agencies.

Risk calculations should be applied within a defined area, typically encompassing a local mosquito and vector control district. Use of smaller spatial units (e.g., city boundaries) is ideal due to spatial variation in virus activity and the need to define potential target areas for mosquito control at finer spatial scales. Decisions about the appropriate spatial scale for risk calculations should consider the balance between (1) the desire to assess risk at a scale fine enough to target mosquito control, and (2) the need to ensure that there is adequate surveillance information available in each area to support the risk calculations. Due to spatial variation in the distributions of humans and the dominant vector species, *Cx. tarsalis* and the *Cx. pipiens* complex, separate calculation of risk for urban and rural areas is encouraged where applicable.

For surveillance factor 2 (vector abundance), abundance is expressed as a percentage of normal by comparing the current level for an area to the average over the previous

five years for the same area and two-week period. The mosquito virus infection rate should be calculated using the most recent data (prior two-week period) and expressed as the minimum infection rate (MIR) per 1,000 female mosquitoes tested. Alternatively, when infection rates are high, they may be calculated using maximum likelihood estimates (Hepworth and Biggerstaff 2017), which account for varying numbers of specimens in pools and the possibility that more than one mosquito could be infected in each positive pool. For WNV and SLEV, risk may be estimated separately for *Cx. tarsalis* and the *Cx. pipiens* complex because these species generally have different habitat requirements and therefore spatial distributions (e.g., rural vs. urban).

Each of the three viruses differs in its response to ecological conditions. WEEV activity has been historically highest during El Niño conditions of wet winters, above-normal run-off and flooding, cool springs, and increased *Cx. tarsalis* abundance. Historically, WEEV spillover into a secondary *Aedes*-rabbit cycle was common in the Central Valley, but this virus spillover has not been detected for more than 25 years. In contrast, SLEV and perhaps WNV activity appear to be greatest during La Niña conditions of drought and hot summer temperatures because SLEV and WNV transmission risk increases when temperatures are above normal. Abundance and infection of the *Cx. pipiens* complex are included in both SLEV and WNV risk estimates because these mosquito species are important vectors, particularly in suburban/urban environments. The occurrence of dead bird infections is included as a risk factor in the WNV calculations. For surveillance factors 4–6 (chickens, dead birds, and humans), the specific region is defined as the area within the agency's boundary and the broad region includes the area within 150 miles (~241 km) of the agency's boundary.

Proximity of virus activity to human population centers is considered an important risk factor for all three viruses of public health concern. In the risk assessment model in Table 1 this was accommodated in two different ways. WEEV transmitted by *Cx. tarsalis* typically amplifies first in rural areas and may eventually spread into small and then larger communities. A risk score was included to account for where virus activity was detected. WNV and SLEV may be amplified concurrently or sequentially in rural and urban cycles. The rural cycle is similar to WEEV and is transmitted primarily by *Cx. tarsalis*, whereas the urban cycle is transmitted primarily by members of the *Cx. pipiens* complex. If the spatial distributions of key *Culex* species differ within an area (e.g., rural vs. urban), it may be advantageous to assess risk separately by species for abundance and infection rates in *Cx. tarsalis* and the *Cx. pipiens* complex. This would result in two estimates of overall risk for the areas dominated by each species.

Each of these surveillance factors can differ in impact and significance according to time of year and geographic region. Climate is used prospectively to forecast risk during the coming season. Climatic factors provide the earliest indication of the potential for increased mosquito abundance and virus transmission and constitute the only risk factor measured in many areas from the start of the calendar year through mid-spring when enzootic surveillance commences. Other factors that may inform control efforts as the season progresses are typically, in chronological order: mosquito abundance, infections in non-humans (e.g., dead birds for WNV, mosquitoes, and sentinel chickens), and infections in humans. Enzootic indicators measure virus amplification within the *Culex*-bird cycle and provide current assessments (nowcasts) of risk, whereas human infections document tangential transmission and are the outcome

measure of forecasts and nowcasts. Response to the calculated risk level should consider the time of year (e.g., epidemic conditions in October would warrant a less aggressive response compared to epidemic conditions in July because cooler weather in late fall will contribute to declining risk of arbovirus transmission).

The ratings listed in [Table 1](#) are benchmarks only and may be modified as appropriate to the conditions in each specific region or biome of the state. Calculation and mapping of risk have also been enabled by tools for local agency use included in the CalSurv Gateway. Roles and responsibilities of key agencies involved in carrying out the surveillance and response plan are outlined in [Key Agency Responsibilities](#).

Table 1. Mosquito-Borne Virus Risk Assessment

WNV Surveillance Factor	Assessment Value	Benchmark	Assigned Value	
			Cx tars	Cx pip
1. Environmental Conditions High-risk environmental conditions include above-normal temperatures with or without above-normal rainfall, runoff, or snowpack.	1	Avg. daily temperature during prior 2 weeks ≤ 56°F		
	2	Avg. daily temperature during prior 2 weeks 57–65°F		
	3	Avg. daily temperature during prior 2 weeks 66–72°F		
	4	Avg. daily temperature during prior 2 weeks 73–79°F		
	5	Avg. daily temperature during prior 2 weeks > 79°F		
			Cx tars	Cx pip
2. Relative abundance of adult female <i>Culex tarsalis</i> and <i>Cx. pipiens</i> complex mosquitoes* Determined by trapping adults, enumerating them by species, and comparing numbers to those previously documented for an area for the prior 2-week period.	1	Vector abundance well below average (≤ 50%)		
	2	Vector abundance below average (51–90%)		
	3	Vector abundance average (91–150%)		
	4	Vector abundance above average (151–300%)		
	5	Vector abundance well above average (> 300%)		
3. Virus infection rate in <i>Cx. tarsalis</i> and <i>Cx. pipiens</i> complex mosquitoes* Tested in pools of ≤ 50 females. Test results expressed as minimum infection rate per 1,000 mosquitoes tested (MIR) for the prior 2-week period.	1	MIR = 0		
	2	MIR = 0.1–1.0		
	3	MIR = 1.1–2.0		
	4	MIR = 2.1–5.0		
	5	MIR > 5.0		
4. Sentinel chicken seroconversion Number of chickens in a flock that develop antibodies to WNV during the prior 2-week period. If more than one flock is present in a region, number of flocks with seropositive chickens is an additional consideration. Typically 7 - 10 chickens per flock.	1	No seroconversions in broad region		
	2	One or more seroconversions in broad region		
	3	One or two seroconversions in a single flock in specific region		
	4	More than two seroconversions in a single flock or two flocks with one or two seroconversions in specific region		
	5	More than two seroconversions per flock in multiple flocks in specific region		
5. Dead bird infection Number of birds that have tested positive for WNV during the prior 3-month period. This longer time period reduces the impact of zip code closures during periods of increased WNV transmission.	1	No positive dead birds in broad region		
	2	One or more positive dead birds in broad region		
	3	One positive dead bird in specific region		
	4	Two to five positive dead birds in specific region		
	5	More than five positive dead birds in specific region		
6. Human cases Do not include this factor in calculations if no cases are detected in region.	3	One or more human infections in broad region		
	4	One human infection in specific region		
	5	More than one human infection in specific region		
			Cx tars	Cx pip
Response Level / Average Rating:				
Normal Season (1.0 to 2.5)		TOTAL		
Emergency Planning (2.6 to 4.0)				
Epidemic (4.1 to 5.0)		AVERAGE		

*Calculation of separate risk values for *Cx. tarsalis* and the *Cx. pipiens* complex may be useful if their spatial distributions (e.g., rural vs. urban) differ within the assessment area.

SLEV Surveillance Factor	Assessment Value	Benchmark	Assigned Value	
1. Environmental Conditions High-risk environmental conditions include above-normal temperatures with or without above-normal rainfall, runoff, or snowpack.	1	Avg daily temperature during prior 2 weeks $\leq 56^{\circ}\text{F}$		
	2	Avg daily temperature during prior 2 weeks $57\text{--}65^{\circ}\text{F}$		
	3	Avg daily temperature during prior 2 weeks $66\text{--}72^{\circ}\text{F}$		
	4	Avg daily temperature during prior 2 weeks $73\text{--}79^{\circ}\text{F}$		
	5	Avg daily temperature during prior 2 weeks $> 79^{\circ}\text{F}$		
			<i>Cx tars</i>	<i>Cx pip</i>
2. Relative abundance of adult female <i>Culex tarsalis</i> and <i>Cx. pipiens</i> complex mosquitoes* Determined by trapping adults, enumerating them by species, and comparing numbers to those previously documented for an area for the prior 2-week period.	1	Vector abundance well below average ($\leq 50\%$)		
	2	Vector abundance below average ($51\text{--}90\%$)		
	3	Vector abundance average ($91\text{--}150\%$)		
	4	Vector abundance above average ($151\text{--}300\%$)		
	5	Vector abundance well above average ($> 300\%$)		
3. Virus infection rate in <i>Cx. tarsalis</i> and <i>Cx. pipiens</i> complex mosquitoes* Tested in pools of ≤ 50 females. Test results expressed as minimum infection rate per 1,000 mosquitoes tested (MIR) for the prior 2-week collection period.	1	MIR = 0		
	2	MIR = 0.1–1.0		
	3	MIR = 1.1–2.0		
	4	MIR = 2.1–5.0		
	5	MIR > 5.0		
4. Sentinel chicken seroconversion Number of chickens in a flock that develop antibodies to SLEV during the prior 2-week period. If more than one flock is present in a region, number of flocks with seropositive chickens is an additional consideration. Typically 7 - 10 chickens per flock.	1	No seroconversions in broad region		
	2	One or more seroconversions in broad region		
	3	One or two seroconversions in a single flock in specific region		
	4	More than two seroconversions in a single flock or two flocks with one or two seroconversions in specific region		
	5	More than two seroconversions per flock in multiple flocks in specific region		
5. Human cases Do not include this factor in calculations if no cases are detected in region.	3	One or more human cases in broad region		
	4	One human case in specific region		
	5	More than one human case in specific region		
			<i>Cx tars</i>	<i>Cx pip</i>
<u>Response Level / Average Rating:</u>				
Normal Season (1.0 to 2.5)			TOTAL	
Emergency Planning (2.6 to 4.0)				
Epidemic (4.1 to 5.0)			AVERAGE	

*Calculation of separate risk values for *Cx. tarsalis* and the *Cx. pipiens* complex may be useful if their spatial distributions (e.g., rural vs. urban) differ within the assessment area.

WEEV Surveillance Factor	Assessment Value	Benchmark	Assigned Value
1. Environmental Conditions High-risk environmental conditions include above normal rainfall, snowpack, and runoff during the early season followed by a strong warming trend.	1	Cumulative rainfall and runoff well below average	
	2	Cumulative rainfall and runoff below average	
	3	Cumulative rainfall and runoff average	
	4	Cumulative rainfall and runoff above average	
	5	Cumulative rainfall and runoff well above average	
2. Relative abundance of adult female <i>Culex tarsalis</i> mosquitoes Determined by trapping adults, enumerating them by species, and comparing numbers to averages previously documented for an area for the prior 2-week period.	1	<i>Cx. tarsalis</i> abundance well below average ($\leq 50\%$)	
	2	<i>Cx. tarsalis</i> abundance below average (51–90%)	
	3	<i>Cx. tarsalis</i> abundance average (91–150%)	
	4	<i>Cx. tarsalis</i> abundance above average (151–300%)	
	5	<i>Cx. tarsalis</i> abundance well above average ($> 300\%$)	
3. Virus infection rate in <i>Cx. tarsalis</i> mosquitoes Tested in pools of ≤ 50 females. Test results expressed as minimum infection rate per 1,000 mosquitoes tested (MIR) for the prior 2-week collection period.	1	<i>Cx. tarsalis</i> MIR = 0	
	2	<i>Cx. tarsalis</i> MIR = 0.1–1.0	
	3	<i>Cx. tarsalis</i> MIR = 1.1–2.0	
	4	<i>Cx. tarsalis</i> MIR = 2.1–5.0	
	5	<i>Cx. tarsalis</i> MIR > 5.0	
4. Sentinel chicken seroconversion Number of chickens in a flock that develop antibodies to WEEV during the prior 2-week period. If more than one flock is present in a region, number of flocks with seropositive chickens is an additional consideration. Typically 7 - 10 chickens per flock.	1	No seroconversions in broad region	
	2	One or more seroconversions in broad region	
	3	One or two seroconversions in a single flock in specific region	
	4	More than two seroconversions in a single flock or two flocks with one or two seroconversions in specific region	
	5	More than two seroconversions per flock in multiple flocks in specific region	
5. Proximity to urban or suburban regions (score only if virus activity is detected) Risk of outbreak is highest in urban areas because of high likelihood of contact between humans and vectors.	1	Virus detected in rural area	
	3	Virus detected in small town or suburban area	
	5	Virus detected in urban area	
6. Human cases Do not include this factor in calculations if no cases found in region or in agency.	3	One or more human cases in broad region	
	4	One human case in specific region	
	5	More than one human case in specific region	
Response Level / Average Rating: Normal Season (1.0 to 2.5) Emergency Planning (2.6 to 4.0) Epidemic (4.1 to 5.0)		TOTAL	
		AVERAGE	

General suggestions for applying the risk assessment model locally

- Use a consistent time period for environmental conditions, adult mosquito abundance, mosquito infection rates, and human cases and use this same period of time for all estimates. If you use a time frame that differs from the prior two-week period defined in the risk assessment, such as the prior month, use the same time period for all other relevant estimates. Note that sentinel chicken seroconversions may require special consideration to account for bleeding schedules, and dead bird data should consider areas that are no longer eligible for dead bird surveillance (e.g. ZIP code closures).
- If you have multiple trap types in your surveillance program, determine the vector abundance anomaly for each trap type and species and use the most sensitive trap type's value in the risk assessment.
- When determining the vector abundance anomaly, there should be at least two years (preferably five) of historical data to provide a comparative baseline for each trap type. Ideally, the prior years should use the same or very similar trap locations, be contiguous, and immediately precede the time period being evaluated.

Risk assessment as implemented by the [CalSurv Gateway](#)

- Statewide maps at a resolution of 1 km² are generated and delivered to the primary contacts of each agency by email every Monday.
- Only agencies with active CalSurv accounts and defined primary contacts will receive the weekly maps.
- Mapped risk surfaces are generated for all areas of California that have one or more surveillance inputs within 8 km. The risk for each pixel in the map image is based on a spatially weighted summary of all available surveillance data within 8 km. Pixels > 8 km from the nearest surveillance do not have assigned risk values.
- Due to privacy concerns and delays in detection and reporting, human cases are not part of CalSurv's risk assessment.
- Risk estimates based on mosquito abundance and infection rates are calculated separately for the key mosquito taxa, *Culex tarsalis* and the *Cx. pipiens* complex.
- The risk assessment model is also implemented as an online calculator for use by local vector control agencies that allows user definition of locations, date ranges, and other criteria.

Characterization of Conditions and Responses for State and Local Agencies

Level 1: Normal Season

Risk rating: 1.0 to 2.5

CONDITIONS
<ul style="list-style-type: none">• Cool to moderate seasonal temperatures (< 65°F)• <i>Culex</i> mosquito abundance at or below five-year average (key indicator = adults of vector species)• No virus infection detected in mosquitoes• No seroconversions in sentinel chickens• No recently infected WNV-positive dead birds• No human cases

RESPONSE
<ul style="list-style-type: none">• Conduct routine public education (eliminate standing water around homes, use personal protection measures)• Conduct routine mosquito and virus surveillance activities• Comply with National Pollutant Discharge Eliminations System (NPDES) permit if applying pesticides to waters of the United States• Conduct routine mosquito control with emphasis on larval control• Inventory pesticides and equipment• Evaluate pesticide resistance in vector species• Ensure adequate emergency funding• Release routine press notices• Send routine notifications to physicians and veterinarians• Establish and maintain routine communication with local office of emergency services personnel; obtain Standardized Emergency Management System (SEMS) training

Level 2: Emergency Planning

Risk rating: 2.6 to 4.0

CONDITIONS
<ul style="list-style-type: none">• Temperature above average (66–79°F)• Adult <i>Culex</i> mosquito abundance greater than 5-year average (150% to 300% above normal)• One or more virus infections detected in <i>Culex</i> mosquitoes (MIR < 5 per 1,000 tested)• One or more seroconversions in single flock or one to two seroconversions in multiple flocks in specific region• One to five recently infected WNV-positive dead birds in specific region• One human case in broad or specific region• WEEV detected in small towns or suburban area

RESPONSE
<ul style="list-style-type: none">• Review epidemic response plan• Enhance public education (include messages on the signs and symptoms of encephalitis; seek medical care if needed; inform public about pesticide applications if appropriate)• Enhance information to public health providers• Conduct epidemiological investigations of cases of equine or human disease• Increase surveillance and control of mosquito larvae• Increase adult mosquito surveillance• Increase number of mosquito pools tested for virus• Conduct or increase localized chemical control of adult mosquitoes as appropriate• Contact commercial applicators in anticipation of large-scale adulticiding• Review candidate pesticides for availability and susceptibility of vector mosquito species• Ensure notification of key agencies of presence of viral activity, including the local office of emergency services

Level 3: Epidemic Conditions

Risk rating: 4.1 to 5.0

CONDITIONS
<ul style="list-style-type: none">• Temperature well above average (> 79°F)• Adult vector population extremely high (> 300% above normal)• Virus infections detected in multiple pools of <i>Culex tarsalis</i> or <i>Cx. pipiens</i> mosquitoes (MIR > 5 per 1,000 tested)• More than two seroconversions per flock in multiple flocks in specific region• More than five recently infected WNV-positive dead birds and multiple reports of dead birds in specific region• More than one human case in specific region• WEEV detection in urban or suburban areas

RESPONSE
<ul style="list-style-type: none">• Conduct full-scale media campaign• Alert physicians and veterinarians to expect cases• Conduct active human case surveillance with outreach to the medical community• Conduct epidemiological investigations of cases of equine or human disease• Continue enhanced larval surveillance and control of immature mosquitoes• Broaden geographic coverage of adult mosquito surveillance• Accelerate adult mosquito control as appropriate by ground and/or air• Coordinate the response with the local Office of Emergency Services or if activated, the Emergency Operation Center (EOC)• Initiate mosquito surveillance and control in geographic regions without an organized vector control program• Determine whether declaration of a local emergency should be considered by the County Board of Supervisors (or Local Health Officer)• Determine whether declaration of a “State of Emergency” should be considered by the Governor at the request of designated county or city officials• Ensure state funds and resources are available to assist local agencies at their request• Determine whether to activate a Standardized Emergency Management System (SEMS) plan at the local or state level• Continue mosquito education and control programs until mosquito abundance and enzootic virus activity is substantially reduced and no additional human cases are detected

For more detailed information on responding to a mosquito-borne disease outbreak, please refer to: [Operational Plan for Emergency Response to Mosquito-Borne Disease Outbreaks, California Department of Public Health](#) (supplement to California Mosquito-Borne Virus Surveillance and Response Plan).

Key Agency Responsibilities

Local Mosquito and Vector Control Agencies

- Acquire and interpret local climate and weather data.
- Monitor abundance of immature and adult mosquitoes.
- Collect and submit mosquito pools to DART or local laboratories for testing.
- Maintain sentinel chicken flocks, collect blood samples and send samples to VBDS for testing.
- Pick up suitable dead birds and collect and submit oral swab samples to DART or local laboratories for WNV testing.
- Report weekly mosquito and dead bird results that are tested in-house to the [CalSurv Gateway](#).
- Conduct routine control of immature mosquitoes.
- Comply with NPDES permit if applying pesticides to waters of the United States.
- Conduct control of adult mosquitoes when needed.
- Educate public on mosquito avoidance and reduction of mosquito breeding sites.
- Coordinate with local Office of Emergency Services personnel.
- Communicate regularly with neighboring agencies.

Mosquito and Vector Control Association of California

- Coordinate purchase of sentinel chickens.
- Receive, track, and disburse payment for mosquito surveillance expenses.
- Coordinate surveillance and response activities among member agencies.
- Serve as spokesperson for member agencies.
- Establish liaisons with press and government officials.

California Department of Public Health

- Provide and maintain Vector Control Technician Certification program.
- Maintain a WNV information and dead bird reporting call center, 1-877-WNV-BIRD, and a [WNV website](#).
- Provide supplies for sentinel chicken diagnostic specimens.
- Test sentinel chicken blood for antiviral antibodies.
- Coordinate surveillance for human infections and conduct epidemiological investigations of suspect cases of human disease.
- Coordinate and oversee testing and acquisition of human specimens for virus and antiviral antibodies.
- Distribute a weekly bulletin summarizing surveillance test results.
- Report weekly environmental and human surveillance data to the CDC arboviral surveillance system (ArboNET).
- Immediately notify local public health officials when evidence of virus activity is found.
- Coordinate and participate in a regional emergency response in conjunction with California Emergency Management Agency.

- Provide oversight to local jurisdictions without defined vector-borne disease control program.
- Maintain inventory of antigens, antisera, and molecular assays to detect exotic viruses.
- Provide confirmatory laboratory testing for local agencies.

University of California at Davis

- Conduct research on arbovirus surveillance, transmission of mosquito-borne pathogens, and mosquito ecology and control.
- Test mosquito and dead bird samples for endemic and exotic arboviruses.
- Provide an annual proficiency panel to local agencies that conduct in-house testing on birds and/or mosquitoes for WNV, SLEV, and WEEV to ensure quality control for local laboratory results.
- Maintain an [interactive website](#) for management and dissemination of data on mosquito-borne virus surveillance and control.
- Maintain inventory of antigens, antisera, and viruses to detect the introduction of exotic viruses.
- Provide confirmation of tests done by local or state agencies.

California Department of Food and Agriculture

- Notify veterinarians and veterinary diagnostic laboratories about WEEV and WNV testing available at CAHFS.
- Provide outreach to general public and livestock managers of the need to monitor and report equine and ratite encephalitides.
- Facilitate equine sample submission from veterinarians.
- Conduct investigations of confirmed WNV and WEEV equine cases.
- Notify CDPH regarding WNV or WEEV positive equines

California Animal Health and Food Safety Laboratory

- Test equine and other animal specimens for evidence of WNV or other arbovirus infection.

Local Health Departments and Public Health Laboratories

- Test human specimens for WNV and other arboviruses.
- Refer human specimens to CDPH for further testing as needed.
- Conduct epidemiological investigations of cases of human disease.
- Notify local medical community, including hospitals and laboratories, if evidence of viral activity is present.
- Pick up suitable dead birds and collect and submit oral swab samples to DART for WNV testing.
- Participate in emergency response.
- Report WNV and other arboviral infections to CDPH.
- Conduct public outreach and education.

California Emergency Management Agency

- Coordinate the local, regional, or statewide emergency response to epidemic conditions in conjunction with CDPH via the Standardized Emergency Management System (SEMS).
- Serve as liaison with the Federal Emergency Management Agency (FEMA) in the event that a federal disaster has been declared.

United States Centers for Disease Control and Prevention

- Provide consultation to state and local agencies in California if epidemic conditions exist.
- Provide national surveillance data to state health departments.
- Provide diagnostic consultation.

State Water Resources Control Board

- Review NPDES permit applications and respond in a timely manner.
- Review vector control pesticides registered by the California Department of Pesticide Regulation for inclusion on the Vector Control NPDES permit.

Appendix A: Guidelines for Adult Mosquito Surveillance

The objective of Appendix A is to standardize mosquito sampling and reporting procedures to provide comparable and interpretable abundance measures among collaborating mosquito control agencies in California. Specific sampling methods for invasive *Aedes* have been summarized in the document [Guidance for Surveillance of and Response to Invasive *Aedes* Mosquitoes and Dengue, Chikungunya, and Zika in California](#). Appendix A summarizes information from Integrated Mosquito Surveillance Program Guidelines for California that have been adopted by the Mosquito and Vector Control Association (MVCAC) (Meyer et al. 2003). The MVCAC guidelines recommend stratifying the use of different sampling methods in rural, small town, and urban environments for each of the major biomes of California and provide a listing of target vector and nuisance mosquito species. The stratified sampling approach monitors vector populations and virus activity in rural enzootic foci, agricultural or suburban amplification sites, and densely populated urban centers to provide estimates of early, eminent, and current epidemic risk.

The four sampling methods currently used by mosquito control agencies are:

- 1) New Jersey (American) light trap (Mulhern 1942);
- 2) CO₂-baited trap, such as CDC/EVS style (Newhouse et al. 1966; Sudia and Chamberlain 1962);
- 3) Gravid trap (Cummings 1992; Reiter 1983);
- 4) Adult resting collections (Loomis and Sherman 1959).

Collection location sites should be geocoded and registered using the [CalSurv Gateway](#). Studies comparing trap design and for surveillance purposes have been published (Reisen et al. 2000; Reisen et al. 2002). These guidelines describe:

- 1) A comparison of the sampling methods
- 2) Equipment design
- 3) Operation
- 4) Specimen processing
- 5) Data recording and analysis
- 6) Data usage.

Advantages and Disadvantages of Mosquito Sampling Methods

New Jersey Light Trap

Pros	Cons
<ul style="list-style-type: none"> • All female gonotrophic states and males collected • Minimal collection effort (can be run nightly without service) • Long history of use in California 	<ul style="list-style-type: none"> • Selective for phototactic nocturnally active mosquitoes • Ineffective in the presence of competing light sources • Sorting time excessive because of other insects in traps • Specimens dead; less useful for virus detection • Collects relatively fewer specimens

CDC/EVS CO₂ Trap

Pros	Cons
<ul style="list-style-type: none"> • Samples biting population • Collects large numbers of virus vector species • Specimens are alive and suitable for virus detection • Without light, collects mostly mosquitoes and reduces sorting time • Battery operated, portable 	<ul style="list-style-type: none"> • Collects >50% newly emerged females that have never blood fed, implying lower probability of infection • Must be set and picked-up daily • Dry ice cost may be high and availability can be a problem • Does not collect males or bloodfed and gravid females

Gravid Trap

Pros	Cons
<ul style="list-style-type: none"> • Primarily collects females that have bloodfed and digested a blood meal; may have higher infection rate than CO₂ trap • Specimens are alive and suitable for virus detection • Effective for <i>Culex quinquefasciatus</i> and <i>Cx. pipiens</i> in urban habitats • Bait is inexpensive, consisting of water and organic matter • Battery operated, portable 	<ul style="list-style-type: none"> • Collects only foul-water <i>Culex</i> (mostly <i>Cx. pipiens</i> complex) • Bait has an objectionable odor • Must be set and picked-up daily

Resting Catches

Pros	Cons
<ul style="list-style-type: none"> • All female reproductive stages collected (unfed, bloodfed, and gravid) • Minimal equipment needed • Specimens are collected alive and suitable for virus detection • Bloodfed and gravid specimens can be tested to improve sensitivity of virus surveillance 	<ul style="list-style-type: none"> • Standardization is difficult due to: <ol style="list-style-type: none"> 1. Variable shelter size and type 2. Variable collector efficiency • Labor intensive; difficult to concurrently sample many sites

New Jersey (American) Light Trap (NJLT)

Operation

At a minimum, one trap should be located in each principal municipality of a district, or have a density of about one trap/township (36 mi²). Correct placement of the NJLT is a critical factor in its performance as an effective surveillance mechanism for measuring the relative abundance of phototactic mosquitoes. Place the traps at a height of six feet. This can be done by using a metal stand, or by hanging the traps from tree limbs or roof eaves. These distances should maximize attractancy over a 360-degree radius. The trap should be placed on the leeward side of a structure or tree line to decrease the influence of wind on trap catch.

Traps should be kept away from smoke or chemical odors that may be repellent to the mosquitoes. Traps should be away from buildings in which animals are housed and not be in the immediate vicinity of sentinel flocks to minimize attractancy competition. Traps should be placed away from street and security lights that may diminish attractancy of the trap bulb. A trap should be placed approximately 100–200 feet from each sentinel chicken flock when possible to link abundance with seroconversions.

Traps should be operated from week 14 to week 44 of the calendar year for districts north of the Tehachapi Mountains and all year long for districts south of the Tehachapi. Ideally, the traps should run consecutively for four to seven nights before the collection is retrieved (Loomis and Hanks 1959). The trap should be cleaned thoroughly at each visit with a brush to remove spider webs or any other debris that may hinder airflow through the trap. A regular cleaning schedule should be maintained during the trapping season to maintain trap efficiency.

Processing

Adult mosquitoes from the NJLT collection should be sorted from the other insects in a white pan before being identified and counted at 10x magnification under a dissecting microscope. Counting aliquots or subsamples of all specimens should be discouraged because vector species may comprise only a small fraction of the total mosquito collection.

CDC style CO₂-baited trap

Operation

Carbon dioxide-baited traps can be used for abundance monitoring or capturing mosquitoes for virus testing, and increased trapping density will result in increased certainty for estimates of mosquito abundance and infection rates (Healy et al. 2015). Traps should be hung from a 6-foot tall standard pole (approximately 4 feet above ground level) to standardize trap placement for population and virus infection rate monitoring. Knowledge of the host-seeking patterns of the target species is essential in determining CO₂-baited trap placement in the habitat to enhance catch size and therefore sampling sensitivity. *Cx. tarsalis* primarily bloodfeed on birds and seek bloodmeals along vegetative borders and tree canopies where birds roost and nest. *Cx. erythrorhax* are best collected within wetland areas near dense stands of tules and cattails. In large, open breeding sources such as rice fields, CO₂-baited traps could be hung on standards on the upwind side of the source for *Cx. tarsalis* and *Anopheles freeborni* collections. *Aedes melanimon* and *Ae. nigromaculis* are mammal feeders and typically seek hosts over open fields.

When used for arbovirus surveillance, traps should be operated at different locations to enhance geographical coverage and thus surveillance sensitivity. Labor and time constraints determine the extent of sampling. When used to monitor population abundance, traps should be operated weekly or biweekly at the same fixed stations. Temperature, wind speed, wind direction, and rainfall should be recorded because these factors affect catch size. The mini light may be removed because it attracts other phototactic insects that may hinder sorting and/or damage female mosquitoes in the collection container. The CO₂-baited trap should not be placed in immediate proximity to the sentinel chicken flock, because it will compete with, and therefore lessen, exposure of the sentinel birds, but may be placed within a 100–200 foot radius of the sentinel flock site, but no closer than 100 feet from the flock.

Processing

Mosquitoes collected for arbovirus surveillance should be processed according to the procedures outlined in Appendix B. If possible, ten pools of a species (*Cx. tarsalis*, *Cx. pipiens*, *Cx. quinquefasciatus*, *Cx. stigmatosoma*, *Ae. melanimon*, and *Ae. dorsalis*) should be submitted for virus testing from a given geographical location at a given time. Only live mosquitoes should be pooled for virus testing. Dead, dried specimens should be counted and discarded. Only whole specimens should be submitted; avoid including detached body parts (which may be from other mosquito species) or other Diptera (e.g., *Culicoides*, etc.) in the pool to prevent sample contamination. Avoid freezing specimens before sorting and counting. Mosquitoes collected for population monitoring should be anesthetized in a well-ventilated area or under a chemical hood using triethylamine, identified to species under a dissecting microscope, counted, pooled, and immediately frozen at -80°C or on dry ice for later virus testing.

Reiter/Cummings gravid traps

Trap design and components

The Reiter/Cummings gravid trap consists of a rectangular trap housing (plastic toolbox) with an inlet tube on the bottom and an outlet tube on the side or top. The rectangular housing is provided with legs to stabilize the trap over the attractant basin containing the hay-infusion mixture (Cummings 1992). The oviposition attractant consists of a fermented infusion made by mixing hay, Brewer's yeast, and water. The mixture should sit at ambient temperature for a minimum of three to four days prior to use to allow fermentation and increase attractancy. New solutions should be made at least biweekly to maintain consistent attractancy.

Operation

The Reiter/Cummings gravid trap is primarily used in suburban and urban residential settings for surveillance of gravid females in the *Cx. pipiens* complex. As for CO₂-baited traps, increased trapping density will result in increased certainty for estimates of mosquito abundance and infection rates (Healy et al. 2015). Gravid traps are placed on the ground near dense vegetation that serves as resting sites for gravid females. Specimens may be retrieved on a one to three-day basis.

Processing

Cx. pipiens complex females collected with the gravid trap for arbovirus surveillance should be retrieved daily and the protocol for mosquito pool submission as outlined in Appendix B should be followed. For population monitoring of the *Cx. pipiens* complex, collections may be retrieved every third day. The females are killed, identified, and counted before being discarded. Autogenous females also may be attracted to the gravid trap.

Adult resting collections

Trap design and operation

A flashlight and mechanical aspirator can be used to collect adult mosquitoes resting in habitats such as shady alcoves, buildings, culverts, or spaces under bridges. Highest numbers usually are collected at humid sites protected from strong air currents. Adults resting in vegetation may be collected using a mechanical sweeper such as the Arbovirus Field Station (AFS) sweeper (Meyer et al. 1983). For quantification, time spent searching is recorded, and abundance expressed as the number collected per person-hour.

Red boxes were developed to standardize collections spatially. Different researchers have used red boxes of varying dimensions. Largest catches are made in semi-permanent walk-in red boxes which measure 4'x4'x6' (Meyer 1985). Smaller 1'x1'x1' foot boxes typically collect fewer specimens but are readily portable. The entrance of the walk-in red box should be left open, draped with canvas, or closed with a plywood door. The canvas or plywood door should have a 1 or 2 ft gap at the bottom to allow entry of mosquitoes, while affording some protection from the wind and decreasing the

light intensity within the box. The box entrance should not face eastward into the morning sun or into the prevailing wind direction.

Processing

Mosquitoes should be anesthetized with triethylamine, identified under a dissecting microscope, sorted by sex and female gonotrophic status (i.e., empty or unfed, blood fed, or gravid), and counted. Females may be counted into ten pools of approximately 50 females per site per collection date for virus monitoring (Appendix B). Only living females should be used for arbovirus surveillance. Data on gonotrophic status may indicate population reproductive age as well as diapause status.

Data recording and analysis

Counts from NJLT, EVS, and gravid traps and information on pools submitted for testing or tested locally should be entered directly in electronic format through the CalSurv Gateway (<https://gateway.calsurv.org>). Data import from local or proprietary data systems is available. For comparisons of abundance over time, space, or collection methods, refer to Bidlingmeyer (1969).

Data usage

Mosquito collections from some or all four adult sampling methods collectively can be used to:

1. Assess control efforts.
2. Monitor arbovirus vector abundance and infection rates.
3. Compare mosquito abundance from collections with the number of service requests from the public to determine the tolerance of neighborhoods to mosquito abundance.
4. Determine proximity of breeding source(s) by the number of males present in collections from the NJLTs and red boxes.
5. Determine age structure of females collected by CO₂ traps and resting adult collections; such data are critical to evaluating the vector potential of the population.

Appendix B: Procedures for Processing Mosquitoes for Arbovirus Detection

1. Collect live mosquitoes and return them immediately to the laboratory. Collections should be kept humid during transport with moist toweling to prevent desiccation. Females should be offered 5–10 percent sucrose if held overnight or longer before processing.
2. Anesthetize mosquitoes with cold, carbon dioxide, or triethylamine (TEA). TEA is recommended because specimens are permanently immobilized with minimal mortality and no loss of virus titer (Kramer et al. 1990). TEA should be used either outdoors, or under a chemical hood. Collections can be anesthetized outdoors using a few drops of TEA, the specimens transferred to petri dishes, and then taken into the laboratory for processing. If refrigerated and kept humid, mosquitoes will remain alive in covered Petri dishes for one or two days without additional anesthesia. If mosquitoes are frozen before processing, sorting to species and enumeration must be done on a chill table to prevent virus loss.
3. Sort mosquito collections to species under a dissecting microscope at 10X to ensure correct identification and to make sure that extraneous mosquito parts (i.e., legs, wings) or other small insects (e.g., chironomids or *Culicoides*) are not inadvertently included in the pools. Count and discard dead and dried mosquitoes. Pools are comprised of up to 50 females of each vector species from each collection site counted into individual polystyrene vials with snap caps containing two 5 mm glass beads. Recommended sampling effort is ten pools of 50 females of each species from each site per week to detect minimum infection rates (MIRs) ranging from 0 to 20 per 1,000 females tested. Vials with pools should be labeled sequentially each year with the pool number and year after the agency code (e.g., KERN-1-21, where 21 refers to the year of collection (2021). Number pools consecutively starting with “1” for each calendar year within your agency.

Data on each pool can be entered directly in electronic format through the [CalSurv Gateway](#). **Pools must be accompanied by a Mosquito Pool Submission Form (generated using the CalSurv Gateway) and can only be tested from registered surveillance sites.** Surveillance sites should be [registered online](#).

Register the surveillance site code for each pool in the CalSurv Gateway that consists of a designated four-letter agency code followed by six digits to identify the site (e.g., KERN000001). Pool numbers do not need to follow the ordering of site codes (e.g., pool #1 may be from KERN000001, pool #2 may be from KERN000004, pool #3 may be from KERN000003, etc.).

4. Freeze pools immediately at -80°C either on dry ice in an insulated container or in an ultra-low temperature freezer. Pools should be shipped frozen on dry ice to DART for testing by real-time multiplex RT-PCR. Agencies will receive an

automated email notification that results have been entered into the CalSurv Gateway as well as a summary of positive pools; additionally, positive pools will be reported weekly in the California Arbovirus Surveillance Bulletin. Each pool is screened for West Nile virus (WNV), St. Louis encephalitis virus (SLEV), and western equine encephalomyelitis virus (WEEV) by a multiplex RT-qPCR assay. Positive pools with Ct scores >35 are confirmed by singleplex RT-qPCR with a different set of virus species-specific primers and probes. Invasive *Aedes* mosquitoes and other mosquito species can also be tested for chikungunya, dengue, and Zika viruses upon request by a separate multiplex RT-qPCR. Pools from selected areas are also screened for additional viruses using Vero cell culture with isolates identified by genetic sequencing. Care must be taken not to allow pools to defrost during storage or shipment, because each freeze-thaw cycle may result in a decrease in viral titer; all virus will be lost if the specimens sit at room temperature for extended periods.

Address mosquito pool shipments to:

ATTN: Ying Fang
University of California
One Shields Avenue
Vet Med: PMI
Room 3336 Vet Med 3A
Davis, CA 95616

For UPS shipments only:

Ying Fang
VM://PMI 3336 Vet Med 3A
1285 Veterinary Medicine Mall
University of California, Davis
Davis, CA 95616

5. Local agencies that conduct their own testing must complete and pass an annual proficiency panel for the results to be reported by CDPH.

Appendix C: Procedures for Maintaining and Bleeding Sentinel Chickens

1. Procure hens in early spring (as notified by MVCAC), when the chickens are 14–18 weeks of age to ensure minimal mortality during handling. Hens at this age have not yet begun to lay eggs, but they should have received all vaccinations and have been dewormed.
2. Recommended housing for chickens. Flocks of 6–10 sentinel chickens can be housed in a 3Wx6Lx3H foot coop framed with 2x2 and 2x4 inch construction lumber and screened with no smaller than 1x1 inch welded wire. It is critical that the wire mesh be large enough to allow the mosquitoes to easily enter the coop and the coops be placed in locations with a history of arbovirus transmission and/or high mosquito abundance. The site and band numbers located at each coop must be [registered online](#). Coops should be at least two feet off the ground to reduce predator access, facilitate capture of the birds for bleeding, and allow the free passage of the feces through the wire floor to the ground. A single, hinged door should be placed in the middle of the coop, so that the entire coop is accessible during chicken capture. After construction, the lumber and roof should be protected with water seal. A self-filling watering device should be fitted to one end of the coop and a 25 lb. feeder suspended in the center for easy access. In exchange for the eggs, a local person (usually the homeowner, farm manager, etc.) should check the birds (especially the watering device) and remove the eggs daily. If hung so the bottom is about four inches above the cage floor and adjusted properly, the feeder should only have to be refilled weekly (i.e., 100 lb. of feed per month per flock of ten birds). Therefore, if proper arrangements can be made and an empty 55-gallon drum provided to store extra feed, sentinel flocks need only be visited biweekly when blood samples are collected.
3. Band each bird in the web of the wing using metal hog ear tags and appropriate pliers. This band number, the date, and site registration number must accompany each blood sample sent to the laboratory for testing.
4. Bleed each hen from the distal portion of the comb using a standard lancet used for human finger "prick" blood samples. The bird can be immobilized by wedging the wings between the bleeder's forearm and thigh, thereby leaving the hand free to hold the head by grabbing the base of the comb with the thumb and forefinger. Use alcohol swabs on comb before bleeding. Blood samples are collected on half-inch wide filter paper strips, which should be labeled with the date bled and wing band number. The comb should be "pricked" with the lancet and blood allowed to flow from the "wound" to form a drop. Collect the blood by touching the opposite end of the pre-labeled filter paper strip to the wound. **THE BLOOD MUST COMPLETELY SOAK THROUGH A ¾ INCH LONG PORTION OF THE STRIP.** Place the labeled end of the strip into the slot of the holder (or "jaws" of the clothes pin) leaving the blood-soaked end exposed to air dry.
5. Attach the completely dry filter paper strips to a 5x7 inch card in sequential order, from left to right by stapling the labeled end towards the top edge of the card, and

leaving the blood-soaked end free so that laboratory staff can readily remove a standard punch sample. Write the county, agency code, site, and date bled onto the card and place it into a Ziploc plastic bag (only one card per bag). It is important that the blood samples do not become dirty, wet, or touch each other. Chicken Samples must be accompanied by a "SENTINEL CHICKEN BLOOD FORM" outside the Ziploc bag. Do not staple the form to the bag.

Samples from each collection date can be placed into a mailing envelope and sent to:

California Department of Public Health
Vector-Borne Disease Section, G164 Attn: ARBO
850 Marina Bay Parkway
Richmond, CA 94804

Specimens will be tested within 1–3 days upon receipt by the laboratory.

6. In the laboratory, a single punch is removed from the blooded end of the paper and tested for West Nile virus (WNV), St. Louis encephalitis virus (SLEV), and western equine encephalomyelitis virus (WEEV) IgG antibodies using an enzyme immunoassay (Patiris et al. 2008; Taketa-Graham et al. 2010). Positive specimens are confirmed with an indirect fluorescent antibody test and/or a western blot. Samples yielding inconclusive results are tested further by cross-neutralization tests. Agencies will receive an automated email notification that results have been entered into the CalSurv Gateway. Additionally, positive chickens will be reported in the weekly California Arbovirus Surveillance Bulletin.

Appendix D: Registration of Agencies and Surveillance Sites

1. Participation of agencies

Agencies interested in participating in the statewide surveillance program for mosquito-borne viruses should place orders for sentinel chicken testing through the California Department of Public Health (CDPH). Agencies will be billed in advance for the number of samples to be tested. Mosquito pool testing by the UC Davis Arbovirus Research and Training (DART) laboratory will be billed through the Mosquito and Vector Control Association (MVCAC).

Agencies are responsible for registering and maintaining updated information for their sites online at the [CalSurv Gateway](#).

2. Registration of sentinel flock sites and wing band numbers

Agencies must use the unique band numbers assigned to their district by CDPH each year. Prior to submitting any sentinel chicken blood samples to CDPH, each agency must ensure that each flock site and accompanying band numbers are registered online at the CalSurv Gateway. CDPH will only test samples if they are accompanied by the "SENTINEL CHICKEN BLOOD form for each flock site, which includes the registered agency code, the registered site code (assigned by local agency), the wing band numbers assigned to that site, and date bled. **Also, the form should indicate any changes made and match the sample card exactly.**

3. Registration of mosquito sampling sites

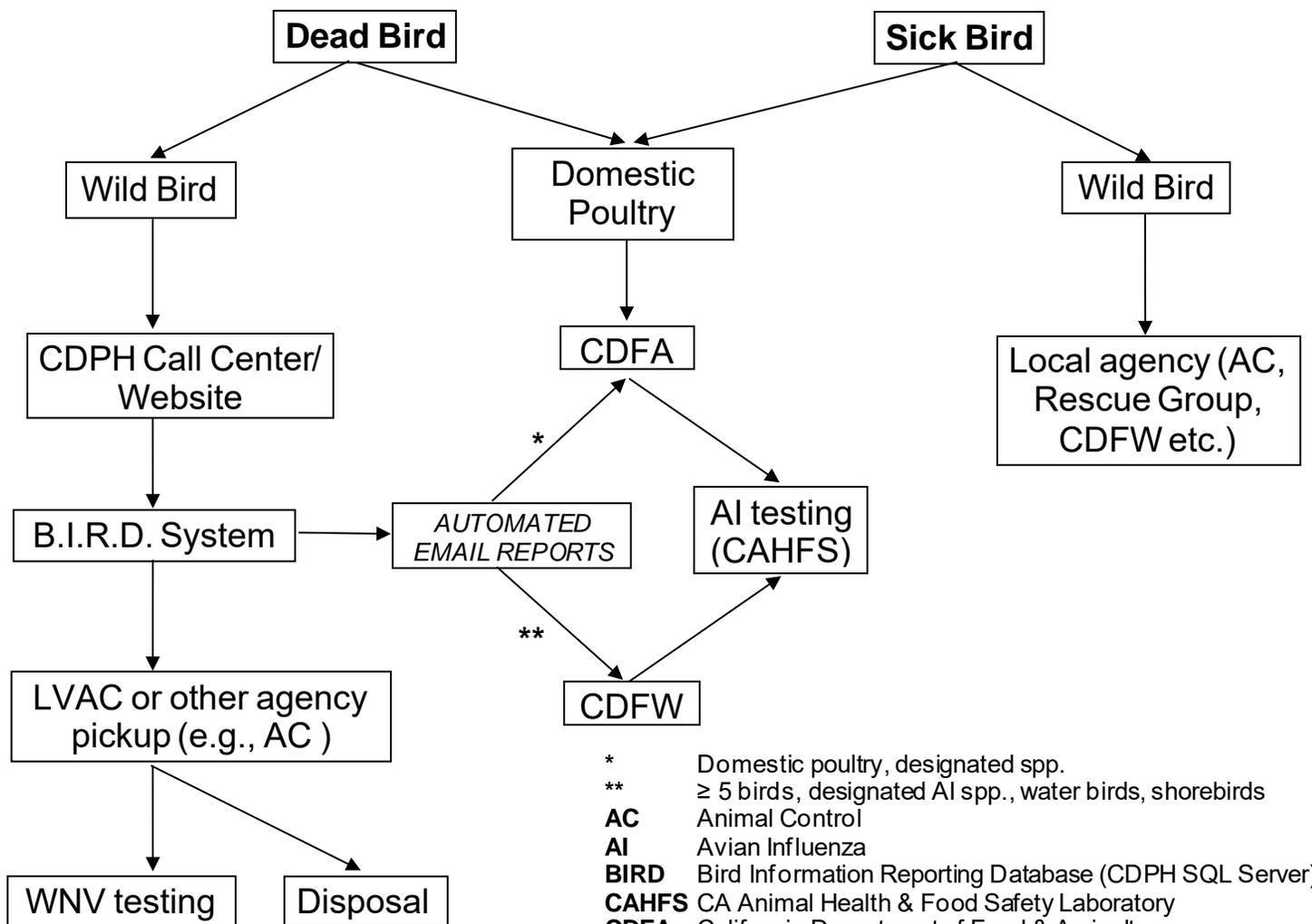
Registration of new sites used for collection of mosquitoes for virus testing may be accomplished by accessing the CalSurv Gateway. Since 2010, the CalSurv Gateway has included enhanced spatial capabilities that allow users the option of directly entering geographic coordinates for sites or interactively selecting the location using a new Google Maps-based interface. The laboratory will test the pools provided that adequate information is provided on the "MOSQUITO POOL SUBMISSION" form including your agency code, site code, and geographic coordinates.

Recording the geographic coordinates of all surveillance sites allows users to filter data spatially for analysis, and the locations are used to generate computer maps that show all registered sites and test results. As part of a collaborative effort, the [DART laboratory hosts real-time maps](#). Local agencies can log in on the mapping website or the CalSurv Gateway to access more detailed maps and enhanced analysis tools.

Appendix E: Procedures for Testing Dead Birds

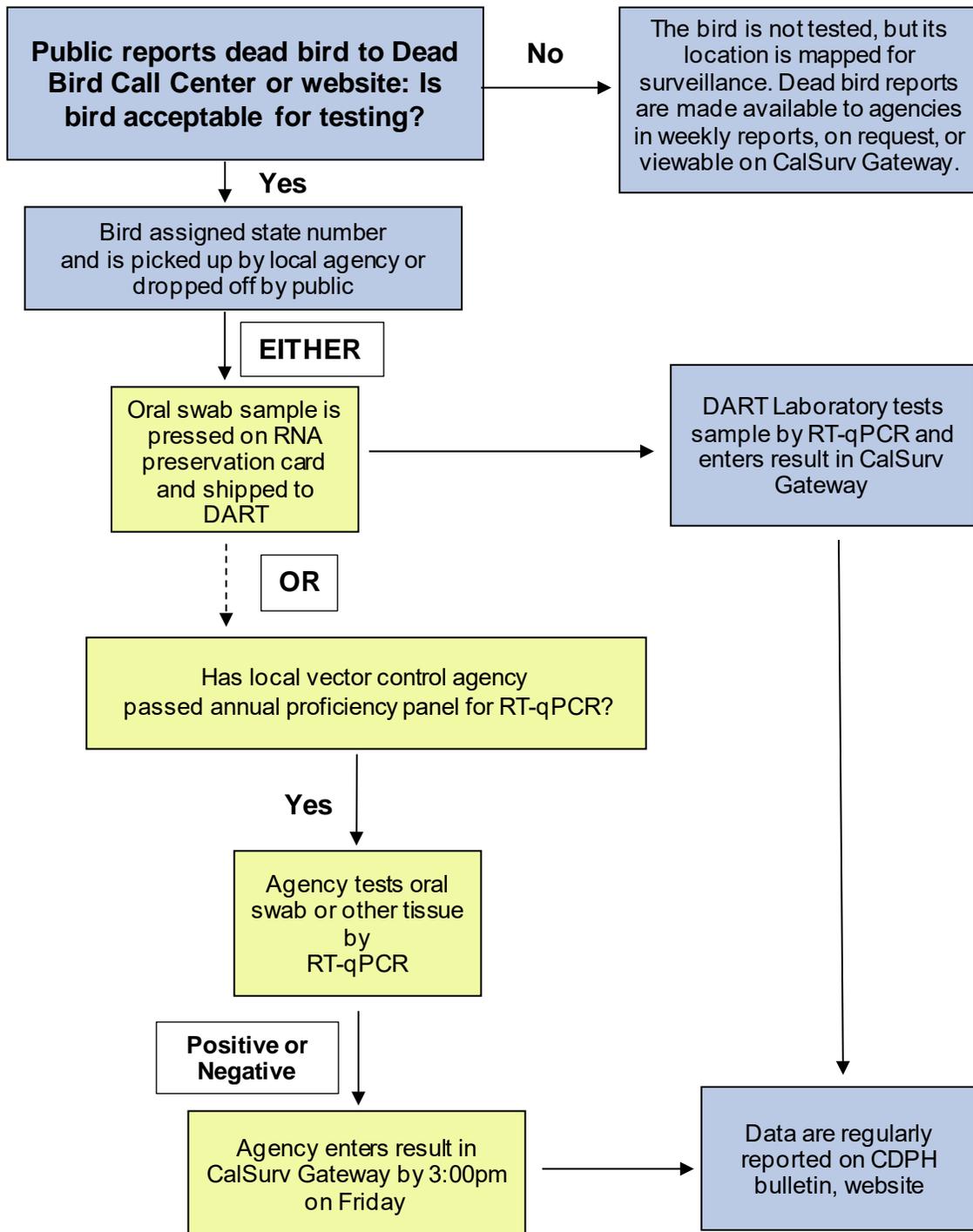
In 2000, the California Department of Public Health (CDPH) initiated a dead bird surveillance program in collaboration with other public agencies. The public is notified about the program through the media and outreach materials, and it is important for local agencies to publicize the need to report dead birds to ensure that the system will be effective. Dead birds are reported to CDPH or data entered electronically through the [CalSurv Gateway](#). An oral swab sample is taken from the bird, pressed on an RNA preservation card, and sent to the UC Davis Arbovirus Research and Training (DART) laboratory for West Nile virus (WNV) RNA detection via RT-qPCR. Overviews of the dead bird reporting and testing algorithms are provided below.

Sick/Dead Bird Reporting Protocol for Public and Local Agencies



- * Domestic poultry, designated spp.
- ** ≥ 5 birds, designated AI spp., water birds, shorebirds
- AC** Animal Control
- AI** Avian Influenza
- BIRD** Bird Information Reporting Database (CDPH SQL Server)
- CAHFS** CA Animal Health & Food Safety Laboratory
- CDFA** California Department of Food & Agriculture:
California Bird Flu Hotline: **1-866-922-BIRD**
- CDFW** California Department of Fish & Wildlife Investigations Lab
phone: **1-916-358-2790**
website: <https://www.wildlife.ca.gov/>
- CDPH** California Department of Public Health
West Nile virus & Dead Bird Line: **1-877-WNV-BIRD**
website: <http://westnile.ca.gov>
- LVCA** Local Vector Control Agency

Dead Bird Testing Protocol



DART = Davis Arbovirus Research and Training laboratory, UC Davis
 VBDS = Vector-Borne Disease Section, California Department of Public Health

VBDS or DART

Local Agencies

***Dead Bird Reporting and Sample Submission Instructions
for Local Agencies
California West Nile Virus (WNV) Dead Bird Surveillance Program
California Department of Public Health (CDPH)
Division of Communicable Disease Control***

When your agency receives a call from the public about a dead bird or your staff finds any dead bird, please immediately refer them to the **CDPH West Nile Virus and Dead Bird Call Center at [1-877-WNV-BIRD \(968-2473\)](tel:1-877-WNV-BIRD)** or the online report page at the [CDPH West Nile Virus website](#). **Crows, ravens, magpies, jays, and raptors are especially vulnerable to WNV, but other bird species will be accepted for testing as well (except for doves, quails, and pigeons).** A field guide to birds of Western North America is recommended to help identify birds to species, and [pictures and descriptions](#) of common birds can be found on the West Nile Virus website.

The WNV and Dead Bird Call Center will be staffed **8:00am–4:30pm, Monday–Friday (5 days a week from mid-April to mid-October)**. Reports can also be made on the [WNV website](#) year-round or after hours via voicemail prompts during the April to October season. CDPH will assess the suitability of the dead bird for testing, work with the resident to secure the bird, and contact your agency if the carcass is approved for pickup. Agencies may call directly **(510-412-4601)** to coordinate bird pickups with call center operators. If your agency collects a dead bird for testing and it is in suitable condition, you can call this number to receive a dead bird number and submission form prior to sampling and/or testing.

Agencies also can obtain a dead bird number directly in the [CalSurv Gateway](#): input a new carcass report and select “Submitted” from the “Status” dropdown menu. CalSurv will assign a number to the dead bird.

Agencies listed under the permit issued to CDPH from the California Department of Fish & Wildlife are authorized to pick up dead birds. The agencies covered include local mosquito and vector control districts, environmental health departments, and other designated agencies. Dead tree squirrels and lagomorphs may also be picked up but will no longer be tested in the program. If your agency would like to test tree squirrels and lagomorphs, the [Center for Animal Health and Food Safety \(CAHFS\)](#) offers a fee-based testing service.

Collect fresh carcasses. Badly decomposed or scavenged carcasses are of limited diagnostic value. Signs that a bird has been dead for too long (over 48 hours) are the presence of maggots; an extremely lightweight carcass; missing eyes; skin discoloration; skin or feathers that rub off easily; strong odor; or a soft, mushy carcass. However, some agencies will accept older carcasses for other tissue or maggot sampling.

If the carcass is found to be unacceptable upon pick-up (e.g., an unaccepted species or badly decomposed specimen), please collect the carcass, double bag it and dispose of it in a secure garbage can or dumpster. Please call CDPH immediately if the carcass will no longer be submitted or change the status of the submission in CalSurv.

Once the bird is collected, collect an oral swab from the bird for an RNA preservation card (please see protocol below) and mail the card to the UC Davis Arbovirus Research and Training (DART) laboratory for WNV testing. Testing expenses will be paid by CDPH, but agencies must purchase the RNA preservation cards.

To ensure your safety when handling carcasses, please follow these instructions:

Dead Bird Oral Swab Sampling Procedure

Materials needed:

- Biosafety cabinet or N95 respirator masks
- Refrigerator to store RNA preservation cards
- **RNA preservation cards** (specifically, RNASound™ cards). Order online from [Fortius Bio](#). Packages of 25 (\$140) or 10 (\$60.20) are available. (Once cards arrive, store in the refrigerator, and note the expiration date on the silver pouch. These cards are fine to use up to 18 months past the expiration date. Order as needed annually.)
- Individually-wrapped polyester swabs such as Fisher brand catalog no. 22-029-682.
- Disposable nitrile or latex gloves
- Lab coat
- Small metal spatula
- Permanent ink pen or pencil
- Shipping envelopes (business size, FedEx, or other.)

Methods:

1. Note on storage via refrigeration and freezing: It is recommended to refrigerate carcasses until ready for swabbing in lieu of maintaining at room temperature. RNA preservation cards must also be stored in the refrigerator until use. Freezing dead birds is only recommended if you cannot swab the bird for several days after collection (more than 3 days), as it will require many hours for the carcass to thaw before it can be swabbed.
2. Clean and disinfect biosafety cabinet or prepare for outdoor sampling and gather needed supplies. Dead birds should be handled in a Class II biosafety cabinet within a laboratory (WNV can be aerosolized). If it is not possible to work in a biosafety cabinet, work should be conducted outside while wearing an N95 respirator.

3. Put on disposable gloves. Partially unwrap the disposable swab. Open the bag containing the bird to expose the head. With gloved hands, pry open the beak (a metal spatula may help with this) and put swab into the mouth. Aggressively swab the mouth and oropharyngeal cavity (throat).
4. Press and roll the swab onto the target area of the RNA preservation card (over the two perforated discs). The sample may be dry and may even be colored with some blood; this is fine. Make sure to label the card with the dead bird number (i.e. 21-####) assigned to the bird by the WNV call center or obtained in CalSurv.
5. Discard the swab into the bag containing the dead bird. Double bag, knot the bag, and dispose in the trash. If you sample birds at the place of collection, the resident may dispose of the carcass or you may do it for them (residents usually appreciate the removal of the bird). Agencies conducting in-house testing may dispose of WNV-negative birds in the trash. However, WNV-positive carcasses must be disposed as biohazardous waste (incinerate).
6. Wipe the inside of cabinet and metal spatula used for opening the beak with a fresh solution of 10% bleach, followed by 70 to 100% ethanol or isopropyl alcohol and change gloves after each bird. Cavicide™ is a product which kills viruses without corroding stainless steel and may also be used.
7. Allow cards to dry in biosafety cabinet or a cool place for 2 hours. Make sure the dead bird number corresponding to the dead bird is written on the front flap of each card. Seal RNA preservation cards back into their small individual bags with desiccation packet. Once used, the cards do not need to be stored in the refrigerator but kept at room temperature. **However, they should be tested within 10 days of sample taken.**
8. Place cards in an envelope for shipment. **IMPORTANT:** Include an inventory list of bird numbers corresponding to RNA preservation card samples in each shipment, or a printout of each dead bird report submitted by an operator.

Shipping options:

- a. Add to weekly mosquito pool shipment. Seal all cards with card inventory list in a Ziplock bag and place in mosquito box. The cold temperatures of the mosquito boxes are fine for these cards but they should be protected from moisture.

- Or -

- b. Ship batches of cards via overnight delivery (FedEx, GLS). Ship on Monday for fastest turnaround times during the testing season.

- Or -

- c. Regular U.S. Postal Service mail is accepted; however, paying additional for tracking or shipping in a larger, more conspicuous envelope is recommended to help avoid lost packages.
- 9. To be notified when the cards have arrived at the lab, change the status of each dead bird in CalSurv to “submitted”. Upon receipt, DART will update the status of the card in CalSurv to “received.”
- 10. After receiving WNV test results, telephone the resident who reported the positive dead bird to let them know the bird was positive for WNV and deliver risk prevention information if needed. Some agencies also opt to call residents when the test result is WNV-negative. Or, if you have an agreement with CDPH that they will make the call, staff at the call center will inform residents whose birds tested **positive** each Monday.

Ship cards using one of the addresses below:

ATTN: Ying Fang
University of California
One Shields Avenue
Vet Med: PMI Room 3336
Vet Med 3A
Davis, CA 95616

For UPS shipments only:

Ying Fang
VM://PMI 3336
Vet Med 3A
1285 Veterinary Medicine Mall
University of California, Davis
Davis, CA 95616

For agencies conducting in-house testing by RT-qPCR:

Once agencies pass the annual proficiency panel, agencies may conduct in-house testing. Results can be entered directly in [CalSurv Gateway](#). Agencies conducting in-house testing must dispose of any WNV-positive birds as biohazard waste (incinerate) **in compliance with [the California Health and Safety Code](#)**. Negative birds can be discarded in the trash.

Appendix F: Procedures for Testing Equines

The California Department Food and Agriculture (CDFA) has primary responsibility for investigation of West Nile virus (WNV) in equids. Veterinarians and diagnostic laboratories are required to report cases of WNV and other equine encephalomyelitides to CDFA (California Food and Agriculture Code §9101; Title 9 California Code of Regulations §161.4(f))

Each spring, CDFA sends information on the California West Nile Surveillance Program to approximately 1,200 veterinarians, animal health branch personnel, and other interested parties. The mailing includes case definitions for equine WNV and instructions for collection and submission of specimens for diagnostic testing. Specimen submission is coordinated through the California Animal Health and Food Safety Laboratory System (CAHFS) and other laboratories or individual veterinarians. Equine serum and cerebrospinal fluid are tested by CAHFS using the IgM-capture ELISA. Equine neurologic tissue specimens are also sent to CAHFS for microscopic examination and, as indicated by clinical findings, forwarded to the USDA National Veterinary Services Laboratories (NVSL) for further arbovirus testing. All fatal cases of equine encephalitis should also be evaluated for rabies at the local or state public health laboratory.

Outreach is an important component of the program. Additional information on WNV for veterinarians, horse owners, and rattle owners is available from CDFA, Animal Health Branch (916) 900-5002, and at the [CDFA website](#). Information on submission of laboratory samples is available from CAHFS (530) 752-8700 and at the [CAHFS website](#).

Appendix G: Protocol for Submission of Laboratory Specimens for Human West Nile Virus (WNV) Testing

West Nile virus (WNV) testing within the regional public health laboratory network (i.e., the California Department of Public Health Viral and Rickettsial Disease Laboratory (CDPH VRDL) and participating local public health laboratories) is recommended for individuals with the following symptoms, particularly during WNV season, which typically peaks between July and October in California:

Neuroinvasive disease

- Meningitis, encephalitis, acute flaccid paralysis, or other acute signs of central or peripheral neurologic dysfunction, as documented by a physician, AND
- Absence of a more likely clinical explanation. Other clinically compatible symptoms of arboviral disease include headache, myalgia, rash, arthralgia, vertigo, vomiting, paresis and/ or nuchal rigidity.

Non-neuroinvasive disease

- Fever (chills) as reported by the patient or a health-care provider, AND
- Absence of neuroinvasive disease, AND
- Absence of a more likely clinical explanation. Other clinically compatible symptoms of non-neuroinvasive arboviral disease include headache, myalgia, rash, arthralgia, and vomiting.

Required specimens:

- Acute serum: ≥ 2 cc serum

If a lumbar puncture is performed and residual CSF is available:

- Cerebral spinal fluid (CSF): 1-2cc CSF*

If WNV is highly suspected and acute serum is negative or inconclusive, request:

- 2nd serum (convalescent): ≥ 2 cc serum collected 7-10 days after acute serum

Contact your local health department for instructions on where to send specimens.

* Given the reduced sensitivity of CSF compared with serum, serum is the preferred sample for human testing. When sending CSF, please also try to obtain and send a serum sample for testing in parallel.

Appendix H: Surveillance Case Definitions for Arbovirus Infection in Humans

Infections with West Nile virus (WNV), St. Louis encephalitis virus (SLEV), and western equine encephalomyelitis virus (WEEV) are reportable to local health departments under Title 17 of the California Code of Regulations. Local health departments should report human infections to the California Department of Public Health (CDPH). Blood and organ donors testing positive for WNV through screening should also be reported to CDPH, regardless of clinical presentation.

Case Definition for Neuroinvasive and Non-neuroinvasive WNV, SLEV, and WEEV

NOTE: This definition is for public health surveillance purposes only. It is not intended for clinical diagnoses.

Symptomatic Cases (adapted from [2015 CSTE case definition](#))

Clinical criteria for diagnosis

Neuroinvasive disease

- Meningitis, encephalitis, acute flaccid paralysis, or other acute signs of central or peripheral neurologic dysfunction, as documented by a physician, AND
- Absence of a more likely clinical explanation.

Non-neuroinvasive disease

- Fever or chills as reported by the patient or a healthcare provider, AND
- Absence of neuroinvasive disease, AND
- Absence of a more likely clinical explanation.

Case classification

Note: This classification changes after an environmental detection of SLEV. Contact CDPH for clarification regarding all suspect human cases of SLEV.

Confirmed: A case that meets the above clinical criteria and one or more of the following laboratory criteria for a confirmed case:

- Isolation of virus from, or demonstration of specific viral antigen or nucleic acid in tissue, blood, CSF, or other body fluid, OR
- Four-fold or greater change in virus-specific quantitative antibody titers in paired sera, OR
- Four-fold or greater difference in virus-specific quantitative antibody titers demonstrated via PRNT, OR
- Virus-specific IgM antibodies in CSF and a negative result for other IgM antibodies in CSF for arboviruses endemic to the region where exposure occurred.

Probable: A case that meets the above clinical criteria and the following laboratory criteria:

- Virus-specific IgM antibodies in serum but with no other testing.

Presumptive Viremic Donors (asymptomatic)

Asymptomatic infections with WNV, which are generally identified in blood donors, but also in organ donors, are also reportable. Blood donors who test positive for WNV may not necessarily be ill, nor will they initially have positive IgM or IgG antibody test results. Local health departments should report blood donors who meet the following criteria for being a presumptively viremic donor to CDPH:

A presumptively viremic donor (PVD) is a person with a blood donation that meets at least one of the following criteria:

- a) One reactive nucleic acid amplification (NAT) test with signal-to-cutoff (S/CO) ≥ 17
- b) Two reactive NATs

Additional serological testing is not required. Local health departments should follow up with the donor two weeks after the date of donation to assess if the patient subsequently became ill. If the donor did become ill as a result of WNV infection, the disease incident should be reclassified as “West Nile virus – Non-neuroinvasive” or “West Nile virus – Neuroinvasive,” depending on the individual’s clinical symptoms. Similarly, organ donors testing positive for WNV should also be reported to CDPH and receive public health follow-up by the local health department.

Appendix I: Compounds Approved for Mosquito Control in California

Label rates and usage vary from year to year and geographically; consult your County Agricultural Commissioner and the California Department of Fish and Game before application. Examples of products containing specific active ingredients are provided below, but this list is not exhaustive, nor does it constitute product endorsement. For more information on pesticides and mosquito control, please refer to the [Environmental Protection Agency website](#).

Larvicides:

1. *Bacillus thuringiensis* subspecies *israelensis* (Bti: e.g. Aquabac 200G, VectoBac® 12AS, Teknar HP-D)
Use: Approved for most permanent and temporary bodies of water.
Limitations: Only works on actively feeding stages. Does not persist well in the water column.
2. *Bacillus sphaericus* (Bs: e.g. VectoLex® CG)
Use: Approved for most permanent and temporary bodies of water.
Limitations: Only works on actively feeding stages. Does not work well on all species. May persist and have residual activity in some sites.
3. Spinosad (e.g. Natular™ G30)
Limitations: Effective against all larval stages and moderately effective against pupal stage. Toxic via ingestion and contact. Some formulations approved for use in OMRI certified organic crops.
4. IGRs (Insect Growth Regulators)
 - a. (S)-Methoprene (e.g. Altosid® Pellets)
Use: Approved for most permanent and temporary bodies of water.
Limitations: Works best on older instars. Some populations of mosquitoes may show some resistance.
 - b. Diflurobenzamide (e.g. Dimilin®25W)
Use: Impounded tail water, sewage effluent, urban drains and catch basins.
Limitations: Cannot be applied to wetlands, crops, or near estuaries.
5. Larviciding oils (e.g. Bonide)
Use: Ditches, dairy lagoons, floodwater. Effective against all stages, including pupae.
Limitations: Consult with the California Department of Fish and Game for local restrictions.
6. Monomolecular films (e.g. Agnique® MMF)
Use: Most standing water including certain crops.
Limitations: Does not work well in areas with unidirectional winds in excess of ten mph.

7. Temephos (e.g. Abate® 2-BG)
Use: Non-potable water; marshes; polluted water sites
Limitations: Cannot be applied to crops for food, forage, or pasture. This material is an organophosphate compound and may not be effective on some *Cx. tarsalis* populations in the Central Valley. May require sampling and testing per General Vector Control National Pollutant Discharge Elimination System (NPDES) permit requirements if applied to waters of the United States.

Adulticides:

1. Organophosphate compounds
Note: Many *Cx. tarsalis* populations in the Central Valley are resistant at label OP application rates.
 - a. Malathion (e.g. Fyfanon® ULV)
Use: May be applied by air or ground equipment over urban areas, some crops including rice, wetlands.
Limitations: Paint damage to cars; toxic to fish, wildlife and bees; crop residue limitations restrict application before harvest.
 - b. Naled (e.g. Dibrom® Concentrate, Trumpet® EC)
Use: Air or ground application on fodder crops, swamps, floodwater, residential areas.
Limitations: Similar to Malathion.
2. Pyrethrins (natural pyrethrin products: e.g. Pyrenone® Crop Spray, Pyrenone® 25-5, Evergreen)
Use: Wetlands, floodwater, residential areas, some crops.
Limitations: Do not apply to drinking water, milking areas; may be toxic to bees, fish, and some wildlife. Some formulations with synergists have greater limitations.
3. Pyrethroids (synthetic pyrethrin products containing deltamethrin, cyfluthrin, permethrin, resmethrin, sumithrin or etofenprox: e.g. Suspend® SC, Tempo Ultra SC, Aqua-Reslin®, Scourge® Insecticide, Anvil® 10+10 ULV, Zenivex E20, and Duet – which also contains the mosquito exciter prallethrin)
Use: All non-crop areas including wetlands and floodwater.
Limitations: May be toxic to bees, fish, and some wildlife; avoid treating food crops, drinking water or milk production.

Appendix J: Adult Mosquito Control in Urban Areas

Adult mosquito control via ultralow volume (ULV) application is an integral part of an integrated mosquito management program. This response plan recommends the consideration of adult mosquito control to disrupt local virus transmission cycles and reduce the risk of human infection. The following provides guidelines for local agencies considering ground or aerial ULV control of adult mosquitoes. Agencies should ensure they are complying with National Pollutant Discharge Elimination System (NPDES) permit requirements.

Preparatory steps for aerial application contracts

- Send out request for proposals (RFP) to commercial applicators well in advance of any potential need for treatment. Specify required equipment and abilities in the RFP such as: 1) application equipment capable of producing desired droplet spectrum and application rate, 2) aircraft availability time frames (remember FAA requires 2-engine aircraft for applications over urban areas), and 3) the demonstrated ability to apply the chosen product to the target area in accordance with label requirements.
- Outline the desired capabilities and equipment within the RFP such as: 1) onboard real time weather systems, and 2) advanced onboard drift optimization and guidance software.
- Determine in advance whether the vector control agency or contractor will secure and provide pesticides. If the contractor will supply the pesticide, verify their knowledge of and ability to comply with regulations regarding the transport, use, and disposal of all pesticide and containers.
- Enter into a contingency contract with the commercial applicator.
- Consider acquiring non-owned, multiple engine aircraft insurance with urban application endorsement for added protection.
- Determine product and application rate to be used, along with a contingency plan. The product choice may be subject to change depending on product availability, the determination of resistance, labeling restrictions, environmental conditions, or other unforeseen factors.

Preparatory steps for ground-based applications

- Ensure that application equipment has been properly calibrated and tested for droplet size and flow rate. The vector control agency should have enough equipment, operators, and product available to finish the desired application(s) between sunset and midnight, or within 2-3 hours pre-sunrise (or when mosquitoes are demonstrated to be most active) to maximize efficacy.
- Ensure that vehicles are equipped with safety lighting and appropriate identifying signs; use sufficient personnel.
- Contact local law enforcement and provide them with locations to be treated and approximate time frames.

- Consider using lead and trailing vehicles particularly if the area has not been treated before and personnel are available.

Implementing an aerial application contract

- Contact commercial applicator and determine availability.
- Review long-term weather forecasts. Ideally applications should be scheduled during periods of mild winds to avoid last minute cancellations.

Contractor should:

- Contact Local Flight Standards District Office (FSDO) for low flying waiver.
- Arrange for suitable airport facilities.
- Contact local air traffic control.
- Locate potential hazards prior to any application and implement a strategy to avoid those hazards during the application – often in darkness.
- Provide equipment and personnel for mixing and loading of material (if previously agreed upon in contract).
- Register with applicable County Agricultural Commissioner's office.

Vector control agency should:

- Delineate treatment block in a GIS format and send to contractor.
- Identify areas that must be avoided during an application and include detailed maps of those areas to contract applicators (e.g. open water, registered organic farms, any area excluded by product label).
- Send authorization letter to FSDO authorizing contractor to fly on the agency's behalf; contractor should provide contact information and assistance.
- Send map of application area and flight times / dates to local air traffic control; contractor should provide contact information and assistance.
- Consult with County Agricultural Commissioner's office. Commissioner's office can provide guidance on contacting registered beekeepers and help identify any registered organic farms that may need to be excluded from application.
- If vector control agency is providing material, ensure adequate quantity to complete mission and that the agency has means to transport material.

Efficacy evaluation for aerial or ground based application

- Choose appropriate method(s) for evaluating efficacy of application
 - Determine changes in adult mosquito population via routine or enhanced surveillance.

- Conduct three-day pre and post-trapping in all treatment and control areas.
- Set out bioassay cages with wild caught and laboratory reared (susceptible) mosquitoes during application.
- Ensure adequate planning so surveillance staff are available and trained, equipment is available, and trap / bioassay cage test locations are selected prior to application.
- Ensure efficacy evaluation activities are timed appropriately with applications.
- Enlist an outside agency such as CDPH and/or university personnel to help evaluate efficacy of application as appropriate.

Actions at time of application

- Confirm application rate with contractor.
- Confirm treatment block.
- Coordinate efficacy evaluations.

Public notification

Notification of the public prior to a mosquito control pesticide application by a vector control agency signatory to a Cooperative Agreement with CDPH, or under contract for such agency is not a legal requirement in California (California Code of Regulations – Title 3: Food and Agriculture: Division 6. Pesticides and Pest Control Operations: Section 6620a). However, public notification of pending adult mosquito control is recommended as early as possible prior to the treatment event.

Basic notification steps

- Provide notification of pending application as early as possible.
- Post clearly defined treatment block map online or through appropriate media outlet.
- Post product label and material safety data sheet (MSDS) online or through appropriate media outlet.
- Post and/or have available scientific publications regarding the efficacy of aerial or ground based applications (as appropriate), including effects on non-target organisms and risk-assessments.

Public relations considerations

- Ensure staffing is adequate to handle a significant increase in phone calls.
- Ensure website capability is adequate to handle a rapid increase in visitors.
- Train personnel answering phones to address calls from citizens concerned about personal and environmental pesticide exposure.

- Ensure adequate follow-through for calls related to sporting events, concerts, weddings, and other outdoor events that may be scheduled during the application and within the treatment block.

Appendix K: Websites Related to Arbovirus Surveillance, Mosquito Control, Weather Conditions and Forecasts, and Crop Acreage and Production in California

Website	URL	Available information
California West Nile Virus Website	http://westnile.ca.gov	Up to date information on the spread of West Nile virus throughout California, personal protection measures, online dead bird reporting, bird identification charts, mosquito control information and links, clinician information, local agency information, public education materials.
California Department of Public Health	https://www.cdph.ca.gov	Use search box to find information on mosquitoes, mosquito-borne diseases, or other vectors and diseases.
Davis Arbovirus Research and Training Laboratory at UC Davis	https://dart.ucdavis.edu	Information on mosquito and arbovirus surveillance in California and related research.
Mosquito and Vector Control Association of California	http://www.mvcac.org	News, membership information, event calendars, and other topics of interest to California's mosquito control agencies.
California Vector-borne Disease Surveillance Maps	https://maps.calsurv.org	Maps showing locations of arbovirus activity and detections of invasive mosquitoes.
California Data Exchange Center	http://cdec.water.ca.gov	Water-related data from the California Department of Water Resources, including historical and current stream flow, snowpack, and precipitation information.
UC IPM Online	http://www.ipm.ucdavis.edu	Precipitation and temperature data for stations throughout California; also allows calculation of degree-days based on user-defined data and parameters.
National Weather Service – Climate Prediction Center	http://www.cpc.ncep.noaa.gov	Short-range (daily) to long-range (seasonal) temperature and precipitation forecasts. Also provides El Niño-related forecasts.

Website	URL	Available information
California Agricultural Statistics Service	http://www.nass.usda.gov/Statistics_by_State/California	Crop acreage, yield, and production estimates for past years and the current year's projections. Reports for particular crops are published at specific times during the year – see the calendar on the website.
State Water Resources Control Board	https://www.waterboards.ca.gov/water_issues/programs/npdes/pesticides/	National Pollutant Discharge Elimination System (NPDES) permit for vector control information.
US Environmental Protection Agency – Mosquito Control	http://epa.gov/mosquitocontrol	Describes the role of mosquito control agencies and products used for mosquito control.
US Centers for Disease Control and Prevention – West Nile Virus	http://www.cdc.gov/ncidod/dvbid/westnile/index.htm	Information on the transmission of West Nile virus across the United States, viral ecology and background on WNV, and personal protection measures in various languages, nationwide statistics, maps, and data.

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ANNEX E

MAY 2021 DRAFT ORANGE COUNTY LHMP VECTOR MITIGATION ISSUES

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Vector-Borne Diseases

Nature of Hazard

According to the Centers for Disease Control and Prevention (CDC), vector-borne diseases are among the most complex of all infectious diseases to prevent and control due to the difficulty of predicting habits of vectors like mosquitoes, fleas, and ticks. These vectors transmit viruses, bacteria, or other pathogens that infect animals as well as humans.

The Orange County Mosquito and Vector Control District (OCMVCD) is an independent special district charged with protecting the citizens of Orange County from vectors and vector-borne disease under the California Health and Safety Code (CAL. HSC. § 2000-2910). OCMVCD operates year-round to provide service to all 34 cities within Orange County as well as unincorporated areas, federal, and state lands.

OCMVCD utilizes an Integrated Vector Management (IVM) Program strategy to control populations of mosquitoes, filth flies and black flies, red imported fire ants (RIFA), and rats. The IVM Program consists of the following activities:

1. Surveillance for vectors, vector habitats, and associated pathogens/diseases, including field and laboratory analysis of vectors in order to evaluate populations and emerging disease threats;
2. Source reduction to limit breeding by vectors, including management of vegetation, land, and water with appropriate landowners to minimize vector production and harborage;
3. Education and outreach efforts targeted toward the public and private landowners in ways to facilitate source reduction and minimize disease-carrying vectors;
4. Distribution of mosquito fish (*Gambusia affinis*), a biological control measure used to reduce mosquito production in isolated aquatic features, such as neglected residential swimming pools; and
5. Application of pesticides to minimize vector populations and reduce the threat of potential vector-borne disease transmission to humans.

The vector-borne diseases currently of major public health threat in Orange County include:

- West Nile Virus and other mosquito-borne infections;
- Flea-borne typhus and other flea-borne infections;
- Other vector-borne diseases with the potential to emerge or re-emerge in Orange County.

West Nile Virus (WNV) and other Mosquito-Borne Infections

Nature of Hazard, Location, Extent and Previous Occurrences

West Nile virus (WNV), which is primarily a disease of birds, can be transmitted to humans and other animals by the bite of a mosquito. WNV has been responsible for causing 364 reported neuroinvasive infections, including 24 deaths, since its introduction to the county in 2004. It has remained well-established in Orange County since its introduction.

Epidemics of West Nile virus infections are expected every year. Although only a small proportion of persons infected develop symptoms, which can include fever, body aches, headaches, and/or rash, infection can also be very severe, resulting in meningitis or encephalitis (inflammation of the brain) and serious sequelae. HCA works closely with the OCMVCD to monitor the presence of the virus in the County.

Other mosquito-borne diseases potentially transmitted by locally abundant Orange County mosquitoes include Saint Louis Encephalitis (SLE), Western equine encephalitis (WEE), and malaria. Although SLE was considered the most important mosquito-borne virus in North America until the arrival of WNV in 1999, SLE virus activity has not been detected in Orange County since the introduction of WNV into the County in late 2003. WEE was a significant cause of death and disease in humans and horses in the United States prior to the establishment of organized vector control programs in the late 1940s. However, WEE has not been detected in mosquitoes, or host animals such as birds in Orange County in many years, and is unlikely to pose a threat in the future.

Malaria is a serious infection caused by a parasite called Plasmodium. Although malaria is thought to be eradicated in the United States, imported malaria cases among travelers returning home have the potential to spark a reintroduction of locally-transmitted malaria among the County's Anopheles mosquitoes, which are largely restricted to wetland habitats in Orange County. The last confirmed outbreak of locally transmitted malaria in Southern California occurred in 1991 along the San Diego County/Orange County border. HCA works closely with the OCMVCD to monitor the presence of imported cases of malaria in the County.

Probability of Future Occurrence

Mosquito-borne diseases transmitted by Aedes mosquitoes not currently known to be present in Orange County but in other areas of California include dengue and chikungunya. With recent introductions of several species of non-native mosquitoes from the genus Aedes in southern California, including the Asian tiger mosquito (*Aedes albopictus*) and the yellow fever mosquito (*Aedes aegypti*), there is potential for diseases like chikungunya and dengue to become established in Orange County. These mosquitoes are known vectors of dengue and chikungunya viruses. Although local transmission of these viruses is not known from Orange County, human cases of dengue and chikungunya are regularly reported to HCA from travelers returning from known endemic disease areas. Therefore, traveling humans infected with the virus could spread the disease once in areas of Orange County with established populations of these mosquitoes.

- **Dengue** -The World Health Organization reports that dengue is the most rapidly spreading mosquito-borne viral disease in the world. Dengue is transmitted by the bite of a mosquito infected with one of the four dengue virus serotypes. Unlike other mosquitoes, *Aedes aegypti*, the main vector for dengue, bites during the day. *Aedes albopictus*, a secondary dengue vector, can survive in cooler temperate regions. Similar to chikungunya, dengue would likely enter Orange County via an infectious person returning from an area of the world where these diseases are endemic. Symptoms of dengue include fever, severe headache, pain behind the eyes, muscle and joint pain, swollen glands and rash. There is no vaccine or any specific medicine to treat dengue. The only method to reduce the transmission of dengue virus is to control vector mosquitoes and

protect against mosquitoes bites. HCA works closely with the OCMVCD to monitor the presence of imported cases of dengue of in the County.

- **Chikungunya** - Chikungunya is a viral tropical disease transmitted by Aedes mosquitoes. In recent years the virus has been regularly detected in parts of Mexico and the Caribbean. Typical symptoms are an acute illness with fever, skin rash and incapacitating joint pains that can last for weeks. The latter distinguishes chikungunya virus from dengue, which otherwise shares the same vectors, symptoms and geographical distribution. Most patients recover fully but, in some cases, joint pain may persist for several months or even years. The spread of disease via movement of infected humans is specifically relevant for a pathogen such as chikungunya virus. As with dengue, the only method to reduce transmission of chikungunya is to control vector mosquitoes and protect against mosquitoes bites. HCA works closely with the OCMVCD to monitor the presence of imported cases of chikungunya in the County.

Impact

WNV is endemic in Orange County, and heavy WNV seasons tend to occur every 3-5 years. Most infections occur in the northern areas. Geographically, Santa Ana, Anaheim, Fullerton, and Tustin areas see the highest densities of infections. Older adults are disproportionately impacted by WNV.

Orange County experienced an outbreak of WNV cases in 2014 and reached an incidence rate of 8.85 cases per 100,000 residents. This was more than 3.5 times the incidence rate experienced by Los Angeles county (where WNV is also endemic), and more than four times the incidence rate experienced by California as a whole.

While asymptomatic cases are the most common, they are severely underreported because they are rarely identified. The reported asymptomatic cases are almost always found through routine screenings of blood donations, since the disease can be passed on through blood transfusion. West Nile fever is also underreported: persons with West Nile fever will often not see a medical provider for their illness, and providers seeing a case of West Nile fever will often not test for this disease. This results in surveillance methods which skew toward detection of neuroinvasive cases, though they are the least common form of the disease. Thus, the number of cases reported to the county severely underestimates the total number of WNV cases in the county.

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Flea-Borne Diseases

Nature of Hazard

Flea-borne typhus is a disease caused by the bacteria *Rickettsia typhi*, and possibly *Rickettsia felis*. The bacteria live in the feces of infected fleas which can be found on cats, dogs, raccoons, skunks, and opossums. After a flea bite, bacteria may remain on the skin's surface. A human becomes exposed to the

bacteria by scratching the site of a flea bite, which allows bacteria from the skin's surface to enter the bloodstream.

People infected with typhus may experience fever, headache, chills, and muscle aches 6 - 14 days after a *Rickettsia*-infected flea bite. Some people also develop a rash. The disease is treated with antibiotics. Most people recover within several days, though hospitalization with serious illness does occur.

Previous and Future Occurrences

- **Flea-borne typhus** - Orange County has experienced a resurgence of flea-borne typhus over the last ten years. Since 2006, 132 human cases have been reported to HCA. Flea-borne typhus is a bacterial (rickettsial) infection transmitted by fleas found on backyard wildlife and domestic pets. The transmission cycle in Orange County involves cat fleas, cats, opossums, and other backyard wildlife. Symptoms include fever, muscle aches, rash, and sometimes vomiting and headache. Approximately 85% of cases reported to HCA are hospitalized. HCA works closely with Orange County Mosquito and Vector Control District to investigate exposure sites with large populations of fleas and host animals. Flea-borne typhus exposure sites with large populations of host animals may be referred to local animal care agencies for assistance.
- **Plague** - Plague is a zoonotic disease caused by the bacterium *Yersinia pestis*. In its sylvatic cycle, it is transmitted by fleas found on locally abundant ground squirrels, rodents and rabbits. Humans usually get plague after being bitten by a rodent flea that is carrying the plague bacterium or by handling an animal infected with plague. Most persons with plague develop fever and swollen lymph nodes. Plague bacteria can also migrate to the lungs causing a pneumonic presentation where respiratory droplets may serve as the source of person-to-person transfer that can lead to localized outbreaks or devastating epidemics. According to CDPH, plague is rare among humans but is found each year among squirrels, chipmunks, and other rodents in California and the southwestern U.S. Plague epizootics can be detected by large die-offs of naturally infected hosts such as rabbits and ground squirrels. Domestic cats are also susceptible to plague and can pass the infection to their owners.

The California Department of Public Health (CDPH) Vector-Borne Disease Section lists the Santa Ana Mountains as a plague endemic area. Plague has occurred in Orange County sporadically, including instances in ground squirrels during 1982 in the Anaheim Hills and in a roof rat from the City of Orange in 1998. Pneumonic plague transmission last occurred along the Orange County and Los Angeles County border in 1988 and involved a pet cat. HCA works closely with the OCMVCD to monitor the presence of plague in the County.

Impact

Flea-borne typhus is considered endemic in areas of Orange County. The geographic areas with the highest density of typhus infections are the areas surrounding Orange, Garden Grove, Westminster, and Anaheim. Orange County sees higher incidence rates of murine typhus than California as a whole. Case counts are highest in the summer months, though illness is seen year-round.

The number of annual reported cases averages approximately 19, the overwhelming majority of which are hospitalized. From the years 2011-2018, cases were 63% male, 54% non-Hispanic white, and 55% in

the age range 18-49. 2013 had the highest overall incidence rate with 1.06 typhus cases per 100,000 Orange County residents. 2017 saw the lowest overall rate, with 0.34 cases per 100,000 residents.

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Other Vector-Borne Diseases

Although less prevalent than West Nile virus and flea-borne typhus, other vector-borne diseases have the potential to re-emerge or emerge in Orange County should environmental conditions change or new competent vector species successfully become established. These diseases are not considered a major health hazard in Orange County at this time, but include tick-borne diseases such as Lyme disease, Pacific Coast tick fever, and tularemia, and rodent-borne diseases such as Hantavirus. OCMVCD is constantly monitoring local vector populations in order to detect the presence of these diseases and mitigate the potential for these hazards.

Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV-2)

Nature of Hazard

Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV-2) also known as Coronavirus (COVID-19) is a new disease first identified in Wuhan China in 2019. It is caused by a novel (or new) coronavirus that has not previously been seen in humans. The virus mainly spreads from person to person when they are in close contact (within 6 feet of for at least 15 minutes within a 24 hour period during the infectious period). Although most people who have COVID-19 have mild symptoms, COVID-19 can also cause severe illness and even death. Some groups, including older adults and people who have certain underlying medical conditions, are at increased risk of severe illness. Severity of illness may require hospitalization, including intensive care, and may result in death.

The global COVID-19 pandemic has spread to 223 countries, areas, or territories with over 100 million cases and millions of deaths reported worldwide. The United States has over 30 million cases and over 500,000 COVID-19 associated deaths.

Previous Occurrences

Coronaviruses are a large group of viruses that infect many animals and humans and are responsible for many diseases. In the past century, a number of coronavirus global pandemics have occurred but only SARS-CoV that causes severe acute respiratory syndrome (SARS) in 2003 and MERS-CoV that causes Middle East respiratory syndrome (MERS) in 2012 were transmissible in humans. Orange County had it's first case of confirmed SARS-CoV-2 in January of 2020 and has experienced 2 large surges of cases since the beginning of the pandemic.

Probability of Future Occurrences

There are a number of approved SARS-CoV-2 vaccines for emergency use from Pfizer, AstraZeneca/Oxford, Johnson & Johnson, and Moderna. These vaccines have all demonstrated high efficacy and safety in clinical trials. The vaccines are expected to provide at least some protection against new virus variants and are effective at preventing serious illness and death. Vaccines create a broad

ANNEX F

DISEASE OUTBREAK NOTIFICAN PLAN

ANNEX G

SOUTHERN CALIFORNIA MVCD MUTUAL AID PLAN AGREEMENT



ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT

September 17, 2020

AGENDA REPORT

AGENDA ITEM F.1

Prepared By: Rick Howard, District Manager
Submitted By: Rick Howard, District Manager

Agenda Title:

Approve Southern California Mosquito and Vector Control Districts Mutual Aid Agreement

Recommended Action:

The Board of Trustees approve the Southern California Mosquito and Vector Control Districts Mutual Aid Agreement for Mosquito and Vector Control Services between the Orange County Mosquito and Vector Control District, Coachella Valley Mosquito & Vector Control District, Greater Los Angeles County Vector Control District, Los Angeles County West Vector and Vector-Borne Disease Control District, Northwest Mosquito & Vector Control District, and the San Gabriel Valley Mosquito & Vector Control District.

Executive Summary:

The Orange County Mosquito and Vector Control District, along with five other Mosquito and Vector Control Districts in the southern California region have worked towards the implementation of a *Southern California Mosquito and Vector Control Districts Mutual Aid Agreement* (Agreement).

The Agreement will provide mutual assurances and resources that in the event of a natural or man-made event or emergency, an agency to this Agreement is able to call upon the signatory Agencies for mutual aid should the need arise. When a District is unable to combat or abate mosquitoes or other vectors which may spread disease or discomfort, and who's resources are limited or unavailable, there is now a mechanism to provide mutual aid and support. The District Manager is authorized to execute the terms of the Agreement and request or offer assistance to supplement vector control services in a regional and cooperative effort.

The Agreement provides the mechanism for Districts to provide or receive personnel, equipment, and vector control products during a time of crises. The Agreement does provide for personnel, equipment, and mosquito control product reimbursement as well as nominal overhead expenses. If resources are unavailable, the party may decline to render assistance pursuant to the terms of the Agreement.

Staff recommends approval of the Southern California Mosquito and Vector Control Districts Mutual Aid Agreement.

Fiscal Impact:

Amount Requested: \$ None
Sufficient Budgeted Funds Available: Yes
Category: Pers. Optg. XXX Cap. -or- CIP# Fund#

Previous Relevant Board Actions for This Item: N/A

Exhibits:

Exhibit A: Mutual Aid Agreement

Exhibit B: Resolution No. 502

MUTUAL AID AGREEMENT FOR MOSQUITO AND VECTOR
CONTROL SERVICES

This Agreement is made and entered into by and between the mosquito and vector control agencies of Southern California that are signatory herein, on the ____ day of _____ 2020.

RECITALS

WHEREAS, mosquitoes and other vectors can transmit disease and cause discomfort to humans and other animals;

WHEREAS, the California Legislature has recognized the risks of vector-borne diseases and has provided broad powers in the Mosquito Abatement and Vector Control District Law (hereinafter “Law”) set forth in California Health and Safety Code Section 2000 *et seq.*;

WHEREAS, the Act specifically provides the authority to enter into agreements with other public agencies to cooperate and take actions to carry out the purposes of the Act (§2044);

WHEREAS, the mosquitoes and the diseases that are transmitted by those mosquitoes and other vectors cross political boundaries;

WHEREAS, there is a need to have a mutual response agreement between agencies to allow joint efforts, cooperation and mutual assistance;

WHEREAS, a further purpose of this Agreement is to implement mutual response as part of any declaration of emergency that may be declared pursuant to the California Emergency Services Act, (California Government Code Section 8550 *et seq.*);

WHEREAS, the California Joint Powers Act (California Government Code Section 6550 *et seq.*) provides that two or more public agencies may jointly exercise any power common to the contracting parties (§6502); and

WHEREAS, the parties hereto desire to enter into this Agreement to cooperate and mutually assist each other when the need arises to combat mosquitoes and other vectors and to thereby prevent the spread of vector-borne diseases and discomfort.

NOW, THEREFORE, the parties hereto do hereby agree as follows:

1. PURPOSE.

A. Purpose. The above recitals are adopted herein. A further purpose of this Agreement is to provide a framework for mutual aid and response and protocols that can be readily utilized in time of need.

B. No separate legal entity created. The parties do not intend to create a separate legal entity but to approve a working protocol that can be implemented and executed by administrative staff.

C. Definitions.

- i. Emergency- a natural or man-made event that causes concern with a public agency that is signatory to this Agreement that mosquitoes or other vectors may spread disease or discomfort beyond the area or capabilities that an agency can combat or abate using its own personnel and resources.
- ii. Authorized Official- an officer or employee of a public agency that is signatory to this Agreement that is authorized by the governing body of the public agency or its authorized executive or management officers to request or offer assistance under this Agreement.
- iii. Requesting Agency- the public agency requesting assistance under this Agreement.
- iv. Responding Agency- the agency responding to a request for assistance under this Agreement.
- v. Period of Assistance- the period of time during which a Responding Agency assists the Requesting Agency. The period commences after the request for assistance is received and the Responding Agency agrees to respond. It includes any call-up efforts, mobilization, and coverage arrangements, and includes the portal to portal costs of equipment, personnel and supplies utilized in the response. The period includes the demobilization costs upon return to the Responding Agency.

2. MUTUAL AID REQUEST AND RESPONSE.

A. Authorized Official. Each signatory agency shall designate an Authorized Official, and any alternates, and provide contact information necessary for 24-hour access for the signatory agencies.

B. Requests for Assistance. In the event of an Emergency, an Authorized Official of the Requesting Agency may request mutual aid and assistance from another signatory agency to this Agreement. Requests for assistance can be made orally or in writing. When made orally, the request for personnel, equipment and supplies shall be also transmitted in writing within 72 hours. Requests for assistance shall be made to the Authorized Official(s) of the Responding Agency(ies).

C. Response to a Request for Assistance. After a Responding Agency receives a request for assistance, the Authorized Official of the Responding Agency shall evaluate whether resources are available to respond to the request for assistance. Following the evaluation, the

Authorized Official of the Responding Agency shall inform, as soon as possible, the Requesting Agency whether it is willing and able to respond. If the Responding Agency is willing and able to provide assistance, the Responding Agency shall inform the Requesting Agency, in writing, about the type of available resources and the approximate arrival time of such assistance.

D. Discretion of Responding Agency's Authorized Official. Execution of this Agreement does not create any duty to respond to a request for assistance. When a Responding Agency receives a request for assistance, the Authorized Official shall have absolute discretion as to the availability of resources and willingness to respond. A Responding Agency's Authorized Official's decisions on the availability of resources and willingness to respond shall be a matter of his/her or the Responding Agency's sole discretion.

3. RESPONDING AGENCY PERSONNEL AND RESOURCES.

A. Control.

- i. Generally. Responding Agency personnel and resources shall remain under the direction and control of the Responding Agency. The Requesting Agency's Authorized Official shall coordinate response activities with the designated supervisor(s) of the Responding Agency.
- ii. NIMS or SEMS/Incident Command System. In cases where CAL OES becomes involved in federal or state emergencies, the signatory parties may be required to use the Incident Command System (ICS) as prescribed by the State's Standard Emergency Management System (SEMS) or the National Emergency Management System (NEMS).

B. Communication. The Requesting Agency shall provide the Responding Agency personnel with radio equipment as necessary, or radio frequency information to program existing radio, or other communication protocols in order to facilitate communications.

C. Status. Unless otherwise provided by law, the Responding Agency's officers and employees retain the same privileges, immunities, rights, duties, and benefits as provided in their respective jurisdictions.

D. License and Permits. To the extent permitted by law, Responding Agency personnel who hold licenses, certificates, or permits evidencing professional, mechanical, or other skills shall be allowed to carry out activities and tasks relevant and related to their respective credentials during the specified Period of Assistance.

E. Right to Withdraw. The Responding Agency's Authorized Official retains the right to withdraw some or all of its personnel and/or resources at any time. Notice of intention to withdraw must be communicated to the Requesting Agency's Authorized Official as soon as possible.

4. COST REIMBURSEMENT.

A. Categories of Cost. Unless otherwise mutually agreed in whole or in part, the Requesting Agency shall reimburse the Responding Agency for each of the following categories of costs incurred while providing aid and assistance during the specified Period of Assistance.

- i. Personnel – Responding Agency personnel are to be paid for work completed during a specified Period of Assistance according to the terms provided in their employment contracts or other conditions of employment. The Responding Agency designated supervisor(s) must keep accurate records of work performed by personnel during the specified Period of Assistance. Requesting Agency reimbursement to the Responding Agency must consider all personnel costs, including regular rate of pay as defined by the Fair Labor Standards Act, costs for fringe benefits, and indirect costs (e.g. cellular data usage, meals and travel) and an administrative overhead of 4% on salaries, hourly wages, costs for fringe benefits, and indirect costs. Expenses related to travel, hotel and meals; the parties agree to utilize the United States General Services Administration (GSA) Per Diem Rate structure as established annually on October 1 of each year by the GSA. Current Per Diem rate is located at the following link: <https://www.gsa.gov/travel/plan-book/per-diem-rates>.

Hourly rates for those agencies signatory to this agreement are included as Appendix A and are current as of the date of this agreement. These labor rates do not include the full burdened rate for each job classification and reimbursement shall include the fully burdened hourly rate for each classification providing assistance to the requestor agency at the time of request.

- ii. Equipment – The Requesting Agency shall reimburse the Responding Agency for the use of equipment during a specified Period of Assistance. As a minimum, rates for equipment use must be based on the California Department of Transportation's (CALTRANS) Labor Surcharge and Equipment Rental Rate Book. If a Responding Agency uses rates different from those in the CALTRANS Labor Surcharge and Equipment Rental Rate Book, the Responding Agency must provide such rates in writing to the Requesting Agency prior to supplying resources. Mutual agreement on which rates are used must be reached in writing prior to dispatch of the equipment. Reimbursement for equipment not referenced on the CALTRANS Labor Surcharge and Equipment Rental Rate Book must be developed based on actual recovery of costs, plus 4% administrative overhead.

For equipment not included in the Caltrans Labor Surcharge and Equipment Rental Rate Book, the supplying agency shall provide a list of equipment and hourly rates prior to utilization of equipment. Equipment valued at \$3,500 or more is listed in Appendix B. Equipment valued under \$3,500 shall be assessed

an hourly rate commensurate with the value of the equipment but shall not exceed \$100/hour of use or day.

- iii. **Materials and Supplies** - The Requesting Agency must reimburse the Responding Agency in kind or at actual replacement cost, plus handling charges, for use of expendable or nonreturnable supplies. The Responding Agency must not charge direct fees or rental charges to the Requesting Agency for other supplies and reusable items that are returned to the Responding Agency in a clean, damage-free condition. Reusable supplies that are returned to the Responding Agency with damage must be treated as expendable supplies for purposes of cost reimbursement.

B. **Payment Period.** The Responding Agency must provide an itemized bill to the Requesting Agency for all expenses it incurred as a result of providing assistance under this Agreement. The Responding Agency must send the itemized bill not later than ninety (90) days following the end of the Period of Assistance. The Requesting Agency must pay the bill in full on or before the forty-fifth (45th) day following the billing date. Unpaid bills become delinquent upon the forty-sixth (46th) day following the billing date, and, once delinquent, the bill accrues interest at the rate of prime, as reported by the Wall Street Journal, plus two percent (2%) per annum.

5. DISPUTES.

Any controversy or claim arising out of, or relating to, this Agreement, or the making, performance, or interpretation of it, including, but not limited to, alleged breach of the Agreement, shall be submitted to arbitration in Southern California, under the Arbitration Law of the State of California (California Code of Civil Procedure Section 1280 et seq.). Any court of competent jurisdiction may enter the judgment rendered by the arbitrators as final judgment that is binding on the parties. The arbitration shall be conducted in the county of the responding party.

6. INSURANCE AND INDEMNIFICATION.

Responding Agency and Requesting Agency are authorized self-insured or partially self-insured public entities for purposes of Professional Liability, General Liability, Automobile Liability and Worker's Compensation and warrant that through their respective programs of self-insurance and insurance, they have adequate coverage or resources to protect against liabilities arising out of performance of the terms, conditions or obligations of this Agreement.

Neither Responding Agency nor any officer, employee, agent or volunteer of Responding Agency shall be responsible for any damage or liability arising out of, pertaining to, or relating to any acts or omissions on the part of Requesting Agency or its contractors under or in connection with any work, authority or jurisdiction delegated to and performed by Requesting Agency or its contractors under this Agreement. It is also understood and agreed that, pursuant to Government Code section 895.4, Requesting Agency shall fully indemnify, defend (with counsel approved by Responding Agency) and hold Responding Agency and its officers, employees, agents, and volunteers harmless from any liability imposed for injury (as defined by Government Code section 810.8) arising out of, pertaining to, or relating to any acts or omissions on the part of Requesting Agency or its contractors under or in connection with any work, authority or jurisdiction delegated to and performed by Requesting Agency or its contractors under this Agreement.

In the event Responding Agency and/or Requesting Agency is found to be comparatively at fault for any claim, action, loss or damage which results from their respective obligations under this Agreement, Responding Agency and/or Requesting Agency shall indemnify the other to the extent of its comparative fault.

Requesting Agency and Responding Agency agree to waive all rights of subrogation against each other. Furthermore, if the Responding Agency or Requesting Agency attempts to seek recovery from the other for Workers' Compensation benefits paid to an employee, the Responding Agency or Requesting Agency agree that any alleged negligence of the employee shall not be construed against the employer of that employee.

7. NOTICE.

A party who becomes aware of a claim or suit that in any way, directly or indirectly, contingently or otherwise, affects or might affect the other party to this Agreement shall provide prompt and timely written notice to the party who may be affected by the suit or claim. Each party reserves the right to participate in the defense of such claims or suits as necessary to protect its own interests.

8. INSURANCE.

The signatory parties shall each maintain insurance coverage that covers activities that it may undertake by virtue of this Agreement. The scope of the insurance coverage must include, at a minimum, coverage for employee faulty treatment or abatement efforts and other negligent acts, errors, or omissions and coverage for meeting the indemnity condition provided in Paragraph 6.

9. WITHDRAWAL.

A party may withdraw from this Agreement by providing written notice of its intent to withdraw to all other parties. Withdrawal takes effect after the Authorized Official receives notice. The indemnification and workers compensation provision shall survive withdrawal.

10. MODIFICATION.

This Agreement may not be modified orally or in any manner other than by an agreement in writing signed by all parties by a person with authority to sign.

11. PROHIBITION ON THIRD PARTIES AND ASSIGNMENT OF RIGHTS/DUTIES.

This Agreement is for the sole benefit of the signatories below and no person or entity may have any rights under this Agreement as a third-party beneficiary. Assignments of benefits and delegations of duties created by this Agreement are prohibited and are without effect.

13. COUNTERPARTS.

This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, and all of which shall constitute one and the same agreement.

14. EFFECTIVE DATE.

This Agreement shall become effective between the signatory parties upon two parties signing. The effective date of subsequent parties' agreements shall be the date of its respective signing.

IN WITNESS WHEREOF, the parties have executed this Agreement on the day and year first written above.

COACHELLA VALLEY MOSQUITO & VECTOR CONTROL DISTRICT

By: _____

Name/Title: _____

Date: _____

GREATER LOS ANGELES COUNTY VECTOR CONTROL DISTRICT

By: _____

Name/Title: _____

Date: _____

LOS ANGELES COUNTY WEST VECTOR AND VECTOR-BORNE DISEASE CONTROL DISTRICT

By: _____

Name/Title: _____

Date: _____

NORTHWEST MOSQUITO & VECTOR CONTROL DISTRICT

By: _____

Name/Title: _____

Date: _____

ORANGE COUNTY MOSQUITO & VECTOR CONTROL DISTRICT

By: _____

Name/Title: _____

Date: _____

SAN GABRIEL VALLEY MOSQUITO & VECTOR CONTROL DISTRICT

By: _____

Name/Title: _____

Date: _____

RESOLUTION NO. 502

**A RESOLUTION BY THE BOARD OF TRUSTEES OF THE
ORANGE COUNTY VECTOR CONTROL DISTRICT**

**APPROVING THE SOUTHERN CALIFORNIA MOSQUITO AND VECTOR CONTROL
DISTRICTS MUTUAL AID AGREEMENT AND AUTHORIZING THE DISTRICT MANAGER TO
RENDER OR REQUEST ASSISTANCE**

WHEREAS, the Orange County Mosquito and Vector Control District has been collaborating with the Coachella Valley Mosquito & Vector Control District, Greater Los Angeles County Vector Control District, Los Angeles County West Vector and Vector-Borne Disease Control District, Northwest Mosquito & Vector Control District, and the San Gabriel Valley Mosquito & Vector Control District; and

WHEREAS, the collaborative efforts have resulted in a draft of a Southern California Mosquito and Vector Control Districts Mutual Aid Agreement, and

WHEREAS, the Agreement will provide mutual assurances and resources that in the event of a natural or man-made event or emergency, an agency to this Agreement is able to call upon the signatory Agencies for mutual aid should the need arise, and

WHEREAS, the Agreement will provide the mechanism for signatory Districts to provide or receive personnel, equipment, and vector control products during a time of crises, and

WHEREAS, if resources are unavailable, any party to the Agreement may decline to render assistance pursuant to the terms of the Agreement, and

WHEREAS, Staff recommends approval of the Southern California Mosquito and Vector Control Districts Mutual Aid Agreement.

NOW, THEREFORE, the Board of Trustees does hereby RESOLVE and DETERMINE that:

Section 1 The Southern California Mosquito and Vector Control Districts Mutual Aid Agreement is approved.

Section 2 That the Board of Trustees adopts Resolution No. 502 approving the District's participation in the Southern California Mosquito and Vector Control Districts Mutual Aid Agreement.

Section 3. That the District Manager is authorized to execute the Southern California Mosquito and Vector Control Districts Mutual Aid Agreement.

Section 4. That the District Manager is authorized to render or request assistance from signatory agencies pursuant to the terms of the Agreement in order to combat or abate mosquitoes or other vectors which may spread disease or discomfort.

PASSED, APPROVED, and ADOPTED by the Board of Trustees of the Orange County Mosquito and Vector Control District at its regular meeting thereof held on the 17th day of September, at 13001 Garden Grove Blvd., Garden Grove, California, 92843.

Michael Alvarez, President

I hereby certify that the foregoing Resolution was duly adopted by the Board of Trustees of the Orange County Mosquito and Vector Control District at a regularly scheduled meeting, held on September 17, 2020:

APPROVED AS TO FORM:

James Gomez, Secretary

Alan R. Burns, District Counsel

ANNEX H

DISASTER SERVICE WORKER POLICY

WHAT TO DO DURING A DISASTER

Background

All District employees are designated Disaster Service Workers subject to such disaster services as may be assigned to them by their superiors or by law as stated in California Government Code, Chapter 8, Division 4, Title 1, Section 3100 through 3109. Refer to the information on the back of District personnel identification cards.

Disaster Service Workers provide for the protection of the general health and safety of the people and property of California from the effects of natural, man-made, or war-caused emergencies which result in conditions of disaster or extreme peril to life, property, and resources.

Procedures

When a local emergency has been declared, District employees have the added and extremely important role of helping the community. Depending on the magnitude of the disaster, District employees may be directed to act outside the ordinary scope of their employment to support the community's emergency response.

Responding to a Disaster While at Work

- Employee safety is paramount. When a disaster occurs, employees shall follow the Safety Rules for their department. Once safety has been established, employees are encouraged to contact family members and loved ones to ensure their safety.
- Personnel with pre-established emergency response assignments shall respond in accordance with those assignments.
- Personnel with no pre-established emergency response assignments are expected to remain at work if it is safe to do so. Supervisors will provide information regarding specific assigned duties and reporting locations.

Responding to Work Following a Disaster Outside of Normal Working Hours

- Family and loved ones are priority. Employees shall make certain that their family is safe and afforded shelter before reporting to work.
- Personnel with pre-established emergency response assignments shall respond in accordance with those assignments.
- Listen to the radio to obtain information about the extent of the disaster. KNX (1070 AM or 94.7 FM) is the region's emergency public broadcast radio station.

- All employees without pre-established emergency response assignments shall call their supervisor as soon as practical to receive reporting instructions. If a supervisor is unavailable, the employee is instructed to call **714-971-2421** for reporting instructions. It may take some time for disaster operations to mobilize; check back often for reporting updates.
- Employees who are unable to report for disaster service work should contact their supervisor as soon as possible and advise why they are unable to report for work and when they expect to be able to come to work. The employee shall update their supervisor every 24 hours regarding his/her inability to report to work.
- District employees are expected to report to work at their normally scheduled time unless they are informed otherwise.

What to Expect

The State of California recognizes 13 DSW job categories that fall within two divisions: *specialized* and *general*. Most, if not all, employees will fall under the general job category, which includes administration, human services, laborer, and logistics. When possible, employees will be assigned duties that as closely as possible resemble their current job classification duties. Duties may require employees to work at locations, times, and conditions that differ from the employee's normal scope of work. Employees will not be assigned a duty or function they do not know how to perform or have not received adequate training to complete.

Compensation

- The District will compensate employees performing disaster service work, as long as the employee has taken and subscribed to the Loyalty Oath, which all District employees are required to sign at the commencement of District employment.
- When a disaster service duty is assigned, employees are required to document start and end times of their shifts.
- If an employee is unable to report to work, or wishes to leave work to check on family members, their home, or other property affected by a disaster, the employee shall follow established policies regarding leave.

Prepare Your Home and Train Your Family

By nature, disasters are unpredictable, but employees can take several precautions to protect themselves and their loved ones in a time of crisis. Develop a family emergency plan, establish a method for communicating with separated family members, and create a home emergency cache and a vehicle “go bag” that contain important supplies such as food, water, a change of clothes, or anything else that would be helpful during an emergency.

Training

- Upon employment, all employees are encouraged to complete a SEMS/NIMS and EOC orientation class.
- Department managers are encouraged to participate in Incident Command System and Standardized Emergency Management System training. These courses are provided locally at various times of the year, or they may be taking online through the Federal Emergency Management Agency.
- Additional trainings will be scheduled on an as needed basis.

ANNEX I

BOARD DUTIES AND RESPONSIBILITIES

The role of the District Board during an emergency is to support the EOC Director and the activities of the Emergency Operation Center (EOC). The Board does not have a direct role in the emergency operation.

Action Checklist

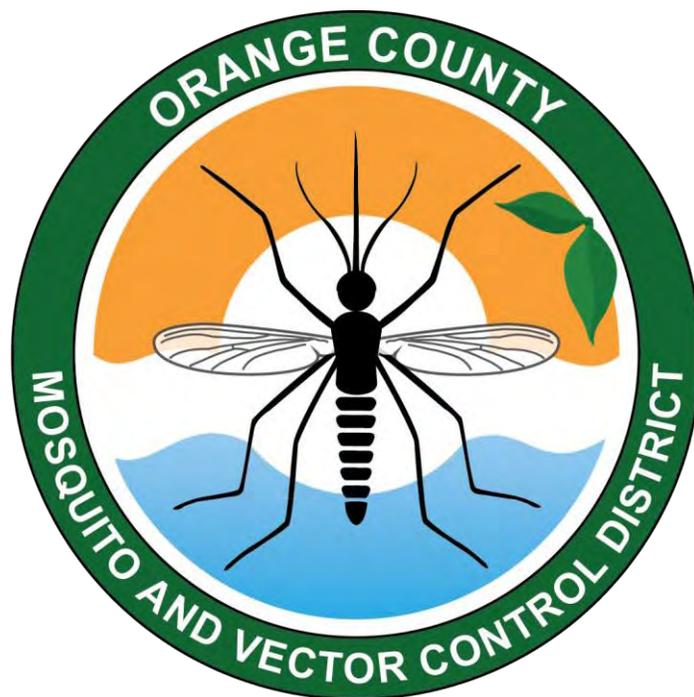
- Respond when called to the EOC to receive a briefing from the EOC Director on the nature and status of the emergency.
- Assist the EOC Director in providing liaison to your jurisdiction, other elected officials and government agencies.
- Liaison with public or community organizations (e.g., media, schools, service clubs, medical facilities, business groups, homeowners associations).
- Ratify emergency proclamation at a special Board meeting within seven (7) days after its issuance by the District Manager.
- Hold Board meetings as required to address legal or policy issues arising from the emergency.
- Be available for public information purposes as requested by the Public Information Officer or the EOC Director.

ANNEX J

OCMVCD ILLNESS & PREVENTION PLAN COVID-19 SUPPLEMENT

Orange County Mosquito and Vector Control District

Injury and Illness Prevention Plan: COVID-19 Supplement



Orange County Mosquito and Vector Control District
13001 Garden Grove Blvd, Garden Grove CA, 92843
Email: info@ocvector.org
www.ocvector.org

November 10, 2020
Updated November 2, 2021

OCMVCD IIPP: COVID-19 Supplement

The Orange County Mosquito and Vector Control District (District) is committed to providing a safe and healthy workplace for all our employees, visitors, and the public we serve. To ensure we have a safe and healthy workplace, the District has developed the following Injury and Illness Prevention Plan: COVID-19 Supplement (COVID-19 Plan) in response to the COVID-19 pandemic. This COVID-19 Plan has been established in accordance with the Cal/OSHA [Interim General Guidelines on Protecting Workers from COVID-19](#) and the Injury & Illness Prevention Program ([Title 8 Section 3203](#)) requirements. Under the IIPP hazard assessment requirements, it has been determined exposure to the COVID-19 virus is a potential hazard in our workplace. Therefore, infection control measures as directed in the Cal/OSHA mandatory guidance have been developed and implemented. References, resources, and informational links are provided as Appendix. A.

Updated 11/02/21

This policy applies to all employees with the following exceptions:

- Work locations with one employee who does not have contact with other persons
- Employees teleworking from home
- Employees teleworking from a location of the employee's choice that is not under the control of OCMVCD

Managers and employees are all responsible for implementing this plan. It is the goal of the District to mitigate the potential for transmission of COVID-19 in the workplace and in the communities served. The Covid-19 Plan requires full cooperation among employees and management. Only through this cooperative effort can the District establish and maintain the safety and health of all persons in the workplace.

The COVID-19 Plan is administered by the Safety Officer (SO) and Human Resources Manager (HRM), who maintain the overall authority and responsibility for the plan which includes:

- Implementing the infection control measures as outlined in this supplement (SO)
- Ensuring the outlined sanitation and disinfection efforts are conducted (SO)
- Conducting regular inventories to ensure all needed supplies and personal protective equipment (PPE) are available (SO)
- Making certain COVID-19 training (as outlined in the training section) is conducted and documented for all employees (SO and HRM)
- Ensuring the District is aware of and in compliance with the COVID-19 employee requirements contained within the SB95 Supplemental Paid Sick Leave mandate. (HRM)
- Monitoring health questionnaires, receiving exposure information, and conducting contact tracing (HRM)

OCMVCD will provide access to this IIPP supplement upon request of an employee or the employee's designated representative within 5 days of the request. Employees must be given a printed copy of the document unless they agree to receive an electronic copy.

Management and employees are equally responsible for supporting, implementing, complying with, and providing recommendations to further improve all aspects of this COVID-19 Plan. Directors, managers, and supervisors are responsible for implementing and maintaining the infection control measures in their respective work areas. Directors, managers, and supervisors are responsible for answering employee questions and setting a good example by following the guidance contained within this supplement. All employees are responsible for understanding and following the infection control measures and for asking questions when direction is unclear. Employees are expected to report any unsafe conditions to their supervisor.

Worker involvement is essential in developing and implementing a successful COVID-19 Plan. The District has involved all employees by; 1) soliciting feedback, asking questions, and answering concerns from all staff, 2) establishing an interdepartmental COVID-19 Response Team, and 3) consultation with the Safety Committee.

The COVID-19 Response Team is responsible for staying up to date with the latest local, state, and federal COVID-19 guidance. The COVID-19 Response Team also plans, implements, and evaluates all COVID-19 related safety measures, and develops internal policies/SOPs. It also administrates the FFCRA, other leave benefits, monitors exposures and conducts contact tracing, procures safety items and equipment, and implements structural mitigations.

OCMVCD will check for the most current information from the California Department of Public Health (CDPH) including guidance documents, Health Orders, and Executive Orders from the Governor's Office and county and local health departments and follow the most current information. Some provisions of Cal/OSHA's COVID-19 emergency regulation may be suspended, or more stringent requirements may need to be implemented based on updated guidance and orders from the CDPH and the Governor's Office through the issuance of updated or new Executive Orders and county or local health department regulations.

As of June 2020, the District's COVID-19 Exposure Plan, Disinfection Plan and other developed protocols follow the guidance developed by the state of California, which is based upon Centers for Disease Control and Prevention (CDC) and California Department of Public Health (CDPH) guidelines for COVID-19, Occupational Safety and Health Administration (OSHA) statutes, rules and standards, and California's relevant and current executive orders. It addresses:

- ensuring sick employees stay home and prompt identification and isolation of sick persons;
- worker hygiene and source controls— including unvaccinated or partially vaccinated employees to wear face coverings while in interior spaces unless in a private office;
- workplace building and ventilation protocol;
- workplace and vehicle cleaning and disinfection protocol;
- public access, drop-off, pick-up and including vendor delivery practices and protocol; and
- communications, training practices and protocols.

The District has reviewed and incorporated industry guidance applicable to the District as an essential service/business, provided by the state of California for the development of this plan. Other conditions and circumstances included in the guidance and addressed in the plan that are specific to the District and services include additional protections and protocols:

- for customers/residents, visitors, and vendors;
- for personal protective equipment (PPE);
- for access and assignment;
- for sanitation and hygiene;
- for work clothes and handwashing;
- for distancing and barriers;
- for managing occupancy;

Compliance

It is the District's primary goal to prevent the spread of COVID-19 and protect employees from contracting Covid-19. All managers, supervisors, and employees are required to strictly adhere to all of the outlined infection control measures contained within this supplement. Compliance measures include, but are not limited to, the following:

- Informing employees of these requirements in readily understandable language and distributed via email
- Training all employees on the infection control measures
- Administrating progressive discipline to employees who fail to comply with the requirements in this supplement

Communication

All employees have been or will be trained on infection control measures in a readily available form that is easy to understand and easy to implement. The District's communication system encourages all employees to inform their managers and supervisors of any unsafe working conditions without fear of reprisal. Employees can report COVID-19 specific or any workplace hazards anonymously by a drop-box located in each department, the locations of which will be made clear to all employees. The drop-box will be regularly checked by a designated employee in each department.

Hazard Assessment & Infection Control Measures

The IIPP regulation requires the District to conduct a hazard assessment to identify, evaluate, and implement control measures whenever we become aware of a new or previously unrecognized hazard. It has been determined that exposure to the COVID-19 virus is a potential hazard in the workplace. Therefore, infection control measures as directed in the Cal/OSHA mandatory guidance have been developed and implemented.

Infection Control Measures

Administrative Controls - Ensure sick employees stay home and prompt identification and isolation of sick persons

Information outlined in this section is detailed in Appendix B OCMVCD COVID-19 Exposure Guidelines.

- All sick employees shall be encouraged to stay home.
- Employees will be immediately sent home or to medical care, as needed, if they have a frequent cough, fever, difficulty breathing, chills, muscle pain, headache, sore throat, or recent loss of taste or smell or other common conditions associated with Covid-19.
- Employees who are off work ill with fever or acute respiratory symptoms are not allowed to return to work until both of the following occur:
 - At least three full days pass with no fever (without the use of fever-reducing medications) and no acute respiratory illness symptoms; and
 - At least 10 days pass since the symptoms first appeared.
- Employees who return to work following an illness are required to report any recurrence of symptoms.
- Teleworking options have been established for those employees that are impacted by school and daycare as their child(ren) are concerned. (Please refer to Appendix C. OCMVCD Emergency Telework Policy)
- Employees will be advised of any non-essential travel requirements/restrictions.

Employees have been informed of and encouraged to self-monitor for signs and symptoms of COVID-19. The following policies and procedures are being implemented to assess workers' health status prior to entering the workplace and for employees to report when they are sick or experiencing symptoms, or if they have been in close contact with others who are sick or experiencing symptoms. Employees are required to self-screen by filling out an online daily health check questionnaire before the start of each shift. If the employee answers "yes" to any of the exposure questions, they are to call the Human Resources Manager immediately, who will take measures to determine the risk of exposure and identify the next steps. Results of each daily health check questionnaire are retained in a searchable database.

A dedicated absence call-in line and email have been established which employees are instructed to utilize if they are sick or experiencing symptoms at home prior to the beginning of their work shift: 714-740-4151 OR email at absent@ocvector.org.

If an employee begins experiencing potential COVID-19 symptoms while at work, they are to immediately report via phone to their immediate supervisor and the Human Resources Manager. Employees will isolate in their personal vehicle until given further direction.

The District has implemented leave policies in accordance with **SB95**. Covered employees are eligible for the equivalent of two-weeks of COVID-19 supplemental emergency paid sick leave in the event that they have COVID-19 symptoms and are seeking a diagnosis, need to quarantine due to close-contact exposure to an ill or COVID-19 positive individual, or when required by a health care provider to isolate or quarantine themselves. The District has also implemented the practice of informing employees if they have been exposed to a person with COVID-19 at their workplace and provides direction for further guidance pertaining to the need to quarantine and for what duration of time.

Fully vaccinated employees without symptoms do not need to be quarantined after close contacts with COVID-19 cases unless they have symptoms and have tested negative. Any employee who may have been exposed to a COVID-19 positive person will be notified by the Human Resources Manager or designee and given instruction as to whether a quarantine period and/or testing is necessary.

On September 9, 2021, the CDPH issued updated guidance which provides that unvaccinated individuals who have a close contact and who remain **asymptomatic**, meaning they do not have any symptoms, may discontinue self-quarantine under the following conditions:

- Quarantine can end after Day 10 from the date of last exposure without testing; OR

- Quarantine can end after Day 7 if a diagnostic specimen is collected on Day 5 or later from the date of last exposure and tests negative.

In addition, to discontinue quarantine before 14 days following the last known exposure, asymptomatic close contacts should:

- Continue daily self-monitoring for symptoms through Day 14 from last known exposure; AND
- Follow all recommended non-pharmaceutical interventions (e.g., wearing a mask when around others, hand washing, avoiding crowds, and staying at least 6 feet from others) through Day 14 from last known exposure.

In addition, to protect the privacy of workers' health status and health information, only a general description is released to staff when reporting potential employee exposures to COVID-19. The identity of an employee who may be COVID-19 positive is only shared with the COVID-19 Response Team, supervisory staff, and those employees that are identified through contact tracing to be at greatest risk of exposure. Permission to reveal identity is obtained from affected employee.

Exposure guidelines - Confirmed Cases of Employee Exposure to COVID-19

If an employee is confirmed to have tested positive for COVID-19, the following measures will take place:

- Inform employees of their possible exposure to COVID-19 in the workplace, but maintain confidentiality as required by the Americans with Disabilities Act (ADA) and the California Department of Fair Employment and Housing (FEHA)
- Immediately inform the COVID-19 Response Team, the Safety Officer and HR Manager and temporarily close the general area where the infected employee worked until cleaning is completed per the OCMVCD Disinfection Plan attached as Appendix D.
- Under direction of the Safety Officer, conduct deep cleaning of the entire general area where the infected employee worked or may have been, including breakrooms, restrooms and travel areas, with a cleaning agent approved for use by the EPA against coronavirus.
 - Any person cleaning the area will be equipped with the proper PPE for COVID-19 disinfection (disposable gown, gloves, eye protection, mask, or respirator, if required) in addition to PPE required for cleaning products.
 - Cleaning of target areas will utilize an electrostatic sprayer and appropriate disinfecting solution (currently Nisus DSV).

Worker Hygiene and Source Controls- Face Coverings

Source controls are being implemented at our workplaces at all times. All OCMVCD employees will be provided with N95 respirators and are to wear a face covering within interior spaces at all times, unless in a private office.

Unvaccinated or partially vaccinated employees must also wear a face covering when interacting other persons in exterior spaces when social distancing is not possible, either on campus or in the field and at all times in the event of a major outbreak.

Cloth face coverings are not authorized PPE, but when combined with physical distancing of at least six feet, they may help prevent infected persons without symptoms from unknowingly spreading COVID-19 to their co-workers or the public.

OCMVCD will offer COVID-19 testing to symptomatic unvaccinated employees, unvaccinated employees after an exposure, vaccinated employees after an exposure if they develop symptoms, unvaccinated employees in an

outbreak, and all employees in a major outbreak.

Basic infection prevention measures are being implemented at our workplaces at all times. Workers are instructed to wash their hands for at least 20 seconds with soap and water frequently throughout the day, but especially at the beginning and end of their shift, prior to any mealtimes, and after using the restroom. All customers/residents, vendors, and visitors to the workplace are required to wash or sanitize their hands prior to or immediately upon entering the facility. Hand-sanitizer dispensers (that use sanitizers of greater than 60% alcohol) are at entrances and locations in the workplace so they can be used for hand hygiene in place of soap and water, as long as hands are not visibly soiled. Hand sanitizer and paper towel dispensers will be checked daily by maintenance staff and replenished as necessary.

Workers and customers/residents, vendors, and visitors are being instructed to cover their mouth and nose with their sleeve or a tissue when coughing or sneezing, and to avoid touching their face, particularly their mouth, nose and eyes, with their hands. Workers and customers/residents, vendors, and visitors are expected to dispose of tissues in provided trash receptacles and wash or sanitize their hands immediately afterward. Respiratory etiquette will be demonstrated on posters and supported by making tissues and trash receptacles available to all workers and other persons entering the workplace. Non-employee visitors will be reminded verbally upon entry to the District that they must abide by all COVID-19 safety protocols and provided appropriate PPE, if necessary.

Workplace Cleaning and Disinfection Protocol

Procedures have been established to routinely clean and disinfect commonly touched objects and surfaces such as copy machines, faucets, and doorknobs. These procedures should include:

- Using disinfectants that are [EPA-Approved](#) for use against the virus that causes COVID-19.
- Providing EPA-registered disposable wipes for employees to wipe down commonly used surfaces before use, such as phones or other workstation items.
- Following the manufacturer's instructions for all cleaning and disinfection products (e.g., safety requirements, PPE, concentration, contact time).
- Ensuring adequate supplies are readily available to support cleaning and disinfection practices.
- Those in individual offices are responsible for disinfecting their workspace on a daily basis.
- Regular practices of cleaning and disinfecting have been implemented, including a schedule for routine cleaning and disinfecting of work surfaces, equipment, tools and machinery, vehicles and areas in the work environment, including restrooms, break rooms, lunch rooms, meeting rooms and other shared spaces. Frequent cleaning and disinfecting is being conducted of high-touch areas, including phones, keyboards, touch screens, controls, door handles, , railings, copy machines, door knobs, delivery equipment, etc.
- All departmental shared spaces, including locker rooms and restrooms, will be cleaned, and disinfected on a daily basis by the Maintenance staff and any contracted cleaning assistants.
- District staff is responsible for cleaning and disinfecting their office workstation and/or assigned vehicle on a daily basis.
- The District has adopted a single occupancy policy (Appendix E) for all District vehicles operated by unvaccinated or partially vaccinated employees.
- In the event of a potential COVID-19 exposure to an employee, the vehicle will be disinfected with an approved aerosol product by the Safety Officer, Operations Supervisor, or other assigned personnel and left locked for 24 hours. Maintenance staff will be notified not to enter the vehicle until the 24-hour period expires.

Appropriate and effective cleaning and disinfecting supplies have been purchased and are available for use in accordance with product labels, safety data sheets and manufacturer specifications, and are being used with required personal protective equipment for the product.

The CDC states that guidance for disinfection of community facilities is a best management practice. OSHA does not require disinfection of a community facility following a detection of an individual with COVID-19, therefore OCMVCD will follow the recommendations as promulgated by the CDC. It is the goal of the CDC and OCMVCD to reduce the amount of COVID-19 virus that could be found on hard, non-porous surfaces and soft surfaces. In the event of a potential exposure or confirmed COVID-19 case on District property the steps detailed in the disinfection guidelines (Appendix C.) will be implemented. Disinfecting products currently being used include:

- Disinfectant approved to kill the Coronavirus (liquid/aerosol; hard surfaces)
- Disinfectant Wipes (cloth; hard surfaces)
- Aerosol Disinfectant (soft surfaces)
- Alcohol-based sanitizers (gel; hands)

- Abrasive cleaners w/ bleach (powder; hard surfaces)
- Nisus DSV (liquid/aerosol; hard surfaces and carpets; electrostatically applied)

Maintenance staff has been trained in use and storage of disinfecting materials according to label requirements. All employees who may utilize any disinfecting product are required to review the label prior to use. Any disinfecting product introduced into the cleaning regime will be reviewed by the Safety Officer who will advise staff of any particular hazards or concerns. Appropriate PPE will be utilized according to label requirements and/or EPA COVID-19 guidelines, up to and including Tyvek suits, respirators, nitrile gloves and goggles. Labels and safety data sheets are available from the Safety Officer in the event of significant exposure or spill.

Workplace Building and Ventilation Protocol

For indoor locations, OCMVCD will evaluate how to maximize ventilation with outdoor air to the highest level of filtration efficiency compatible with the existing ventilation system and whether the use of portable or mounted high efficiency particulate air (HEPA) filtration units, or other air cleaning systems, would reduce the risk of COVID-19 transmission.

We will review applicable orders and guidance from the State of California and the local health department related to COVID-19 hazards and prevention. These orders and guidance are both information of general application, including Interim Guidance for Ventilation, Filtration, and Air Quality in Indoor Environments by the California Department of Public Health (CDPH) and information specific to our industry, location, and operations.

Drop-off, pick-up and delivery practices, and protocol

Engineering Controls for Customer Service Areas

For employees who have frequent contact with the public, the following measures will be implemented that consider the possibility that the public is a possible contamination source, including:

- Conducting even more frequent cleaning and disinfection of surfaces touched by the public such as door handles/knobs, touch screens, doorknobs, etc.
- Where feasible, employees who have frequent interaction with the public will be protected with engineering controls such as Plexiglas screens, tables or other physical barriers, or spatial barriers of at least six feet.
- If exposures to the general public cannot be eliminated with engineering controls, customers will be required to wear face coverings and maintain physical distancing.
- Hand sanitizer stations will be provided, and employees will be encouraged to frequently wash their hands with soap and water for 20 seconds.
- Physical distancing will be enforced by limiting the number of customers in the space, where feasible.
- Disposable gloves will be provided to employees who handle items touched by the public.
- Parcel deliveries will be accepted only in the front lobby of the Administration building.
- Communications staff will alert specific departments of parcel deliveries and are available for retrieval from the lobby area.
- Outgoing parcels will be staged in the Administration lobby area and the appropriate carrier notified.
- All parcel delivery employees must abide by all District COVID-19 protocols when making deliveries.

Communications - Training practices and protocol

This IIPP: COVID-19 Supplement was communicated via email to all employees on December 9, 2020 and necessary training schedule was provided. Additional communication and training will be ongoing by the Human Resources Manager and the Safety Officer. Training will be provided to all workers who did not receive the initial training and prior to initial assignment or reassignment.

Instructions will be communicated to all workers, including full-time employees, part-time seasonal employees and interns, independent contractors, subcontractors, vendors and outside technicians about protections and protocols, including:

- 1) social distancing protocols and practices;
- 2) drop-off, pick-up, delivery;
- 3) practices for hygiene and respiratory etiquette;
- 4) requirements regarding the use of face-coverings by employees; and
- 5) mandatory health questionnaire prior to activities on District property will also be advised not to enter the workplace if they are experiencing symptoms or have contracted COVID-19.

Managers and supervisors are expected to monitor the effectiveness of the Covid-19 Program and report any deficiencies to the Human Resources Manager. All management and workers are to take an active role and collaborate in carrying out the various aspects of this plan, and update the protections, protocols, work-practices, and training, as necessary. This IIPP: COVID-19 Supplement has been certified by OCMVCD management and the plan was posted throughout the workplace and made readily available to employees December 9, 2020. It will be updated as necessary by the Human Resources Manager.

All employees will receive training in a language that is readily understandable to them. Training will include a review of this IIPP - COVID-19 Supplement and the following topics:

- General description of COVID-19, symptoms, when to seek medical attention, how to prevent its spread, and the employer's procedures for preventing its spread at the workplace.
- How an infected person can spread COVID-19 to others even if they are not sick.
- How to prevent the spread of COVID-19 by using cloth face covers, including:
 - CDC guidelines that everyone should use cloth face covers when around other persons.
 - How cloth face covers can help protect persons around the user when combined with physical distancing and frequent hand washing.
 - Information that cloth face covers are not protective equipment and do not protect the person wearing a cloth face cover from COVID-19.
 - Instructions on washing and sanitizing hands before and after using face coverings, which should be washed after each shift.
- Cough and sneeze etiquette.
- Washing hands with soap and water for at least 20 seconds after interacting with other persons, and after contacting shared surfaces or objects.
- Avoiding touching eyes, nose, and mouth with unwashed hands.
- Avoiding sharing personal items with co-workers (i.e., dishes, cups, utensils, towels).
- Providing tissues, no-touch disposal trash cans, and hand sanitizer for use by employees.

- Safely using cleaners and disinfectants, which includes:
 - The hazards of the cleaners and disinfectants used at the worksite.
 - Wearing PPE (such as gloves).
 - Ensuring cleaners and disinfectants are used in a manner that does not endanger employees.

Hazard Correction

Any reported COVID-19 related unsafe or unhealthy work conditions, practices, or procedures will be investigated and, if warranted, corrected in a timely manner.

Accident/Incident Investigations

Accident/incident investigations, for potentially work-related COVID 19 illnesses, will be conducted as required by Cal/OSHA.

Cal/OSHA's reporting requirements are outlined at <https://www.dir.ca.gov/dosh/coronavirus/Reporting-Requirements-COVID-19.html>.

Cal/OSHA's Q&A on Executive Order N-62-20 is available at <https://www.dir.ca.gov/dwc/Covid-19/FAQs.html>

Record Keeping

All COVID-19 related training records, inspections, and investigations will be maintained as outlined in our IIPP Recordkeeping section.

Additional protections and protocols

Field activities and public interactions

Due to the high degree of public interaction in the field by a significant portion of District staff, masks/face coverings will still be required on SRs, ITs and at Outreach Events when residents or event host request they be worn.

In all field activity circumstances, if a District employee is threatened or feels intimidated, they are to immediately and safely remove themselves from the situation and contact police, if necessary. All such instances are to be promptly reported to the appropriate Supervisor.

Departmental Specific Guidance

Individual departments have developed additional protocols that relate to their unique workflows and functions. These measures are in conjunction and compliance with this plan.

Laboratory -Specific lab related measures can be found in Appendix G. COVID-19 Laboratory Safety Guidelines last updated November 10, 2020.

Communications –

- Mosquitofish pick up is suspended until further notice, mosquitofish will be provided to residents through a service request if desired.
- Insect Identification drop offs are only accepted with the prior approval of laboratory staff that has conducted an initial review with the resident.

- All community presentations will be conducted virtually until further notice.

Executive / Administration –

Operations -

- Operations staff must change out of their uniform at the end of each work shift and deposited in the dirty uniform receptacle.
- Clean uniforms may be brought home by Operations staff and worn into work for the beginning of their shift.

Certified by:

Rick Howard

11/02/21

District Manager

List of Appendices

Appendix A. References, Resources, and Informational Links

Appendix B. OCMVCD COVID-19 Exposure Guidelines

Appendix C. OCMVCD Emergency Telework Policy

Appendix D. OCMVCD Disinfection Plan

Appendix E. OCMVCD Single Occupant Vehicle Use Guidelines

Appendix F. OCMVCD Guidelines for Public Interactions

Appendix G. COVID-19 Laboratory Safety Guidelines

Appendix A – References, Resources, and Informational Links

General

Centers for Disease Control and Prevention (CDC): Coronavirus (COVID-19) – <https://www.cdc.gov/coronavirus/2019-ncov/index.html>

California Department of Public Health (CDPH): Coronavirus – <https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Immunization/ncov2019.aspx>

State of California: COVID-19 response – <https://covid19.ca.gov/>

Businesses

CDC: Resources for businesses and employers – <https://www.cdc.gov/coronavirus/2019-ncov/community/guidance-business-response.html>

CDC: General business frequently asked questions – <https://www.cdc.gov/coronavirus/2019-ncov/community/general-business-faq.html>

CDC: Building/business ventilation – <https://www.cdc.gov/coronavirus/2019-ncov/community/guidance-business-response.html>

CDC: Health screening checklist – <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>

CDPH: Businesses and employers: COVID-19 – <https://covid19.ca.gov/business-and-employers/>

CDPH: Materials for businesses and employers – <https://covid19.ca.gov/industry-guidance/>

California Governor’s Office of Business and Economic Development: COVID-19 information and resources – <https://business.ca.gov/coronavirus-2019/>

California Labor & workforce Deployment Agency: Updates related to COVID-19 – <https://www.labor.ca.gov/coronavirus2019/>

Federal OSHA: Guidance on Preparing Workplaces for COVID-19 – <https://www.osha.gov/Publications/OSHA3990.pdf>

Handwashing

CDC: Handwashing video translated into multiple languages – <https://www.cdc.gov/handwashing/videos.html>

Respiratory etiquette: Cover your cough or sneeze

CDC: <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html>

CDC: https://www.cdc.gov/healthywater/hygiene/etiquette/coughing_sneezing.html

Physical distancing

CDC: <https://www.cdc.gov/coronavirus/2019-ncov/community/guidance-business-response.html>

Cleaning and Disinfection

CDC: <https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility.html>

CDC: <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/disinfecting-your-home.html>

CDC: <https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/cleaning-disinfection.html>

Environmental Protection Agency (EPA):

<https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2-covid-19>

Employees exhibiting signs and symptoms of COVID-19 and testing

CDC: <https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/steps-when-sick.html>

CDPH: <https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Immunization/ncov2019.aspx>

State of California: <https://covid19.ca.gov/testing-and-treatment/>

Training

CDC: The National Institute for Occupational Safety and Health - https://www.cdc.gov/niosh/emres/2019_ncov.html

Federal OSHA: <https://www.osha.gov/Publications/OSHA3990.pdf>

CDPH: <https://files.covid19.ca.gov/pdf/guidance-office-workspaces.pdf>

Communication Resources

CDC: <https://www.cdc.gov/coronavirus/2019-ncov/communication/index.html>



Orange County Mosquito and Vector Control District

A Public Health Agency Serving Orange County Since 1947

Effective Date: April 28, 2020

Reissue Date: May 15, 2020

Reissue Date: June 26, 2020

COVID-19 Employee Exposure Guidelines While in the Workplace

These employee exposure guidelines are intended to provide informational and directional steps for employees of the Orange County Mosquito and Vector Control District (District, OCMVCD) to follow in the event an employee of the District is presumed to be COVID-19 positive, tests COVID-19 positive, or has come into close contact with someone who is presumed to be COVID-19 positive or tests positive for COVID-19. These guidelines are subject to change based upon updated guidance from the Centers for Disease Control and Prevention (CDC), the California Department of Public Health (CDPH), or the Orange County Health Care Agency (OCHCA).

Background

As a result of that determination, the District's essential functions of protecting the public from vectors and vector-borne disease continues. In maintaining these essential public health services, the health and safety of District employees and the general public is the District's highest priority. Core essential functions will be conducted throughout this pandemic to the extent that the health and safety of District employees and general public are able to be protected from COVID-19 in a manner that is consistent with local, state, and federal guidance.

According to the CDC, the risk of acquiring COVID-19 is reduced by following CDC guidelines and District protocols which include the following: washing hands frequently, refraining from touching your face, practicing social distancing by maintaining at least 6 feet of separation between yourself and others, and wearing a facial covering. A more detailed description of recommended measures to be taken to prevent the spread of COVID-19 can be found below and on the CDC website [CDC How To Protect Yourself](#)

In order to maintain essential functions of the District and to comply with the Governor's Order, modified and/or staggered work schedules had been implemented. To provide a safe work environment for all employees present at the District, the following Employee Exposure to COVID-19 Guidelines have been implemented and shall remain in effect until such time as the threat from COVID-19 has been determined by the CDC, CDPH and OCHCA to be at a level deemed safe to resume normal and customary workplace activities:

Employee Exposure to COVID-19 Guidelines

Employees scheduled to return to work for their daily shift are directed to stay home if they are sick, especially if experiencing COVID-19 symptoms, including fever, coughing, or having difficulty breathing (total list of symptoms identified by the CDC can be found here: [CDC COVID19 Symptoms](#)). If an employee suspects that he or she may have been exposed to COVID-19, he or she shall not return to the workplace. They shall contact their primary care physician or other medical professional, and as promptly as possible notify their supervisor or Human Resources (HR).

At the beginning of each shift every employee is required to fill out an Employee Health Check survey https://iws.ocvector.org/health_form.html, which can be found on the District's website.

PRIORITY LEVEL 1 - An employee who is presumed COVID-19 positive, or has tested positive (PCR) for COVID-19

Any employee that falls into Priority Level 1 (has COVID-19 symptoms, is presumed positive or tests positive) will immediately be placed on paid leave pursuant to the terms of the *Families First Coronavirus Response Act FFCRA* (see attached). Human Resources will coordinate with key staff to determine potential exposure of the affected employee and will work to identify any other employees that may have come in direct or close contact with the presumed COVID-19 positive person, or positive COVID-19 employee.

An employee in Priority Level 1 (has COVID-19 symptoms, is presumed positive or tests positive), must stay home in isolation* until at least 10 days have passed after the symptoms first appeared AND at least 3 days after recovery (as defined below) AND must have a negative COVID-19 test. If the employee that tests positive is asymptomatic (has no symptoms), this individual may return to work if at least 10 days have passed since the date of the first positive test AND the employee continues to have no symptoms (no cough or shortness of breath, etc.) since the test **AND has** received two consecutive negative COVID-19 tests, that are no less than 24 hours apart.

Recovery means that there is no presence of a fever for at least 72 hours (3 days) without the use of fever-reducing medications and respiratory symptoms (e.g. cough, shortness of breath, etc.) have returned to normal.

PRIORITY LEVEL 2 - Employee determined to have likely exposure to positive COVID-19 individual while in the workplace or elsewhere.

Any employee that is determined to have had exposure (direct or close contact) to a presumed COVID-19 positive individual, or to someone who has tested positive (PCR) for COVID-19 while at the District or elsewhere, will immediately be placed on paid leave pursuant to the terms of the *Families First Coronavirus Response Act (FFCRA)*. A close contact is any person who was within 6 feet for more than 10 minutes of the presumed COVID-19 positive or COVID-19 positive individual, or had unprotected direct contact to body fluids of the presumed COVID-19 positive or COVID-19 positive individual (e.g. cough or sneeze on face or sharing of a drink or a food utensil).

Employees in Priority Level 2 should get a Viral/PCR/Nasal Swab test as soon as possible. This individual shall be in quarantine* at home for 14 days utilizing emergency sick leave pursuant to the *FFCRA*.

If test results are positive, refer to Priority Level 1 process, above.

If test results are negative, employee will be allowed to return to work if they have had no further direct contact with the positive or presumed positive individual and do not develop symptoms (cough, shortness of breath, loss of taste or smell, etc.) AND have a second negative test result at the conclusion of the 14-day quarantine period .

Recovery means that there is no presence of a fever for at least 72 hours (3 days) without the use of fever-reducing medications and respiratory symptoms (e.g. cough, shortness of breath, etc.) have returned to normal.

*See attached for Isolation vs. Quarantine

District facilities that the affected employee occupied or visited shall be closed pending facility disinfection procedures per OCMVCD Disinfection Contingency Plan (see attached). During closure, only critical District functions will be performed on-site or in the field if appropriate employee safety measures are in place and there is no access to the closed area. Following disinfection, the affected facility will be reopened; however, maximum remote work and only essential staff performing essential duties will be allowed on site or in the field.

ANTIBODY TESTING

The District is offering to provide voluntary Antibody tests for any interested employees. These types of tests are intended to determine if an individual may have been infected by the COVID-19 coronavirus at some time in the past and possibly mounted an immune response to a COVID-19 infection. If the District covers the cost of the test, the results will be shared in confidence with the District, as your employer, and become part of your medical file. The test and the results are just for your knowledge and will not relax any social distancing or other prevention measures.

A positive test result shows you may have antibodies from an infection with the virus that causes COVID-19, or possibly from infection with a related virus from the same family of viruses (called coronavirus), such as one that causes the common cold.

At this time, it has not been clinically determined that having antibodies to the virus that causes COVID-19 can protect someone from getting infected again or, if they do, how long this protection might last.

The spread of COVID-19 and ways in which it is believed to infect people:

The virus is spread mainly from person-to-person:

- Between people who are in close contact with one another (within about 6 feet).
- Through respiratory droplets produced when an infected person coughs, sneezes, or talks.
- These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs.
- COVID-19 may be spread by people who are not showing symptoms (asymptomatic)

Symptoms Characteristic of COVID-19

According to the CDC, symptoms may appear **2-14 days after exposure to the virus**. People with these symptoms may have COVID-19:

- Fever or chills
- Cough
- Shortness of breath or difficulty breathing
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea

This list does not include all possible symptoms. CDC will continue to update this list as we learn more about COVID-19.

Reported illnesses have ranged from mild symptoms to severe illness and even death for confirmed coronavirus (COVID-19) cases.

To prevent COVID-19, follow CDC recommended guidelines, including:

- Washing your hands often with soap and water for at least 20 seconds, especially after you have been in a public place, after blowing your nose, coughing, or sneezing.

- If soap and water are not readily available, use a hand sanitizer that contains at least 60% alcohol. Cover all surfaces of your hands and rub them together until they feel dry. The District will provide hand sanitizer to all employees.
- Avoid touching your eyes, nose, and mouth with unwashed hands.
- Avoid close contact with people who are sick
- Stay home as much as possible
- Put distance between yourself and other people.
- Cover your mouth and nose with a cloth face cover when around others. – The District has procured face coverings for all employees. Employees are to wear face coverings when on-campus and when in contact with anyone outside their vehicles.
- You could spread COVID-19 to others even if you do not feel sick.
- The cloth face cover is meant to protect other people in case you are infected.
- Continue to keep about 6 feet between yourself and others. The cloth face cover is not a substitute for social distancing. All personal surfaces (desks, phones, keyboards, vehicles, etc.) are to be disinfected on a daily basis. The District has provided disinfection supplies to all employees.
- If you are caring for someone in your household that is positive for COVID-19, refer to the CDC guidelines here: [CDC Caring for Someone Who is Sick](#)

If you have questions, please contact Human Resources for further direction.

Initially Issued April 28, 2020

Amended and reissued: May 11, 2020

Amended and reissued: May 15, 2020

Amended: June 17, 2020

Reissued: June 26, 2020



Richard J. Howard, District Manager

EMPLOYEE RIGHTS

PAID SICK LEAVE AND EXPANDED FAMILY AND MEDICAL LEAVE UNDER THE FAMILIES FIRST CORONAVIRUS RESPONSE ACT

The Families First Coronavirus Response Act (FFCRA or Act) requires certain employers to provide their employees with paid sick leave and expanded family and medical leave for specified reasons related to COVID-19. These provisions will apply from April 1, 2020 through December 31, 2020.

PAID LEAVE ENTITLEMENTS

Generally, employers covered under the Act must provide employees:

Up to two weeks (80 hours, or a part-time employee’s two-week equivalent) of paid sick leave based on the higher of their regular rate of pay, or the applicable state or Federal minimum wage, paid at:

- 100% for qualifying reasons #1-3 below, up to \$511 daily and \$5,110 total;
- 2/3 for qualifying reasons #4 and 6 below, up to \$200 daily and \$2,000 total; and
- Up to 10 weeks more of paid sick leave and expanded family and medical leave paid at 2/3 for qualifying reason #5 below for up to \$200 daily and \$12,000 total.

A part-time employee is eligible for leave for the number of hours that the employee is normally scheduled to work over that period.

ELIGIBLE EMPLOYEES

In general, employees of private sector employers with fewer than 500 employees, and certain public sector employers, are eligible for up to two weeks of fully or partially paid sick leave for COVID-19 related reasons (see below). Employees who have been employed for at least 30 days prior to their leave request may be eligible for up to an additional 10 weeks of partially paid expanded family and medical leave for reason #5 below.

QUALIFYING REASONS FOR LEAVE RELATED TO COVID-19

An employee is entitled to take leave related to COVID-19 if the employee is unable to work, including unable to telework, because the employee:

<ol style="list-style-type: none"> 1 . is subject to a Federal, State, or local quarantine or isolation order related to COVID-19; 2 . has been advised by a health care provider to self-quarantine related to COVID-19; 3 . is experiencing COVID-19 symptoms and is seeking a medical diagnosis; 4 . is caring for an individual subject to an order described in (1) or self-quarantine as described in (2); 	<ol style="list-style-type: none"> 5 . is caring for his or her child whose school or place of care is closed (or child care provider is unavailable) due to COVID-19 related reasons; or 6 . is experiencing any other substantially-similar condition specified by the U.S. Department of Health and Human Services.
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ENFORCEMENT

The U.S. Department of Labor’s Wage and Hour Division (WHD) has the authority to investigate and enforce compliance with the FFCRA. Employers may not discharge, discipline, or otherwise discriminate against any employee who lawfully takes paid sick leave or expanded family and medical leave under the FFCRA, files a complaint, or institutes a proceeding under or related to this Act. Employers in violation of the provisions of the FFCRA will be subject to penalties and enforcement by WHD.



WAGE AND HOUR DIVISION
UNITED STATES DEPARTMENT OF LABOR

For additional information
or to file a complaint:
1-866-487-9243
TTY: 1-877-889-5627



do.gov/agencies/whd

COVID-19: Quarantine vs. Isolation

QUARANTINE keeps someone who was in close contact with someone who has COVID-19 away from others.



If you had close contact with a person who has COVID-19



- Stay home until 14 days after your last contact.



- Check your temperature twice a day and watch for symptoms of COVID-19.



- If possible, stay away from people who are at higher-risk for getting very sick from COVID-19.

ISOLATION keeps someone who is sick or tested positive for COVID-19 without symptoms away from others, even in their own home.



If you are sick and think or know you have COVID-19



- Stay home until after
 - 3 days with no fever and
 - Symptoms improved and
 - 10 days since symptoms first appeared



If you tested positive for COVID-19 but do not have symptoms



- Stay home until after
 - 10 days have passed since your positive test.

CS317422-A

6/8/2020 2PM





Orange County
Mosquito and Vector Control District

A Public Health Agency Serving Orange County Since 1947

COVID-19 Telework Guidelines

Effective Date: **October 1, 2020**

Background

Due to the COVID-19/Coronavirus Pandemic, primary education schools and many childcare programs in California have closed to “in-person” instruction/care. California schools have largely been advised to begin the 2020/21 school year in a “distance learning” setting.

Telework is a workplace arrangement in which eligible employees work at least part-time away from the primary workplace. Telework is not a universal employee benefit or entitlement, but an alternative method of meeting the work needs of the organization due to exceptional circumstances beyond the control of any one party.

Emergency Telecommuting Protocol

The purpose of these guidelines is to establish a protocol and processes to allow teleworking opportunities where practicable for Non-Exempt employees of the Orange County Mosquito and Vector Control District (District) and that are utilizing the expanded family medical leave under the Families First Coronavirus Response Act (FFCRA).

The District may allow or require employees to temporarily work from home to ensure business continuity during the COVID-19/Coronavirus Pandemic.

Procedures:

Employees shall notify their supervisors as well as Human Resources of their need to utilize the benefits afforded to them through the FFCRA for childcare purposes. Employees must meet the criteria outlined in the FFCRA which states: “You are caring for a child whose school or place of care is closed (or childcare provider is unavailable) for reasons related to COVID-19”.

Telework arrangements will be based on specific, work-related criteria. Not every employee or job is appropriate for telework, and the key to successful telework is not in the job itself, but in the functions and tasks that the employees will be performing at the remote site.

Telework candidates, supervisors, and Human Resources will work together to determine whether job duties are suitable for, and can be performed in, a telework capacity. In approving the telework schedule, the employee’s supervisor will take into consideration the overall impact of the teleworker’s total time away from the physical worksite. Considerations include, but are not limited to, flex time and compressed work week schedules, meetings, consultations, presentations and conferences. The District shall also give consideration to the overall effect of the teleworker’s and co-workers’ schedules in maintaining adequate communication.

If the District determines that job duties are appropriate and sufficient to allow for telework, a telework schedule will be established. All telework is to be completed during the employee’s regular work hours. The employee and supervisor will work with the Information Technology (I.T.) department to review equipment needs, such as hardware and software and to provide support to employees to enable remote work.

The employee will establish an appropriate work environment, free from safety hazards, within his or her home for work purposes. The District will not be responsible for costs associated with the setup of the employee's home office, such as remodeling, furniture or lighting, nor for repairs or modifications to the home office space. The District will determine the equipment needs for each employee on a case-by-case basis. Equipment supplied by the District is to be used for business purposes and only the assigned user is authorized to use District equipment. The employee will ensure all District equipment is stored in a secure area within the home. When not in use, District laptops must be shut down or screen locked to prevent unauthorized access.

The District is not responsible for any loss or damage to the teleworker's property, personal property owned by the teleworker or any of the teleworker's family members, or property of others in custody of the teleworker.

Injuries sustained by the employee in a home office location and in conjunction with his or her regular work duties may be covered by Workers' Compensation. Teleworking employees are responsible for notifying their supervisor and Human Resources of such injuries as soon as possible. Because there may be liability that arises from hazards in the home that might cause serious harm or injury, the District reserves the right to periodically inspect the teleworker's home work space. Any inspection conducted for these purposes will be done by an outside resource and not a District employee. The District will precede any such inspection by advanced notice and will schedule an appointment. The District assumes no liability for injuries that occur outside the performance of the employee's duties and/or outside the employee's scheduled telecommuting hours. The District will not be liable for any injuries sustained by family members, visitors, and others in the teleworker's home worksite.

Protocol:

The ability to telework is a privilege, not a right, and within the discretion of the District Manager. All District employees permitted to telework must sign an approved telework agreement (Attached Enclosure A.) The Department shall maintain a copy of the Agreement and provide a copy to Human Resources. Other than those additional duties and obligations expressly imposed on the employee under this policy, the duties, obligations, responsibilities and conditions of employee's employment with the District shall remain unchanged. In addition, the employee's salary and benefits shall remain unchanged.

Any and all Overtime must be expressly authorized in advance by the Department Director and employee in a telework capacity does not have the unilateral authority to approve Overtime. Hours off under the FFCRA for childcare shall not considered "regular" hours when calculating overtime. However, teleworking hours, will be considered "regular" hours in the calculation of overtime.

Employees teleworking must comply with all District rules, policies, practices, and instructions. A teleworking employee must perform work during scheduled teleworking hours and be available via telephone and email during established working hours. Telework employees must maintain a tracking log of activities for all telework reported. (Attached Enclosure B)

Depending on the job responsibilities and manager discretion, a work diary may be used to manage performance. A work diary is a document that employee teleworker completes that tracks what is accomplished during the course of a week. A work diary can be especially useful for positions where more traditional work metrics are not relevant or practical.

Any special project, presentation, etc. not expressly stated in the teleworking employee's job description shall require formal approval from the District Manager before being accepted by the teleworking employee.

Teleworkers will not act as primary caregivers for dependents during the agreed upon work hours. This does not mean dependents must be absent from the home during the telework hours, it means that the dependents will not require the teleworker's attention during work hours. Teleworkers must make dependent care arrangements to permit concentration on work assignments to the same extent as if they were performing work at the District.

The teleworker will not hold in-person business meetings with others at his or her residence. Meetings with other District staff will not be scheduled on a regular basis at the teleworker's residence and must be approved in advance by the teleworker's supervisor. Virtual meeting through Microsoft Teams, Zoom, or other type of meeting platform are expressly authorized by this agreement.

The Department Director or the District Manager may deny, terminate, or modify a Teleworking Agreement for any reason, without notice. Similarly, a Teleworking employee may end teleworking at any time. Any employee determined to not be in compliance with the authorized telework agreement is subject to the District rescinding the Teleworking Agreement. Any employee who willfully violates the Agreement may be subject to discipline, up to and including termination.

Confidentiality:

All files, papers, records, documents, or other materials created while telecommuting is the property of the District. Teleworking employees and their supervisors shall ensure safeguards in place to protect confidential information. Employees may not disclose confidential or private files, records, materials, or information while telecommuting and may not allow access to District networks or databases to anyone who is not authorized.

The California Public Records Act remains in full force and all records regarding public information and public records apply to teleworking employees. Public records include any writing containing information relating to the conduct of the public's business prepared, owned, used, or retained by the District regardless of physical form or characteristic. If the District receives a Public Records Act request (subject to certain exceptions), a teleworking employee must permit inspection and examination of any public record or public information in the employee's possession. This is required regardless of where the public record is located.

Term:

Employees should not assume any specified period for emergency telework arrangements, and the Orange County Mosquito and Vector Control District may require employees to return to regular, in-office/on-site work at any time.

Effective October 1, 2020

Rick Howard

By: Rick Howard, District Manager

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
EMERGENCY TELEWORKING AGREEMENT
ENCLOSURE A**

Employee Name: _____

Department _____ Supervisor/Director: _____

Job Title: _____

Telecommute Start Date: _____

Equipment/Supplies Inventory

Please list any District Supplied Equipment:

Please list any Employee Supplied Equipment:

Regularly Assigned Place of Employment: The days and hours the District expects the Employee to be physically present at the District work site are the following:

DAY	MORNING		LUNCH	AFTERNOON		TOTAL HOURS
	START	END		START	END	
MONDAY						
TUESDAY						
WEDNESDAY						
THURSDAY						
FRIDAY						

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
EMERGENCY TELEWORKING AGREEMENT
ENCLOSURE A (CONTINUED)**

The location and address of the Alternative/Remote Work Location is:

Street City

Zip Code State

The phone number to reach Employee at the Alternative Work Location while working under this Agreement is: _____.

The days and hours (“Work Schedule”) the District expects and/or permits the Employee to be physically present at the Alternative Work Location are the following:

DAY	MORNING		LUNCH	AFTERNOON		TOTAL HOURS
	START	END		START	END	
MONDAY						
TUESDAY						
WEDNESDAY						
THURSDAY						
FRIDAY						

Rest Breaks: Hourly employees are responsible for taking one fifteen-minute rest break for each four (4) hours, or a substantial fraction thereof, that they work in a day.

Meal Breaks: Hourly employees working full-day schedules of six hours or more, are required to include a minimum thirty (30) minute unpaid meal break each work day.

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
EMERGENCY TELEWORKING AGREEMENT
ENCLOSURE A (CONTINUED)**

I understand and agree to the following during the remote work period:

- I understand and affirm that this agreement is temporary due to COVID-19/Coronavirus Pandemic and is contingent upon District Manager approval and further understand and agree that this agreement does not imply entitlement to a permanently modified position or a continued telecommute arrangement.
- Pursuant to the Families First Coronavirus Response Act (FFCRA), once the conditions for eligibility for teleworking no longer apply, this agreement will terminate based upon the terms of the FFCRA.
- This agreement is non-precedent setting and its terms and conditions shall terminate at such time as the COVID-19/Coronavirus Pandemic has been determined by the World Health Organization, Centers for Disease Control, California Department of Public Health, and/or the Orange County Health Care Agency to no longer pose a public health emergency.
- I understand and agree that the District may, at any time, terminate, change, or modify any or all of the conditions under which approval to participate is granted, with or without notice.
- I agree to adhere to and understand my duties, obligations, and responsibilities. I understand and agree to the work expectations communicated by my supervisor and I will contact my supervisor promptly if clarification is needed.
- I agree to communicate to my supervisor when additional assignments or work is needed to fill work hours.
- I agree to adhere to the agreed upon schedule and remain accessible for group meetings and/or status updates. Employees who telecommute are expected to respond to their supervisor or other District employee within 15 minutes of notice by phone, email or text during regular work hours, with the exception of unpaid meal periods. I will promptly notify my Supervisor if I will not be available.
- I also understand it is my responsibility to provide adequate advance notification to my supervisor if I am unable to keep any of the agreed upon commitments and/or deliverables. If I fail to do so, I understand this Agreement may be immediately terminated.
- For non-exempt/hourly employee, I will ensure to take scheduled rest periods and a lunch break and maintain a tracking log of activities and work assignments for all telework reported.
- I will report to my supervisor immediately any job-related incidents or accidents that occur during remote work as soon as practical.
- I will ensure confidentiality of all confidential or private files, records, materials, or information while teleworking and may not allow access to District networks or databases to anyone who is not authorized.

The Agreement is valid as of _____. The District may rescind this Agreement at any time.

I hereby affirm by my signature that I have read this Emergency Telecommuting Agreement, and understand and agree to all of its provisions.

Employee's Signature

Date

Employee's Supervisor's Signature

Date

District Manager's Signature

Date

Submit executed agreement to Human Resources

**ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT
ENCLOSURE B**

OCMVCD TELECOMMUTING DAILY ACTIVITY LOG

NAME: _____

DATE: _____

Briefly describe your work activity for each segment of time

6:00 - 6:30	
6:30 - 7:00	
7:00 - 7:30	
7:30 - 8:00	
8:00 - 8:30	
8:30 - 9:00	
9:00 - 9:30	
9:30 - 10:00	
10:00 - 10:30	
10:30 - 11:00	
11:00 - 11:30	
11:30 - 12:00	
12:00 - 12:30	
12:30 - 1:00	
1:00 - 1:30	
1:30 - 2:00	
2:00 - 2:30	
2:30 - 3:00	
3:00 - 3:30	
3:30 - 4:00	
4:00 - 4:30	



Orange County Mosquito and Vector Control District

A Public Health Agency Serving Orange County Since 1947

Effective Date: April 13, 2020
Reissuance Date: June 26, 2020

Disinfection Procedures and Contingency Plan of the Orange County Mosquito and Vector Control District in the Event an Employee Tests Positive for COVID-19

This Disinfection Procedures and Contingency Plan applies to all OCMVCD facilities, vehicles, employees, contractors, vendors and visitors. This Plan is subject to change based upon updated guidance from the Centers for Disease Control and Prevention (CDC).

Background:

On January 30, 2020 the World Health Organization (WHO) declared the 2019 Coronavirus a Public Health Emergency of International Concern. On March 11, 2020 WHO announced a name for the new coronavirus disease: COVID-19, and officially declaring the emergency a world-wide Pandemic.

The CDC has issued guidance to employers and business owners for the disinfection of a business (in community facility category) following an employee testing positive for COVID-19. All OCMVCD facilities are considered a community facility pursuant to CDC guidelines.

The CDC has issued specific guidance for cleaning and disinfecting community facilities that is regularly updated with new information as it becomes available. This procedure was developed based upon information that was current at the time of issuance (accessed April 6, 2020 <https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/cleaning-disinfection.html>).

The CDC states that guidance for disinfection of community facilities is a best management practice. OSHA does not require disinfection of a community facility following a detection of an individual with COVID19 (See Environmental Decontamination here: <https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/cleaning-disinfection.html>), therefore the OCMVCD will follow the recommendations as promulgated by the CDC. It is the goal of the CDC and the OCMVCD to reduce the amount of COVID-19 virus that could be found on hard, non-porous surfaces and soft surfaces.

Specifications:

Is the person confirmed COVID19 positive and was physically at the facility in the last 24 hours? If yes, follow procedure below to close facility for 24 hour and carryout disinfection.

Once a community facility (office building, workshop, office, other structure or vehicle) is determined that a confirmed COVID19 positive employee (or contractor, vendor, public) was present at the site, the CDC recommends that the building(s) where the person worked should be vacated for 24 hours prior to disinfection. If 24 hours is not feasible, wait as long as possible. An assessment will be conducted to determine the affected areas to be closed and disinfected per the protocol detailed below. However, CDC guidance allows for no disinfection if the building, facility or vehicle was vacated and not occupied for a period of at least seven days. In this scenario, disinfection is not recommended as a best management practice. For purposes of this procedure, OCMVCD District vehicles are considered a workspace and follow the guidelines identified, above.

1 Disinfection Procedures and Contingency Plan for COVID-19

Is the person a close contact to a confirmed or presumed COVID19 positive individual? If yes, proceed with modified disinfection procedures which do not require a 24 hour closure.

Determine if the employee that reports themselves as a close contact works primarily in the field or a facility building. Consider when the employee last worked at the facility. Evaluate how much time the employee spent in any given area and if all COVID19 safety protocols were observed. The assessment will determine the affected areas to be temporarily closed and disinfected. During a same day temporary closure and disinfection procedure the area would be cleared of employees as soon as possible (they may be asked to relocate to other work areas or sent home). The protocol for disinfection below would be followed for all the affected workspaces. The areas would remain closed until all surfaces are dry.

Staffing:

Employees who maintain current CDPR, QAL Category K license are certified to conduct disinfection pursuant to CDC guidelines. OCMVCD employees that are certified to conduct disinfection functions are Integrated Vector Management Compliance Officer John Drake and Vector Ecologist Laura Krueger Prelesnik. According to CDPR, either of those employees are able to oversee staff without a license to assist in completing required disinfection functions.

Protocol for Disinfection of a OCMVCD Building (Including the garage)

Employees must be trained on PPE and the chemicals used for disinfection. CDC provides a guide to disinfectants effective for coronavirus here <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>. Employees must wear Tyvek suits or uniforms, full face respirators and/or goggles and gloves.

1. Building must be vacated no less than 24 hours prior to disinfection. If 24 hours is not feasible, wait as long as possible.
2. Open all windows and doors of the building on the initial walkthrough. Turn off the building HVAC system. Remove and dispose of any exposed food that is found in a kitchen area, offices, or other open space areas that will be disinfected.
3. If the area is carpeted, use a high-efficiency particular air (HEPA) filtered vacuum in the space. This should only be done in an unoccupied space.
4. The CDC recommends “wipe down cleaning” of high touch surfaces in contact with the case while on the job site. The CDC guidance indicates first to conduct “wipe down cleaning” meaning wetting the surface with disinfectant, allowing for the proper contact time, and wiping the surface clean, prior to ULV disinfection.
5. Once “wipe down cleaning is complete”, in preparation for ULV disinfection, close windows and doors that were previously opened.
6. Using an electric ULV fogger filled with disinfectant mixed at the proper dilution, disinfect all high touch surfaces, and other surfaces as directed.
7. After ULV application the building should remain closed until all surfaces are dry and consistent with the label.

The building should be opened, and the HVAC system turned back on after all surfaces are dry. All surfaces where food is prepared will need to be wiped with potable water (depending on the disinfectant used). The opening of the building could occur anywhere from fifteen minutes to four hours, depending on how long it takes surfaces to dry.

If you have questions or suspect a COVID-19 contamination, immediately contact your Supervisor, Human Resources, and either John Drake or Laura Krueger Prelesnik for further direction.

OneDrive/rh/2020 COVID 19 Materials

2 Disinfection Procedures and Contingency Plan for COVID-19



Orange County Mosquito and Vector Control District

A Public Health Agency Serving Orange County Since 1947

Effective Date: April 13, 2020

Revised / Issued Date: June 26, 2020

Single Occupancy Vehicle/Disinfection Guidelines, COVID-19

- Each District vehicle will be assigned to an individual employee, who will be responsible for disinfecting (with provided materials) after each day of use.
- Disinfection will involve wiping all surfaces which are routinely touched with an approved product, such as Barbicide, Clorox wipes, etc.
- No employee shall enter the assigned vehicle of another employee, except in the case of approved maintenance or emergency conditions.
- If it is necessary to move a vehicle by an unassigned employee, a spray bottle of disinfectant should be used to mist all surfaces of the vehicle interior, including seats, and allowed to dry (minimum of 10 minutes) prior to vehicle operation. Also, the unassigned employee is to notify the assigned employee of the vehicle contact.
- Each employee must wear an approved mask and nitrile gloves while operating a vehicle which is not specifically assigned to them.
- If an employee feels that a vehicle must be moved outside of maintenance or emergency conditions, contact your immediate supervisor as well as Jerry Sims (Operations Supervisor).
- Disinfection products may be obtained from Simon DeLira (Facilities Maintenance Technician) or John Drake (IVM Compliance Officer).
- When an employee reports an exposure or potential exposure to COVID-19, their assigned vehicle will be disinfected by the Operations Supervisor, locked and appropriate staff will be notified to NOT enter the vehicle.

MEMORANDUM



Orange County Mosquito and Vector Control District

A Public Health Agency Serving Orange County Since 1947

DATE: March 11, 2020

TO: All District Staff

FROM: Lora Young, Director of Communications

RE: COVID-19 and Employee Interaction with Community

As a public health agency, we have a commitment to keeping both District employees and the community we serve safe. We understand that those in the community are concerned about COVID-19. Sharing information about what we are doing to reduce the risk of COVID-19 exposure for our employees and residents is of critical. Below you will find some measures the District is implementing to lower the risk to employees when interacting with the community:

1. As we adapt how employees interact with community members:

- Be consistent
- Be polite and explain why
- If resident becomes upset, let them know it is an agency protocol at this time

2. Some phrases you can use to convey to residents why you are not shaking hands:

- "I wanted you to be aware that for public health reasons our agency policy is advising all staff to not shake hands."
- "For your health and mine, our agency is advising that we currently do not shake hands with members of the public and coworkers."
- "Due to the ongoing developments with the spread of coronavirus our agency is directing that we minimize contact for our mutual safety (or for your safety and mine)."

3. Having residents keep their distance at all times

- Even if they appear healthy, let residents know that they are more than welcome to come along for their yard inspection, however politely inform them that for their safety and yours you will maintain a minimum of 6 feet away in accordance with CDC recommendations
- Let resident know you can conduct the inspection without them immediately present and provide follow-up with marked literature or via phone/email, including photos.

4. If your appointment appears sick

- You can reschedule an appointment if the resident is sick, **however you can not ask a resident if they are sick on the phone.** While on the phone if you suspect your appointment is not feeling well, politely ask to reschedule the appointment for another date.

5. If you arrive at an appointment and visibly see someone is sick

- Let them know you are happy to reschedule to a later date when they are feeling better.
- If the resident is insistent regarding the inspection, let the resident know that current District procedures require inspectors to reschedule appointments if a resident appears sick, or
- You can conduct the inspection without the resident immediately present and provide follow-up with marked literature or via phone/email, including photos.
- Do not enter interior spaces under any circumstances.

6. What to do if YOU are sick

We want to extend the same courtesy to residents, that we are asking of them. If you are not feeling well please do not expose the public to a potential threat by showing up at a residence or place of business exhibiting signs of illness.

- If you are not feeling well, you are encouraged to stay home
- If you have a fever, you should not return to work until you have not had a fever for 24 hours without medication.
- If you are out sick more than three (3) days, you are required to submit medical clearance to return to work.

OCMVCD Laboratory COVID-19 Safety Guidelines (updated last November 10, 2020)

All staff are required to adhere to COVID-19 worker safety guidelines in accordance with Federal, State of California, County of Orange, the District, and industry best practices regarding social distancing, protective equipment, onsite suspected illness cases, and sanitation. As a manner of general practice to minimize virus exposure, Lab staff must adhere to the following safety guidelines:

General

- Do not come to work sick.
- Wash your hands frequently for at least 20 seconds.
- Refrain from touching your face.
- Maintain physical distancing of 6 ft or more.
- Face coverings must be worn at all times on District property, in both interior and exterior spaces, as well as during all public interactions outside of the District.
- Sanitize your personal workspace (note enhanced steps below) and vehicle after each use (please refer to Single Occupant Vehicle/Disinfection Guidelines).
- Keep all interactions to a necessary minimum.
- If an employee feels they are becoming ill at any point during a shift, notify your supervisor or HR immediately.

Lab Specific

- Work areas for each individual Lab staff will be assigned. These will be the main areas where a person works and sharing of workspaces are to be avoided and held to a minimum. Refer to worksite map with names and designated workspaces.
- Occupancy numbers for indoor work are as follows: Main Lab - 5 people; Director's office – 1 person; Lab conference room -1 person; Micro Lab – 2 people; Dead Bird Lab - 1 person; Insectary – 1 person; Haster Office Unit 12916 back entrance only (Bowers) – 2 people in separate offices and 1 person at ID station; Fish Room Area – 1 person at workstation; and Art Room – 1 person. Specimen processing is to be performed in seven designated work areas (please refer to floor plan map).
- At any one time, the Main Lab area is to accommodate a maximum of 5 employees, with all observing physical distancing and use of face covering. During processing of specimens and data entry, "surplus" staff not involved in this process must relocate to other low occupancy areas of the Lab or District property, such as any available empty Lab or office rooms, the garage trap processing area, outdoors, etc.
- When entering the Lab, please make sure to check the magnetic white board located near the scheduling boards at the entry to the main space on the left. If you are entering the Main Lab, move your magnet from "out" to "in". Please only touch your own magnet. Please maximize the use of other indoor and outdoor workspaces. It is recognized that even when the Main Lab is at the 5-person maximum occupancy capacity, periodically others may need to briefly enter the space to drop off or retrieve items. This is to be kept to an absolute minimum. If your task requires more than a brief walkthrough, you must request another staff member to leave the space.
- There is a 1 person maximum occupancy in the open area of the Micro Lab. The Micro Lab may have 2 people working in the area simultaneously on limited occasions. In this situation, one person will be restricted to working in the preparation rooms only. On the occasions where they might have to interact, the two must limit contact and wear their N95 respirators if they are within 6 ft or share a workspace. In general, specimen processing will be done by the District Microbiologist. On alternate test days a District Research Associate may process and perform tests.
- Seasonal employees and interns are to report to their lead for the days assignment and minimize time spent in Main Lab spaces.

- As much as practical, equipment and trucks will be assigned to a single user (please refer to Single Occupant Vehicle/Disinfection Guidelines). Minimize sharing of microscopes, trucks, and equipment. If equipment re-use is necessary, ensure proper cleaning of shared workspaces and equipment (microscopes, vehicles, etc.) and adhere to a time interval (48 hrs.) between re-use.
- Gloves must be worn when using data entry computer / disinfect space after use
- At the end of your shift thoroughly disinfect your workspace/desk/workbench. Spray disinfectant and allow to air dry. Ensure that your workspace surfaces are clutter free for ease of cleaning and disinfection.
- Larval and ant specimens will be received only at a backdoor collections site to minimize entry into the lab.
- Consider the use of other Lab entrances & exits (rear door, sliding doors in Bob's office) to avoid high traffic areas, especially in front of the Lab Administrative Assistant area.
- The Lab conference room is now a dedicated work area for 1 assigned staff. No one else should use this room.
- Areas listed below have been identified to be used for lunches and breaks. All available seating in these areas have been marked with green tape on the chairs to indicate where staff can sit and still maintain appropriate physical distancing. When picking a lunch or break location ensure you are picking the least crowded area.
- Below are the locations for Lab staff lunches and breaks. If you are in a shared workspace like the Main Lab please don't eat at your desk. It is imperative and your responsibility to disinfect your lunch/break area prior to leaving.
- No indoor eating in the breakroom/lab common areas
 - Only permitted if you have office where you can close the door
 - Additional outdoor seating options include back patio and concrete tables
 - Lab outdoor patio – Maximum 4 people
 - Circular concrete outdoor tables (1 near concrete fish pond and 1 near Ops gate) – Maximum 1 person
 - No use of other department rooms and restroom facilities in Admin or Ops buildings. For Lab employees, please use the Lab for these purposes (use of restrooms and break/dining areas).
- Do not share Lab coffee pot, water dispenser, utensils, dishes, cooking supplies, condiments, etc. Use disinfectant in breakroom at the space you occupied during breaks once you are finished. Maintain physical distancing in the breakroom.
- Staff must bring their own cookware, eating utensils, cups, etc.
 - Paper plates, paper/plastic cups, plastic utensils are provided by the District and will be restocked frequently.
- Lab staff will use lockers in the lab hallway. Use your assigned locker and change in the restroom. Amenities have been added to the restroom for changing purposes.
- Only use the Lab restrooms. Please do not use restrooms in other buildings at the District if can be avoided. Restroom use should be limited to one person at a time, whenever possible. Before entering the restroom make sure to kick the cone in front of the door to indicate when it is occupied. There should only be one person in the restroom at any time. Please return the cone to the side of the door when you leave. The intention is to only use your foot to move the cone not your hands.
- Staff that wear uniforms daily should take the uniforms home and come into work dressed in uniform to reduce bathroom/changing room traffic and exposure potential
- A wheeling hamper will be used to transport dirty uniforms from now on
- The mailboxes in the Admin building will no longer be used. Mail will be distributed by the department admin specialist to your mailbox located in the lab.

Sanitization reminders – everyone must sanitize their workspace and vehicles at the end of each shift or more frequently

- a. Desks at the end of the day
- b. Vehicles after each use
- c. Scopes and shared computers etc. after each use
- d. Eating locations after each use

ANNEX K

ORANGE COUNTY OPERATIONAL AREA AGREEMENT

Orange County Operational Area Agreement



of the County of Orange
and Political Subdivisions
January 2020

Table of Contents

I. Recitals iv

Section One. Operational Area Establishment 1

 1.1 Operational Area Established..... 1

 1.2 Local Authority 1

Section Two. Operational Area Council, Executive Board and Subcommittees..... 2

 2.1 Operational Area Signatory Council 2

 2.2 Operational Area Executive Board 3

 2.3 Orange County Emergency Management Organization 5

Section Three. Responsibilities 8

 3.1 Operational Area Jurisdiction Responsibilities..... 8

 3.2 County-Specific Responsibilities..... 9

Section Four. Operational Area Coordinator and Operational Area Manager..... 11

 4.1 Operational Area Coordinator 11

 4.2 Operational Area Manager 11

Section Five. Operational Area Response Systems..... 13

 5.1 Operational Area Emergency Operations Plan 13

 5.2 Operational Area Emergency Operations Center 13

Section Six. Operational Area Finance 14

 6.1 Operational Area Expenses and Revenues 14

Section Seven. Operational Area Agreement Administration..... 16

 7.1 Existing Agreements..... 16

 7.2 Effective Date 16

 7.3 Withdrawal..... 16

 7.4 Indemnification 16

 7.5 Counterparts 16

 7.6 Interpretation..... 16

 7.7 Ambiguities..... 17

 7.8 Amendment..... 17

I. Recitals

**OPERATIONAL AREA AGREEMENT
OF THE COUNTY OF ORANGE AND POLITICAL SUBDIVISIONS**

THIS AGREEMENT is entered into this 19th day of May, 2020, which date is enumerated for purpose of reference only, by and between the County of Orange, hereinafter referred to as County, and all other Political Subdivisions within Orange County, as defined in Government Code Section 8557 (b) of the California Emergency Services Act, hereinafter referred to as Subdivisions, collectively hereafter referred to as the Parties.

WITNESSETH:

WHEREAS, it is the intent of the Parties hereto to coordinate prevention, preparedness, response, recovery and mitigation efforts for the safety of persons and property from the effects of natural, human-caused, or war-caused disasters, hereinafter referred to as emergencies, as required by the California Emergency Services Act and the Standardized Emergency Management System (SEMS) Regulations, Title 19 California Code of Regulations Sections 2400 et seq.; and

WHEREAS, the purpose of an Operational Area, as defined in Government Code Section 8605 and Title 19 California Code of Regulations Sections 2403 and 2409, is to manage and coordinate information, resources, and priorities among the local governments within the geographic area of the County, and to serve as the coordination and communication link between the local government level and the regional level of the State; and to use multi-agency or inter-agency coordination to facilitate decisions for overall operational area level emergency response activities; and

WHEREAS, this Agreement is intended to provide for the continued management of the Operational Area; cooperative and mutual handling of duties and responsibilities of the Operational Area Lead Agency; coordination of the emergency functions of the Operational Area with all other public agencies, corporations, organizations, and affected private persons within the Operational Area; and the preparation and implementation of plans for the protection of persons and property within the Operational Area in the event of an emergency; and

WHEREAS, in accordance with the requirements of California laws and regulations the County previously adopted Orange County Codified Ordinances, section 3-1-5 and Resolutions 81-1104 and 95-870 and intends to adopt an updated resolution for this Agreement to support emergency management planning and coordination of all political subdivisions within the Orange County geographic area as required by State law; and

WHEREAS, Orange County Board of Supervisors Resolution 05-144 adopted the National Incident Management System (NIMS) for the Orange County Operational Area which sets many of the same objectives as the Standardized Emergency Management System;

NOW THEREFORE, the Parties hereto agree as follows:

Section One. Operational Area Establishment

1.1 Operational Area Established

The entire geographic area of Orange County constitutes an Operational Area (OA) for the purposes of coordinating the prevention, preparedness, response, recovery and mitigation efforts for the safety of persons and property from the effects of natural, human-caused or war caused disasters, hereinafter referred to as emergencies. All local governments should cooperate in organizing an effective OA, but the OA authority and responsibility is not affected by the non-participation of any local government. The County of Orange shall be the Operational Area Lead Agency as specified in Title 19 California Code of Regulations Section 2409(d).

1.2 Local Authority

In the event of an actual or threatened emergency, each jurisdiction shall retain the authority provided for by law respecting its jurisdiction. No body created by this Agreement can bind Parties to legal or financial obligations.

Section Two. Operational Area Council, Executive Board and Subcommittees

2.1 Operational Area Signatory Council

All political subdivisions within the geographic area of Orange County, California are organized into the OA, regardless of signatory status.¹ The OA Signatory Council, hereinafter referred to as the Council, is hereby created to include the signature Parties to this Agreement. The Parties acknowledge that the Council is not a separate legal entity and that it is not their intention to form a joint powers authority.

2.1.1 Membership

By approval and execution of this Agreement, all Subdivisions in the County of Orange, including cities, school districts, community college districts, special districts, joint powers authorities, and the County, are members of the Council. Each signature party shall designate annually in writing to the Orange County Sheriff's Department Emergency Management Division, hereinafter referred to as county emergency management, one primary and one alternate representative of its governing body to serve on the Council.

2.1.2 Responsibilities

It is not the intent of this Agreement that there be regular meetings of the Council. In routine matters and day-to-day decision-making, the OA Executive Board (as described in Section 2.2) will represent the interests of the OA. However, the Council shall have authority over the major policy issues of the OA, as determined by the Executive Board, including adoption of any amendments to this Agreement or adoption of any fees to support OA coordination activities. Council members will receive information regarding major OA policy issues from the Executive Board, when necessary, for consideration at their respective governing body meetings. Furthermore, whenever a majority of the Council determine that an issue should be brought before the Council, it shall be done irrespective of whether the Executive Board has identified it as a major policy issue.

2.1.3 Representatives Meeting

The representatives of the Council may meet as necessary as determined by the Executive Board or as requested by a majority of the members of the Council. Should it be necessary for the Council to meet, each member of the Council shall be entitled to one vote. The representatives present shall, by majority vote, select a Chair Pro Tem for that meeting from among the representatives present. A majority of all Council member representatives shall constitute a quorum for the transaction of business relating to the OA. Unless otherwise provided herein, a vote of the majority of those present and qualified to vote shall be sufficient for the adoption of any motion, resolution, or order and to take any other action deemed appropriate to further the

¹ Title 19 California Code of Regulations Section 2409

Orange County Operational Area Agreement

objectives of the OA. Voting will be conducted in accordance with Robert's Rules of Order. All meetings will be noticed and conducted in accordance with the Brown Act.

2.2 Operational Area Executive Board

2.2.1 Membership

The Council shall have an OA Executive Board, hereinafter referred to as the Executive Board, consisting of sixteen voting members. The Executive Board includes representatives from the County Board of Supervisors, public safety agencies and Mutual Aid Coordinators, key County departments, and OA jurisdictions. Individuals will only serve as a voting member in one role for any single meeting and for purposes of determining quorum.

Executive Board Members

1. The Chair of the Orange County Board of Supervisors
2. The County Executive Officer
3. The OA Law Enforcement Mutual Aid Coordinator, the Orange County Sheriff
4. The OA Fire & Rescue Mutual Aid Coordinator, as selected by the Orange County Fire Chiefs Association
5. The OA Public Works Mutual Aid Coordinator, the Orange County Public Works Director
6. The OA Health Care Mutual Aid Coordinator, the Orange County Health Care Agency Director
7. The OA Water/Wastewater Mutual Aid Coordinator
8. The Orange County Social Services Agency Director
9. A representative selected jointly from the Orange County City Managers Association
10. A representative from the Orange County Chiefs of Police and Sheriff's Association
11. A representative from the Orange County Fire Chiefs Association
12. A representative from the Orange County City Engineers and Public Works Directors Association
13. A representative from Independent Special Districts of Orange County
14. The Orange County Superintendent of Schools, representing Orange County K-12 School Districts
15. A representative selected jointly from Orange County Community College Districts
16. The Orange County Transportation Authority Chief Executive Officer

Terms, Alternates and Voting

Executive Board members subject to being "selected," which are enumerated above as numbers 4, 9-13 and 15, shall be appointed by their respective agency, jurisdiction or organizations annually and shall serve at the discretion of their organization for one year. Each jurisdiction, agency or organization shall also designate three alternate representatives. Individuals appointed to the Executive Board can be the same or different than those identified in Section 2.1.1 as a

Orange County Operational Area Agreement

member jurisdiction's Council primary or alternate representative. In no circumstances shall one individual occupy more than one Executive Board position or count as more than one member for purposes of determining quorum.

Each Executive Board member, or alternate in the absence of the voting member for whom he/she is the designated alternate, shall be entitled to one vote. A majority of the Executive Board (9 members) shall constitute a quorum for the transaction of business relating to the OA. Unless otherwise provided herein, a vote of the majority of those present and qualified to vote shall be sufficient for the adoption of any motion, resolution or order and to take any other action deemed appropriate to achieve the objectives of the OA. Voting will be conducted in accordance with Robert's Rules of Order. The OA Executive Board is a Brown Act meeting and is noticed and conducted as such.

Operational Area Executive Board Chair and Vice-Chair

The Chair and Vice Chair shall be elected annually by the Executive Board. In the absence of both the Chair and the Vice Chair, the members of the Executive Board present shall, by majority vote, select one of the members present to act as Chair Pro Tem.

Meetings

The Executive Board shall meet quarterly or as designated by the Executive Board Chair.

2.2.2 Responsibilities

The Executive Board shall have oversight of the actions of the OA Manager (as described in Section 4.2) in the daily operations and administration of the OA. The Executive Board's oversight authority shall include directing the development, establishment, and implementation of the policies of the OA, and keeping the Council informed of its actions. The Executive Board shall determine which major policy issues of the OA require Council approval and shall seek such approval.

Policy and Operational Area Emergency Operations Plan

The Executive Board will establish OA policy, review and approve the OA Emergency Operations Plan (EOP) and Annexes, and maintain these documents as required by SEMS and NIMS.

Mutual Aid Plans and Agreements

The Executive Board shall review proposals of emergency mutual aid plans and agreements and make recommendations on endorsement of such proposals to governing boards of Subdivisions.

Laws, Rules, Legislation and Regulation

The Executive Board shall review and may recommend for action or adoption by Subdivisions, emergency and mutual aid plans, agreements, ordinances, resolutions, and any rules and regulations necessary to implement such plans and agreements. The Executive Board may also

study, review, and make recommendations on State and Federal legislation and policy as appropriate, and on matters referred to the Executive Board in writing by Council members.

Operational Area Executive Board Emergency Advisory Capacity

The Executive Board may be convened by the Chair or the OA Coordinator, as described in Section 4.1, to review a potential or actual emergency situation and make and receive appropriate recommendations from the OA Coordinator and Council members to facilitate a coordinated OA response.

2.2.3 Subcommittees and Working Groups

The Executive Board may establish standing and ad hoc subcommittees and working groups to complete its work and to ensure communication and coordination between all interested persons or groups. Subcommittees and working groups shall elect a Chairperson and provide appropriate staff support from their participants. The OA Manager shall provide coordination between these subcommittees and the Executive Board only:

2.3 Orange County Emergency Management Organization

There is hereby established a standing subcommittee to the Executive Board, the Orange County Emergency Management Organization, hereinafter referred to as OCEMO. OCEMO is a collaboration and coordination body tasked with developing the plans, procedures, and associated documents necessary for a robust Operational Area emergency management program. The County and all Subdivisions shall be expected to participate in OCEMO, to the maximum extent possible, with the understanding that the cooperative maintenance of the OA EOP, policies and procedures, training and exercises is necessary to ensure that the OA EOP, policies, procedures, training and exercises meet the emergency needs of the Subdivisions, County, and OA.

2.3.1 Membership

The entire OCEMO body ("Members at Large") consists of three groups of representatives involved in some capacity of an emergency management function, as defined below and in the OCEMO Bylaws.

Signatory Members

Staff members with primary emergency management responsibilities from signatory agencies to this agreement are considered Signatory Members. Each signatory jurisdiction shall identify a primary and secondary representative who shall have the right to vote on behalf of the jurisdiction. To ensure compliance with the Brown Act, no more than eight OCEMO members who are also voting members of the OA Executive Board shall be present at any OCEMO meeting.

Orange County Operational Area Agreement

Collaborative Members

Representatives of other government, non-profit, or private agencies that are not signatories to this agreement and are not currently represented by a Signatory or Collaborative Member, but are considered to have a significant role in OA planning, response and recovery processes are considered Collaborative Members. Collaborative members must be approved by Signatory Members and have limited voting rights as outlined in the OCEMO Bylaws.

Associate Members

Other representatives of organizations interested in participating in OCEMO activities, and who may provide input into the OA EOP, annexes, and supporting Standard Operating Procedures (SOPs) are considered Associate Members. Associate members have no voting rights.

2.3.2 Responsibilities

As a subcommittee to the Executive Board, the responsibilities of OCEMO are to meet the following objectives as they relate to disaster and emergency prevention, preparedness, response, recovery and mitigation within the OA:

Operational Area Plans, Annexes, and Standard Operating Procedures

- Participate in revisions and updates of the OA EOP and associated Annexes and SOPs developed and maintained by county emergency management staff as described in Section 3.2. Once completed, plans and the associated Annexes reviewed by OCEMO shall be forwarded to the OA Executive Board for approval.

Training and Exercises

- Coordinate training and exercises for the OA, to include after action discussions, lessons learned and professional development.

Public Education and Outreach

- Coordinate the development of public education and whole community emergency preparedness programs.

Legislation

- Review and report on legislation impacting emergency plans and programs, and propose concepts for new legislation for consideration by the Executive Board.

Other

- Other duties as assigned by the Executive Board.

2.3.3 OCEMO Leadership

The OCEMO Leadership shall consist of the OCEMO Chairperson, First Vice Chairperson and Second Vice Chairperson, elected in accord with the OCEMO Bylaws, the OA Manager and the

Orange County Operational Area Agreement

immediate past Chairperson. Any Signatory or Collaborative Member shall be eligible to serve as a candidate for OCEMO Chairperson, First Vice Chairperson, and Second Vice Chairperson as outlined in the OCEMO Bylaws.

2.3.4 Organization and Procedures

OCEMO will maintain and approve Bylaws. The Bylaws will define, at a minimum, OCEMO purpose, membership, leadership duties, elections, voting procedures, official meeting frequency, and the process for amending the Bylaws. The Bylaws shall in all instances be consistent with this Agreement.

OCEMO will review the Bylaws, as needed. Any amendments to the Bylaws will be approved by OCEMO Signatory Members, as detailed in the OCEMO Bylaws.

If OCEMO identifies the need for additional Subcommittees or working groups, OCEMO members participating in that subcommittee or working group shall provide staff support.

2.3.5 Administrative Support

The County shall provide administrative support to OCEMO as follows:

- Attend all OCEMO and OCEMO Leadership meetings
- Maintain a contact list of the primary and alternate representatives of each OCEMO member
- Organize and manage OCEMO Leadership elections and votes on other issues
- Notify members of their appointment to office or subcommittees
- Create and distribute OCEMO meeting agendas
- Take and transmit OCEMO meeting minutes
- Maintain official OCEMO records, including agendas and minutes, in compliance with County record retention policies.

Section Three. Responsibilities

3.1 Operational Area Jurisdiction Responsibilities

Subdivisions of the OA have the responsibilities as set forth below:

Participation

Actively participate as a member jurisdiction in the Council, Executive Board (if designated), and subcommittees such as OCCEMO.

Cooperation

Promote cooperation among all Subdivisions in order to improve the overall OA emergency management program.

Emergency Management Program

Develop an emergency management program to provide for the needs of the Subdivision, which shall be complementary to and compatible and coordinated with the needs of the OA in the event of an emergency.

Emergency Plan and Organization

Develop and maintain an EOP and organization to provide for the emergency needs of the Subdivision according to SEMS Regulations and NIMS, and coordinate with and, where able, support other Subdivisions, the County, and the OA Emergency Operations Center (EOC).

Procedures

Develop Subdivision procedures that outline the steps necessary to satisfy responsibilities as a member jurisdiction of the OA.

Training and Exercises

Maintain a thorough knowledge of the Parties' and OA's EOPs and ensure that the supporting services and key personnel are properly trained and organized to meet all of their responsibilities in the event of an emergency. Conduct regular exercises and participate in regional exercises, when offered.

Emergency Assistance

Parties shall offer assistance to other jurisdictions and secondary and relief support to the OA within the limits of capabilities and according to applicable mutual aid agreements. Parties should participate in mutual aid agreements wherever possible.

Resource Lists

Maintain current resource listings of staff, facilities, equipment and supplies available in the jurisdiction for use in the event of an emergency.

Orange County Operational Area Agreement

Critical Points of Contact

Identify 24-hour or other critical points-of-contact for the Subdivision that may be used by the OA EOC during emergency operations. If the points-of-contact are individuals, identify a primary and at least three alternates for each. Inform county emergency management staff when critical points-of-contact change or are updated.

Disaster Recovery and Financial Reimbursement

Subdivisions have ultimate responsibility for their own recovery program and will work directly with FEMA and Cal OES throughout the cost recovery process. Each Subdivision is individually responsible for developing, submitting, and receiving their own emergency aid, loans or grants from any source including local, state, and federal governments. Each is individually responsible for the timeliness, accuracy, and compliance of its own expenditures submitted for reimbursement through such mechanisms.

3.2 County-Specific Responsibilities

The County acts as the OA Lead Agency. The OA Lead Agency has the following responsibilities to the OA in addition to those responsibilities specified under Section 3.1 of this Agreement:

24-Hour Contact Point

The County will serve as the 24-hour contact point for the OA and act as lead in activating the OA EOC, hereinafter referred to as OA EOC.

Operational Area Emergency Operations Center

The County EOC and Alternate EOC (as designated) shall serve as the OA EOC. The OA EOC shall exist as a dedicated essential facility and be capable of serving as the central point for:

- coordinating information and resources with OA subdivisions
- coordinating all levels of government as a component of Orange County's Multiagency Coordination System (MACS)
- coordinating with other OAs
- reporting information to and coordinating with the California Office of Emergency Services (Cal OES) Southern Region EOC

County emergency management staff shall be responsible for ensuring the OA EOC is maintained in a state of constant readiness, in accord with the FEMA Emergency Operations Center Assessment Checklist and ASTM E2668 – Standard Guide for Emergency Operations Center Development, or subsequent standards if revised.

Initial EOC Activation Staffing

The County shall provide initial OA EOC activation staff. Subdivisions with available resources may provide secondary and relief OA EOC staffing.

Orange County Operational Area Agreement

Disaster Recovery and Financial Reimbursement

The County shall be responsible for coordinating the formal recovery process through Cal OES and FEMA and will assist with:

- Coordinating initial OA disaster recovery
- Scheduling damage assessment site visits
- Other duties as outlined in the Recovery Annex to the OA EOP

Operational Area Emergency Operations Plan and Annexes

County emergency management staff shall be responsible for coordinating with the Orange County Emergency Management Organization to maintain and revise the OA EOP, annexes and SOPs as directed by the Executive Board.

Operational Area Executive Board Support

County emergency management staff shall provide support to the Executive Board for agendas and minutes for meetings and coordinating follow-up only.

Subcommittee and Working Group Support

County emergency management staff shall provide support to Executive Board subcommittees and working groups.

Section Four. Operational Area Coordinator and Operational Area Manager

4.1 Operational Area Coordinator

By this Agreement, the Council creates and recognizes the position of an OA Coordinator, hereinafter referred to as the Coordinator. During an emergency the OA Coordinator position will be filled by the Orange County Director of Emergency Services, as specified by Section 3-1-6 of the Orange County Code of Ordinances and County Board of Supervisors Resolution 12-036, as presently existing or as hereafter amended.

4.1.1 Powers and Duties

The Coordinator shall direct and coordinate the OA during times of emergency. In addition to his/her responsibilities as Director of Emergency Services, the Coordinator shall have the additional duties and powers, as described below and in the OA EOP:

Direction and Coordination

Serve as key decision-maker in the OA EOC, providing direction and coordination necessary to accomplish the purposes of this Agreement and responsibilities of the OA Lead as specified in Title 19 California Code of Regulations Section 2409(e).

Operational Area Representative

Represent the OA in all dealings with the public or private agencies on matters pertaining to emergencies as defined in Section 3-1-2 of the Orange County Code of Ordinances.

4.2 Operational Area Manager

By this Agreement, the Council creates and recognizes the position of an OA Manager. The OA Manager shall be the County Emergency Manager as specified in Section 3-1-6 of the Orange County Code of Ordinances and County Board of Supervisors Resolution 12-036, as presently existing or as hereafter amended.

4.2.1 Powers and Duties

The OA Manager shall have the following powers and duties:

Administration of Operational Area Agreement

On a day-to-day basis, ensure County-specific responsibilities detailed in Section 3.2 are met.

Staff to the Operational Area Executive Board

Serve as staff to the Executive Board, maintain close liaison with the Executive Board, and coordinate all activities of assigned OA staff with the Executive Board.

Orange County Operational Area Agreement

Daily Coordination and Assistance

Direct the daily coordination and cooperation between the county emergency management staff, Subdivisions, and Executive Board Subcommittees, including OCEMO. Resolve questions of authority and responsibility that may arise between them, and work closely with and assist the Executive Board, as required.

Notification of Emergency Operations Center Activation

Notify the Board of Supervisors, the Executive Board, and OCEMO of an OA EOC activation as soon as practical, and keep the Executive Board and Board of Supervisors informed on all aspects of a current emergency situation as soon as information becomes available.

OCEMO Support

Serve on OCEMO Leadership. Provide support to OCEMO for agendas, minutes and administrative support only. Staff support to OCEMO subcommittees shall be provided by OCEMO members.

Budget and Staffing

Develop an annual operating budget and staffing recommendations, and monitor the expenditures at the direction of the Executive Board.

After Action Reports

Coordinate with OCEMO for the development of after action reports for the Executive Board following activations of the OA EOC.

Resource Coordination

Act as the coordination point between Subdivisions and the Cal OES on a day-to-day basis for Emergency Management Mutual Aid (EMMA) resource requests, in accordance with the State of California Emergency Management Mutual Aid Plan. The OA Manager may also coordinate other OA mutual aid requests, as appropriate.

Section Five. Operational Area Response Systems

5.1 Operational Area Emergency Operations Plan

Under the direction of the Executive Board, county emergency management staff shall be responsible for maintaining the OA EOP, which shall provide for the effective mobilization of all OA resources, both public and private, to meet any condition constituting an emergency; and shall provide for the organization, powers and duties, and staff of the OA emergency response organization. This responsibility is inclusive of the EOP and any associated Annexes and SOPs.

5.1.1 Compliance

The OA Emergency Operations Plan shall comply with applicable local, state and federal planning criteria, including NIMS and SEMS.

5.1.2 Functional Assignments

The OA EOP shall include the functions assigned to the mutual aid organizations, County agencies/departments and Subdivisions. It shall be the responsibility of agency/department heads and Subdivisions to appoint staff who shall report to the OA EOC and carry out the assigned duties as appropriate.

5.1.3 Approval

Updates and revisions to the OA EOP and annexes will be effective on approval by the Executive Board. SOPs and other support documents may be updated on an ongoing basis by county emergency management staff as long as changes are consistent with approved plans and annexes.

5.2 Operational Area Emergency Operations Center

5.2.1 Location

The primary and dedicated County EOC located at 2644 Santiago Canyon Rd., Silverado, California, or alternate as designated, shall serve as the OA EOC. Communication connection to the OA EOC shall be the responsibility of each Subdivision and Mutual Aid Coordinator or their representative.

5.2.2 Required Activation

Activation of the OA EOC is required under the conditions defined by SEMS, Title 19 California Code of Regulations Section 2409(f), the Orange County OA EOP and associated Annexes.

5.2.3 Staff for the Operational Area Emergency Operations Center

The County shall provide initial OA EOC activation staff. Subdivisions with available resources shall provide secondary and relief OA EOC staffing. Emergency management or other mutual aid shall be used to staff the OA EOC as necessary. The County declares its willingness to provide a staff member to an impacted Subdivision's EOC or Incident Command Post to act as an OA coordination point, if desired by the Subdivision and as personnel availability and safety concerns allow.

Section Six. Operational Area Finance

6.1 Operational Area Expenses and Revenues

Operational Area Administrative Expenses

This Agreement recognizes that there are day-to-day costs associated with OA administration and emergency management activities; these costs are separate from County-specific emergency management activities. The County shall provide administrative staffing for the OA to carry out the duties as delineated in Section 3.2 and Section 4 of this Agreement; however, the County shall not be solely responsible for the costs of administering the OA.

The County Board of Supervisors has the over-arching authority and responsibility to approve the county emergency management budget that supports both County and OA emergency management activities.

To offset costs of the OA, the Executive Board shall be responsible for the acquisition and distribution of federal, state, and business or private foundation emergency management grant funds. For emergency management grant funds made available to the OA for distribution among the Subdivisions, the Executive Board will review and approve proposed funding allocation methods. Their review will take into consideration recommendations from OCEMO, acting in their role as subcommittee to the Executive Board. To offset administrative costs, a percentage of such grants may be allotted to the OA before apportionment among the subdivisions. If funding becomes available with a short application period that does not allow for OCEMO, Executive Board, and County Board of Supervisors pre-approval, then approval will be sought retroactively through the ratification process set forth by the County Board of Supervisors.

The County or any Subdivision may fund through general or special funds any services, supplies, or programs that they separately or jointly determine are necessary to comply with laws or regulations, or that serve the purposes of emergency prevention, preparedness, response, recovery and mitigation on an OA level.

Costs of Operational Area during Emergency Response and Recovery

During emergencies, all OA jurisdictions shall be expected to participate to the maximum extent possible, according to mutual aid and other agreements, with the understanding that during an emergency, the priorities are life safety, property, and the environment (in that order), regardless of which jurisdiction is impacted. This Agreement incorporates by reference the reimbursement concepts of the Emergency Management Assistance Compact, the California Disaster and Civil Defense Master Mutual Aid Agreement, and the State of California Emergency Management Mutual Aid Plan. Expenditures made in connection with such emergency activities required by this Agreement, the California Emergency Services Act and/or SEMS, including mutual aid activities,

Orange County Operational Area Agreement

shall be deemed conclusively to be for the direct protection and benefit of the persons and property in the OA.

In deciding the level of OA response and resource commitment during emergencies, the County and Subdivisions agree to operate according to the EOP and supporting documents defined in Section 5.1 of this Agreement.

Financial Reimbursement and Recovery Following Emergencies

The County and each Subdivision are each individually responsible for developing, submitting, and receiving their own emergency aid, loans or grants from any source including local, state, and federal governments. Each is individually responsible for the timeliness, accuracy, and compliance of its own expenditures submitted for reimbursement through such mechanisms.

Section Seven. Operational Area Agreement Administration

7.1 Existing Agreements

Nothing contained in this Agreement shall be construed as superseding or modifying any existing agreements, including mutual aid agreements, except for superseding the existing OPERATIONAL AREA AGREEMENT OF THE COUNTY OF ORANGE AND POLITICAL SUBDIVISIONS dated October 3, 1995, and addenda; and nothing herein shall be construed as preventing any Party from entering into or modifying mutual aid or other emergency response agreements.

7.2 Effective Date

This Agreement shall become effective six months after approval and execution by the County Board of Supervisors and at least one Subdivision. Any Subdivision in Orange County may become a Party hereto by executing this Agreement. Notice shall be provided to the County upon a Subdivision's execution of this Agreement.

7.3 Withdrawal

Any Party may withdraw from this Agreement by providing written notice to county emergency management staff. Said notice shall be given 30 days before withdrawal from this Agreement.

7.4 Indemnification

Each Party shall defend, indemnify, and hold harmless the other Parties, and their officers, agents, employees and representatives from any and all losses, liability, damages, claims, suits, actions, administrative proceedings, demands, and litigation, and all expenses and costs relating directly to the negligent or otherwise wrongful acts or omissions of the indemnitor, its officers, agents, employees, or representatives arising out of or incidental to performance under this Agreement. No Party assumes liability for the acts or omissions of persons other than that Party's respective officers, agents, employees or representatives.

7.5 Counterparts

This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, and all of which shall constitute one and the same instrument.

7.6 Interpretation

Save to the extent that the context or the express provisions of this Agreement otherwise require:

- Headings and sub-headings are for ease of reference only and shall not be taken into consideration in the interpretation or construction of this Agreement;
- All references to Parts, Sections, and Paragraphs are references to Parts, Sections and Paragraphs contained herein;

Orange County Operational Area Agreement

- All references to any ordinance, resolution, law, regulation or guidance shall include references to any ordinance, resolution, law, regulation or guidance which amends, extends, consolidates or replaces the same or which has been amended, extended, consolidated, supplemented, substituted, novated, replaced, or assigned by the same and shall include, without limitation, any instrument, proclamation, bylaw, directive, decision, regulation, rule, order, notice, codes of practice, code of conduct, rule of court, instrument or delegated or other subordinate legislation thereto;
- The words "herein", "hereto" and "hereunder" refer to this Agreement as a whole and not to the particular Section, or Paragraph in which such word may be used;
- Any reference to a public organization or representative shall be deemed to include a reference to any successor to such public organization or representative or any organization or entity or representative which has taken over the functions or responsibilities of such public organization or representative.

7.7 Ambiguities

In the case of any ambiguity or discrepancy:

- Between the provisions in this Agreement and the provisions of any underlying Executive Order, law, or regulation, the provisions of underlying Executive Order, law, or regulations will be incorporated by approval of the Executive Board and written notice shall be provided to all Parties.
- Between the provisions in this Agreement and the provisions of any underlying mutual aid agreement or EOP, the provisions of this Agreement shall prevail until such time as the OA Executive Board considers the matter and notice of proposed resolution to such issues are provided to all Parties.

7.8 Amendment

This Agreement may not be amended or modified except in a writing executed by a majority of all signature Parties as defined by Section 2.1 of this Agreement.

OPERATIONAL AREA AGREEMENT
OF THE COUNTY OF ORANGE AND POLITICAL SUBDIVISIONS

DATED: 5/19/20

County of Orange
(City or Jurisdiction)
BY Michelle Steel
Michelle Steel, Chairwoman
County of Orange

ATTEST:

By: Robin Stieler
Robin Stieler, Clerk of the Board
County of Orange



Date 5/19/20

NOTICE TO COUNTY OF ORANGE TO BE GIVEN TO:
City/Jurisdiction
Donna Boston
Name
County of Orange
City/Jurisdiction
2644 Santiago Canyon Road
Address
Silverado, CA 92676
City/State/Zip
714-628-7154
FAX Number

APPROVED AS TO FORM:
Wendy J Phillips
Wendy Phillips, Senior Deputy County Counsel
County of Orange

Dated 5/26/20

Orange County Operational Area Agreement

ATTEST:

By: _____

Date _____

NOTICE TO _____ TO BE GIVEN TO:

City/Jurisdiction

Name

City/Jurisdiction

Address

Chapter 3 City/State/Zip

FAX Number

APPROVED AS TO FORM:

Wendy J. Phullysi

Senior Deputy County Counsel

Orange County

Dated *2/26/20*

ANNEX L

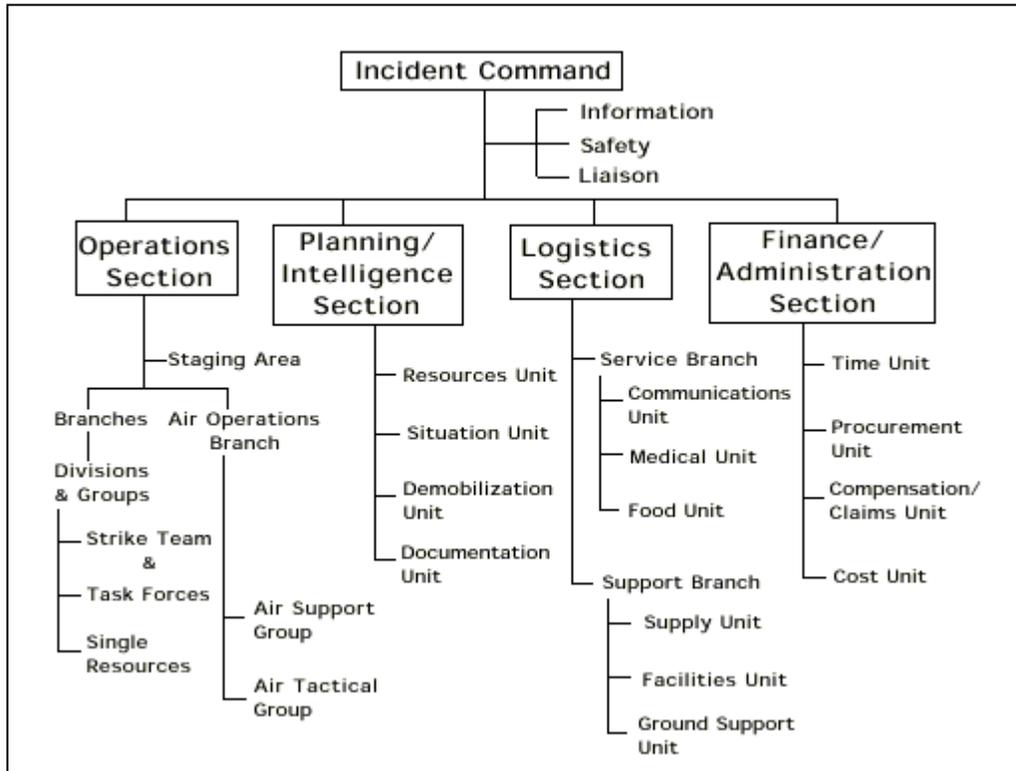
THE INCIDENT COMMAND SYSTEM

(FIELD RESPONSE)

FIELD USE ONLY

Incident Command System (ICS) Structure

ICS Structure Chart



General ICS Information

The Incident Command System is used to manage an emergency incident or a non-emergency event. It can be used for both small and large situations.

The system has considerable internal flexibility. It can grow or shrink to meet differing needs. This makes it a very cost-effective and efficient management system. On the next page are examples of the kinds of incidents and events that can be used with ICS:

Applications for the Use of the Incident Command System

- Fires, HAZMAT, and multi-casualty incidents
- Multi-jurisdictional and multi-agency disasters
- Wide-area search and rescue missions
- Pest eradication programs
- Single and multi-agency law enforcement incidents
- Air, rail, or ground transportation accidents
- Planned events such as celebrations, concerts, parades
- Private sector emergency management programs
- State or local major natural hazard management
- Water and waste water system emergency incidents

ICS Organization

The organization of the Incident Command System is built around the same five major management activities as SEMS. These five management activities are the foundation upon which the incident management develops. They apply whether handling a routine emergency, organizing a major event, or managing a major response to a disaster.

Command Section

Sets objectives and priorities. Has overall responsibility at the incident.

Incident Commander

Person in charge at the incident, and must be fully qualified to manage the incident. As incidents grow in size or become more complex, a more highly qualified person may be assigned as IC by the responsible jurisdiction or agency.

Public Information Officer

The point of contact for the media or other organizations seeking information directly from the incident or event.

Safety Officer

Monitors safety conditions and develops measures for assuring the safety of all assigned personnel.

Liaison Officer

On larger incidents or events, representatives from other agencies may be assigned to the incident to coordinate their agency's involvement. The Liaison Officer will be their primary contact.

Operations Section

Conducts tactical operations to carry out the plan. Develops the tactical objectives, organization, and directs all resources.

Divisions

Established to divide an incident geographically or describe some geographical area related to incident operations.

Groups

Established to describe functional areas of operation. What is established will be determined by the needs of the incident. Groups work wherever they are needed, and are not assigned to any single division. Divisions and Groups are at an equal level in the organization.

Branches

Established another level of organization within the Operations Section to increase the span of control, define another functional structure, or organize the incident around jurisdictional lines.

Air Operations

Operated at the branch level and established separately at an incident where there are complex needs for the use of aircraft in both tactical and logistical operations.

Staging Areas

Established wherever necessary to temporarily locate resources awaiting assignment.

Planning and Intelligence

Develops the action plan to accomplish the objectives. Collects and evaluates information. Maintains resource status.

Logistics

Provides support to meet incident needs. Provides resources and all other services needed to support the incident response.

Finance and Administration

Monitors costs related to the incident. Provides accounting, procurement, time recording, and cost analyses.

Units

Functional Units fall under each of the three remaining sections (see ISC Structure Chart). Not all of the units may be required, and they will be established based upon the need. The titles of the units are self-descriptive.

Incident Facilities

Facilities will be established depending on the kind and complexity of the incident or event. Not all facilities will necessarily be used.

Incident Command Post (ICP)

The location from which the incident Commander oversees all incident operations. There is only one ICP for each incident or event. Every incident or event must have some form of ICP.

Staging Area

Locations at which resources are kept while awaiting incident assignment.

Base

The location at the incident at which primary service and support activities are performed.

Camps

Incident locations where resources may be kept to support incident operations. Camps differ from staging areas in that essential support operations are done at camps, and resources at camps are not always immediately available.

Helibase

A location in and around an incident area at which helicopters may be parked, maintained, fueled, and equipped for incident operations.

Helispot

Temporary locations where helicopters can land and load/off-load personnel, equipment, and supplies.

Incident Action Plan

Every incident must have an oral or written action plan. The purpose of the plan is to provide all incident supervisory personnel with direction for future actions. Action plans which include the

measurable tactical operations to be achieved, are always prepared around a time-frame called an Operational Period.

Operational Periods can be of various lengths, but should be no longer than 24 hours. The planning of an operational period must be done far enough in advance to ensure that requested resources are available when it begins.

The Incident Action Plan must be known to all incident supervisory personnel. This can be done through briefings, by distributing a written plan prior to the start of the Operational Period, or by both methods.

Essential Incident Action Plan Elements

Statement of Objectives - Appropriate to the overall incident.

Organization - Describes what parts of the ICS organization will be in place for each Operational Period.

Assignments to Accomplish Objectives - These are normally prepared for each Division or Group and include the strategy, tactics, and resources to be used.

Supporting Material - Examples can include maps of the incident, a communications plan, a medical plan, a traffic plan, etc.



ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT

December 16, 2021

AGENDA REPORT

AGENDA ITEM H.3

Prepared By: Rick Howard, District Manager
Submitted By: Rick Howard, District Manager

Agenda Title:

Review and Approve the Orange County Mosquito and Vector Control District Updated 2019-2023 Strategic Plan

Recommended Action:

That the Board of Trustees: 1. Review OCMVCD's 5 Year (2019-2023) Strategic Plan and provide input and direction to staff, and 2. Adopt Resolution No. 517 Approving OCMVCD's 5 Year (2019-2023) Strategic Plan.

Executive Summary:

On September 19, 2019 the Board of Trustees adopted Resolution No. 483 accepting and approving the District's Five-Year Strategic Plan (Strategic Plan/Plan). In addition to the Plan itself, the document also incorporates the District's Mission Statement, and the organization's Core Values as well as Workplace Values.

The 2021 Strategic Plan update (attached) provides the District with goals that challenge and guide the District from vision to reality. The Strategic Plan process drives our actions, budgets, and ongoing activities. The ability to effectively capture and identify long range goals and implementation strategies keep staff focused on the mission at hand, simultaneously providing the Board and staff the ability to plan and prioritize its goals in a transparent and accountable manner.

The initial 2019 Strategic Plan was performed in-house over a two-year period. During the Strategic Plan's development, a "*Strengths, Weaknesses, Opportunities and Threats*" (SWOT) analysis was conducted in December 2017. That SWOT analysis was a thorough and comprehensive look at the District, its external operations, internal functions, public outreach, and engagement efforts. The SWOT was the first step in the overall development of the Strategic Plan. Staff continued to work through the Plan throughout 2018 and into early-mid 2019.

The initial OCMVCD Five-Year Plan is a roadmap to the District's future. The plan recognizes our limited resources and prioritizes initiatives, resulting in a stronger organizational foundation. The Plan incorporates ten "priorities", each with a comprehensive series of Goals and Strategies, all designed to guide the District for the next five-year period. Priorities included in the original plan are as follows:

- 1) Collaboration and Engagement with Partner Agencies, Stakeholders, and the Public
- 2) Extra Help & Seasonal Workforce Stabilization
- 3) Invasive Aedes
- 4) Facility Enhancement/Rehabilitation Project
- 5) Comprehensive Policy and Procedure Review and Updates
- 6) Pesticide Resistance
- 7) Staff Training Programs
- 8) Emerging Technologies
- 9) Staffing
- 10) Internal Communication

Since the Plan was adopted in 2019, significant accomplishments have been achieved in fulfilling the Priorities, Goals, and Objectives. Those accomplishments are listed within the Plan.

As the Plan is a “living” document it is important that it is followed, reviewed regularly, and is current. As a result, staff felt it important to add two additional Priorities, as follows:

- 11) Financial
- 12) Mission Focused Review and Analysis

The current update includes revisions where needed, and updates the previously established Priorities, Goals, and Objectives.

In addition to the methodical review of the Plan itself, staff also worked on uniting the District’s Core Values and Workplace Values. As noted on Page 4 of the Plan, the values have been consolidated into a single statement that reads as follows: *“The Orange County Mosquito and Vector Control District is committed to achieving its mission in a professional and safe manner, based upon a foundation of education, communication, collaboration, innovation, and proactive efforts”*.

During the Plan’s development process, each and every employee had the opportunity to participate in the Plan’s development.

Staff recommends that the Board review the Draft updated Five-Year Strategic Plan 2019-2023, provide input, and approve the Plan.

Fiscal Impact:

Amount Requested: \$N/A

Sufficient Budgeted Funds Available: Category: Pers. Optg. Cap. -or- CIP# Fund#

Previous Relevant Board Actions for This Item:

Resolution No. 483 Adopted September 19, 2019 Adopting the District’s Strategic Plan for the Period 2018-2022

Exhibits:

Exhibit A: Draft 2021 Five-Year Strategic Plan Update REDLINE VERSION

Exhibit B: Draft 2021 Five-Year Strategic Plan Update CLEAN VERSION

Exhibit C: Resolution No. 517

Orange County Mosquito and Vector Control District
Strategic Plan 2018-202~~3~~2



SWOT, Priority Topics, & Operational Strategy

ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT

Strategic Plan 2018 - 202~~3~~²
SWOT, Priority Topics, & Operational Strategy

TABLE OF CONTENTS

DEFINITIONS

MISSION STATEMENT

DISTRICT OVERVIEW

PRIORITY AREAS

IMPLEMENTATION

APPENDIX A: GOALS AND OBJECTIVES TIMETABLE/ ACCOUNTABILITY MATRIX

DEFINITIONS

Mission Statement: Identifies the organization's purpose and value to the community it serves. All activities within the District should be related to supporting the Mission Statement.

District Overview: Entails a review of the District's strengths, weaknesses, opportunities and threats/concerns which may affect the District's abilities to provide services and/or require changes or modifications to services.

Priority Areas: Identifies policies, practices or events that may impact the District's ability to provide services or require modifications or changes to service delivery. These areas can play a key role in governance, management and operational planning and community outreach.

Strategy: Gives a specific direction to accomplish the Objective.

Objective: Identifies approaches or methods to address specific strategic issues. This may include short, long term, focused or broad-brushed approaches.

Goals: Specific actions, timeframes necessary for the completion of the goals. It is expected that periodic progress reports will be submitted by those responsible for the completing the goals.

DISTRICT MISSION STATEMENT

The mission of the Orange County Mosquito and Vector Control District is to provide the citizens of Orange County with the highest level of protection from vectors and vector-borne diseases.

(established by Board Action, June 18, 2005)

DISTRICT MISSION STATEMENT

The mission of the Orange County Mosquito and Vector Control District is to educate and protect Orange County from vectors and prevention of vector-borne diseases in an environmentally responsible manner.

(Spring 2019)

OCMVCD promises/commits to achieve the mission by:

In achieving this mission, the Orange County Mosquito and Vector Control District shall:

1. Be proactive in dealing with current and future vector threats
2. Respond effectively and courteously to the needs of the public
3. Inform and educate the public about the shared responsibility of vector control
4. Utilize the most effective and safest methods available for the control of vectors
5. Provide vector control services in the most cost-effective manner

Core Values:

The Orange County Mosquito and Vector Control District is committed to achieving its mission in a professional and safe manner, based upon a foundation of education, communication, collaboration, innovation, and proactive efforts.

WORKPLACE VALUES STATEMENT

The ideal workplace is committed to fulfilling the District's mission through a professional and positive work environment built on the foundation of respect, integrity, communication, and teamwork.

WORKPLACE CORE VALUES

- We pledge to a Positive Work Environment by promoting a safe and friendly workplace and fostering a positive work-life balance.
- We commit to open and clear Communication through collaboration, respect, and accountability.

- ~~We promote Teamwork by encouraging one another, recognizing individual strengths, and celebrating group successes.~~
- ~~We commit as Professionals to continue to learn and constantly strive to meet high service standards.~~

DISTRICT OVERVIEW - SWOT

The District's strengths, weaknesses, potential opportunities or threats/concerns (SWOT) may affect the District's abilities to provide services and/or require changes or modifications to services. The following items could have an impact on the future success of the District:

<p>STRENGTHS: <i>Internal attributes and resources that support a successful outcome.</i></p>	<p>WEAKNESSES: <i>Internal attributes and resources that work against a successful outcome.</i></p>
<ul style="list-style-type: none"> • Clear Mission and Dedicated Staff • Increased Proactive Responses and Adaptability • Improved Information Sharing Between Departments • Improved Collaboration with Outside Agencies/Stakeholders/Public • Improvements to Vector Control Programs • Service Request Response Time • Extension of Part-time Workforce Hours 	<ul style="list-style-type: none"> • Internal Communication Needs to Improve (Interpersonal, Departmental, Management /Staff) • Data Sharing Across Departments • Lack of Clear Policies and Procedures • Reliable Pesticide Equipment and Latest Technologies • Equitable Work Distribution/Staffing Needs/Reorganizing Workflows • No Multi-Year Strategy • Staff Training – Safety, Pesticides, Warrant Procedures • Trustee Education/Awareness/Engagement • Supervision/Quality Assurance/ Part-time Supervision
<p>OPPORTUNITIES: <i>External factors that the District can capitalize on or use to its advantage.</i></p>	<p>THREATS: <i>External factors that could jeopardize the District's success.</i></p>
<ul style="list-style-type: none"> • Improve Follow-Up with HRA9 Partners • Collaboration with Code Enforcement and Cities to Address Chronic Problem Areas and through Implementation of Abatement Program • Develop Neighborhood Advocate Program • Increase Transparency Through Videos, Improvements to District Website, Data Sharing, Notification and Messaging 	<ul style="list-style-type: none"> • Invasive Aedes • Misinformation • Special Interest Groups • Pesticide Resistance

PRIORITY AREAS

This section identifies policies, practices or events that may impact the District's ability to provide services or require modifications or changes to service delivery. These areas can play a key role in governance, management and operational planning and community outreach.

- 1) Collaboration and Engagement with Partner Agencies, Stakeholders, and the Public
 - a. Trustee Education, Engagement, and Advocacy
 - b. Improve Public Awareness and Information Sharing
 - c. Strengthen Public Agency Partnerships
- 2) Extra Help & Seasonal Workforce Stabilization
- 3) Invasive Aedes
- 4) Facility Enhancement/Rehabilitation Project
- 5) Comprehensive Policy and Procedure Review and Updates
- 6) Pesticide Resistance
- 7) Staff Training Programs
- 8) Emerging Technologies and Equipment
- 9) Staffing
- 10) Internal Communication
- 11) Financial
- 12) Mission Focused Review and Analysis

PRIORITY AREA 1: Collaboration and Engagement with Partner Agencies, Stakeholders, and the Public (S)

GOAL 1.1: Improve Trustee education, engagement, and advocacy.

- o STRATEGY: Increase Trustee engagement and awareness through structured training, education, and collaborative programs.
- o OBJECTIVES:
 - 1.1.1. By March 1, 2018, provide Trustee's with city/county specific monthly report and expand reporting distribution to all city contacts by May 1, 2019. (Completed)
 - 1.1.2. By May 1, 2018, provide optional monthly mosquito trapping at Trustee's residence. (Completed)
 - 1.1.3. By May 11, 2018, develop and conduct Trustee Education Day (Develop curriculum and program). (Completed)
 - 1.1.4. By January 31, 2019, develop New Trustee Orientation. (Completed)
 - 1.1.5. By October 31, 2019, conduct informational presentation for Board Authorized Annual Conferences. (Annually) (Completed)
 - 1.1.6. By February 2022, develop Trustee Toolkits for common questions
 - 1.1.7. By March 2022, develop workshop for Trustees to train for outreach event participation.

GOAL 1.2: Improve public awareness and information sharing.

- o STRATEGY: Increase public awareness of vectors and vector-borne diseases by enhancing programs and creating new resources to empower action.
- o OBJECTIVES:
 - 1.2.1. By June of each year, launch large summer campaign.
2018 - Make Your Home Mosquito-Free media campaign (Completed)

2019 – Mission Possible – Eliminate the Source (Completed)
2020 – Tip, Toss, and Take Action (Completed)
2021 – Mosquitoes are Here – Tip, Toss, and Take Action (Completed)
2022 – We are Back – Tip, Toss, and Take Action

1.2.2. By January 2019, launch new website to include mobile device friendly website. (Completed)

1.2.3. By March 2019, produce information videos for Aedes. (Completed)

Video 1 – Meet your new neighbor (identify sources)
Video 2 – Protecting yourself and your home from mosquitoes
Video 3 – Treating for Aedes

1.2.46. By November 2019, complete Facebook video series on vector sources. (Completed)

1.2.57. By May 2020, develop community advocacy program for Aedes outreach. (Completed)

1.2.68. By March 2021, produce information videos about rats. (Completed)

Video 1 – Signs of Rats
Video 2 – Preventing Rats
Video 3 – Controlling for Rats

1.2.79. By April 2021, produce information videos about mosquitoes. (Completed)

Video 1 – The Mosquito Perspective (English/Spanish)

1.2.810. By March 2022, have all 34 cities participate in annual summer campaign

1.2.944. By May 2022, expand community advocacy program for Aedes outreach to include training PowerPoint, talking points and levels of participation.

1.2.1042. By May 2022, expand social media content to Spanish/English posts

GOAL 1.3: Engaging members of the community and stakeholders to become active participants of our vector control efforts.

- o STRATEGY: Increase collaboration and awareness through enhancing our public agency partnerships.
- o OBJECTIVES:
 - 1.3.1. By September 1, 2018, meet with all HRA9 City Partners and complete workshops. (Completed)
 - 1.3.2. By March 31, 2019, provide HRA9 City Partners results from Gutter Assessment and recommended action report. (Completed)
 - 1.3.3. By February 2022, webinar for high-risk areas such as schools to educate and assist in source reduction.
 - 1.3.4. By December 202~~1~~, present to all 34 Cities and the County of Orange, continue to present to HRA9 cities annually and 3-year cycle for remainder cities.
 - 1.3.5. By June 30, 2022, develop list of Special Districts that provide strategic value and provide materials or meet with those agencies as needed.
 - 1.3.6. By ~~March 31, 2020~~ April 2022, provide HRA9 City Partners with assessment of City Parks and BMPs.
 - 1.3.7. By March 2021, All City Partners webinar. (Completed)
 - 1.3.8. By March 31, 2022, develop partnerships with water districts.
 - 1.3.9. By May 2022, identify Hispanic stakeholders to expand outreach.
 - 1.3.10. By March 1, 2022, evaluate what data should be public facing such as number of door-to-door visit, SR per month, routine inspections areas.

PRIORITY AREA 2: Extra Help & Seasonal Workforce Stabilization (S)

GOAL 2.1: Stabilize part-time workforce.

- o STRATEGY: Identify and improve the timing and onboarding/orientation of extra-help and seasonal employees to learn the job duties prior to beginning of season.

- o OBJECTIVES:

- 2.1.1. By December 31, 2018, develop recruitment timeline to ensure all extra help and seasonal staff are in place no later than end of March. (Completed)

- 2.1.2. By January 31, 2019, conduct salary survey of regional vector control districts to determine competitiveness within the labor market. (Completed)

GOAL 2.2: Improve part-time workforce training.

- o STRATEGY: Reassess and evaluate and “update if necessary” the existing PT/S training curriculum.

- o OBJECTIVES:

- 2.2.1 By June 2021, review training materials and field training process with each department/program. (Completed)

- 2.2.2 By November 202~~1~~⁴, annually review and update training material as needed.

- 2.2.3 December 2021, develop library for all training documents.

PRIORITY AREA 3: Invasive Aedes (T)

GOAL 3.1: Minimize nuisance burden and risk of disease transmission by Invasive Aedes.

- o STRATEGY: Identify methods and processes to increase education, surveillance, and control of Invasive Aedes in Orange County.

- o OBJECTIVES:

- 3.1.1. By May 31, 2018, finalize Aedes response matrix to address tiered response to Invasive Aedes. (Completed)

- 3.1.2. By June 30, 2018, formalize internal response process for travel and local acquired disease cases SOP. (Completed)

- 3.1.3. By January 2019, develop Aedes specific outreach campaign “Meet Your New Neighbor.” (Completed)

- 3.1.4. By September 2020, develop nuisance Aedes response threshold guidelines. (Completed)

3.1.5. By November 2021, develop protocols for Door-to-Door team that streamline the need for secondary property inspections by the Zone Inspector. Consider enforcement options.

- o STRATEGY: Plan and implement service model delivery changes to address impact of increased demand due to Invasive Aedes.

3.1.6. By July 1, 2019, launch Phase 1 Service Model Changes to address increasing mosquito service requests including:

- Phone bank support expansion
- Service request response mail follow-up
- Changes to on-line SR- Report an Issue Form
- New phone message prompt with tips and call wait time and call back option
- Flexible Area Assistants (FAA) Team training and integration to support Zone Inspectors for pools, ITs, and variable tasks
- Routing of overflow service requests to Scheduling and Dispatch Team
(Completed)

3.1.7. By July 1, 2019, rollout new public information resources to empower residents/property managers to mitigate mosquito problems including:

- Story Map Aedes/Mosquito Webpage
- Aedes FAQ Sheet
- Property Inspection Checklist (Inside and Outside)
- Pesticide Active Ingredient Recommendation Sheet
- Yard drain screening brochure
- Enhance social media segments on vector sources, increase posts of photos and video clips from actual inspections throughout year
- Provide inspection leave-behind packets to residents to share with neighbors
(Completed)

3.1.8. By August 2020, implement the use of truck-mounted larviciding equipment in control program. (Completed)

3.1.9. By July 2021, expand truck-mounted larviciding equipment in control program. (Completed)

PRIORITY AREA 4: Facility Enhancement/Rehabilitation Project (W)

GOAL 4.1: Identify long term facility needs.

- o STRATEGY: Evaluate District facility location opportunities to accommodate future needs.
- o OBJECTIVES:
 - 4.1.1. By July 2018, staff review of space plan evaluation. (Completed)
 - 4.1.2. By October 2018, obtain BP&E Committee recommendation to proceed with site plan analysis. (Completed)
 - 4.1.3. By December 2018, present space plan evaluation to Building, Property and Equipment Committee. (Completed)
 - 4.1.4. By May 2019, present space plan evaluation to Budget and Finance Committee. (Completed)
 - 4.1.5. By January 2020, obtain Board decision on future facilities and project details. (Completed)
 - 4.1.6. Staff shall continue to pursue Board's 2019 recommendation regarding building project. If no acceptable sites are found or under contract for purchase by June 30, 2023 staff will reassess options with the Board.

PRIORITY AREA 5: Comprehensive Policy, Procedure, and Plan Review and Updates (W)

GOAL 5.1: Identify, review, and update (as needed) all Board of Trustees Policies.

- o STRATEGY: Conduct comprehensive policy analysis.
- o OBJECTIVES:
 - 5.1.1. By September 30, 2018, develop a list of current Board policies for review and identify those necessitating revision. (Completed)
 - 5.1.2 By December 2021, identify Board approved policy gaps and establish timeline for development.

5.1.3 By July 2022, present Board policy analysis to the Policy and Personnel Committee.

GOAL 5.2: Identify, review, and update (as needed) all District Administrative Policies/Procedures.

o STRATEGY: Conduct comprehensive policy/procedure analysis.

o OBJECTIVES:

5.2.1. By February 2020, complete Social Media Policy (Trustee and Staff). (Completed)

5.2.2. By December 2021, develop a current list of Administrative policies and procedures for District operations, identify policy gaps and establish timeline for development, present administrative policy analysis to the Executive Staff.

5.2.3. By December 2021, produce a historical file/catalog.

5.2.4. By ~~December 2021~~ March 2022, produce glossary of District terminology.

5.2.5. By ~~December 2021~~ March 2022, develop library for all policy/procedure documents to be maintained by Clerk of the Board.

5.2.6. By February 2022, complete electronic employee handbook.

5.2.7. By February 2022, finalize Comprehensive Update of PSR.

GOAL 5.3: Identify, review, and update (as needed) all District Programs and Departmental Plans, Manuals, and Standard Operating Procedures.

o STRATEGY: Conduct comprehensive analysis.

o OBJECTIVES:

5.3.1. By August 1, 2019, HR Performance Review Performance Evaluation Program. (Completed)

5.3.2. By January 31, 2021, complete Safety Manual w/IIPP.

• 5.3.2.a. By December 2020, IIPP COVID-19 Supplement (Completed)

5.3.3. By January 20212, complete Disease Outbreak Communication Plan.

5.3.4. By December 2021, present final Emergency Operations Plan.

5.3.5. By July 2022, initiate review and update of the Vector Reduction Manual and outline implementation mechanisms to include invasive *Aedes* and enforcement steps.

5.3.6. By March 2021, complete ULV SOP and WALs SOP document.
(Completed)

5.3.7. By July 2022 complete ALL department manuals with SOPs
(Lab, Operations, Comm, Admin).

PRIORITY AREA 6: Pesticide Resistance and Efficacy (T)

GOAL 6.1: Conduct routine monitoring of pesticide efficacy for products used in District control programs.

- o STRATEGY: Evaluate existing products and new products for pesticide efficacy and environmental impact.

- o OBJECTIVES:

- 6.1.1. Every two years conduct routine bottle bioassays and/or field trials of adulticides and larvicides used in control operations.

- 6.1.2. Within one year of new product being approved for use, conduct bottle bioassays and/or field trials.

PRIORITY AREA 7: Staff Training and Development Programs (W)

GOAL 7.1: Conduct staff training on annual basis, or as needed.

- o STRATEGY: Establish and formalize staff training and safety training programs.

- o OBJECTIVES:

- 7.1.1. By December 12, 2018, conduct annual training on travel procedures.
(Completed)

- 7.1.2. By August 2019, establish annual safety training schedule to include monthly safety trainings. (Completed)

7.1.3. By September 2019, develop a list of required and supplemental training for staff (examples include social media, HIPAA, harassment, ethics). (Completed)

7.1.4. By March 1, 2022, develop and conduct staff training program on communicating with the public.

7.1.5. By March 1, 2022, create and conduct staff training on Springbrook, purchasing procedures, credit card use policy, AP processes, time sheet. Prepare training checklist.

7.1.6. By October 2021, establish annual training schedule. (Completed)

PRIORITY AREA 8: Emerging Technologies and Equipment(O)

GOAL 8.1: Explore and evaluate emerging technologies for District use.

o STRATEGY: Assess new technologies/equipment to enhance efficiency, accuracy, and effectiveness for District use.

o OBJECTIVES:

8.1.1. By June 2019, implement drone use in surveillance. (Completed)

8.1.2. By June 2019, complete staff certification and training for drone flights. (Completed)

8.1.3. By Summer 2020, utilize drone capabilities for pesticide applications. (Pending regulations) (Completed)

8.1.4. By January 2022, evaluate how new technologies can be integrated into outreach events to increase **the public's** interactive experience.

8.1.5. By December 2021, expand IWS (Database Management System) to integrate all department data.

8.1.6. By ~~December 2021~~ March 2022, evaluate the effectiveness and cost effectiveness of rovers to conduct underground inspections and treatments and enforcement actions, for potential inclusion in FY22/23 Budget.

8.1.7. By December 2021, evaluate mosquito control using sterile insect techniques (SIT) methods such as *Wolbachia*, irradiated, and genetically modified male mosquitoes.

8.1.8. By December 2021, evaluate flow monitoring and tracking technology.

~~8.1.9. By December 2021, evaluate novel rat and tick control products.~~

8.1.1~~0~~. By December 2021, evaluate current technology and optimize use and training. Including TEAMS project management, scheduling software, and GIS layers of source hotspots.

8.1.1~~2~~4. By December 2021, evaluate replacement for aerial pool vendor

8.1.1~~3~~2. Ongoing, evaluate and implement new data retention, management and IT infrastructure requirement to fit with best practices and/or legal requirements.

PRIORITY AREA 9: Staffing (O)

GOAL 9.1: Assess and address staffing needs/deficiencies and evaluate options for full-time and part-time staffing models that consider current and future demand on services and growth in the county.

- o STRATEGY: Fill current approved positions and conduct staffing study.

- o OBJECTIVES:

 - 9.1.1. By December 2019, initiate and complete hiring of Board approved Seasonal Coordinator and Assistant Vector Ecologist/Vector Ecologist positions. (Completed)

 - 9.1.2. By October 2021, initiate in-house departmental staffing assessment and identify potential departmental reorganization options. (Completed)

GOAL 9.2: Improve staff professional development opportunities.

- o STRATEGY: Develop new programs for staff retention, advancement, and development.

- o OBJECTIVES:

9.2.1 By July 2022 (due to COVID19), develop concept for a job shadowing / interdepartmental program to cultivate and train staff for professional opportunities.

9.2.2 By July 202~~2~~⁴, implement coaching and mentoring program to identify strengths/talents and to improve staff performance.

9.2.3 By July 202~~2~~⁴, implement comprehensive staff development program that provides regular training opportunities to improve existing skill sets and develop new ones.

GOAL 9.3: Establish succession planning program.

- o STRATEGY: Develop succession program for senior staff.
- o OBJECTIVES:

9.3.1. By July 2022, initiate succession process for pending retirements.

PRIORITY AREA 10: Internal Communication (W)

GOAL 10.1: Increase and improve interpersonal and interdepartmental communication.

- o STRATEGY: Increase engagement of staff at all hands meetings and provide more frequent information updates.

- o OBJECTIVES:

10.1.1. By August 21, 2018, have a staff member conduct a presentation at each staff meeting (Completed)

10.1.2. By January 2019, conduct a safety training at each all hands meeting (Completed)

10.1.3. By January 2022, publish monthly District activity updates.

10.1.4. By ~~TDB~~ March 2022, fully integrate content on SharePoint Intranet (including staff training).

- o STRATEGY: Create consistent team building opportunities.

10.2.1. By January 2019, conduct staff team building event. (Completed)

10.2.2. By May 2019, establish a monthly District social to celebrate birthdays (and other notable occasions). (Completed)

10.2.3. By July 2019, initiate practice of regular staff project based working groups to enhance feedback and collaboration. (Completed)

o STRATEGY: Improve information sharing pathways and create new platforms to share information.

o OBJECTIVES:

10.3.1. By October 2019, establish a regular staff discussion forum with District Manager in addition to the open-door communication policy. District Manager will invite discussion on a range of suggested topics. (Completed)

10.3.2. By December 2021, establish District policy on written communications i.e., memos, email, text, meeting agendas and minutes and require official guidance/direction/recommendations to be in writing.

10.3.3. By January 2022, ~~rollout rede~~ District intranet and SharePoint with enhanced features and functionality.

10.3.4. By July 2021, redo District shared computer drive so file sharing is organized and easily searchable. (Completed)

10.3.5. By January 2022, program new feature to visualize data on a map from IWS across all workflows.

10.3.6. By March 2022, onboard all department into IWS data management system (remaining lab, communications, administrative services).

PRIORITY AREA 11: Fiscal Responsibility/Financial

GOAL 11.1: Conduct the Business and Operational Functions of the District in the most cost efficient and effective manner that prioritizes both fiscal and fiduciary responsibility to the residents of Orange County.

O STRATEGY: Ensure a robust system of financial checks and balances are in place. Review all existing financial controls and processes ensuring fiscal responsibility and strengthen if warranted.

o OBJECTIVES:

11.1.1. By June 30 of each year conduct review of each departmental budget and forecast for future District operational needs.

11.1.2 Conduct monthly reconciliation of accounts payable process.

11.1.3 Revise by July 2022, Purchasing and Procurement Policy to ensure ongoing compliance with existing laws and regulations.

GOAL 11.2: Remain compliant with GAAP, GFOA, State and Federal Financial Requirements

O STRATEGY: Demonstrate compliance with all codes and regulations

o OBJECTIVES:

11.2.1. Conduct monthly independent financial review

11.2.2. Conduct annual independent financial audit

11.2.3. Provide monthly accounting and financial statements

11.2.4. Provide quarterly investment report to the Board of Trustees

GOAL 11.3: Improve Finance workflow efficiency.

O STRATEGY: Improve workflow efficiency through process documentation and scanning.

o OBJECTIVES:

11.3.1. By October 31st, 2021, identify any new finance process that has changed.

11.3.2. By December 31st, 2021, document all processes by creating SOPs for finance program.

11.3.3. By December 31st, 2021, create and scan in contracts and agreements previously filed in folders.

GOAL 11.4: Increase financial transparency.

o STRATEGY: Identify financial information to add to the District's website that meets standards for transparency and proper disclosure.

o OBJECTIVES:

11.4.1. By September 30th, 2021, identify, review, and upload financial documents to OCMVCD's website for added transparency. (Completed)

GOAL 11.5: Update District's Finance and Budget policies.

o STRATEGY: Perform a review of all District's policies relating to finance and budget on an annual basis.

o OBJECTIVES:

11.5.1. By December 31st, 2021, update Investment and Fund policies to align with District's funding status. (Completed)

11.5.2. By December 31st, 2021, ensure District's budget policies align and are compatible with all District operations and other District policies.

PRIORITY AREA 12: Mission Focused Decision Making, Review, and Analysis

GOAL 12.1: Protecting the public from vectors and vector-borne disease and provide services in an environmentally responsible manner

o STRATEGY: Stay current on the latest industry science, technology, and equipment.

o OBJECTIVES: Ensure continuation of efficient and effective vector control services

12.1.1. Annually, staff participate in learning opportunities, such as, continuing education and conferences to stay current and explore emerging trends.

12.1.2. Annually, staff evaluate and purchase new equipment and upgrade technology, as appropriate.

GOAL 12.2: Periodically review District Values to ensure that values reflect current agency priorities, culture and mission.

o STRATEGY: Engage staff, management team, and Trustees in District Values assessment

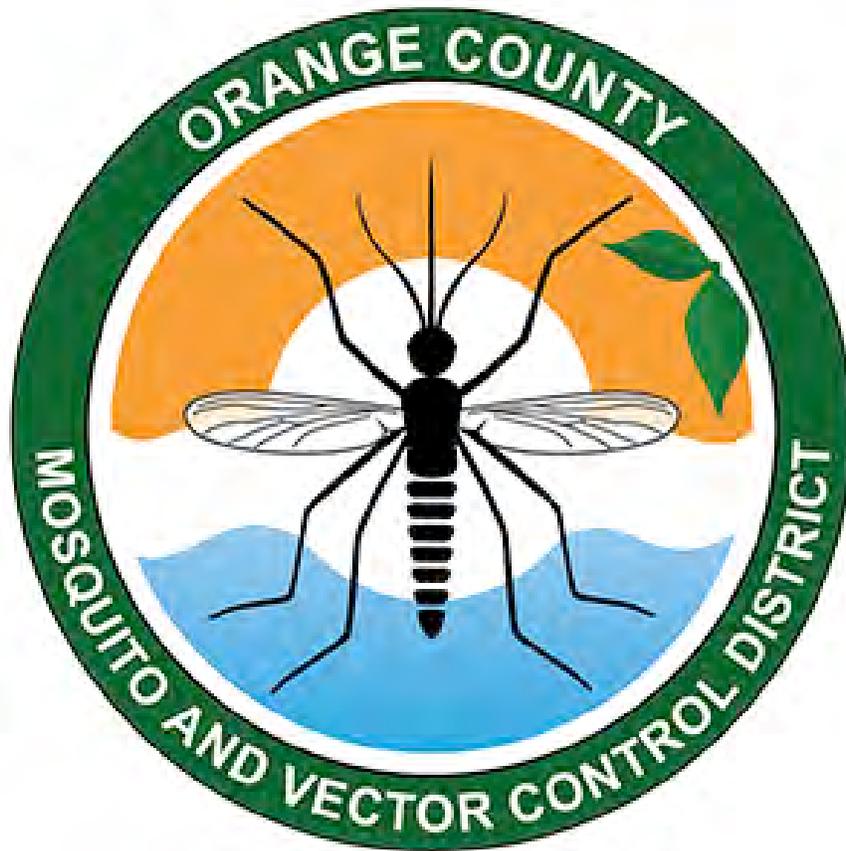
o OBJECTIVES: Update District Values to reflect how we will achieve the mission

12.2.1. By November 30, 2021, Host all staff sessions to listen to input regarding current values statement and shorten to key words

12.2.2. By November 30, 2021, Determine 4-5 key values

12.2.3. By January 31, 2022, Publish, lead and ingrain values into the culture of the District for the 75th anniversary of the District.

Orange County Mosquito and Vector Control District
Strategic Plan 2018-2023



SWOT, Priority Topics, & Operational Strategy

ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT

Strategic Plan 2018 - 2023
SWOT, Priority Topics, & Operational Strategy

TABLE OF CONTENTS

DEFINITIONS

MISSION STATEMENT

DISTRICT OVERVIEW

PRIORITY AREAS

IMPLEMENTATION

APPENDIX A: GOALS AND OBJECTIVES TIMETABLE/ ACCOUNTABILITY MATRIX

DEFINITIONS

Mission Statement: Identifies the organization's purpose and value to the community it serves. All activities within the District should be related to supporting the Mission Statement.

District Overview: Entails a review of the District's strengths, weaknesses, opportunities and threats/concerns which may affect the District's abilities to provide services and/or require changes or modifications to services.

Priority Areas: Identifies policies, practices or events that may impact the District's ability to provide services or require modifications or changes to service delivery. These areas can play a key role in governance, management and operational planning and community outreach.

Strategy: Gives a specific direction to accomplish the Objective.

Objective: Identifies approaches or methods to address specific strategic issues. This may include short, long term, focused or broad-brushed approaches.

Goals: Specific actions, timeframes necessary for the completion of the goals. It is expected that periodic progress reports will be submitted by those responsible for the completing the goals.

DISTRICT MISSION STATEMENT

The mission of the Orange County Mosquito and Vector Control District is to provide the citizens of Orange County with the highest level of protection from vectors and vector-borne diseases.

(established by Board Action, June 18, 2005)

DISTRICT MISSION STATEMENT

The mission of the Orange County Mosquito and Vector Control District is to educate and protect Orange County from vectors and prevention of vector-borne diseases in an environmentally responsible manner.

(Spring 2019)

OCMVCD promises/commits to achieve the mission by:

In achieving this mission, the Orange County Mosquito and Vector Control District shall:

1. Be proactive in dealing with current and future vector threats
2. Respond effectively and courteously to the needs of the public
3. Inform and educate the public about the shared responsibility of vector control
4. Utilize the most effective and safest methods available for the control of vectors
5. Provide vector control services in the most cost-effective manner

District Values:

The Orange County Mosquito and Vector Control District is committed to achieving its mission in a professional and safe manner, based upon a foundation of education, communication, collaboration, innovation, and proactive efforts.

DISTRICT OVERVIEW - SWOT

The District's strengths, weaknesses, potential opportunities or threats/concerns (SWOT) may affect the District's abilities to provide services and/or require changes or modifications to services. The following items could have an impact on the future success of the District:

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2021 – Mosquitoes are Here – Tip, Toss, and Take Action (Completed)

2022 – We are Back – Tip, Toss, and Take Action

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1.2.6. By March 2021, produce information videos about rats. (Completed)

Video 1 – Signs of Rats

Video 2 – Preventing Rats

Video 3 – Controlling for Rats

1.2.7. By April 2021, produce information videos about mosquitoes. (Completed)

Video 1 – The Mosquito Perspective (English/Spanish)

1.2.8. By March 2022, have all 34 cities participate in annual summer campaign

1.2.9. By May 2022, expand community advocacy program for Aedes outreach to include training PowerPoint, talking points and levels of participation.

1.2.10. By May 2022, expand social media content to Spanish/English posts

GOAL 1.3: Engaging members of the community and stakeholders to become active participants of our vector control efforts.

- o STRATEGY: Increase collaboration and awareness through enhancing our public agency partnerships.

- o OBJECTIVES:

- 1.3.1. By September 1, 2018, meet with all HRA9 City Partners and complete workshops. (Completed)

- 1.3.2. By March 31, 2019, provide HRA9 City Partners results from Gutter Assessment and recommended action report. (Completed)

- 1.3.3. By February 2022, webinar for high-risk areas such as schools to educate and assist in source reduction.

- 1.3.4. By December 2022, present to all 34 Cities and the County of Orange, continue to present to HRA9 cities annually and 3-year cycle for remainder cities.

- 1.3.5. By June 30, 2022, develop list of Special Districts that provide strategic value and provide materials or meet with those agencies as needed.

- 1.3.6. By April 2022, provide HRA9 City Partners with assessment of City Parks and BMPs.

- 1.3.7. By March 2021, All City Partners webinar. (Completed)

- 1.3.8. By March 31, 2022, develop partnerships with water districts.

- 1.3.9. By May 2022, identify Hispanic stakeholders to expand outreach.

- 1.3.10. By March 1, 2022, evaluate what data should be public facing such as number of door-to-door visit, SR per month, routine inspections areas.

PRIORITY AREA 2: Extra Help & Seasonal Workforce Stabilization (S)

GOAL 2.1: Stabilize part-time workforce.

- o STRATEGY: Identify and improve the timing and onboarding/orientation of extra-help and seasonal employees to learn the job duties prior to beginning of season.
- o OBJECTIVES:
 - 2.1.1. By December 31, 2018, develop recruitment timeline to ensure all extra help and seasonal staff are in place no later than end of March. (Completed)
 - 2.1.2. By January 31, 2019, conduct salary survey of regional vector control districts to determine competitiveness within the labor market. (Completed)

GOAL 2.2: Improve part-time workforce training.

- o STRATEGY: Reassess and evaluate and "update if necessary" the existing PT/S training curriculum.
- o OBJECTIVES:
 - 2.2.1 By June 2021, review training materials and field training process with each department/program. (Completed)
 - 2.2.2 By November 2022, annually review and update training material as needed.
 - 2.2.3 December 2021, develop library for all training documents.

PRIORITY AREA 3: Invasive Aedes (T)

GOAL 3.1: Minimize nuisance burden and risk of disease transmission by Invasive Aedes.

- o STRATEGY: Identify methods and processes to increase education, surveillance, and control of Invasive Aedes in Orange County.
- o OBJECTIVES:
 - 3.1.1. By May 31, 2018, finalize Aedes response matrix to address tiered response to Invasive Aedes. (Completed)

3.1.2. By June 30, 2018, formalize internal response process for travel and local acquired disease cases SOP. (Completed)

3.1.3. By January 2019, develop Aedes specific outreach campaign "Meet Your New Neighbor." (Completed)

3.1.4. By September 2020, develop nuisance *Aedes* response threshold guidelines. (Completed)

3.1.5. By November 2021, develop protocols for Door-to-Door team that streamline the need for secondary property inspections by the Zone Inspector. Consider enforcement options.

- o STRATEGY: Plan and implement service model delivery changes to address impact of increased demand due to Invasive Aedes.

3.1.6. By July 1, 2019, launch Phase 1 Service Model Changes to address increasing mosquito service requests including:

- Phone bank support expansion
- Service request response mail follow-up
- Changes to on-line SR- Report an Issue Form
- New phone message prompt with tips and call wait time and call back option
- Flexible Area Assistants (FAA) Team training and integration to support Zone Inspectors for pools, ITs, and variable tasks
- Routing of overflow service requests to Scheduling and Dispatch Team
(Completed)

3.1.7. By July 1, 2019, rollout new public information resources to empower residents/property managers to mitigate mosquito problems including:

- Story Map Aedes/Mosquito Webpage
- Aedes FAQ Sheet
- Property Inspection Checklist (Inside and Outside)
- Pesticide Active Ingredient Recommendation Sheet
- Yard drain screening brochure
- Enhance social media segments on vector sources, increase posts of photos and video clips from actual inspections throughout year
- Provide inspection leave-behind packets to residents to share with neighbors
(Completed)

3.1.8. By August 2020, implement the use of truck-mounted larviciding equipment in control program. (Completed)

3.1.9. By July 2021, expand truck-mounted larviciding equipment in control program. (Completed)

PRIORITY AREA 4: Facility Enhancement/Rehabilitation Project (W)

GOAL 4.1: Identify long term facility needs.

- o STRATEGY: Evaluate District facility location opportunities to accommodate future needs.

- o OBJECTIVES:

- 4.1.1. By July 2018, staff review of space plan evaluation. (Completed)

- 4.1.2. By October 2018, obtain BP&E Committee recommendation to proceed with site plan analysis. (Completed)

- 4.1.3. By December 2018, present space plan evaluation to Building, Property and Equipment Committee. (Completed)

- 4.1.4. By May 2019, present space plan evaluation to Budget and Finance Committee. (Completed)

- 4.1.5. By January 2020, obtain Board decision on future facilities and project details. (Completed)

- 4.1.6. Staff shall continue to pursue Board's 2019 recommendation regarding building project. If no acceptable sites are found or under contract for purchase by June 30, 2023 staff will reassess options with the Board.

PRIORITY AREA 5: Comprehensive Policy, Procedure, and Plan Review and Updates (W)

GOAL 5.1: Identify, review, and update (as needed) all Board of Trustees Policies.

- o STRATEGY: Conduct comprehensive policy analysis.

- o OBJECTIVES:

- 5.1.1. By September 30, 2018, develop a list of current Board policies for review and identify those necessitating revision. (Completed)

- 5.1.2 By December 2021, identify Board approved policy gaps and establish timeline for development.

- 5.1.3 By July 2022, present Board policy analysis to the Policy and Personnel Committee.

GOAL 5.2: Identify, review, and update (as needed) all District Administrative Policies/Procedures.

- o STRATEGY: Conduct comprehensive policy/procedure analysis.

- o OBJECTIVES:

- 5.2.1. By February 2020, complete Social Media Policy (Trustee and Staff). (Completed)

- 5.2.2. By December 2021, develop a current list of Administrative policies and procedures for District operations, identify policy gaps and establish timeline for development, present administrative policy analysis to the Executive Staff.

- 5.2.3. By December 2021, produce a historical file/catalog.

- 5.2.4. By March 2022, produce glossary of District terminology.

- 5.2.5. By March 2022, develop library for all policy/procedure documents to be maintained by Clerk of the Board.

- 5.2.6. By February 2022, complete electronic employee handbook.

- 5.2.7. By February 2022, finalize Comprehensive Update of PSR.

GOAL 5.3: Identify, review, and update (as needed) all District Programs and Departmental Plans, Manuals, and Standard Operating Procedures.

- o STRATEGY: Conduct comprehensive analysis.

- o OBJECTIVES:

- 5.3.1. By August 1, 2019, HR Performance Review Performance Evaluation Program. (Completed)
- 5.3.2. By January 31, 2021, complete Safety Manual w/IIPP.
 - 5.3.2.a. By December 2020, IIPP COVID-19 Supplement (Completed)
- 5.3.3. By January 2022, complete Disease Outbreak Communication Plan.
- 5.3.4. By December 2021, present final Emergency Operations Plan.
- 5.3.5. By July 2022, initiate review and update of the Vector Reduction Manual and outline implementation mechanisms to include invasive *Aedes* and enforcement steps.
- 5.3.6. By March 2021, complete ULV SOP and WALs SOP document. (Completed)
- 5.3.7. By July 2022 complete ALL department manuals with SOPs (Lab, Operations, Comm, Admin).

PRIORITY AREA 6: Pesticide Resistance and Efficacy (T)

- GOAL 6.1: Conduct routine monitoring of pesticide efficacy for products used in District control programs.
- o STRATEGY: Evaluate existing products and new products for pesticide efficacy and environmental impact.
 - o OBJECTIVES:
 - 6.1.1. Every two years conduct routine bottle bioassays and/or field trials of adulticides and larvicides used in control operations.
 - 6.1.2. Within one year of new product being approved for use, conduct bottle bioassays and/or field trials.

PRIORITY AREA 7: Staff Training and Development Programs (W)

- GOAL 7.1: Conduct staff training on annual basis, or as needed.
- o STRATEGY: Establish and formalize staff training and safety training programs.

- o OBJECTIVES:

- 7.1.1. By December 12, 2018, conduct annual training on travel procedures. (Completed)
- 7.1.2. By August 2019, establish annual safety training schedule to include monthly safety trainings. (Completed)
- 7.1.3. By September 2019, develop a list of required and supplemental training for staff (examples include social media, HIPAA, harassment, ethics). (Completed)
- 7.1.4. By March 1, 2022, develop and conduct staff training program on communicating with the public.
- 7.1.5. By March 1, 2022, create and conduct staff training on Springbrook, purchasing procedures, credit card use policy, AP processes, time sheet. Prepare training checklist.
- 7.1.6. By October 2021, establish annual training schedule. (Completed)

PRIORITY AREA 8: Emerging Technologies and Equipment(O)

GOAL 8.1: Explore and evaluate emerging technologies for District use.

- o STRATEGY: Assess new technologies/equipment to enhance efficiency, accuracy, and effectiveness for District use.

- o OBJECTIVES:

- 8.1.1. By June 2019, implement drone use in surveillance. (Completed)
- 8.1.2. By June 2019, complete staff certification and training for drone flights. (Completed)
- 8.1.3. By Summer 2020, utilize drone capabilities for pesticide applications. (Pending regulations) (Completed)
- 8.1.4. By January 2022, evaluate how new technologies can be integrated into outreach events to increase the public's interactive experience.
- 8.1.5. By December 2021, expand IWS (Database Management System) to integrate all department data.

8.1.6. By March 2022, evaluate the effectiveness and cost effectiveness of rovers to conduct underground inspections and treatments and enforcement actions, for potential inclusion in FY22/23 Budget.

8.1.7. By December 2021, evaluate mosquito control using sterile insect techniques (SIT) methods such as *Wolbachia*, irradiated, and genetically modified male mosquitoes.

8.1.8. By December 2021, evaluate flow monitoring and tracking technology.

8.1.11. By December 2021, evaluate current technology and optimize use and training. Including TEAMs project management, scheduling software, and GIS layers of source hotspots.

8.1.12. By December 2021, evaluate replacement for aerial pool vendor

8.1.13. Ongoing, evaluate and implement new data retention, management and IT infrastructure requirement to fit with best practices and/or legal requirements.

PRIORITY AREA 9: Staffing (O)

GOAL 9.1: Assess and address staffing needs/deficiencies and evaluate options for full-time and part-time staffing models that consider current and future demand on services and growth in the county.

- o STRATEGY: Fill current approved positions and conduct staffing study.

- o OBJECTIVES:

 - 9.1.1. By December 2019, initiate and complete hiring of Board approved Seasonal Coordinator and Assistant Vector Ecologist/Vector Ecologist positions. (Completed)

 - 9.1.2. By October 2021, initiate in-house departmental staffing assessment and identify potential departmental reorganization options. (Completed)

GOAL 9.2: Improve staff professional development opportunities.

- o STRATEGY: Develop new programs for staff retention, advancement, and development.

- o OBJECTIVES:

- 9.2.1 By July 2022 (due to COVID19), develop concept for a job shadowing / interdepartmental program to cultivate and train staff for professional opportunities.

- 9.2.2 By July 2022, implement coaching and mentoring program to identify strengths/talents and to improve staff performance.

- 9.2.3 By July 2022, implement comprehensive staff development program that provides regular training opportunities to improve existing skill sets and develop new ones.

GOAL 9.3: Establish succession planning program.

- o STRATEGY: Develop succession program for senior staff.

- o OBJECTIVES:

- 9.3.1. By July 2022, initiate succession process for pending retirements.

PRIORITY AREA 10: Internal Communication (W)

GOAL 10.1: Increase and improve interpersonal and interdepartmental communication.

- o STRATEGY: Increase engagement of staff at all hands meetings and provide more frequent information updates.

- o OBJECTIVES:

- 10.1.1. By August 21, 2018, have a staff member conduct a presentation at each staff meeting (Completed)

- 10.1.2. By January 2019, conduct a safety training at each all-hands meeting (Completed)

- 10.1.3. By January 2022, publish monthly District activity updates.

- 10.1.4. By March 2022, fully integrate content on SharePoint Intranet (including staff training).

- o STRATEGY: Create consistent team building opportunities.
 - 10.2.1. By January 2019, conduct staff team building event. (Completed)
 - 10.2.2. By May 2019, establish a monthly District social to celebrate birthdays (and other notable occasions). (Completed)
 - 10.2.3. By July 2019, initiate practice of regular staff project based working groups to enhance feedback and collaboration. (Completed)
- o STRATEGY: Improve information sharing pathways and create new platforms to share information.
- o OBJECTIVES:
 - 10.3.1. By October 2019, establish a regular staff discussion forum with District Manager in addition to the open-door communication policy. District Manager will invite discussion on a range of suggested topics. (Completed)
 - 10.3.2. By December 2021, establish District policy on written communications i.e., memos, email, text, meeting agendas and minutes and require official guidance/direction/recommendations to be in writing.
 - 10.3.3. By January 2022, rollout District intranet and SharePoint with enhanced features and functionality.
 - 10.3.4. By July 2021, redo District shared computer drive so file sharing is organized and easily searchable. (Completed)
 - 10.3.5. By January 2022, program new feature to visualize data on a map from IWS across all workflows.
 - 10.3.6. By March 2022, onboard all department into IWS data management system (remaining lab, communications, administrative services).

PRIORITY AREA 11: Fiscal Responsibility/Financial

GOAL 11.1: Conduct the Business and Operational Functions of the District in the most cost efficient and effective manner that prioritizes both fiscal and fiduciary responsibility to the residents of Orange County.

- o STRATEGY: Ensure a robust system of financial checks and balances are in place. Review all existing financial controls and processes ensuring fiscal responsibility and strengthen if warranted.

- o OBJECTIVES:

- 11.1.1. By June 30 of each year conduct review of each departmental budget and forecast for future District operational needs.

- 11.1.2 Conduct monthly reconciliation of accounts payable process.

- 11.1.3 Revise by July 2022, Purchasing and Procurement Policy to ensure ongoing compliance with existing laws and regulations.

GOAL 11.2: Remain compliant with GAAP, GFOA, State and Federal Financial Requirements

- O STRATEGY: Demonstrate compliance with all codes and regulations

- o OBJECTIVES:

- 11.2.1. Conduct monthly independent financial review

- 11.2.2. Conduct annual independent financial audit

- 11.2.3. Provide monthly accounting and financial statements

- 11.2.4. Provide quarterly investment report to the Board of Trustees

GOAL 11.3: Improve Finance workflow efficiency.

- O STRATEGY: Improve workflow efficiency through process documentation and scanning.

- o OBJECTIVES:

- 11.3.1. By October 31st, 2021, identify any new finance process that has changed.

- 11.3.2. By December 31st, 2021, document all processes by creating SOPs for finance program.

- 11.3.3. By December 31st, 2021, create and scan in contracts and agreements previously filed in folders.

GOAL 11.4: Increase financial transparency.

- o STRATEGY: Identify financial information to add to the District's website that meets standards for transparency and proper disclosure.

o OBJECTIVES:

11.4.1. By September 30th, 2021, identify, review, and upload financial documents to OCMVCD's website for added transparency. (Completed)

GOAL 11.5: Update District's Finance and Budget policies.

- o STRATEGY: Perform a review of all District's policies relating to finance and budget on an annual basis.

o OBJECTIVES:

11.5.1. By December 31st, 2021, update Investment and Fund policies to align with District's funding status. (Completed)

11.5.2. By December 31st, 2021, ensure District's budget policies align and are compatible with all District operations and other District policies.

PRIORITY AREA 12: Mission Focused Decision Making, Review, and Analysis

GOAL 12.1: Protecting the public from vectors and vector-borne disease and provide services in an environmentally responsible manner

- o STRATEGY: Stay current on the latest industry science, technology, and equipment.

o OBJECTIVES: Ensure continuation of efficient and effective vector control services

12.1.1. Annually, staff participate in learning opportunities, such as, continuing education and conferences to stay current and explore emerging trends.

12.1.2. Annually, staff evaluate and purchase new equipment and upgrade technology, as appropriate.

GOAL 12.2: Periodically review District Values to ensure that values reflect current agency priorities, culture and mission.

- o STRATEGY: Engage staff, management team, and Trustees in District Values assessment

- o OBJECTIVES: Update District Values to reflect how we will achieve the mission

- 12.2.1. By November 30, 2021, Host all staff sessions to listen to input regarding current values statement and shorten to key words

- 12.2.2. By November 30, 2021, Determine 4-5 key values

- 12.2.3. By January 31, 2022, Publish, lead and ingrain values into the culture of the District for the 75th anniversary of the District.

RESOLUTION NO. 517

**A RESOLUTION BY THE BOARD OF TRUSTEES OF THE
ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT**

ADOPTING THE DISTRICT'S STRATEGIC PLAN FOR THE PERIOD 2019-2023

WHEREAS, the staff of the Orange County Mosquito and Vector Control District had spent considerable time assessing the District's various functions, and conducted a Success, Weakness, Opportunities and Threats (SWOT) analysis in late 2017 and into early 2018; and,

WHEREAS, the SWOT provided the basis for the District's Five-Year Strategic Plan; and

WHEREAS, all District employees participated components of the Strategic Plan development; and

WHEREAS, staff conducted a top down review of the Strategic Plan that was adopted in September 2019; and

WHEREAS, the Strategic Plan has been updated and revised; and

WHEREAS, the District's Board of Trustees, and Executive Committee have met and discussed the Strategic Plan.

NOW, THEREFORE, the Board of Trustees does hereby RESOLVE and DETERMINE as follows:

Section 1. That the Board of Trustees adopts Resolution No. 517 adopting the District's updated Five-Year 2019-2023 Strategic Plan, which is attached and made a part of this Resolution.

PASSED, APPROVED, and ADOPTED by the Board of Trustees of the Orange County Mosquito and Vector Control District at its regular meeting thereof held on the 16th day of December 2021, at 13001 Garden Grove Blvd., Garden Grove, California, 92843.

PASSED, APPROVED, and ADOPTED by the Board of Trustees of the Orange County Mosquito and Vector Control District at its regular meeting thereof held on the 16th day of December 2021, at 13001 Garden Grove Blvd., Garden Grove, California, 92843.

Michael Posey, President

I hereby certify that the foregoing Resolution was duly adopted by the Board of Trustees of the Orange County Mosquito and Vector Control District at a regularly scheduled meeting, held on December 16, 2021: APPROVED AS TO FORM:

Peggy Huang, Secretary

Alan R. Burns, District Counsel



ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT

November 18, 2021

AGENDA REPORT

AGENDA ITEM I.4

Prepared By: Tawnia Pett, Executive Assistant/Clerk of the Board
Submitted By: Rick Howard, District Manager

Agenda Title:

Trustee Terms of Office to Expire on January 3, 2022 at 11:59 A.M.

Recommended Action:

Receive and file.

Executive Summary:

The following Trustees' terms of office will expire on January 3, 2022 at 11:59 A.M.

Bolded City/County has appointed a representative:

Trustee Representative	Governing Body	Date of Communication
Lucille Kring	Anaheim	December 21, 2021
Jon Peat	Cypress	December 13, 2021
Cheryl Brothers	Fountain Valley	December 21, 2021
Nicholas Dunlap	Fullerton	
Mike Posey	Huntington Beach	December 21, 2021
Tammy Kim	Irvine	January 11, 2022
Nitesh Patel	La Palma	January 18, 2022
Erica Pezold	Laguna Hills	December 14, 2021
Tanya Doby	Los Alamitos	December 13, 2021
Bob Ruesch	Mission Viejo	January 11, 2022
Mike Alvarez	Orange	January 11, 2022
Steve Knoblock	San Clemente	November 16, 2022 2 Years
Crystal Miles	Villa Park	January 25, 2022

Previous Relevant Board Actions for This Item:



ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT

December 16, 2021

AGENDA REPORT

AGENDA ITEM: I.5

Prepared By: Tina Pacific, Human Resources Manager
Submitted By: Rick Howard, District Manager

Agenda Title:

Recognize District Employees Years of Service

Recommended Action:

Recognize District Employees Years of Service

Executive Summary:

Every year, the District acknowledges employees' years of service. The District congratulates the following employees for bringing their skills and dedication to fulfill the mission of the District:

Richard Howard, District Manager	5 Years of Service
Nathan Dingman, Vector Control Inspector II	5 Years of Service
Francisco Garcia, Vector Control Inspector II	5 Years of Service
Hector Gonzalez, Vector Control Inspector II	5 Years of Service
Hester Petropoulos, Education Coordinator	5 Years of Service
Roland Bausa, Vector Control Inspector II	5 Years of Service
Roland Jen, Urban Water Program Manager	5 Years of Service
Sokanary Sun, Assistant Vector Ecologist	5 Years of Service
John Savage, Vector Control Inspector II	10 Years of Service
Simon Delira, Facilities Maintenance Technician	15 Years of Service
Amber Semrow, Director of Scientific and Technical Services	15 Years of Service
David Miller, Fleet and Equipment Maintenance Coordinator	15 Years of Service
Todd Harries, Vector Control Inspector II	20 Years of Service
Carlos Martinez, Vector Control Inspector III	25 Years of Service

Fiscal Impact:

Amount Requested \$ N/A
Sufficient Budgeted Funds Available:
Category: Pers. Optg. Cap. –or– CIP# Fund#

Previous Relevant Board Actions for This Item:

Exhibits:

Vector of the Month, Tropical Rat Mite



Mites are very small arthropods that usually need to be viewed under a microscope. Some mites serve as parasites to vertebrates, but most feed on plants, or feed/attack other arthropods. Without their normal hosts, the tropical rat mite, the northern fowl mite, and tropical fowl mite, will feed on humans.

The tropical rat mite (*Ornithonyssus bacoti*) is a parasite of roof rats (*Rattus rattus*) and Norway rats (*Rattus norvegicus*), which are commensal rodent species found in association with humans and living accommodations worldwide. Many collection records are known of *O. bacoti* from a wide variety of mammals including numerous ones from wild rodents and also a few from squirrels species, rabbits, skunks, and foxes. When these primary hosts are absent, *O. bacoti* will migrate into living areas or structures to feed on human or animal hosts. They can crawl long distances to secure a blood meal.

Mites locate potential hosts by seeking out carbon dioxide (result of respiration) and heat, therefore making them drawn to areas with greatest human activity, such as kitchens, work areas, family rooms, and bedrooms. They are also attracted to frequently used furniture (sofas, beds, etc.) and will bite occupants as they sleep.

One must get rid of rat infestations in order to rid of the tropical rate mites. Rats should be controlled with snap traps and glue boards if indoors. Be aware that killing rats may increase mite activity, since they will search for other hosts.

Look for areas of rodent activity and remove any stored food caches, fecal pellets, and nesting material (which can be found behind large objects, inside old furniture, storage boxes lined with any soft material like shredded paper, rags, insulation, old clothing, or furniture stuffing). Wear plastic gloves and a dust mask to prevent inhaling dust contaminated with feces or urine. Before disposing of the material in a plastic bag, spray the area lightly with a disinfectant (Lysol) and gather up the materials with disposable paper towels. Seal the bag tightly and throw it away in the trash.

Mites in carpet and furniture can be vacuumed. Pesticide room foggers can be used to temporarily control mites on exposed surfaces. Be sure to follow pesticide label directions. In a bedroom, remove all lines, vacuum the mattress, and cover it with a sheet, use a fogger (pesticide), and wash the sheets, and then replace the sheet that covered the mattress. Once treatment is complete, the room can be safely entered.

Detecting and Controlling Biting Mites Within Structures

By: Andrew Mason Sutherland ,Published on: December 17, 2020Most pest management professionals have served clients who swore they were being bitten by unseen pests. Perhaps the usual suspects (bed bugs, fleas, and mosquitoes) were ruled out by thorough inspection and monitoring devices. But what about mites? There are several species of mites known to bite humans within homes and other structures, many times causing significant physical symptoms and psychological distress. Clients can easily fall prey to misinformation online when learning about these tiny pests, however, so be prepared to educate them and help them solve their problem.



Figure 1. Adult tropical rat mite. (Credit: Jack Kelly Clark)

In all cases, biting mites found indoors are blood-sucking nest parasites of other animals living nearby, especially rodents or birds. The most common species in California, the tropical rat mite (*Ornithonyssus bacoti*) (Figure 1), is often associated with the nests and runways of roof rats and other commensal rodents. Also common are northern fowl mites (*Ornithonyssus sylviarum*), known to inhabit nests of commensal birds, such as pigeons, starlings, sparrows, and swallows. Less common but perhaps increasing in prevalence is the chicken mite or red mite (*Dermanyssus gallinae*).

All three of these common species will take blood meals from humans, especially if their primary hosts have been controlled, removed, or have migrated away. For instance, successful rat control programs (Figure 2) may result in hundreds of starving rat mites wandering nearby areas in search of blood. If rats were nesting in wall voids, attics, subareas, or living spaces, then there is a good chance the resident rat mites will be attracted to the humans in the structure when the rats are no longer around.

A similar phenomenon occurs when migratory birds leave nests in autumn if nests are situated in window alcoves, eaves, or other areas abutting a living space. With the rise in popularity of backyard chickens (Figure 3), primary hosts for both northern fowl mites and chicken mites, problems can occur when coops are adjacent to walls of the home or near windows or exterior doors. Mite populations associated with chickens reportedly peak and are most likely to affect humans in spring and summer, while rat mite issues tend to be most common in late summer and autumn. Problems can occur any time of year, of course, when the primary host has been removed.

Detecting Mites



Figure 2. Roof rat captured in live trap. (Credit: N Quinn)

Mites may become trapped on sticky traps and glue boards placed at floor-to-wall junctions and in corners; look at the edges of the glue deposit on these traps with a 10X hand lens. Another detection trick is to use double-sided tape. With the client's permission and guidance, apply double-sided tape to walls and furniture legs near areas where bites have occurred; wandering mites may become stuck on the edge of the tape. Sticky traps and tape may not preserve mites well enough for positive identification, but they can confirm that mites are present and may be responsible for the bites.

Such monitoring tools can also give clues as to where the nest of the primary host is or was. In multi-unit housing situations, the source of these wandering mites may be in adjacent units, the hallway, stairwells, or utility areas. In single-family homes, the source may even be outside, such as a bird or rat nest in the landscape. Tropical rat mites are known to travel along pipes, utility wires, tree branches, fencing, and exteriors of structures to find new hosts.

Identifying Mites

The best way to confirm a biting mite issue is to capture a specimen. Though very small (about 1/16 inch (1.5 mm) or less in diameter), all three common species can be observed without magnification. Mites may be yellowish or whitish before feeding but will be dark red when engorged with blood. Ask the client about areas of the home where bites are most common. When active, mites may be seen crawling on walls, floors, or furniture. For positive identification, mites should be captured alive and preserved in rubbing (isopropyl) alcohol or ethanol (at least 70%). This can be accomplished with the help of a fine wet paintbrush and a ready vial of alcohol.

Identification to species requires clearing and slide mounting of the specimen and close examination by an acarologist (mite specialist). Some county vector control programs can identify mite specimens and some entomologists can prepare and photograph specimens, but there are few acarologists in California who may be able to provide identification services. Be prepared for such positive identification to take a week or longer.

Managing Mites

Once mites have been confirmed, management should focus on removal of the primary hosts and their nests. Humans are incidental hosts and are not known to support reproducing populations of *Ornithonyssus* and *Dermanyssus*. That means that, in theory, once the rat or bird hosts have been eliminated from the structure, the mites will slowly die. Depending on temperature, season, and mite life stage, however, this could take weeks. Some experts report that tropical rat mites can survive without primary hosts for six weeks or longer, feeding incidentally on humans and their pets that entire time, often causing red itchy welts.



Figure 3. Backyard chickens can be a source of biting mites. (Credit: J Ersan)

If the source of the mites is known, exclusion services can be offered to seal the pest's access points. Regular vacuuming and surface cleaning will remove or kill wandering mites and so should be recommended to your client or provided as part of your service. Also, pulling beds away from the walls can be very effective. As soft-bodied arthropods, mites are vulnerable to contact insecticides such as soaps and oils, but these products may not be labeled for indoor use and may damage wall coverings, flooring, and other furnishings. Some professionals have had success with essential oil products and even claim they provide short term repellency, but research has not been conducted to confirm these observations.

Residual insecticides, especially pyrethroids, may be effective against mites, and some are labeled for use indoors. Such products should be applied between suspected mite sources and areas where bites occur, in narrow bands on surfaces unlikely to be touched by residents. Insecticides will not solve a biting mite problem if the primary hosts are still present. In all cases, refer to product labels to ensure legal application site, method, and rate, and to prevent damage to furnishings.

Biting mites may be more common than we realize, escaping detection due to their small size and their cryptic habits. Much research still needs to be done to better understand the biology and ecology of these pests as well as to develop effective monitoring and management tools. Sometimes, mites cannot be detected, and rodents and birds are seemingly not present, but your client's dermal symptoms ("bites") persist. In such cases, it may be prudent to consider other causes of dermatitis, such as environmental irritants, reactions to medications or drugs, stress, some medical conditions, or even delusional infestation (aka delusory parasitosis), a psychiatric condition.



Orange County Mosquito and Vector Control District

A Public Health Agency Serving Orange County Since 1947

Conference and Meeting Report

Staff of the Orange County Mosquito and Vector Control District and its Board of Directors attend a variety of educational seminars, conferences and symposia annually. This report provides a brief summary of the event attended, and the organizational value of that attendance to the District.

Staff Name and Title: Sokanary Sun, Assistant Vector Ecologist

Name of Conference/Event: Society of Vector Ecology (SOVE) Annual Meeting 2021

Date: September 16-17, 2021 (Presentations Archived Until September 2022)

Location: Virtual Meeting (Garden Grove, CA)

SOVE is like MVCAC and AMCA, except it mainly focuses on the vector ecology and science of disease spread. SOVE is nationwide and incorporates some collaborators around the world. This conference also extends beyond the focus of mosquitoes as vectors, including other arthropods such as sand flies, biting midges, ticks, kissing bugs, and nematodes. This technical conference is imperative to scientists sharing ongoing research, using data to implement disease mitigation methods, and possibly reduce/control vector abundance.

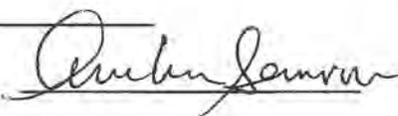
One highlight from the Plenary Session on day one was a presentation from Dr. Brian Bird from the UC Davis One Health Institute, focusing on pathways for disease emergence. Diseases can spread from animal to human spill over, from human to human, and then can spread internationally with the help of international travel and trade markets. Diseases he covered included Ebola Viruses and Rift Valley Fever.

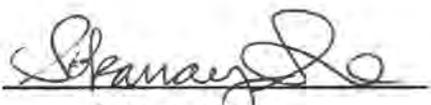
Day one also consisted of three other symposia, covering diseases vectored by ticks, kissing bugs, and biting flies. From the tick symposium, one presentation (by Dr. Denise Bonilla) surveyed the host preferences and expansion of the Asian Longhorned Tick, an invasive species native to Eastern Asia. Since introduction into the US in 2017. These ticks can reproduce without mating, adding complications to reduce their infestation. Dr. Bonilla also investigated acaricides/treatments possible to control for these ticks.

Day two consisted of four symposia, and of the four, two stood out to me. One of them was the student symposia, and the other focused research regarding the invasive *Aedes* mosquitoes. From the student symposium, the research done by PhD candidate, Krithika Venkataraman, focused on studying two genes in *Aedes aegypti* that allowed the species to adapt to drought conditions. She found that without those two genes, *Aedes aegypti* eggs had impaired embryonation and were less likely to hatch in drought (dry) conditions compared to *Aedes aegypti* in non-drought conditions. This is significant because this knowledge and tool may be

incorporated for future abundance reduction/and or control methods, especially since California has been suffering from drought conditions. From the other symposium (research focused on invasive *Aedes*), Dr. Casey Parker Crockett looked at insecticide resistance trends in this species in Florida. Even though this research is based in a different state, this data may serve parallels for the same species in southern California. In the short time frame that they have been established, the local Orange County, California *Aedes aegypti* population has already developed some level of pesticide resistance to certain chemicals. With that said, pesticide resistance research needs to be ongoing for OCMVCD to prevent pesticide resistance through use of product/chemical rotation, as well as test new products that come into the market. The District needs to ensure that what gets put out there is effective.

Date: 11/12/21

Dept Mgr Signature: 

Signed: 

Print Name: Sokanary Sun



Orange County Mosquito and Vector Control District

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Conference and Meeting Report

Staff of the Orange County Mosquito and Vector Control District and its Board of Directors attend a variety of educational seminars, conferences and symposia annually. This report provides a brief summary of the event attended, and the organizational value of that attendance to the District.

Staff Name and Title: Laura Krueger, Vector Ecologist

Name of Conference/Event: Society of Vector Ecology, Virtual Conference

Date: September 16 & 17, 2021

Location: Virtual Meeting

The SOVE Virtual Conference provided many topics that impact Orange County rate payers. It was interesting to see how much advance has been made through the sequencing of 20 mosquito species genomes allowing for development of novel control mechanisms for species of interest around the world. Much focus has been placed on challenges for *Aedes aegypti* control and how SIT and gene driven control dynamics are the future for control of the cryptic species.

The warm Mediterranean climate in Orange County allows for establishment and proliferation of invasive arthropods. I enjoyed the update on the biology and distribution of the Asian Long-horn tick in the United States. Although not yet detected in California or Orange County, it will likely be detected in the future and an issue for domestic and companion animals.

Orange County is home to the Kissing Bug, *Triatoma protracta*. One of the presentations focused on the emerging Chagas disease vectors and entomologic aspects of concern. Orange County residents are already negatively impacted by *T. protracta* and it is possible that Chagas disease may be detected here in the future.

This conference had a virtual poster session highlighting scientific research on vectors from across the world. Many of the vectors highlighted are note currently found in Orange County, but may establish here in the future. Dynamic climate change is contributing to the expansion in home range of the American dog tick, mosquito species, and the Chagas disease vectors.

Date: 12/3/21

Signed: Laura Krueger

Dept Mgr Signature: *Laura Krueger* Print Name: Laura Krueger



Orange County Mosquito and Vector Control District

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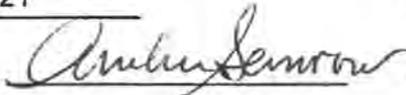
Conference and Meeting Report

Staff Name and Title: Kiet Nguyen, Vector Ecologist
Name of Conference/Event: 2021 Virtual SOVE meeting
Date: September 16, 2021, 8:00 AM – September 17, 2021
Location: 2021 Virtual SOVE meeting

Due to social distancing restrictions, the SOVE conference was held virtually this year. The SOVE committee put together a professional format using a virtual conference platform from Notified™ web services. The two-day conference consisted of 8 symposia ranging from invasive *Aedes* mosquito surveillance, Chagas disease research, and invasive tick surveillance. The conference scheduling, efficient flow, and easy to navigate platform were the technical highlights of this event. The navigability of the symposiums made this conference easy to digest, compared to other conferences.

The symposium on invasive *Aedes* mosquitoes highlighted progress on development of sterile insect technique (SIT) technology and potential wide area control. Dr. Steven Su moderated the group of mosquito researchers, and vector biologists with updates on current technologies and surveillance. Rui-De Xue reported great reduction in abundance from Florida, using SIT on *Ae. aegypti*. Jennifer Henke also gave her report on positive control measures using aerial wide area larviciding and truck mounted wide area larviciding. Our district was represented by Chlore Wang, who gave her report of the suitability of underground storm drains as habitat for *Ae. aegypti* and *Ae. albopictus*.

Finally, the symposium on Tick-borne diseases was moderated by Ben Beard of the CDC's Division of Vector Borne Diseases. Speaker's talks ranged from updates of the Longhorn tick invasion and spread to mapping Lyme disease hotspots. Denise Bonilla from the USDA updated the westward expansion of the Asian Longhorn tick (*H. longicornis*). Her report touched on their ability to vector certain pathogens, and their new westward detections towards Missouri and Arkansas. James Burtis followed by presenting a risk map and habitat suitability modeling of the Lyme disease vector *I. scapularis* and *I. pacificus*. His modeling showed increasing risk areas based on climate predictor variables. They used a General Linear Model to designate counties as suitable or non-suitable for disease transmission.

Date: 11/22/2021 Signed: Kiet Nguyen
Dept Mgr Signature:  Print Name: Kiet Nguyen



Orange County Mosquito and Vector Control District

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Conference and Meeting Report

Staff of the Orange County Mosquito and Vector Control District and its Board of Directors attend a variety of educational seminars, conferences and symposia annually. This report provides a brief summary of the event attended, and the organizational value of that attendance to the District.

Staff Name and Title: Timothy Morgan, Vector Ecologist

Name of Conference/Event: Society of Vector Ecology

Date: September 16 & 17, 2021

Location: Virtual

The Society of Vector Ecology (SOVE) held its annual international meeting virtually in 2021 which I was able to view and take notes on some issues associated with vector-borne diseases that are now and may someday be a public health threat to people in Orange County.

Several symposia were focused on topics that are at the forefront of concern for the Orange County Mosquito and Vector Control District (OCMVCD), namely, the control of invasive *Aedes* mosquitoes. One of the invasive species is an aggressive human biting species, *Aedes aegypti*, which continues to expand across California at alarming rates and poses an increasing human health risk as time passes. This species is well suited to spread infectious agents that cause diseases that have never been transmitted from mosquitoes to humans here in southern California. Presentations on *Aedes aegypti* included attempts to eradicate them from certain counties when they were detected for the first time; these efforts were unsuccessful, forcing eradication efforts into suppression efforts at best.

Genetic analysis of *Aedes aegypti* across California suggests that multiple independent introductions have occurred across the state in short periods of time and the origins of these introductions have been variable. This suggests that even though some efforts to eliminate the species have been made during initial invasion, regardless of the efficacy of such efforts, areas will continue to have re-introductions which will repopulate areas rapidly. It only took five years for *Aedes aegypti* to occupy every city in Orange County; the species is here to stay for now.

Novel mosquito control techniques are currently being developed, including genetically modified mosquitoes used to suppress or eliminate target populations. Different types of GM mosquitoes are currently being researched and one promising technique shared at the conference involves the rearranging of genes that are currently in the mosquitoes' genome. These modifications would not introduce novel genes but use what is already present, just change the order or

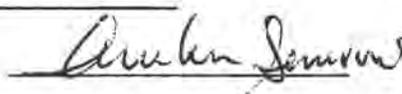
increase the numbers of genes of interest. This would enhance the production of certain proteins that improve the mosquito's innate immune response. These gene edited mosquitoes show promise of resisting infection by a handful of very important and potentially emerging pathogens in the USA, including Zika, dengue, chikungunya, and yellow fever. The state-of-the-art molecular techniques used to modify the mosquito's genome represent the future of innovative control strategies that may be responsible for designing the next best treatment for the suite of invasive *Aedes* mosquitoes already calling California their new home. Supplementing or even replacing pesticide control with bio-engineered mosquitoes are shaping up to be the future of mosquito control, but require rigorous testing and scrutiny, and public acceptance, which takes ample time.

Besides invasive mosquitoes, global climate change is facilitating the spread and success of other invasive arthropods that have the potential to greatly impact human health in new areas. Southern California is in an area projected to soon be able to support additional invasive species. One presentation highlighted the movement of an invasive tick that has the potential to spread disease to humans and is currently expanding through new environments in mid and eastern US. In addition to the increase in successful invasions by non-native species, certain important native ticks that vector Lyme and other important disease-causing agents are moving northwards in the US as the climate becomes more favorable in the northern latitudes. The average increase in temperature is not just favoring arthropod range expansions but enhancing viral and bacterial replication in vectors. The seasonal duration of favorable climatic conditions for the survival of some infectious agents is increasing in areas where vector-borne disease is already present, making some situations more precarious.

As we see new invasions of arthropods that pose potentially significant public health threats continue, research on enhancing surveillance techniques through improved trapping tools and methods and improved control strategies and tools becomes extremely important on an international and very local level. We continue to explore, test and use up to date and innovative approaches to surveil and control native and invasive species here at OCMVCD.

Date: 12-1-2021

Signed: 

Dept Mgr Signature: 

Print Name: Amber Semrow



Orange County Mosquito and Vector Control District

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Conference and Meeting Report

Staff of the Orange County Mosquito and Vector Control District and its Board of Directors attend a variety of educational seminars, conferences and symposia annually. This report provides a brief summary of the event attended, and the organizational value of that attendance to the District.

Staff Name and Title: Daisy Rangel, Microbiologist

Name of Conference/Event: 2021 Society for Vector Ecology – Virtual Meeting

Date: 09/16/2021 and 09/17/2021

Location: Online

Attending the SOVE (Society for Vector Ecology) meeting online this year was a great opportunity to learn about the latest research in the ecology and biology of mosquitoes and other vectors of public health importance. From the poster sessions, I learned about the reproductive biology of male and female *Aedes aegypti* mosquitoes, vector capacity of *Aedes albopictus*, improved design of traps for mosquitoes in aquatic habitats, cold hardiness of the American Dog tick *Dermacentor variabilis* that allows it to overwinter successfully, detecting the presence of insecticide resistant alleles in the *Anopheles minimus* mosquito responsible for transmitting malaria, the feeding behaviors of triatomines, or kissing bugs, that can cause Chagas disease, and the effects of cannibalism within *Aedes albopictus* mosquitoes. There were also many great talks covering a wide array of topics such as invasive *Aedes* species which our very own Research Associate, Chloe Wang, presented on the *Aedes* mosquitoes preferred habitats in Orange County, work that she performed here at the OCMVCD in collaboration with the University of California, Irvine. I also learned about genome research and its applications to vector biology and control. Of interest, I learned that we have at our disposition the full sequence genomes of over 20 mosquito species, this information is important for us here at OCMVCD to pursue more genetic studies that can help us understand genetic components linked to insecticide resistance among other research projects of interest. Another talk of great interest for the OCMVCD was that given by Casey Parker from the University of Florida, where she focused on the status of resistance in mosquitoes in her region. Casey reported that the two classes available for public health wide application use fall under pyrethroids (group 3A) and organophosphates (group 1B) as classified by the Insecticide Resistance Action Committee. Since there are only two groups of insecticides, it is important to establish the baseline insecticide susceptibility screening of mosquitoes. Following her recommendations, we can plan to coordinate a large study to investigate the mosquitoes in Orange County and perform a similar study to investigate the level of resistance in our region.

Date: 09/17/2021

Signed: _____

Dept Mgr Signature: _____

Print Name: _____

Daisy Rangel
Daisy Rangel



Orange County Mosquito and Vector Control District

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Conference and Meeting Report

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Staff Name and Title: Amber Semrow

Name of Conference/Event: Society of Vector Ecology

Date: September 16 – 17, 2021

Location: Virtual

The Society for Vector Ecology (SOVE) hosted a virtual conference for 2021. It was a great opportunity to learn about many topics in vector ecology conveniently in the virtual format.

Challenges and opportunities to combat invasive *Aedes* mosquitoes was a major focus of talks that explored strategies for addressing invasive *Aedes* mosquitoes. This symposium featured speakers from across the country who discussed sterile insect technique (SIT), spray programs, insecticide resistance, and community engagement. They offered background on the spread of invasive *Aedes* in Florida, Texas, and California and highlighted how some programs are showing promising results from strategies used.

The talks that explored genome research applied to vector biology and control highlighted fascinating advances. The full genomes of over 20 mosquito species have now been sequenced starting with *Anopheles gambiae* back in 2002. Researchers have used this technology to identify origins of populations which informs us about how and when they arrived in various locations in California and which populations may be more resistance to certain pesticides. These advances have also allowed for novel control strategies like the use of genetically modified mosquitoes.

Other symposiums covered topics that included Chagas disease, tick-borne diseases, sand flies, and biting flies.

Date: 12/1/21

Signed: Amber Semrow

Print Name: Amber Semrow



Orange County Mosquito and Vector Control District

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Conference and Meeting Report

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Staff Name and Title: Sokanary Sun

Name of Conference/Event: Entomological Society of America (ESA) Annual Meeting 2021

Date: October 31-November 3, 2021 (Presentations Archived Until February 2022)

Location: Virtual Meeting (Garden Grove, CA)

The ESA is the largest organization in the world that serves entomologists (scientists and individuals who study insects and related entities). The annual meeting allows 3,500 individuals to share research regarding arthropods and relatives, including vectors and their diseases. The virtual portion of this conference, alone, offers over 400 symposia presentations. Entomologic studies and discussions are essential. Due to climate change, invasive insects are crossing over into higher latitudes than they normally would and are thriving in areas that they previously wouldn't be able to. Thus, increasing risk of emerging diseases in new locations.

One example of an invasive species crossing over into new territory is the spotted lanternfly, *Lycorma delicatula*. This planthopper species originated from parts of China, India, and Vietnam, but has spread into Japan, South Korea, and was first detected in Pennsylvania in 2014. It has since spread to 9 additional eastern US states. So far, the California Department of Food and Agriculture (CDFA) intercepted dead eggs, nymphs, and adults from air cargo flights and at the Us-Mexico border. However, their potential distribution could expand and change to include California. The spotted lantern fly is detrimental to host plants by directly feeding on plant sap, as well as secreting waste onto plants that can attract mold. If the spotted lanternfly invades California, it puts agricultural crops, such as kiwi berry, raspberry, peach, cucumber, hops, and grapevine, at greater risk for damage, disease, and/or death.

Presentations covering the topic of mosquitoes that came to mind, include a study in Iowa that wanted to see if diapause of *Culex pipiens* (Northern House Mosquito) is the reason for the end season West Nile Virus trend (populations gradually decline into October). The study found that, diapause (hibernation or overwintering state) of this species is characterized by arrested ovarian development, and that diapause is triggered by environmental factors, such as temperature. This trend held true when comparing trapping data across the US. This information has important timing implications for mosquito abundance suppression and breaking disease transmission cycles. Another presentation conducted a semi-field trial evaluating In2Care traps

for control of *Culex quinquefasciatus*. In short, the In2Care traps seemed to reduce larval mosquitoes in the study. However, the study was conducted with tents, preventing the immigration of outside mosquitoes from sources outside the study area from entering the study area. This means that, if applied in the field, there is nothing preventing mosquitoes from outside the treated area to immigrate into the treated area, not necessarily reducing abundance. One study looked at thymol-selected *Aedes aegypti*, and found that a higher percentage of them would take the first blood meal, lay more eggs, and blood feeding decreases their longevity, as compared to controls.

One last honorable mention is a study from Kerrville, Texas that explored the microbiome of screwworms, and how that affected them in terms of mass rearing for use of sterile insect technique (SIT). This can have major implications on how microbiomes can impact specific strains of the same species, such as fitness or ability to survive. Since our District would like to take part in SIT (specifically x-ray irradiation), learning about the impact of the microbiome of *Aedes aegypti* can help us learn how to improve their competitive fitness, which in turn will improve our ability to mass rear them.

Date: 11/30/21

Signed: _____

Dept Mgr Signature: _____

Print Name: _____

Sokanang Sun



Orange County Mosquito and Vector Control District

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Conference and Meeting Report

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Date: 11/30/21

Signed: _____

Dept Mgr Signature: _____

Print Name: _____

Sokanang Sun



Orange County Mosquito and Vector Control District

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Conference and Meeting Report

Staff of the Orange County Mosquito and Vector Control District and its Board of Directors attend a variety of educational seminars, conferences and symposia annually. This report provides a brief summary of the event attended, and the organizational value of that attendance to the District.

Staff Name and Title: TINA PACIFIC, HUMAN RESOURCES MANAGER

Name of Conference/Event: CALPELRA

Date: NOVEMBER 16 – 19, 2021

Location: MONTEREY, CA

Attended the Annual CA Public Employers Labor Relations Association Annual Conference that included two and a half days of Human Resources and Labor Relations presentations and breakout sessions outlined below.

- Keynote Address – Coloring Outside the Lines: From Diversity Compliance to Workplace Transformance: the speaker addressed the business case for diversity in the workplace and spoke about seeing things in a different way to look at Diversity, Equity and Inclusion. As a Sr. Client Strategist and “Radical Inclusionist” she explained the science behind developing solutions and strategies for public sector employees to not just be compliant, but transform the workplace in regards to DEI thinking.
- A Spectrum of Change: Regulations, Leaves and Vaccines... Oh My! – This session covered the history of COVID-19 regulations, leaves and vaccines. The speakers asked for audience participation and ended with the future in regards to vaccine mandates, etc.
- Somewhere Over the Rainbow: Legal Lessons Learned from the COVID-19 Pandemic – Presenters went over lawsuits and policies relating to all things COVID-19. From leaves, to discrimination to vaccines, etc.
- When All You See is Red, Empathy Fatigue in a Post Pandemic World – Presenters reviewed the signs of empathy fatigue and the importance of recognizing factors in your workforce (or yourself) and how to manage/treat it.
- Labor Relations Game Show – Hosted by LCW Attorneys this session went over several new regulations/laws - we discussed scenarios and cases. Fun interactive session.
- Legal Strategies 2021 – This general session included several speakers and topics to update attendees on regulations/laws and legal compliance that went into effect recently or are new for 2022.

- Roll Up Your Sleeves and Get Messy. The Everyday Work of Inclusion – Hosted by HR professionals and an attorney this session was enlightening about the tough work and importance of inclusion of minorities in the workforce - Particularly for People of Color, Women and those with Disabilities. The presenters offered real-world examples of techniques that assist in achieving your
- Managing Psychological Disabilities in a Post-COVID Era – This was a great session with many take aways the most important being to pay attention to what is going on with employees in regards to their mental health and utilize the Employee Assistance Program to help them and other resources available. Another great takeaway was that HR Professionals have been through a lot through COVID and that we need to concentrate on taking care of ourselves
- Save the Drama – Managing Challenging Employees and Behaviors - this session covered politics in the workplace, consensual employee relationships, difficult supervisors, gossip at work, bullying and chronic absenteeism. The presenters cited legal cases and advised on where agencies might want to take a look at certain policies to ensure legal compliance.

In addition to the above listed presentations and breakout sessions, this conference offered opportunities to interact with many other agencies and HR Professionals to help build a lasting network of resources to lean on. I am grateful for the District allowing me to attend this valuable conference.

Date: 11/29/2021

Signed: 

Print Name: TINA PACIFIC



Orange County

Mosquito and Vector Control District

A Public Health Agency Serving Orange County Since 1947

Conference and Meeting Report

Staff of the Orange County Mosquito and Vector Control District and its Board of Directors attend a variety of educational seminars, conferences and symposia annually. This report provides a brief summary of the event attended, and the organizational value of that attendance to the District.

Staff Name and Title: Liz Escobar, Human Resources Specialist

Name of Conference/Event: 2021 CALPELRA

Date: NOVEMBER 16 – 19, 2021

Location: MONTEREY, CA

The 2021 Annual CA Public Employers Labor Relations Association Annual Conference provided great insight and guidance with navigating the unique set of challenges facing the workforce culture today. There was extensive training in labor relations, personnel management, and professional development throughout the conference.

I had the pleasure to attend several breakout sessions, below are a few I have summarized:

Keynote- Coloring Outside the Lines: From Diversity Compliance to Workplace Transformance

In the keynote presentation, our speaker Janet Stovall really challenged us to find the real meaning of the word “diversity”. Encouraging us to move from diversity compliance and embrace workplace transformance, while understanding the value and importance of racial diversity in the workplace.

The Interactive Process Top 10 Rules of Thumb: Tips and Strategies to Better Accommodate Medical Restrictions

The basics of an interactive process needed when handling disability accommodations was discussed in depth in this session. The 10 essential rules such as, individual process, showing empathy, legal and analysis separation, along with other tips were provided to ensure we, as an agency, are lawfully accommodating.

Can't We All Just get Along? Conflict Resolution Techniques to Build Consensus, Regain Civility, and Foster a Positive Workplace Culture.

This session couldn't be more relevant, especially during these difficult times. We learned different techniques to deescalate workplace conflicts which tend to escalate unnecessarily. One

technique that was discussed was neutral mediation. A key take-away is that most of the time by simply being more available and open to facilitate, an internal neutral mediation will provide more answers. This in return will improve the workplace morale, productivity, and culture.

Mental Health Accommodations: Real- Life Strategies You Can Implement to Help your Employees Succeed, and Avoid Litigation

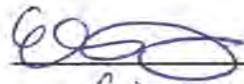
Timing is everything when it comes to accommodations, this session provided tips in recognizing cues when an employee needs an accommodation. Mental health is often overlooked in the workplace, and a lot of the times employees are too afraid to ask for help. It is our obligation as employers to recognize when an accommodation is needed, when and how to engage in the interactive process and select the appropriate accommodation.

Unlocking the Evidence Conducting Effective Investigate Interviews

This session highlighted the importance of a good interview. A good interview reveals information needed to assess an issue properly and is a central piece of every workplace investigation. In this session we learned how to prepare for an interview, different types of introductory questions, and the use of the “funnel method” to gather relevant evidence.

In summary, this conference was a wonderful opportunity to interact with other public agencies throughout California. Attending this conference has been very rewarding and has contributed to my professional and personal development. I am very grateful the District has provided me with the chance to be part of this wonderful event.

Date: 11/30/2021
Dept Mgr Signature: 

Signed: 
Print Name: Elizabeth Escobar

“This agenda shall be made available upon request in alternative formats to persons with a disability, as required by the American with Disabilities Act of 1990 (42 U.S.C. § 12132) and the Ralph M. Brown Act (California Government Code § 54954.2). Persons requesting a disability related modification or accommodation in order to participate in the meeting should contact the Orange County Mosquito and Vector Control District at (714-971-2421), during regular business hours, at least twenty-four hours prior to the time of the meeting.”

"Materials related to an item on the Agenda submitted after distribution of the agenda packet are available for public inspection in the District Office located at Orange County Mosquito and Vector Control District offices, 13001 Garden Grove Blvd., Garden Grove, CA 92843 during normal business hours."