



**REVISED BOARD MEETING NOTICE AND AGENDA**

March 12, 2020  
9:00 A.M.

Department of Consumer Affairs  
Hearing Room  
2005 Evergreen Street  
Sacramento, CA 95815

Contact Person: Susan Saylor  
916-561-8700

**REVISED AGENDA**

- I. Roll Call / Establishment of Quorum
- II. Flag Salute / Pledge of Allegiance
- III. Public Comment for Items Not on the Agenda  
*The Board may not discuss or take action on any matter raised during this public comment section that is not included on this agenda, except to decide whether to place the matter on the agenda of a future meeting. [Government Code Sections 11125, 11125.7(a)]*
- IV. Petition for Reinstatement  
Andy Alfonso Bastien — OPR 11417 — Branch 3
- V. Petition for Reinstatement  
Christopher J. Craig — FR 51975 — Branch 2
- VI. Closed Session - Pursuant to Subdivision (c)(3) of Section 11126 of the Government Code the Board Will Meet in Closed Session to Consider Reinstatements, Proposed Disciplinary Actions, and Stipulated Settlements

**Reconvene in Open Session**

- VII. Review and Approval of Minutes of the October 23 & 24, 2019 Board Meeting
- VIII. Department of Consumer Affairs (DCA) Update Which May Include Updates on DCA's Administrative Services, Human Resources, Enforcement, Information Technology, Communications and Outreach, and Legislative, Regulatory, or Policy Matters
- IX. Department of Pesticide Regulation (DPR) Update Which May Include General Updates on DPR's Administration, Cooperative Enforcement With SPCB and County Agricultural Commissioners, and Pertinent Legislation, Regulation, or Policy Topics

- X. Presentation and Discussion on School Pesticide Use Data
- XI. Discussion and Possible Action on the Structural Pest Control Board's Compliance With U.S. Environmental Protection Agency Pesticide Applicator Regulations
- XII. Business Modernization Plan Update by Office of Information Services
- XIII. Executive Officer's Report
  - a. Licensing, Enforcement, Examination and WDO Statistics
  - b. Survey Results
  - c. Examination Development
  - d. Update on Approved Statutory Amendments Pending Legislative Inclusion — Business and Professions Code Sections 8572, 8593, 8593.1, and 8610
- XIV. Review of the Structural Pest Control Board's (SPCB) 2015 Strategic Plan and Discussion and Possible Action on the Formulation of a new SPCB Strategic Plan
- XV. Update on the Status of the Research Proposals Selected for Funding at the July 26, 2018 Board Meeting
- XVI. Regulations Discussion, Possible Action, and Update:
  - a. California Code of Regulations (CCR), Title 16, sections 1970.4, 1970.41, 1970.42 – Pesticide Disclosure Requirements
  - b. CCR, Title 16, section 1997 - WDO Emergency Fee Increase Certificate of Compliance
  - c. CCR, Title 16, sections 1936, 1936.1, 1936.2, 1937.1, 1937.2 – AB 2138 Compliance
- XVII. Legislation Update and Possible Action:
  - a. Assembly Bill 434 (Baker): State Web Accessibility: Standards and Reports
  - b. Assembly Bill 613 (Low): Professions and Vocations: Regulatory Fees
  - c. Assembly Bill 1024 (Frazier): Home Inspector Licensure Act
  - d. Assembly Bill 1616 (Low): Department of Consumer Affairs: Boards: Expunged Convictions
  - e. Assembly Bill 1788 (Bloom): Pesticides: Use of Anticoagulants
  - f. Assembly Bill 2028 (Aguiar-Curry): State Agencies: Meetings
  - g. Assembly Bill 2373 (Blanca Rubio): Structural Pest Control: Second Generation Anti-Coagulant Rodenticides
  - h. Senate Bill 53 (Wilk): Open Meetings
- XVIII. Future Agenda Items
- XIX. Board Calendar
- XX. Adjournment

The meeting may be cancelled or changed without notice. For verification, please check the Board's website at [www.pestboard.ca.gov](http://www.pestboard.ca.gov) or call 916-561-8700. Action may be taken on any item on the agenda. Any item may be taken out of order to accommodate speakers and/or to maintain a quorum. All times indicated are approximate. Meetings of the Structural Pest Control Board are open to the public except when specifically noticed otherwise in accordance with the Open Meeting Act. The public may take appropriate opportunities to comment on any issue before the Board at the time the item is heard, but the President may, at his discretion, apportion available time among those who wish to speak. The public may comment on issues not on the agenda, but Board Members cannot discuss any issue that is not listed on the agenda. If you are presenting information to the Board, please provide 13 copies of your testimony for the Board Members and staff. Copying equipment is not available at the meeting location.

The meeting is accessible to the physically disabled. A person who needs a disability-related accommodation or modification in order to participate in the meeting may make a request by contacting the Structural Pest Control Board at (916) 561-8700 or email [pestboard@dca.ca.gov](mailto:pestboard@dca.ca.gov) or send a written request to the Structural Pest Control Board, 2005 Evergreen Street, Suite 1500, Sacramento, CA 95815. Providing your request at least five (5) business days before the meeting will help to ensure availability of the requested accommodation.

While the Board intends to webcast this meeting, it may not be possible to webcast the entire open meeting due to limitations on resources or technical difficulties that may arise. To view the Webcast, please visit [www.thedcapage.wordpress.com/webcasts/](http://www.thedcapage.wordpress.com/webcasts/).

This agenda can be found on the Structural Pest Control Board's website at: [www.pestboard.ca.gov](http://www.pestboard.ca.gov).

**MINUTES OF THE MEETING OF THE STRUCTURAL PEST CONTROL BOARD**

October 23 & 24, 2019

The meeting was held October 23 & 24, 2019 at the Department of Consumer Affairs,  
Hearing Room, 2005 Evergreen Street, Sacramento, California

**Board Members Present:**

Darren Van Steenwyk, President  
Dave Tamayo, Vice President  
Ronna Brand  
Mike Duran  
Curtis Good

**Board Members Absent:**

None

**Board Staff Present:**

Susan Saylor, Executive Officer  
Robert Lucas, Assistant Executive Officer  
Kathy Boyle, Chief Enforcement Officer  
David Skelton, Administrative Analyst

**Departmental Staff Present:**

Sabina Knight, Legal Counsel

**October 23, 2019 — 1:00 P.M.**

**ROLL CALL / ESTABLISHMENT OF QUORUM**

Mr. Van Steenwyk called the meeting to order at 1:14 P.M. and Mr. Skelton called roll.

Mr. Van Steenwyk, Mr. Tamayo, Ms. Brand, and Mr. Good were present.

Mr. Duran was absent.

A quorum of the Structural Pest Control Board (SPCB) was established.

**FLAG SALUTE / PLEDGE OF ALLEGIANCE**

Mr. Van Steenwyk led everyone in a flag salute and recitation of the Pledge of Allegiance.

**PUBLIC COMMENT FOR ITEMS NOT ON THE AGENDA**

There were no public comments for items not on the agenda.

**PETITION FOR MODIFICATON / TERMINATION OF PROBATION  
EDWARD CHARLES MUNOZ III — OPR 11978 — BRANCH 2**

Administrative Law Judge Wim van Rooyen sat with the SPCB to hear the Petition for Modification/Termination of Probation for Edward Charles Munoz III, Operator License Number 11978. Mr. Munoz was informed that he would be notified by mail of the SPCB's decision.

Mr. Duran arrived at 2:31 P.M.

**PETITION FOR MODIFICATION / TERMINATION OF PROBATION  
EDWARD G. HERNANDEZ — OPR 11475 — BRANCH 2**

Administrative Law Judge Wim van Rooyen sat with the SPCB to hear the Petition for Modification/Termination of Probation for Edward G. Hernandez, Operator License Number 11475. Mr. Hernandez was informed that he would be notified by mail of the SPCB's decision.

**PETITION FOR REINSTATEMENT  
GERALD WAYNE FINLEY II — FR 32663 — BRANCHES 1 & 3**

Administrative Law Judge Wim van Rooyen sat with the SPCB to hear the Petition for Reinstatement for Gerald Wayne Finley II, Field Representative License Number 32663. Mr. Finley was informed that he would be notified by mail of the SPCB's decision.

**CLOSED SESSION**

Pursuant to Subdivision (c)(3) of Section 11126 of the Government Code the SPCB Met in Closed Session to Consider Reinstatements, Proposed Disciplinary Actions, and Stipulated Settlements.

**THE SPCB RECONVENED IN OPEN SESSION AND ADJOURNED AT 4:38 P.M.**

**October 24, 2019 — 9:00 A.M.**

**ROLL CALL / ESTABLISHMENT OF QUORUM**

Mr. Van Steenwyk called the meeting to order at 9:02 A.M. and Ms. Saylor called roll.

Mr. Van Steenwyk, Mr. Tamayo, Ms. Brand, Mr. Duran, and Mr. Good were present.

A quorum of the Structural Pest Control Board (SPCB) was established.

**FLAG SALUTE / PLEDGE OF ALLEGIANCE**

Mr. Van Steenwyk led everyone in a flag salute and recitation of the Pledge of Allegiance.

## **PUBLIC COMMENT FOR ITEMS NOT ON THE AGENDA**

There were no public comments for items not on the agenda.

## **REVIEW AND APPROVAL OF MINUTES OF THE JULY 17, 2019 BOARD MEETING**

Mr. Duran moved and Mr. Good seconded to approved the Minutes of the July 17, 2019 meeting of the SPCB. Passed unanimously.

(AYES: Van Steenwyk, Tamayo, Brand, Duran, Good. NOES: None. ABSTENTIONS: None.)

## **DEPARTMENT OF PESTICIDE REGULATION (DPR) UPDATE**

Peggy Byerly, DPR, stated that on October 14, 2019 Governor Newsom announced the appointment of Val Dolcini as Director of DPR and Jesse Cuevas as Chief Deputy Director of DPR.

Ms. Byerly also updated the SPCB on the structural enforcement training held in Irvine, California from October 1-3, 2019. Ms. Byerly stated that there were 94 attendees including 66 enforcement staff from 17 counties. Ms. Byerly thanked Mr. Good and Newport Exterminating for their participation in Branch 2 training exercises and Lee Whitmore and Quality Pest Services for their participation in Branch 1 training exercises.

Karey Windbiel-Rojas, University of California Statewide Integrated Pest Management Program, asked Ms. Byerly how often the structural training occurs.

Ms. Byerly stated that the training occurs approximately once a year and it rotates between northern and southern California.

## **EXECUTIVE OFFICER'S REPORT**

Ms. Saylor updated the SPCB on licensing, enforcement, examination, and wood destroying organism (WDO) statistics.

Mr. Good stated that the Applicator passing rate improved significantly and asked if there was something contributing to the improvement.

Ms. Saylor stated that there are multiple factors — the examination being out for a while creates familiarity with the subject matter as well as companies implementing more comprehensive Applicator training programs.

Mr. Van Steenwyk stated that the Field Representative and Operator passing rates also improved and asked if a contributing factor is the Office of Professional Examination Services (OPES) removing poorly performing questions.

Ms. Saylor stated that OPES has been doing a great job of monitoring all the examinations and removing and reworking questions that consistently underperform.

Ms. Saylor stated that the Branch 1 Occupational Analysis workshop will be held at Newport Exterminating November 5-7, 2019 and more participants are still needed. Ms. Saylor asked the industry for help in getting the word out.

Chris Reardon, Pest Control Operators of California (PCOC), stated that he will be working with PCOC membership, and Ms. Saylor, to encourage participation in the Branch 1 Occupational Analysis.

Mr. Good stated that he wanted to thank Frank Munoz at the SPCB's Operator Licensing desk for consistent excellent job performance.

### **UPDATE ON THE STATUS OF THE RESEARCH PROPOSALS SELECTED FOR FUNDING AT THE JULY 26, 2018 BOARD MEETING**

Ms. Saylor stated that official research proposal progress reports are due by the end of October 2019 and would be included in the March 2020 SPCB meeting materials.

Mr. Tamayo asked if there is any update on the progress of Dr. Niamh Quinn's "Investigation of Rodenticide Pathways in an Urban System Through the Use of Isotopically Labelled Bait" research project.

Mr. Van Steenwyk stated that he has spoken to Dr. Quinn and she is in the process of acquiring the necessary permits to begin her research.

### **DISCUSSION AND POSSIBLE ACTION ON THE STRUCTURAL PEST CONTROL BOARD'S COMPLIANCE WITH U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) PESTICIDE APPLICATOR REGULATIONS**

Leslie Talpasanu, DPR, stated that she has been working with SPCB staff on ensuring compliance with the United States Environmental Protection Agency (EPA) applicator certification and training requirements.

Ms. Talpasanu stated that SPCB staff has provided her with all the necessary information and she is on track to submit the California state plan by March 4, 2020. Ms. Talpasanu further stated that after the state plan is submitted the EPA has two years to review and approve it.

Ms. Talpasanu stated that the most significant changes that are expected to result from compliance with EPA certification and training requirements are related to identity verification during the continuing education process.

Mr. Van Steenwyk asked if there are any other areas of concern for the SPCB to comply with EPA requirements.

Ms. Talpasanu stated that other than the continuing education changes that are expected to occur the SPCB appeared largely to be in compliance with the EPA requirements.

Mr. Van Steenwyk asked what the expected timeline is for implementation of any changes that may occur.

Ms. Talpasanu stated that the goal is for any changes to become effective by April 1, 2022 when the state plan is officially approved.

#### **ANNUAL REVIEW AND POSSIBLE ACTION REGARDING THE BOARD'S RESEARCH FUND**

Ms. Saylor referred the SPCB members to the research fund forecast included in the meeting materials and stated that current projections anticipate sufficient funds being available to begin soliciting research projects in 2021.

Mr. Tamayo stated that the SPCB should begin preparing its internal procedures in 2020 in advance of sufficient funds being available to streamline the solicitation and selection process.

Mr. Good stated that it would be helpful to see the results of the ongoing research projects before considering new research projects for funding.

#### **ANNUAL REVIEW AND POSSIBLE ACTION REGARDING THE BOARD'S POLICIES AND PROCEDURES**

Ms. Saylor stated that a review of the SPCB's Policies and Procedures occurs annually at the October meeting and presented two staff recommended amendments.

Ms. Saylor presented a staff recommendation to amend SPCB Policy G-5 to extend the timeline for Board meeting minutes to be completed from 30 days after a meeting to either 60, or 90 days after a meeting. Ms. Saylor stated that 30 days is a quick turnaround for SPCB staff to complete the minutes and that the webcast is publicly available immediately after a meeting.

Mr. Tamayo stated that in the interest of transparency his preference is that the minutes be completed within 60 days.

Mr. Tamayo moved and Mr. Good seconded to amend SPCB Policy G-5 to state that board meeting minutes shall be completed within 60 days after a meeting. Passed unanimously.

(AYES: Van Steenwyk, Tamayo, Brand, Duran, Good. NOES: None. ABSTENTIONS: None.)



Ms. Saylor presented a staff recommendation to add SPCB Policy L-7 to establish guidelines governing continuing education audits.

Mr. Good moved and Mr. Duran seconded to add SPCB Policy L-7 to state that the SPCB may conduct continuing education audits at its discretion, up to 3% of the license renewals received under each license category, and that it may conduct additional audits, at its discretion, as deemed necessary. Passed unanimously.

(AYES: Van Steenwyk, Tamayo, Brand, Duran, Good. NOES: None. ABSTENTIONS: None.)

### **PRESENTATION AND POSSIBLE ACTION ON STATUTORY AMENDMENT TO BUSINESS AND PROFESSIONS CODE (BPC) SECTION 8506.1 – COMPANY REGISTRATIONS**

This agenda item was held over for discussion at a future meeting.

### **REGULATIONS DISCUSSION, POSSIBLE ACTION, AND UPDATE**

#### **California Code of Regulations (CCR), Title 16, Section 1970.4, 1970.41, 1970.42 – Pesticide Disclosure Requirements**

Ms. Knight presented the proposed additions and amendments to 16 CCR 1970.4, 1970.41, and 1970.42 (included in meeting materials) to the SPCB.

Mr. Van Steenwyk stated that it would be preferable to give PCOC and other interested parties an opportunity to review the proposed language before the SPCB voted on adopting it.

Mr. Tamayo asked what the reasoning is for using “must” instead of “shall” in the proposed language.

Nathan Desjarlais, DPR, stated that the preference for using “must” instead of “shall” is due to a U.S. Supreme Court decision.

Mr. Tamayo asked what the rationale was in 16 CCR 1970.41(a) for giving the owner, or the owner’s designated agent, an option to object to posting the pesticide notification in a conspicuous place.

Ms. Boyle stated that option to object to posting the pesticide notification in a conspicuous place is specifically for commercial or industrial structures and matches the language that is used in Business and Professions Code (BPC) section 8538.

Ms. Knight stated that the proposed language will be posted on the SPCB’s website and that any feedback or contributions will be considered and possibly incorporated before a possible vote at the March 2020 meeting.

Mr. Van Steenwyk stated that the industry appreciates the option to communicate with its customers via electronic mail and voiced his support for that addition.

Mr. Reardon stated that the industry would be actively working with SPCB legal counsel and staff on refining the proposed language before the March 2020 meeting.

Ms. Boyle stated that in addition to the changes presented in the proposed language, Form 43M-48, the Occupants Fumigation Notice (OFN) will also be amended in a manner consistent with the amendments that are adopted. Ms. Boyle stated that the proposed amendments to the OFN will also be presented at the March 2020 meeting.

Michelle Thom, Santa Clara County Agricultural Commissioner, stated that the counties were generally in agreement with the proposed changes for post-application notices but wanted to emphasize how important it is for written pre-application notices to be provided to tenants. Ms. Thom stated that electronic pre-application notices can be provided to owners but for tenants it is important that a written notice be provided.

Mr. Van Steenyk asked if tenants can opt to receive electronic pre-application notice.

Ms. Thom stated that for tenants, the pre-application notice needs be written to ensure that tenants are properly informed when the inside of their home is going to be treated.

Mr. Van Steenyk stated that the proposed language will be posted on the SPCB's website for all interested parties to view and comment on before a possible vote at the March 2020 meeting.

#### CCR, Title 16, Section 1997 – WDO Emergency Fee Increase Certificate of Compliance

Ms. Saylor stated that the emergency rulemaking raising the WDO Inspection Reporting Fee from \$3.00 to \$4.00 per property address reported, was approved by the Office of Administrative Law (OAL) on August 23, 2019 and will expire February 18, 2020.

Ms. Saylor stated that SPCB staff is in the process of permanently adopting the emergency rulemaking and the package is currently in review at the DCA budget office.

#### CCR, Title 16, Section 1936, 1936.1, 1936.2, 1937.1, 1937.2 – AB 2138 Compliance

Mr. Skelton stated that the AB 2138 compliance rulemaking file is currently in review at the DCA budget office and will be moving forward shortly.

### **LEGISLATION UPDATE AND POSSIBLE ACTION**

#### Assembly Bill 613 (Low) – Professions & Vocations: Regulatory Fees

Ms. Saylor stated that the hearings for AB 613 were cancelled and the bill would possibly be back in the next legislative session.

#### Assembly Bill 1788 (Bloom) – Pesticides: Use of Anti-Coagulants

Mr. Van Steenyk stated that AB 1788 was placed in the suspense file.

Senate Bill 53 (Wilk) – Open Meetings

Ms. Saylor stated that SB 53 was placed in the suspense file.

**ANNUAL ELECTION OF BOARD PRESIDENT AND VICE PRESIDENT**

Mr. Tamayo moved and Mr. Van Steenwyk seconded to nominate Mr. Good for SPCB President. Passed unanimously.

(AYES: Van Steenwyk, Tamayo, Brand, Duran, Good. NOES: None. ABSTENTIONS: None.)

Mr. Van Steenwyk moved and Mr. Good seconded to nominate Mr. Tamayo for SPCB Vice President. Passed unanimously.

(AYES: Van Steenwyk, Tamayo, Brand, Duran, Good. NOES: None. ABSTENTIONS: None.)

**FUTURE AGENDA ITEMS**

The following items were identified as future agenda items —

Proposed language and possible vote for 16 CCR 1970.4, 1970.41, and 1970.42.

**BOARD CALENDAR**

The SPCB scheduled its upcoming meetings as follows —

March 11 & 12, 2020 in Sacramento

July 7 & 8, 2020 in Los Angeles

October 20 & 21, 2020 in Sacramento

**CLOSED SESSION**

Pursuant to subdivision (a)(1) of section 11126 of the Government Code the SPCB met in closed session to conduct the Executive Officer's performance review.



STRUCTURAL PEST CONTROL BOARD STATISTICS FOR JANUARY 2020      Page 1 of 2	FISCAL YEAR 2019/2020		FISCAL YEAR 2018/2019	
	Monthly	Year To Date	Monthly	Year To Date
<b>EXAMINATION</b>				
Field Representatives Scheduled	686	3,283	509	3,304
Field Representatives Examined	341	2,385	332	2,611
Field Representatives Passed	207	1,256	208	1,232
Field Representatives Failed	134	1,129	124	1,379
Operators Scheduled	50	308	53	313
Operators Examined	53	278	41	290
Operators Passed	23	136	19	138
Operators Failed	30	142	22	152
Applicators Scheduled	201	1,667	211	2,158
Applicators Examined	158	1,346	182	1,805
Applicators Passed	104	876	91	780
Applicators Failed	54	470	91	1,025
Field Representatives Passing Rate	61%	53%	63%	47%
Operator Passing Rate	43%	49%	46%	48%
Applicators Passing Rate	66%	65%	50%	43%
<b>LICENSING</b>				
Field Representative Licenses Issued	138	850	135	920
Operator Licenses Issued	11	80	12	99
Company Registrations Issued	17	125	27	152
Branch Office Registrations Issued	3	29	2	26
Change of Registered Company Officers	2	23	2	22
Change Of Qualifying Manager	4	46	8	60
Applicator Licenses Issued	96	855	87	774
Duplicate Licenses Issued	49	378	106	640
Upgrade Present License	23	138	21	186
Change of Status Processed	53	251	38	304
Address Change	67	664	294	1,429
Address Change (Principal Office)	4	122	43	195
Address Change (Branch Office)	1	2	4	9
Transfer of Employment Processed	95	814	323	1,437
Change of Name	0	15	1	13
Change of Registered Company Name	0	8	1	10
License Histories Prepared	4	78	15	84
Down Grade Present License	64	415	84	465
<b>LICENSES/REGISTRATIONS IN EFFECT</b>				
Field Representative		13,303		12,663
Operator		4,189		4,138
Company Registration		3,167		3,186
Branch Office		448		440
Licensed Applicator		6,650		6,410
<b>LICENSES/REGISTRATIONS ON PROBATION</b>				
Companies		29		27
Licensees		111		96

STRUCTURAL PEST CONTROL BOARD STATISTICS FOR JANUARY 2020      Page 2 of 2	FISCAL YEAR 2019/2020		FISCAL YEAR 2018/2019	
	Monthly	Year To Date	Monthly	Year To Date
<b>LICENSES RENEWED</b>				
Operator	0	298	0	447
Field Representative	0	872	1	1,085
Applicator	0	341	0	495
<b>LICENSES/ REGISTRATIONS CANCELLED</b>				
Operator	3	9	1	113
Field Representative	10	55	15	1,096
Company Registration	18	96	7	83
Branch Office	6	19	1	15
Applicator	9	69	8	1,582
<b>LICENSES DENIED</b>				
Licenses	1	24	3	25
<b>INVESTIGATIVE FINES PROCESSED</b>				
Fines Processed	\$6,800	\$51,840	\$2,840	\$36,760
Penalty Assessment	\$50	\$50	\$0	\$0
Pesticide Fines	\$2,975	\$62,470	\$15,600	\$109,691
<b>STAMPS SOLD</b>				
Pesticide	6,310	45,610	7,590	43,830
<b>SEARCHES MADE</b>				
Public	48	497	56	529
Complaints	8	58	7	48
<b>BOND &amp; INSURANCE</b>				
Bonds Processed	12	76	12	91
Insurance Processed	214	1559	214	1451
Restoration Bonds Processed	1	3	1	1
Suspension Orders	32	232	45	274
Cancellations Processed	9	143	9	161
Change of Bond/Insurance	0	68	0	277

## LICENSING UNIT SURVEY RESULTS

March 12, 2020 – SPCB Meeting  
October 10, 2019 – February 26, 2020

Response cards are sent to licensees, registered companies, and applicants receiving the following services: Licensure, Renewal of License, Upgrade/Downgrade License, Change of Qualifying Manager, Bond/Insurance, Company Registration, Transfer of Employment, Change of Address, and Examination. One hundred fifty survey cards were mailed during this reporting period. Five responses were received.

	Question	Yes	No	N/A
1	Was staff courteous?	100%	0%	0%
2	Did staff understand your question?	100%	0%	0%
3	Did staff clearly answer your question?	80%	20%	0%
4	Did staff promptly return your telephone call?	60%	20%	20%
5	Did staff efficiently and promptly handle your transaction?	80%	20%	0%
6	How long did it take to complete its action on your file?* (Average)	45 days		

\*There were 4 responses to question 6.

**Company Registration:** 45 days (1 response)

**Operator License:** N/A (0 responses)

**Field Representative License:** N/A (0 responses)

**Applicator License:** N/A (0 responses)

**Transfer of Employment:** N/A (0 responses)

**Change of Address:** N/A (0 responses)

**Bond/Insurance:** N/A (0 responses)

**Change of Qualifying Manager:** N/A (0 responses)

**Examination:** N/A (0 responses)

Comments:

- Mr. Munoz helped me with everything from re-registration to my operator's license. After my father's death, he helped me. Thank you!
- Everything was done easily.

- It's impossible to get someone on the phone. They don't return your calls. They don't give you a choice in some of your licensing.
- Been great thus far. Thank you!



## WDO ACTIVITIES FILED

	2015/16	2016/17	2017/18	2018/19	2019/20	Monthly Average FY15/16 to FY18/19
<b>July</b>	121,639	111,086	124,000	117,000	125,000	<b>118,431</b>
<b>August</b>	112,511	121,000	128,400	128,000	124,400	<b>122,478</b>
<b>September</b>	115,977	119,089	119,000	110,445	119,300	<b>116,128</b>
<b>October</b>	123,409	125,804	124,100	127,700	123,200	<b>125,253</b>
<b>November</b>	100,779	118,121	117,000	105,000	110,500	<b>110,225</b>
<b>December</b>	105,326	106,000	96,100	93,600	89,000	<b>100,257</b>
<b>January</b>	83,209	96,000	94,900	90,000	95,000	<b>91,027</b>
<b>February</b>	97,100	95,000	96,900	93,000	99,000	<b>95,500</b>
<b>March</b>	122,261	127,300	115,000	116,000		<b>120,140</b>
<b>April</b>	128,201	122,120	115,000	127,600		<b>123,230</b>
<b>May</b>	123,028	132,900	123,000	133,100		<b>128,007</b>
<b>June</b>	131,954	135,000	127,000	137,600		<b>132,889</b>
<b>FY Total</b>	<b>1,365,394</b>	<b>1,409,420</b>	<b>1,380,400</b>	<b>1,379,045</b>		<b>1,383,565</b>
AVG PER MO.	113,783	117,452	115,033	114,920	110,675	

# Structural Pest Control Board



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## Message from the President



On behalf of the California Structural Pest Control Board (SPCB), I'm pleased to present our updated strategic plan. This plan benefited from the thoughtful input and discussion of Board members, staff, and industry. It was created to provide a framework and identify priorities for SPCB's efforts over the next few years to modernize operations and adapt to an evolving pest control industry.

This document is the road map toward our vision of SPCB as a national leader, by achieving the highest standards of consumer protection and promoting a high degree of professionalism in the State's structural pest control industry.

Dave Tamayo, President  
California Structural Pest Control Board

## About the Board

In 1935, in response to lobbying by what was then known as the California Pest Control Association and that later became the Pest Control Operators of California, Assembly Bill 2382, “An act to regulate the practice of structural pest control; to create the Structural Pest Control Board; to provide for the registration and licensing of persons engaged in such practice, and for the protection of the public in the practice of structural pest control,” was passed by the California State Legislature. The bill was signed by the Governor on July 20, 1935, and became law on September 15, 1935.

The Structural Pest Control Board (Board) is composed of seven members of which, by law, four are public members and three are members of the pest control industry. The Governor appoints two public members and three licensed industry members. The Senate Rules Committee and the Speaker of the Assembly each appoint one public member. Board members may serve up to two four-year terms.

The Board, under jurisdiction of the Department of Consumer Affairs (DCA), was transferred via legislation to the jurisdiction of the Department of Pesticide Regulation, operative October 23, 2009 (ABX4, 20, Strickland and Huber, 2009). The Board returned to the DCA effective July 1, 2013, under the Governor’s 2011–2012 Reorganization Plan No. 2 and AB 1317 (Frazier, 2013).

## 2007 Strategic Plan Accomplishments

**Examination Subversion** – In February 2013, the Board learned that its examinations were compromised. The Board worked with the Division of Investigation to investigate and prepare evidence against those involved in compromising the examination. The investigation resulted in two individuals being arrested and later convicted on two counts of burglary for helping people cheat on not just the Board’s examinations, but several State licensing examinations. One of these individuals was sentenced to 30 days of jail and ordered to pay restitution to the State agencies involved to a sum of \$400,000. The interference with the subversion of the examination was crucial to the integrity of the Board’s examinations and hence, the protection of consumers.

**Examination Development** – In 2013, the Board contracted with DCA’s Office of Professional Examination Services to write current and relevant examinations for all of its licenses. Having current examinations is important to consumer protection to ensure people coming into the industry have the necessary skills and knowledge to perform the work they are licensed to perform while implementing the most recently acknowledged practices.

**Implementation of Computer Based Testing (CBT)** – In February 2014, the Board implemented CBT, which has been a long-standing desire of the industry and Board alike. CBT improves examination accessibility since the candidate can schedule themselves at their convenience and in one of 17 locations throughout the State, or 22 additional locations throughout the country. Previously, the exams were given only once a month and only available at two locations in the State. CBT also provides for better examination security and reduces the risk of examinations being compromised. The Board is contracted with an outside vendor who administers several State licensing and other examinations, and exercises much better security precautions than were previously available.

**Development of an Act Review Committee** – In 2011, the Board appointed an Act Review Committee to review the Structural Pest Control Act for relevance and consistency. This committee has met almost every month since and has made several recommendations for updates to the Act. Some of these recommendations have already been approved by the Board, passed legislation, and become effective.

**Utilizing Modern Technologies** – In January 2011, the Board began maintaining an e-mail notification subscription listing where interested parties can subscribe to and receive all of the Board meeting agendas, approved minutes, regulation changes, and other mailings that are otherwise only mailed from the Board. In October 2014, the Board began posting meeting materials on its website and webcasting Board meetings. These utilizations of modern technology greatly improve the ability of the industry and other interested parties to stay informed on current issues and recent changes.

**Increasing Consumer Protection by Increasing Bond and Insurance**

**Requirements** – Senate Bill 662 passed in October 2013, significantly increasing the Board’s bond and insurance requirements. Increased bond and insurance requirements ensures better consumer protection and makes companies more liable for their work.

**Consumer Savings** - In the Fiscal Year (FY) 2013–2014 alone, the Board collected more than \$39,000 in cost recovery and restitution to consumers. Consumers saved approximately \$82,000 through the Board’s mediations and investigations programs.

**Integrated Pest Management (IPM)** – In 2007, the Board developed an IPM Task Force, whose intent was to define IPM. In 2008, a definition of IPM was passed into regulation and in 2009, IPM was added as a requirement of prelicensure training and as a continuing education requirement for all licensees. Including IPM education as initial prelicensure training and continuing education requirements is important because it makes the licensee better aware of nonchemical approaches and strategies to prevent and minimize pests while creating a minimal impact on human health, property, the environment, and nontarget organisms.

**Chief Enforcement Officer** – In 2008, a Budget Change Proposal was approved for a new Chief Enforcement Officer position at the Staff Services Manager I (SSMI) level to address the coordination of the Board’s Statewide regulatory enforcement program activities. In FY 2003–04, the Board’s Deputy Chief Enforcement position, which performed the above-mentioned activities, was abolished via Control Section 4.10. Approval of the Budget Change Proposal allowed the Board to recruit an SSMI to once again head enforcement activities.

**Addressing Unlicensed Activity and the Underground Economy** – In 2013, the Board began partnering with the Department of Industrial Relations, Division of Labor Standards Enforcement, and sibling agencies to counteract the negative effects of the underground economy. The Board endeavors to initiate proactive investigations, as opposed to only the traditional reactive investigations, that would not solely be based on administrative or criminal sanctions.



## Mission

To protect the general welfare of Californians and the environment by promoting outreach, education, and regulation of the structural pest management profession.

## Vision

The Structural Pest Control Board will strive to be the national regulatory leader of pest management.

## Values

### Consumer Protection

We make effective and informed decisions in the best interest and for the safety of Californians.

### Professionalism

We ensure that qualified, proficient, and skilled staff provides services to the State of California.

### Efficiency

We diligently identify the best ways to deliver high-quality services with the most efficient use of our resources.

### Integrity

We are committed to honesty, ethical conduct, and responsibility.

# Strategic Goals

## **1 LICENSING, EXAMINATIONS, AND CONTINUING EDUCATION**

The Board promotes licensing standards to protect consumers and allow reasonable access to the profession. Additionally, the Board oversees and approves continuing education and examination standards to ensure excellence in practice and promote public safety.

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## **2 ENFORCEMENT**

The Board protects the health and safety of consumers through the enforcement of the laws and regulations governing the practice of structural pest control.

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## **3 LEGISLATION, REGULATIONS, AND POLICY**

The Board pursues statutes, regulations, policies, and procedures that strengthen and support the Board's mandate and mission.

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## **4 OUTREACH**

The Board informs consumers, licensees, and stakeholders about the practice and regulation of the profession.

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## **5 ORGANIZATIONAL EFFECTIVENESS**

The Board standard is to build an excellent organization through proper Board governance, effective leadership, and responsible management.

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# GOAL 1: LICENSING, EXAMINATIONS, AND CONTINUING EDUCATION

*The Board promotes licensing standards to protect consumers and allow reasonable access to the profession. Additionally, the Board oversees and approves continuing education and examination standards to ensure excellence in practice and promote public safety.*

- 1.1 Evaluate continuing education provider qualifications and criteria to strengthen the approval process.

Status: Changes to strengthen the approval process for continuing education providers and courses will be codified with the changes SPCB adopts to comply with the EPA C&T rule.

- 1.2 Review and refine the licensing and renewal processes to increase licensees' level of compliance.

Status: Renewal processes, specifically with regard to documentation of continuing education requirements will be streamlined with the implementation of a new IT system (April 1, 2021).

- 1.3 Review and analyze exam questions and current reference materials to develop study guides and materials that focus on essential occupational principles and practices.

Status: This is an ongoing effort. Since the adoption of the Strategic Plan we have continuously created, monitored, and improved licensing examinations in coordination with the Office of Professional Examination Services. Additionally, the creation of candidate handbooks and the reduction in reference material have contributed to the improvements in licensing examinations.

- 1.4 Evaluate continuing education categories and hourly requirements, with emphasis on core competencies.

Status: These changes have been approved by the SPCB and will be codified when the SPCB adopts changes to comply with the EPA C&T rule.

- 1.5 Increase continuing education course field audits to ensure standards are met and proper training is received.

Status: In-person continuing education audits have been increased.

## GOAL 2: ENFORCEMENT

*The Board protects the health and safety of consumers through the enforcement of the laws and regulations governing the practice of structural pest control.*

- 2.1 Increase proactive enforcement to effectively reduce the frequency of unlawful pest control services.

Status: SPCB conducts stings and sweeps on an ongoing basis in coordination with intergovernmental agencies.

- 2.2 Implement enhancements to Board response and coordination with local governments and other partners on fumigation emergencies and where multiple (serious level) pest control violations exist.

Status: SPCB conducts stings and sweeps on an ongoing basis in coordination with intergovernmental agencies. Additionally, SPCB has developed partnerships with several county agricultural commissioners and has been successful in partnering with several district attorneys.

- 2.3 Seek statutory authority to automatically suspend or, with cause, revoke any license or registration based on noncompliance of citation.

Status: This is on hold pending analysis of AB 2138 and its impact on potential legislation seeking to suspend or revoke licensure.

- 2.4 Seek statutory authority to automatically suspend any license or registration based on an owner's or licensee's failure to satisfy court judgments, arbitration awards, tax liens, and other lawfully imposed sanctions related to the pest control profession.

Status: This is on hold pending analysis of AB 2138 and its impact on potential legislation seeking to suspend or revoke licensure.

- 2.5 Seek statutory authority to require any person listed on the principle registration or branch office registration to take continuing education or Board-approved courses as a condition of a Board-issued citation.

Status: This is on hold pending analysis of AB 2138 and its impact on potential legislation seeking to suspend or revoke licensure.

2.6 Seek statutory authority to deny the renewal of a license based on an owner's or licensee's failure to comply with any provision of the Structural Pest Control Act (i.e., failure to post a restoration bond, complete continuing education courses, or comply with an order of abatement).

Status: This is on hold pending analysis of AB 2138 and its impact on potential legislation seeking to suspend or revoke licensure.

## GOAL 3: LEGISLATION, REGULATIONS, AND POLICY

*The Board pursues statutes, regulations, policies, and procedures that strengthen and support the Board's mandate and mission.*

- 3.1 Establish a committee to research pre- and post-licensing requirements and consider developing or amending those requirements to ensure all those practicing structural pest control are properly regulated.

Status: A committee to examine these requirements wasn't established but pre-licensing requirements related to examinations have been continuously monitored and improved and post-licensing requirements related to continuing education will be improved by the changes related to compliance with the EPA C&T rule.

- 3.2 Evaluate and forecast current fee structure to ensure fees support the operational needs of the Board.

Status: This happens every year in coordination with the DCA Budget Office and have evaluated and adjusted fees where necessary to meet our operational needs.

- 3.3 Research, review, and make recommendations regarding the roles and responsibilities of a qualifying manager and branch office supervisor and accordingly pursue statutory and/or regulatory changes.

Status: Qualifying manager roles and responsibilities have been reviewed and amended in Business and Professions Code section 8506.2. Evaluation of qualifying manager and branch office supervisor roles and responsibilities happen continuously.

- 3.4 Pursue regulatory changes to include new and/or updated provisions for all Board forms based on priority and operational need.

Status: We have updated or amended all our licensing and examination forms and are in the process of amending all the continuing education forms coinciding with the EPA C&T rule compliance. Additionally, the Occupants Fumigation Notice will be updated with changes to CCR 1970.4.

- 3.5 Explore alternatives to foster improved communication with other agencies and the Legislature to improve timely tracking of sensitive or competing legislation.

Status: SPCB continues to work cooperatively with Pest Control Operators of California executive leadership on building relationships with legislators and is working cooperatively with DCA on building relationship with Assembly and Senate Business and Professions Committees.

## GOAL 4: OUTREACH

*The Board informs consumers, licensees, and stakeholders about the practice and regulation of the profession.*

- 4.1 Develop an outreach plan to create awareness of the Board’s mission and function, using a variety of proven methods.

Status: SPCB has done several mailouts and continued to use SPCB Website to communicate with interested parties. Additionally, SPCB has partnered with Contractors State Labor Board on attending Senior Scammer Prevention seminars and are continuing to gather information, guidelines, and requirements related to attending Home & Garden shows.

- 4.2 Develop strategy to educate licensees and consumers on the new web access tools that will be available through BreEZe.

Status: This became inapplicable when we passed on BreEZe but with the effort underway to implement a new IT system, strategies to educate licensees and consumers on its features will be developed and conducted months ahead of system release.

- 4.3 Partner with DCA and other agencies to leverage outreach efforts.

Status: SPCB continues to partner with DCA’s Public Information Office and the Contractors State Labor Board to leverage outreach efforts on legislative and enforcement issues.

- 4.4 Promote the Board’s web-based license status lookup tool through public and private partnerships.

Status: DCA debuted a new and improved version of web license lookup and the SPCB helped promote it at the time it was released.

- 4.5 Establish alliances with continuing education providers so that they may educate and inform licensees about how to avoid the most common enforcement violations.

Status: We anticipate doing this as we navigate the regulatory process for the adoption of new continuing education guidelines associated with EPA C&T rule.



## GOAL 5: ORGANIZATIONAL EFFECTIVENESS

*The Board standard is to build an excellent organization through proper Board governance, effective leadership, and responsible management.*

- 5.1 Review and consolidate Board member orientation materials and training that is specific to the Board and industry with emphasis on policies, procedures, responsibilities, and functions of the Board.

Status: This is done and is continuously updated by Department of Consumer Affairs SOLID and legal units.

- 5.2 Continue to monitor staffing levels to achieve Board's mandated goals and objectives in the areas of enforcement and continuing education, and pursue budgetary authority to support Board operations.

Status: We continuously monitor staffing levels to ensure our ability to meet operational needs.

- 5.3 Research ways to use technology to increase operational efficiencies and effectiveness.

Status: We are in the process of implementing a new IT system that will allow for increased operational efficiency and effectiveness and it is expected to debut in early 2021.

- 5.4 Analyze pay and classification structure of staff to ensure it aligns with the Board's recruitment and retention plan, and pursue resources, as appropriate, to meet those needs.

Status: We continuously monitor pay and classification structure to ensure alignment with retention and recruitment goals. SPCB Specialists were granted a special salary adjustment as a result of this process.

## Strategic Planning Process

To understand the environment in which the Board operates and to identify factors that could impact the Board's success, DCA's SOLID unit conducted an environmental scan of the internal and external environments by collecting information through the following methods:

- An online survey sent to 5,000 stakeholders, comprised of industry professionals, professional associations, continuing education providers, and others who expressed interest in the strategic direction of the Board.
- A staff focus group on September 11, 2014, in which eight Board staff members participated.
- An online survey sent to field staff, in which five members responded.
- Telephone interviews with Board members in August and September 2014.

The most significant themes and trends identified from the environmental scan were discussed by the Board executive team and Board during a strategic planning session facilitated by SOLID on October 15, 2014. This information guided the Board in the development of its mission, vision, and values while directing the Board in the formulation of its strategic goals and objectives as outlined in the 2015–2018 Structural Pest Control Board Strategic Plan.



# Progress Report

Reporting Period 5-1-2019 to 1-30-2020

Submittal Date: 2-3-2020

Project Title “Improving Urban Pest Ant Management by Low-Impact IPM Strategies”

Grant Agreement No. 26710

Principal Investigator Dong-Hwan Choe, University of California, Riverside

1. List of work performed during this reporting period

<ul style="list-style-type: none"> <li>Using the manufacturing methods that have been developed during the last progress report period, the research team conducted a field study in summer months (June – October, 2019). The following treatment protocols were developed and demonstrated in the field settings. Five residential houses (5 replications) used for each treatment protocols.</li> </ul>			
Treatment protocol	Conventional #1	Conventional #2	Reduced-risk IPM
Initial perimeter treatment	0.03% fipronil  Perimeter (15 cm up and 15 cm out)  1 L / linear 50 m (0.25 gal / 160 linear ft) of diluted spray		0.03% fipronil  +  pheromone adjuvant
Follow-up maintenance treatment	0.06% bifenthrin  4 L / 100 m <sup>2</sup> (1 gal / 1,000 ft <sup>2</sup> ) of diluted spray	118 ml (4 ounces) of Essentria IC3 per 3.8 L (1 gal) of water  8 L / 100 m <sup>2</sup> (2 gal / 1,000 ft <sup>2</sup> ) of diluted spray	Biodegradable hydrogel bait (1% boric acid) + pheromone adjuvant  4-8 L / 100 m <sup>2</sup> (1-2 gal / 1,000 ft <sup>2</sup> )

- For the initial treatment, the sites were monitored for ant activity level on day 1 pre-treatment, and weeks 1, 2, and 4 after the treatment.
- Follow-up maintenance treatment was made after the monitoring at week 4, and sites were further monitored at weeks 5, 6, and 8. For each treatment, the amount of spray and bait applied and the time required to make the applications were recorded.
- A Kruskal-Wallis test was used to compare three groups of houses in their pre-treatment ant activity levels. A Friedman test, a non-parametric alternative to a one-way repeated-measures ANOVA, was used to assess differences in ant visits between different monitoring time points within a treatment protocol. If the Friedman test indicated a significant difference among different monitoring time points, Conover's all-pairwise comparisons test was used for multiple comparisons.

2. Milestones achieved during this reporting period:

Following milestones were achieved during the reporting period.

- Conventional protocol #1 was developed and tested.
- Conventional protocol #2 was developed and tested.
- Reduced IPM protocol was developed and tested.
- Ant monitoring was conducted in all of the houses used for the study.
- A report has been drafted with detailed method and data analyses to compare three aforementioned ant treatment protocols (submitted to 10th International Conference on Urban Pests, see Appendix)

3. Any problems encountered in the performance of the work:

N/A

Based on my inquiry of the persons who manage the project, or those directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

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Principal Investigator's Signature

2-4-2020

Date

**Appendix**

**Improving Urban Pest Ant Management by Low-Impact IPM Strategies**

**Dong-Hwan Choe, Kathleen Campbell, Ho Eun Park, Les Greenberg, and Michael K. Rust**

Department of Entomology, University of California, Riverside, CA 92521, USA

**Summary.** Two new technologies (spray with a pheromone adjuvant + biodegradable hydrogel bait delivery method) were used to develop a unique IPM protocol for Argentine ant at urban structural settings. The IPM protocol included a one-time perimeter treatment with 0.03% fipronil (mixed with a pheromone adjuvant) at the beginning of the ant season to achieve a quick knock down. The initial spray application was followed by hydrogel baiting with boric acid (1%) as a one-time supplementary or maintenance treatment. This low-impact IPM protocol was compared with other two conventional methods: (1) one initial fipronil application and one pyrethroid spray application for maintenance, or (2) one initial fipronil application and one essential oil insecticide spray application for maintenance. The protocols were compared for efficacy based on the Argentine ant foraging activity. Insecticide use information and service time were also recorded and compared among different treatment protocols.

**INTRODUCTION**

In many urban residential areas of the United States, the Argentine ant is one of the most common nuisance ant species treated by pest management professionals (PMPs). Contact and residual insecticide sprays are among the most common treatment options for Argentine ant control because of their ease of application and cost-effectiveness. However, many of these insecticides are frequently detected in urban waterways (Greenberg et al., 2014, references cited therein).

In this study, we used two new approaches (i.e., pheromone adjuvant for spray applications and biodegradable hydrogel bait) to develop a low-impact IPM protocol (Choe et al., 2014; Choe and Campbell, 2014; Tay et al., 2017). It was compared with other two other methods that mimic the

treatment protocols that are often adopted by PMPs. A one-time perimeter treatment with a fipronil spray at the beginning summer was incorporated in all protocols. The initial spray application was followed by one follow-up maintenance treatment at week 4. Ant foraging activity levels were monitored throughout the season (July – October) and compared among different treatment protocols. Insecticide use amount and treatment time data were also compared between different treatment protocols.

## **MATERIALS AND METHODS**

### **Experimental settings**

Residential houses in Riverside, CA, USA were used for the experiments. Five houses were assigned to each of three protocols, each house representing one replicate. Foraging activity level of ants was estimated based on the total amount of sucrose solution consumed over a 24-hour period (Welzel et al. 2016). The average value from 10 monitoring sites around foundation was used for statistical analyses. To understand the overall Argentine ant activity in the absence of treatment efforts, an untreated control house was monitored over the entire project period.

### **Conventional protocols**

Two different conventional protocols mimicked ant treatment protocols used by PMPs. Both conventional protocols consisted of a one-time 0.03% fipronil spray treatment (Termidor SC, BASF, Research Triangle Park, NC) at early summer (Fig. 1), followed by maintenance treatment with another spray product (Table 1). For the maintenance treatment, conventional protocol #1 used a 0.06% bifenthrin spray (Talstar P, FMC, Philadelphia, PA) and conventional protocol #2 used a botanical insecticide spray containing a mixture of rosemary oil, geraniol, peppermint oil and wintergreen oil (Essentria IC3, Central Garden & Pet Company, Schaumburg, IL). The maintenance treatment focused on active ant trails on soil, lawn, and other horizontal surfaces within 5 m of the building (Fig. 2). All spray products were prepared and applied with a backpack sprayer (Birchmeier Iris 15, Stetten, Switzerland) following the label recommendations. The initial fipronil treatment was made in late July, and the maintenance treatment was made in late August (week 4).

### **Low-impact IPM protocol**

The low-impact IPM protocol consisted of a one-time fipronil spray treatment (mixed with a pheromone adjuvant – microencapsulated (Z)-9-hexadecenal, Suterra, LLC., Bend, OR; 25 ml per 3.8 liter of spray) at early summer followed by the use of a biodegradable hydrogel bait (1% boric acid) at week 4 post-treatment as a maintenance treatment (Table 1).

The biodegradable hydrogel bait was produced by the method described by Tay et al. (2017) with minor modifications. The Na-Alg solution (1%) was slowly dispensed dropwise through a modified 8-inch shower head nozzles (1.6 mm diameter). The droplets were immediately collected in a plastic container with 0.5% CaCl<sub>2</sub> crosslinker solution. After 2 minutes, the resulting hydrogel beads were filtered out from the crosslinking solution and rinsed with clean water. The rinsed hydrogel beads were “conditioned” by submerging them in a liquid bait containing sucrose and boric acid overnight (24 h). Concentrations of the sucrose and boric acid in the final hydrogel bait were 25 and 1%, respectively. To improve stability of the final hydrogel bait, 0.25% sorbic acid potassium salt was incorporated in the final hydrogel bait. A pheromone adjuvant (microencapsulated (Z)-9-hexadecenal; 1 ml per liter of bait) was also mixed with the hydrogel bait immediately before application.

About 4-7 liter of hydrogel bait was used per house (approximately 40-70 g boric acid per house). The hydrogel bait was scattered on the ground using a manual or motorized spreader, mostly on active ant trails, soil, or vegetated surfaces within 5 m of the building (Fig. 3). As in the conventional protocols, the bait was not used on horizontal impervious surfaces (e.g., concrete).

### **Data collection and statistical analyses**

For the initial treatment, the sites were monitored on day 1 pre-treatment, and weeks 1, 2, and 4 after the treatment. Follow-up maintenance treatment was made after the monitoring at week 4, and sites were further monitored at weeks 5, 6, and 8. For each treatment, the amount of spray and bait applied (in liter) and the time required to make the applications were recorded.

A Kruskal-Wallis test was used to compare three groups of houses in their pre-treatment ant activity levels. A Friedman test, a non-parametric alternative to a one-way repeated-measures ANOVA (Kim, 2014), was used to assess differences in ant visits between different monitoring time points within



a treatment protocol. If the Friedman test indicated a significant difference among different monitoring time points, Conover's all-pairwise comparisons test was used for multiple comparisons (Analytical Software, 2008).

## RESULTS AND DISCUSSION

### Control efficacy

Before the initial spray treatment, three groups of houses showed similar levels of Argentine ant foraging activity (Kruskal-Wallis test:  $P = 0.8$ ). Pre-treatment ant visit numbers for conventional #1, conventional #2, and IPM houses were  $21,283 \pm 21,034$ ,  $19,863 \pm 18,413$ , and  $21,433 \pm 10,268$  per monitoring vial (mean  $\pm$  SD), respectively.

Over the entire study period, the ant visit numbers in conventional #1 group showed some significant changes over time (Friedman test:  $F = 3.07$ ,  $P = 0.02$ ) (Fig. 4A). However, multiple comparisons test indicated that significant changes occurred between week 5 and 6 (reduction), and between week 6 and 8 (increase), during which no treatments were made. The numbers of ant visit in conventional #2 group showed no significant changes over time (Friedman test:  $F = 0.36$ ,  $P = 0.90$ ) (Fig. 4B). During the entire study period, the untreated control house did not show any consistent drop in ant activity level.

In contrast, ant visit numbers in the reduced-risk IPM group showed significant changes over time (Friedman test:  $F = 6.00$ ,  $P = 0.0006$ ). Multiple comparisons test indicated that both the initial perimeter spray treatment (between pre-treatment and week 1) and the follow-up treatment with biodegradable hydrogel bait (between week 4 and 5) provided significant reductions in the ant foraging activity level immediately after those treatments (Fig. 4C).

### Pesticide use and treatment time

The pesticide use and treatment time data are shown in Table 2. The overall amount of spray used per house for the initial perimeter treatment was 0.9-1.2 liter (0.23-0.31 gallon), providing all three protocols had similar amount of fipronil applied per house. Time spent for the initial treatment was 5-8 minutes. For the follow-up treatment, the conventional protocol #1 had the smallest amount of material

applied (1 liter per house) compared to the other protocols (3.8 and 5.6 liter per house for conventional #2 and IPM, respectively). Relatively low application rate and targeted use of bifenthrin spray in the current study may be responsible for this difference. For example, only pervious (e.g. soil, lawn) areas around the structure were treated with a band application (0.6 m or 2 ft width). All horizontal impervious surfaces (e.g., concrete) and other adjacent vegetated areas were treated only with “spot” (0.19 m<sup>2</sup> or 2 ft<sup>2</sup> in size) or “pin stream” (up to 2.54 cm or 1 inch wide) applications. Interestingly, in spite of the largest amount of material being applied, the baiting in the IPM protocol had substantially shorter treatment time (about 7 minutes) than the other protocols (about 10 minutes), indicating the ease of application of the hydrogel baits with the hand-held spreaders. Since PMPs spend about 20 minutes treating a typical residential account for ants (Choe et al., 2019), the time component of tested protocols was considered reasonable.

## CONCLUSIONS

Data from conventional protocols #1 and 2 indicated that the use of 0.03% fipronil alone for perimeter treatment failed to provide 4-weeks control of Argentine ants. Large amounts of variation in ant foraging activity levels across different houses might be responsible, at least in part, for the overall non-significant reduction of ant activity at week 1 post-treatment. For example, in both conventional protocols, two of five houses had increased ant activity levels at week 1 when compared to corresponding pre-treatment data. Additional applications of fipronil spray might be necessary to provide an acceptable level of control. The current label of Termidor SC allows up to 4 separate applications per calendar year in California.

In contrast, the addition of the pheromone adjuvant in the fipronil spray reduced this large variation among different houses. All five houses in the reduced-risk IPM protocol had substantial reductions in ant foraging activity level at week 1, showing a statically significant difference when compared to pre-treatment data (65% reduction). The level of ant activity decreased until week 2 (85% reduction). The current findings corroborate the utility of pheromone adjuvant in improving control efficacy of a non-repellent spray insecticide (Choe et al., 2014).

By week 4, all treatment protocols (including IPM protocol) experienced some levels of recovery in Argentine ant activity. Follow-up maintenance treatment with the bifenthrin spray alone did not provide any significant reduction in ant foraging activity (4 of 5 houses had increased ant activity). Even though 4 of 5 houses showed some reductions in ant activity levels after the botanical insecticide spray application when compared to week 4 data, our data indicated that the botanical insecticide sprays alone failed to provide any significant reduction in ant foraging activity.

In contrast, 1% boric acid bait in biodegradable hydrogels provided a consistent efficacy across all houses tested, keeping the ant activity levels low at week 5 (88% reduction). All five houses had reductions in ant foraging activity level immediately after the baiting (week 5), showing a statistically significant difference when compared to week 4 data. By week 8, the houses in the IPM protocol had an overall 80% reduction in ant activity level when compared to pre-treatment data.

The novel spray and bait protocol developed in the current study was effective in providing a season-long control for Argentine ants without repeated use of sprays. The pheromone adjuvant will maximize the efficacy of residual spray products. When used as a stand-alone method, the biodegradable hydrogel bait with boric acid takes a few weeks to achieve the acceptable levels of control (>80% reduction) for Argentine ants (D.-H. Choe, unpublished data). Thus, perimeter treatment with an effective spray material was useful in providing the initial quick control. With its relatively low toxicity profile on non-target organisms, boric acid baiting is an important tool for the follow-up maintenance services. Relatively high cost associated with material and labor has been a drawback for conventional baiting methods. The use of a biodegradable hydrogel matrix as a carrier of liquid bait is an important breakthrough in addressing this challenge.

### **ACKNOWLEDGMENTS**

We thank Qian Yue Lu, Benning Le, and Maddux Le for their assistance in the ant monitoring. The pheromone adjuvant used in the current study was provided by Suterra, LLC. Funding for the current study was provided by California Department of Consumer Affairs, Structural Pest Control Board (grant agreement #26710).

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**Table 1.** Treatment protocols used in the current study

Treatment protocol	Conventional #1	Conventional #2	Reduced-risk IPM
Initial perimeter treatment	0.03% fipronil  Perimeter (15 cm up and 15 cm out)  1 L / linear 50 m (0.25 gal / 160 linear ft) of diluted spray		0.03% fipronil  +  pheromone adjuvant
Follow-up maintenance treatment	0.06% bifenthrin  4 L / 100 m <sup>2</sup> (1 gal / 1,000 ft <sup>2</sup> ) of diluted spray	118 ml (4 ounces) of Essentria IC3 per 3.8 L (1 gal) of water  8 L / 100 m <sup>2</sup> (2 gal / 1,000 ft <sup>2</sup> ) of diluted spray	Biodegradable hydrogel bait (1% boric acid) + pheromone adjuvant  4-8 L / 100 m <sup>2</sup> (1-2 gal / 1,000 ft <sup>2</sup> )

**Table 2.** Pesticide use amount and the time required to treat each house (average value from five houses)

Treatment protocol	Conventional #1	Conventional #2	Reduced-risk IPM
Initial perimeter treatment	1.2 L (0.31 gal) 8 min	0.9 L (0.23 gal) 5 min	1.0 L (0.25 gal) 7 min
Follow-up maintenance treatment	1.0 L (0.26 gal) 10 min	3.8 L (1 gal) 10.8 min	5.6 L (1.48 gal) 7.4 min



**Fig. 1.** Treatment of a house with a perimeter spray (fipronil).

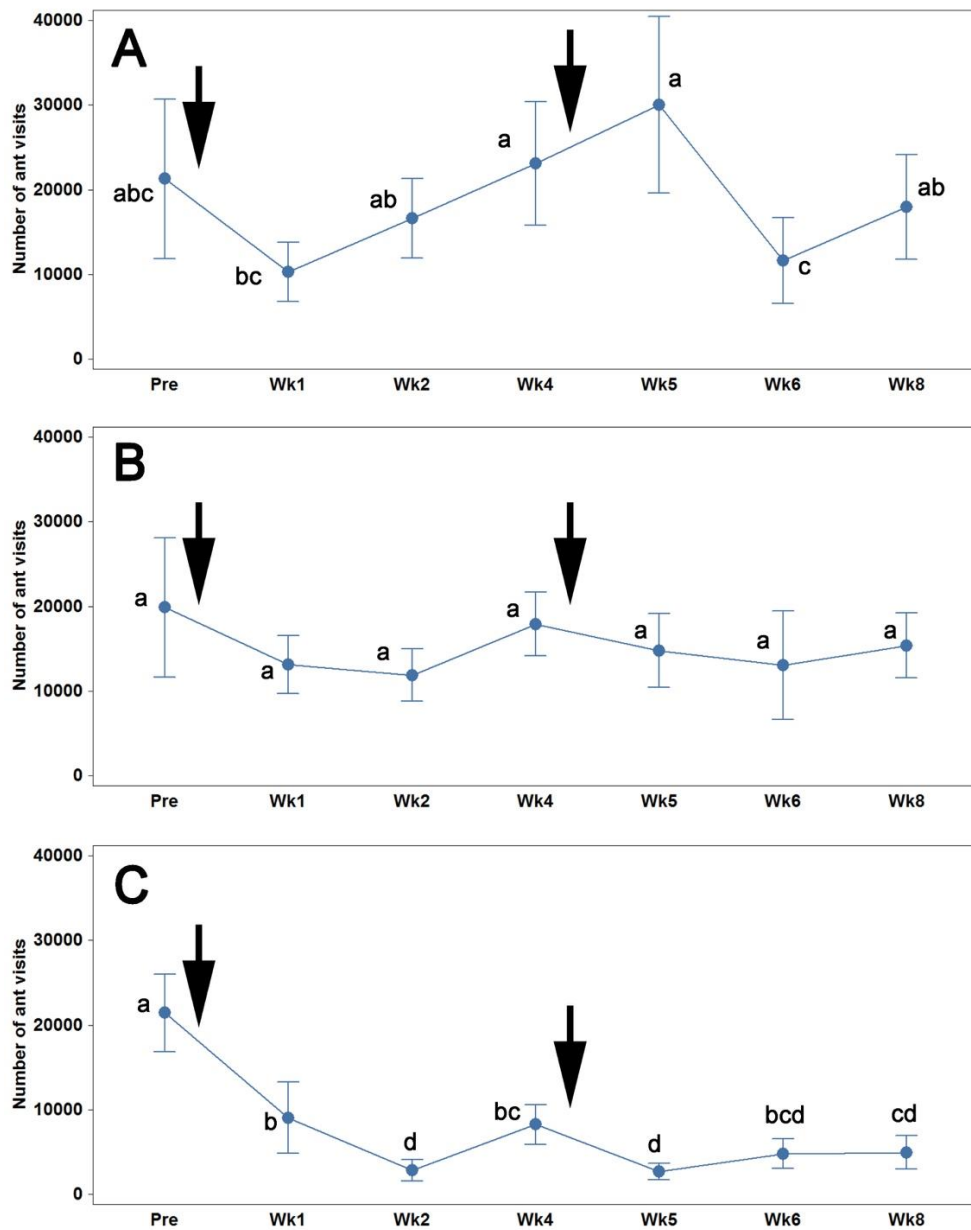


**Fig. 2.** Treatment of a house with a spray (bifenthrin or botanical).



**Fig. 3.** Treatment of a house with biodegradable hydrogel beads containing 25% sucrose and 1% boric acid.





**Fig. 4.** Level of Argentine ant foraging activity (number of ant visits at the monitoring tubes; mean  $\pm$  SEM,  $n = 5$  for each treatment protocol) for (A) conventional protocol #1, (B) conventional protocol #2, and (C) low-risk IPM protocol. Arrows indicate the timing of initial perimeter spray treatment (left) and follow-up maintenance treatment (right). Data with different letters within a treatment are significantly different (Conover's all pairwise comparison test followed by Friedman's test:  $\alpha = 0.05$ ). Pre: pre-treatment; Wk: week post-treatment.

**Progress Report**  
**Development and Evaluation of Bait Strategies for Control**  
**of Pest Yellowjackets in California**  
**April 1, 2019 – February 1, 2020**

Even though the grant was not funded until October 2018, the project was initiated in August 2018 so that some initial trapping and baiting studies could be initiated in 2018, but the yellowjacket season ended before any substantial testing was conducted. The summer of 2019 was the first complete yellowjacket season for monitoring and testing. In addition to those sites mentioned in the previous progress report, three additional sites in southern California were added in 2019. The tests in 2019 focused on increasing the attractiveness and acceptability of hydrogel and alginate baits and testing dinotefuran as a potential bait toxicant. Unfortunately, it was not possible to secure technical metaflumizone from the basic manufacturer to pursue this promising active ingredient.

The report is divided into separate sections concerning the tests conducted at the San Francisco Bay, Lake Tahoe, and southern California sites. Testing conditions varied at each of the sites depending upon human use patterns (recreational park, RV park, wild animal park, etc.) and local conditions (elevation, bears, park restrictions, etc.).

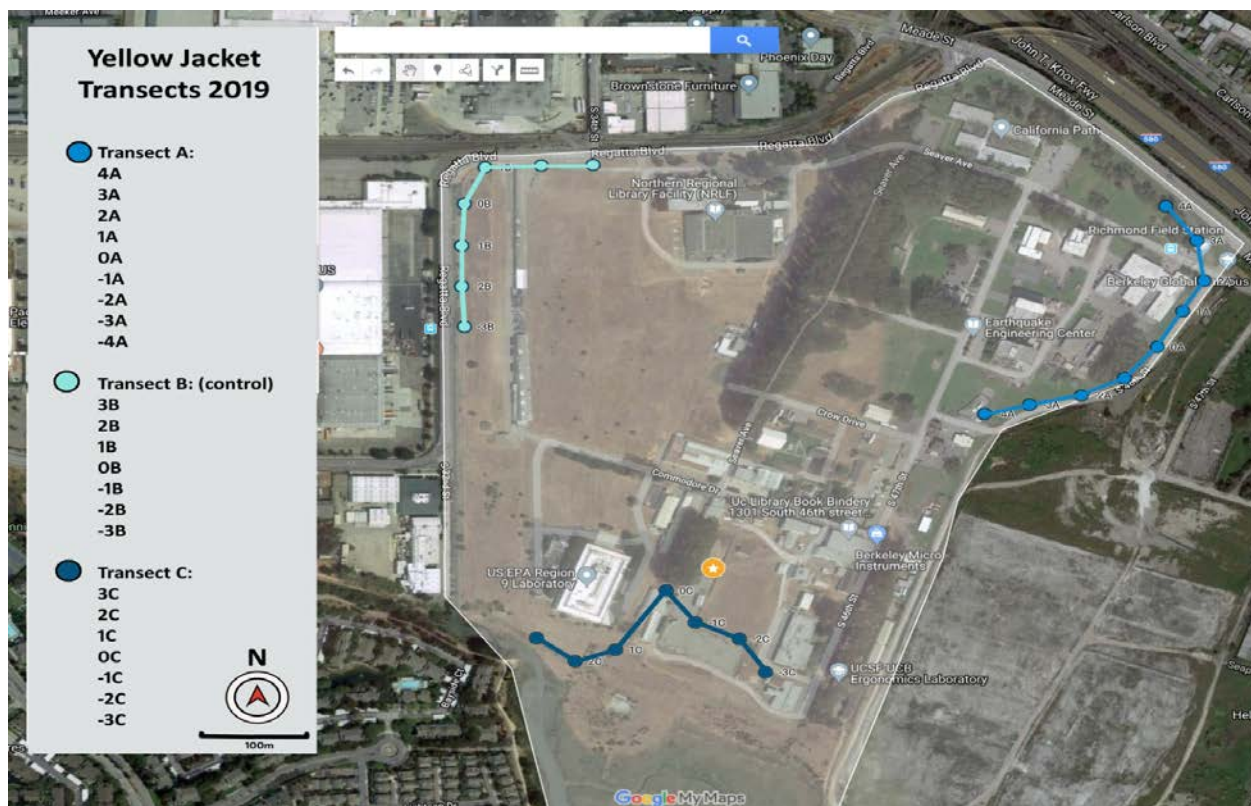
### **UC Berkeley Richmond Field Station**

Three trap lines (transects) were utilized at the UC Berkeley Richmond Field Station during 2019, with 11 trapping periods, beginning May 6 and ending October 16. All individuals trapped were identified as the western yellowjacket, *Vespula pensylvanica*. One preference trial, investigating relative acceptance of a seaweed alginate hydrogel (ALG), was conducted on August 27. The eastern transect (A) was baited on September 4, at location 2A, and the southern transect (C) was baited September 18, at location 1C (Fig. 1). The western transect (B, approximately 700 m from A and approximately 500 m from C) was left untreated and considered as a seasonal phenology check (control).

### **Overall Findings**

Wasp density increased slowly during 2019, only surpassing 10 yellowjackets/trap/day (YJTD) after August 12. Wasps were observed to remove very little alginate hydrogel as compared with the standard polyacrylamide (PAA) hydrogel, a difference that was statistically significant after 4 hours of deployment. PAA bait was deployed at two separate locations following observations of wasp density considered to be at pest thresholds (10 YJTD). Trap catches along baited transects did not significantly decline after baiting events. A significant decline in wasp density was recorded between trapping events October 8 and October 16 along the untreated transect, perhaps due to seasonal phenology related to decreasing temperatures and photoperiods (see the following pages for photos, discussions of trials, and statistical summaries).

Fig. 1. Map of the UC Berkeley Richmond Field Station and monitoring sites.



#### *Bait Matrix Preference Trial (10/27/2019)*

Two bait matrices, including the PAA standard and a novel seaweed alginate hydrogel (ALG), were deployed without a toxicant at two locations alongside evaporation controls (Fig. 2). At each location, one cup of each matrix type was removed at two hours and four hours after deployment. Concurrent evaporation was estimated and subtracted from the observed mass differences to calculate the estimated amount removed from each bait cup. Observations were recorded as reported in Table 1.

Table 1. Choice tests with PAA and ALG hydrogels.

bait matrix type	deployment duration	estimated concurrent evaporation (n = 2)	mean estimated bait removed (n = 2)
polyacrylamide hydrogel (PAA)	two hours	0.80 g	1.50 g
	four hours	1.95 g	6.50 g
seaweed alginate hydrogel (ALG)	two hours	0.75 g	0.40 g
	four hours	1.65 g	0.75 g

Considering data from the 4-hour deployment, it was apparent that the ALG matrix was less preferred than the PAA matrix by western yellowjackets at this site, though scant replication prohibited statistical analysis.

*Bait Trial 1 (9/4/2019)*

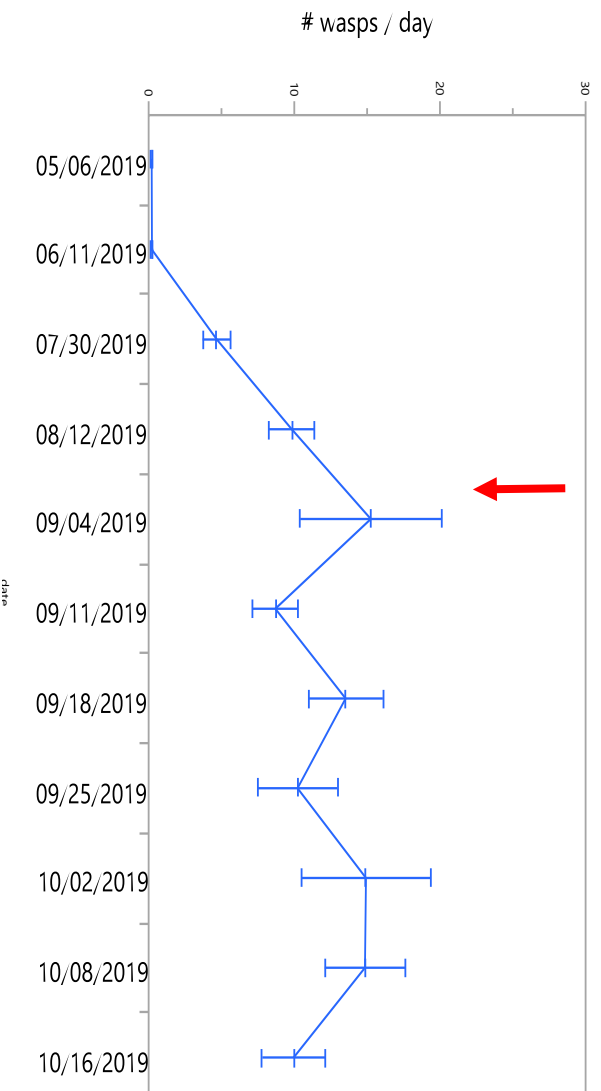
PAA bait containing 0.001% dinotefuran was deployed for 24 hours along transect A, centered at trap 2A. Three plastic cups filled with bait (mean mass = 32.7 g, n = 9) were placed in each of three bait boxes that were then hung about 1.5 m high and about 5 m apart. An evaporation check station, also with three cups of bait and screened to prevent wasp access, was hung alongside the central bait station.

Fig. 2. Yellowjackets removing PAA gels from the bait station (left). Choice bait and evaporation stations hanging from a Shepard's hook next to the fence line.



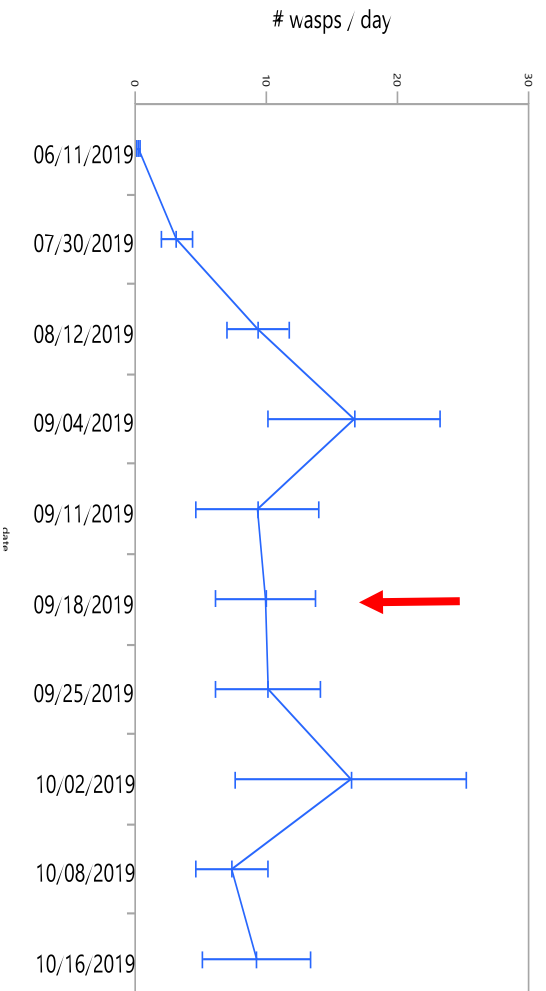
Accounting for the evaporation that occurred during the 24-hour deployment period (6.05 g, n = 4), we calculated that wasps removed a total of 23.65 g of bait (mean amount removed per cup = 2.63 g), representing 0.0236 g of dinotefuran. No significant reduction in wasp density was detected along this transect after this baiting event ( $\chi^2 = 4.30$ , df = 6, p = 0.64), and trap densities remained near or above pest threshold levels (Fig. 3).

Fig. 3. The number of yellowjackets trapped per day. The red arrow indicates the date that 0.001% dinotefuran bait was applied.



*Bait Trial 2 (9/18/2019)*  
 PAA baits containing 0.0025% dinotefuran were deployed for 24 hours along transect C, centered at trap 1C. As with Trial 1, three plastic cups filled with bait (mean mass = 33.1 g, n = 9) were placed in each of three bait stations and hung alongside one evaporation check station. Accounting for the evaporation that occurred during the 24-hour deployment period (5.05 g, n = 4), we calculated that wasps removed a total of 21.25 g of bait (mean amount removed per cup = 2.36 g), representing 0.0531 g of dinotefuran. As before, no significant reduction in wasp density was detected along this transect after this baiting event ( $\chi^2 = 1.83$ , df = 6,  $p = 0.93$ ), and trap densities remained near or above pest threshold levels (Fig. 4).

Fig. 4. The number of yellowjackets trapped per day along transect C. The red arrow indicates when 0.0025% dinotefuran bait was applied.

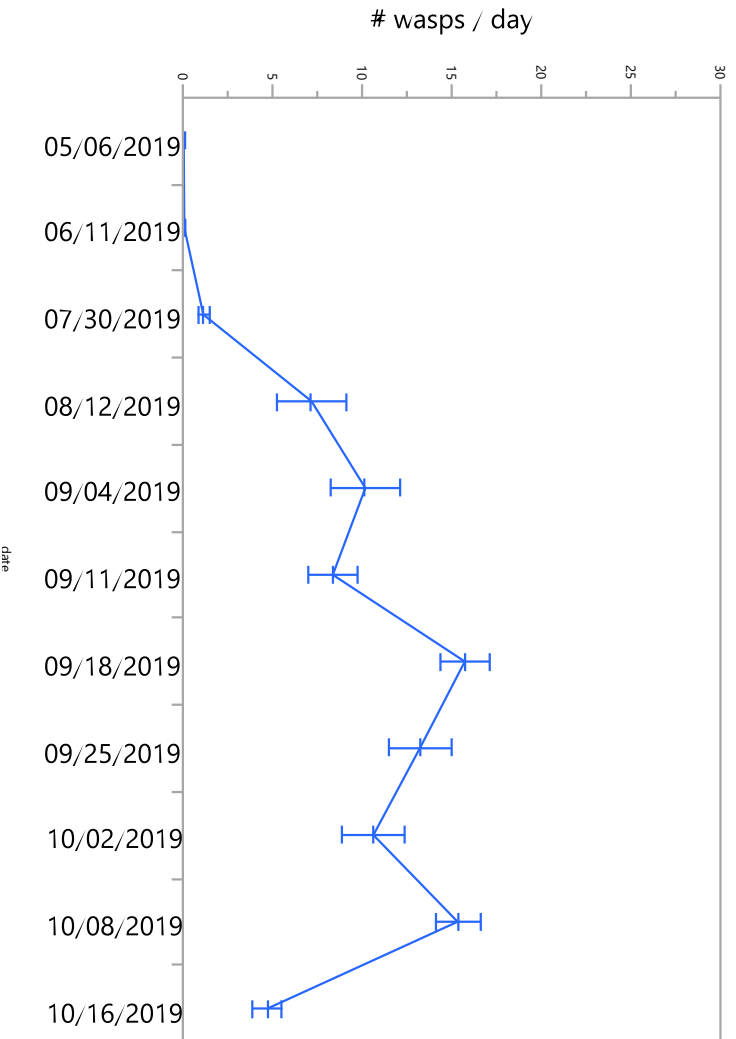


## Conclusions

The novel formulation of ALG bait, using a seaweed alginate hydrogel matrix, appeared to be less attractive than the PAA hydrogel. The observations by the team suggest that additional processing (maceration) of alginate hydrogel beads may be necessary to produce pieces of bait more easily handled by yellowjacket foragers.

As explained above, the western transect (B) at the Richmond Field Station was left untreated as a seasonal density check for efficacy comparisons, while bait trials took place along the eastern (A) and southern (C) transects. The only significant decrease in wasp density was observed along transect B ( $\chi^2 = 25.9$ ,  $df = 6$ ,  $p = 0.0002$ ) between trapping events October 8 and October 16 (Fig. 5).

Fig. 5. The total number of yellowjackets trapped along the control transect (B).



These observations suggest that neither baiting event was effective. Without genetic data, which could be used to determine yellowjacket colony fidelity associated with bait delivery, and nest location, which could be used to determine distance from bait delivery sites, it is difficult to determine bait efficacy.

## Lake Tahoe Report

Seven different sites from the Lake Tahoe region were monitored for yellowjacket activity in 2019 (Fig. 6) using a pair of Placer style traps (Fig. 7) at each site, one with a heptyl butyrate attractant and one with chicken attractant. The chicken meat and juice were attractive

to another pest species *Vespula alascensis*. Two of these sites were selected for baiting trials: North Star Village and Alpine Meadows Water District.

### **Trial 1 – North Star Village**

#### **Methods**

North Star Village is located about 4.8 km from Lake Tahoe (39°16'29.68" N, 120°07'16.35" W, elev. 1,926 m). The site is located within the Tahoe National Forest and is covered with pine trees and native shrubs. The trapping site is along a wooded border of a shopping and recreation area (Fig. 8). The maximum average temperatures are around 27°C (82°F) to 24°C (75°F) and the minimum average temperatures are around 5°C (41°F) to 1°C (34°F) in August and September.

The juices and liquid contents from cans of canned minced chicken (Swanson White Premium Chunk Chicken, Campbell Soup Co., Camden, NJ) were strained through cheesecloth. The juice (100 ml) was diluted with water (300 ml) and combined with 0.01 g dinotefuran (Alpine 40WSG, BASF Corp., Research Triangle Park, NC). Twenty grams of the PAA hydrogels (Watering Storing Crystals, Miracle-Gro Lawn Products, Inc., Marysville, OH) were added to the mixture resulting in hydrogels containing 0.001% dinotefuran. The PAA mixture was placed in the refrigerator and conditioned overnight (minimum of 16 hours).

Thirty monitoring traps were set up about every 25 m at the site (Fig. 8). Monitoring began on 10/8/2019, two weeks before bait placement, and the trap contents were collected after 7 and 14 days. Traps were hung in trees to prevent bears and other animals from disturbing them (Fig. 7). Yellowjackets were removed from the traps and preserved in alcohol for later identification to species and to be counted.

Bait stations were constructed from black two-gallon buckets with four 13 cm by 13 cm openings cut into the sides (Fig. 4). The openings were covered with flexible plastic mesh poultry fencing material with 2 cm x 2 cm openings in the mesh to allow yellowjackets to enter and exit. Bait stations contained 3 cups filled with  $\approx$  30g bait each and were hung along the trap line in an area of high yellowjacket activity.

Evaporation control stations with openings covered by window-screen (1 mm mesh) were hung alongside bait stations to exclude yellowjackets and measure the water loss from evaporation from the bait cups (Fig. 9). At the end of the baiting period, the cups were capped, returned to the laboratory and weighed. The original amount of bait in cup was adjusted by the evaporation loss and the bait removed determined.

On 8/29/2019, three bait stations each containing three bait cups of  $\approx$  30 g of 0.001% dinotefuran bait were hung in trees. To control for water loss from the baits, one evaporation control bait station with three bait cups was hung. The bait and evaporation stations were removed after 24 hours. The bait cups were returned to the laboratory and weighed. On 8/30/2019, monitoring traps were returned to their original sites in the field. Yellowjackets were collected and traps were reset on 9/6/2019, and yellowjackets were collected one, two, three, and four weeks after baiting.

#### **Results**

Collections were predominantly *Vespula pensylvanica* (95%), but also included *V. alascensis*, *V. acadica*, *V. atropilosa*, *Dolichovespula maculata*, and *D. arenaria*. The bait cups

in the evaporation checks lost an average of 9.18 g. An average of 19.20 g of bait was consumed from each exposed cup (Fig. 10). Corrected for evaporation, a total of 90 g of bait was removed from the site. No significant reduction was observed in the number of yellowjackets collected in traps before and after baiting (Fig. 11).

## **Trial 2 – Alpine Meadows**

### **Methods**

The Alpine Meadows site (39°11'21.6774" N, 120°11'55.662" W, elev. 1,975 m) is located about 5.6 km northwest of Lake Tahoe in a partly sloped and rocky naturally forested area heavily treed with pine, fir, and incense cedar. The site is adjacent to the Alpine Meadows Water District offices and garbage collection area and is bordered to the south by a small landscaped park and to the north by Bear Creek.

Traps, baits and bait stations were as described above for the North Star site. Thirty monitoring traps were set up about every 25 m at the site (Fig. 12). Monitoring began on 8/14/2019 and the traps were collected 8/21 and 8/28 (14 d and 7 d prior to baiting). Placer style traps baited with heptyl butyrate were hung in trees to prevent bears and other animals from disturbing them. Yellowjackets were removed from the traps and preserved in ethanol for later identification and counting.

On 9/10/2019, three bait stations each containing three cups of  $\approx 30$  g bait were hung in trees. To control for water loss from the baits, one evaporation control cage, also containing three bait cups, was hung. The bait stations were removed after 24 hours, and the bait cups were returned to the laboratory and weighed. On 9/11/2019, monitoring traps were placed in their original positions. Yellowjackets were collected each week for four weeks after baiting.

### **Results**

Yellowjackets captured in traps were predominantly *V. pensylvanica* (83%), followed by *V. acadica* (9%), *V. alascensis* (6%), *V. atropilosa*, *Dolichovespula maculata*, and *D. arenaria* (all < 2%). The cups in the evaporation checks lost an average of 2.9 g. In the bait stations open to yellowjackets, an average of 4.7 g was consumed. Corrected for evaporation loss, a total of 16.2 g of bait was consumed at the site. No significant reduction was observed in yellowjacket numbers one week after baiting (Fig. 13). Two weeks after baiting, there was a large decrease in yellowjackets captured; however, a large decrease was observed at this time in unbaited sites as well (Fig. 6), likely due to drops in temperature.



Fig. 6. Weekly monitoring data for all seven sites at Lake Tahoe (including the two baited sites). Only numbers collected from traps baited with heptyl butyrate are shown.

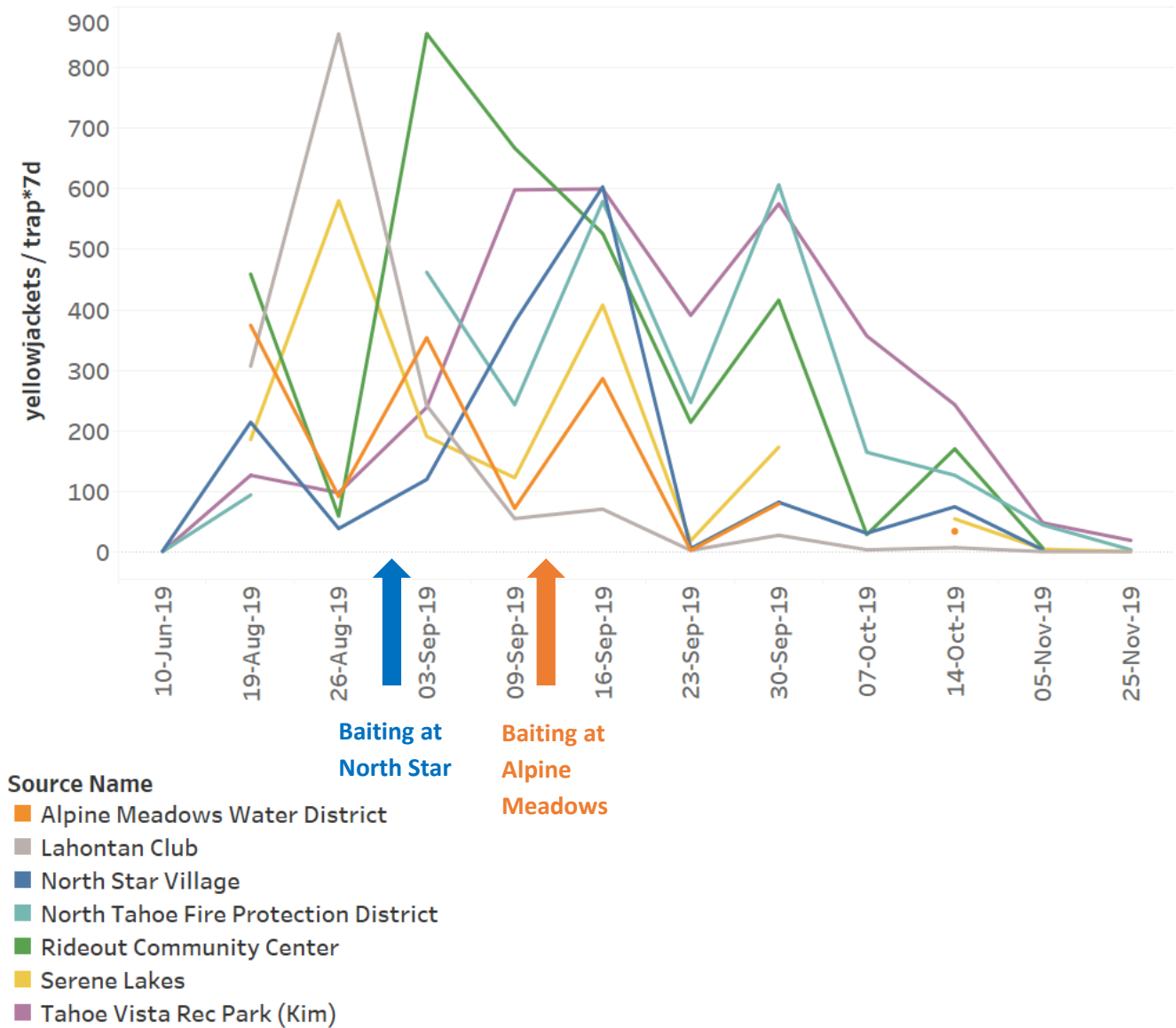


Fig. 7. A Placer-style yellowjacket monitoring trap in the field. These traps may be baited with chicken or heptyl butyrate.



Fig. 8. North Star Village and the location of monitoring traps.

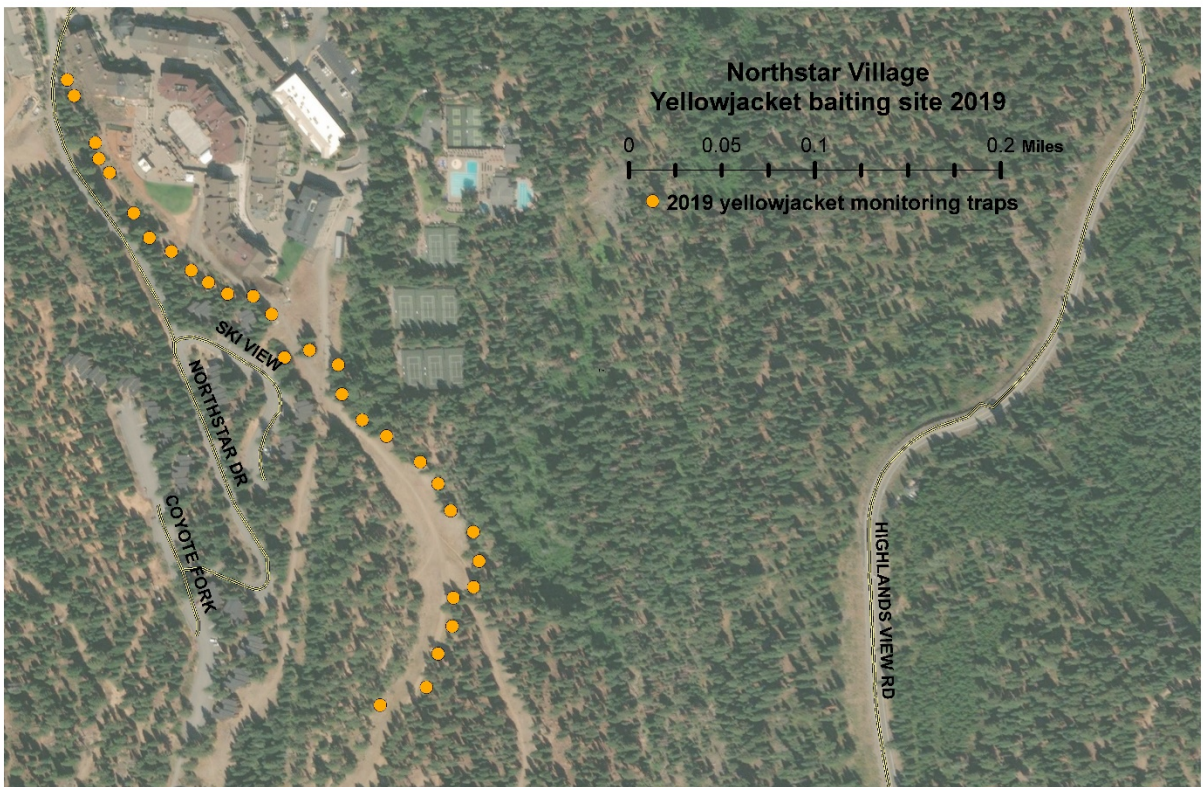


Fig. 9. An evaporation test station with screen to exclude yellowjackets (left) and a bait station to allow yellowjackets to enter and feed on the test bait (right).



Fig. 10. The average number ( $\pm$  SEM) of yellowjackets/trap/7d at North Star Village before and after baiting with 0.001% dinotefuran.

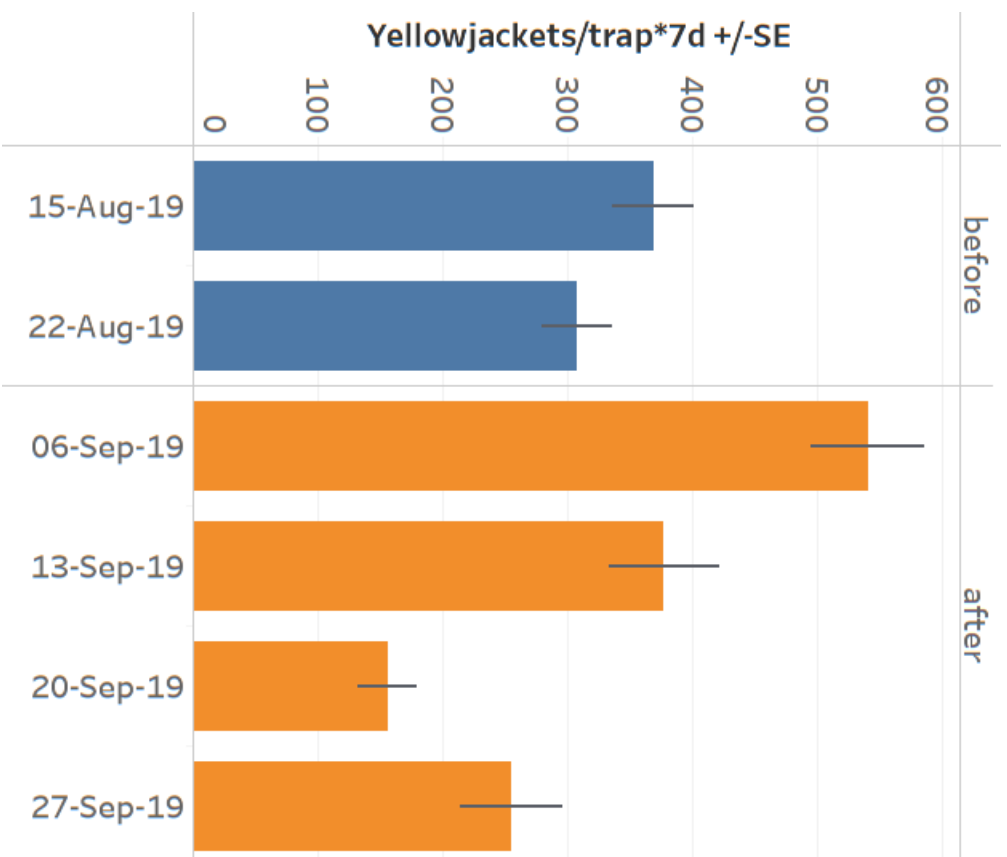


Fig. 11. The average bait removal ( $\pm$  SEM) by yellowjackets at North Star Village.

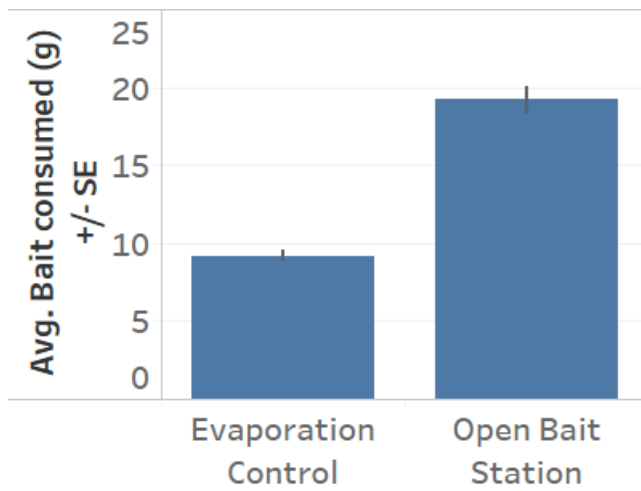
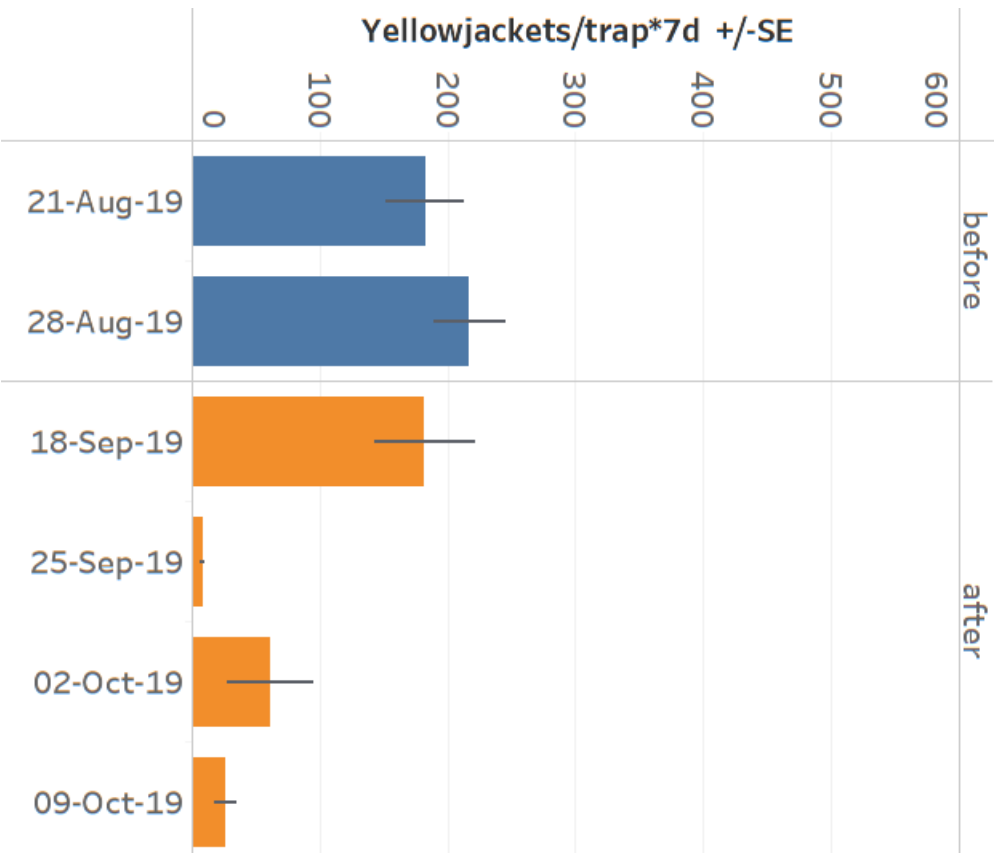


Fig. 12. Map of Alpine Meadows and the monitoring sites.



Fig. 13. The average number of yellowjackets ( $\pm$ SEM) /trap\*7days at Alpine Meadows before and after baiting with dinotefuran.



## Southern California Report

In 2019, four sites were monitored in southern California: Irvine Regional Park, Silent Valley RV Park, UC Riverside campus, and a wild animal park in northern San Diego County. Baiting trials were conducted at all sites, except on the UC Riverside campus.

### **Irvine Regional Park (IRP)**

IRP (33°47'46.55" N, 177°45'24.04" W, elev. 171.9 m) is a multiple-use park ( $\approx$  193 ha) surrounded by undeveloped wilderness areas composed primarily of a riparian, coastal sage scrub, and oak woodland plant community. The park offers many picnic activities, concession stands, shady turf areas, a zoo, and small lake (Fig. 14). Nestled in the foothills, the park provides an excellent foraging setting for *V. pensylvanica*.

*Monitoring Traps.*- Modified wet traps provisioned with an 8-ml vial containing about 7.2 ml heptyl butyrate and a 5-cm piece of dental wick were used to monitor yellowjacket activity (Reiersen and Wagner 1975). The design of the trap allowed the collection of wasps in the jar containing propylene glycol (Sierra® Antifreeze/Coolant, Old World Industries, Inc., Northbrook, IL) diluted with water (1:1, vol:vol) (Rust et al. 2010). The monitoring traps were hung under trees about 100–150 cm off the ground and about 20–80 m apart. Traps were checked every 14 days and the heptyl butyrate vials and containers with coolant were replaced as needed. The perimeter of the park was surrounded by 56 traps. The traps were installed on 6/10/2019.

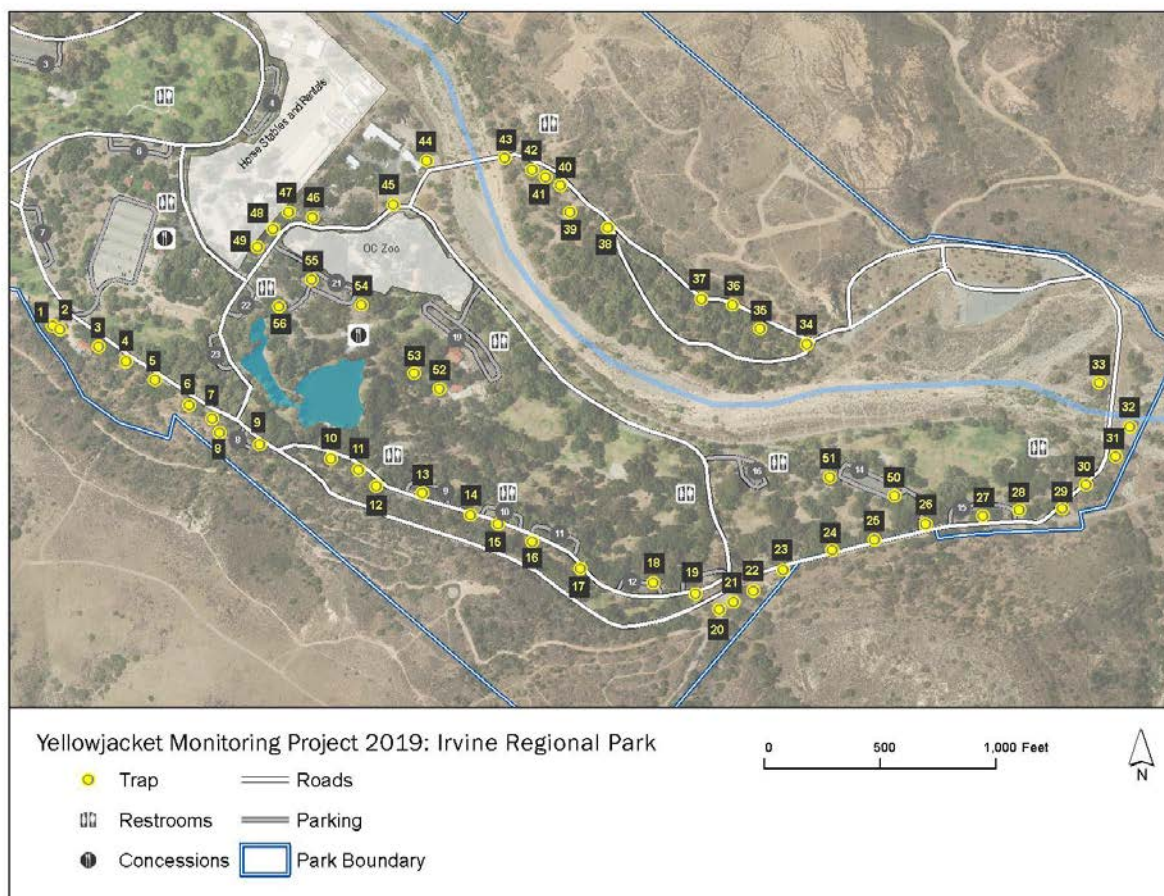
*Bait Stations.*-Bait stations were constructed from two pieces of pine board about 18 x 18 cm and 1.8 cm thick and a piece of 2.54-cm hardware cloth (72 x 14 cm). The hardware cloth was stapled to the edges of the boards to construct a cage (18 x 18 x 14 cm). The hardware cloth on one side of the cage was not stapled to the wood so that bait cups could be placed inside the cage. The opening was held closed with a twist tie. The bait station was hung from a bush or tree on a wire and a Perky-Pet® ANT GUARD® (Woodstream Corp., Lititz, PA) to prevent ants from feeding on the baits near the monitoring traps (Fig. 15).

The heptyl butyrate vial and the jar containing the propylene glycol solution were removed during baiting.

### *Choice Tests Polyacrylamide (PAA) Gels vs. Sodium Alginate (ALG) Gels*

To determine if different hydrogels affected the amount of bait retrieved, choice tests were conducted with hydrogels made with chicken juice. The PAA and ALG hydrogels were placed in bait stations and observed for 4 hours.

Fig. 14. A map of Irvine Regional Park and the monitoring trap locations throughout the park.



## Materials and Methods

The PAA gels were prepared by mixing 200 ml of chicken juice, 600 ml of deionized water and 40 g of PAA crystals (Watering Storing Crystals, Miracle-Gro Lawn Products, Inc., Marysville, OH) providing a 1:3 dilution ratio of chicken juice:water. The biodegradable ALG hydrogels were produced by the method described by Tay et al. (2017) with minor modifications. The Na-Alg solution (1%) was slowly dispensed dropwise through a modified 8-inch shower head nozzles (1.6 mm diameter). The droplets were immediately collected in a plastic container with 0.5%  $\text{CaCl}_2$  crosslinker solution. The alginate hydrogel beads were crosslinked in the  $\text{CaCl}_2$  solution for 2 minutes. The resulting hydrogel beads were filtered out and conditioned in a diluted chicken juice.

The resulting ALG hydrogels are mostly water, consisting of 300 ml chicken juice, 300 ml deionized water, and 600 ml of the ALG gel to obtain an approximate 1:3 (chicken juice: water) ratio. The PAA and ALG gels were placed in the refrigerator overnight to condition. After 24 hours, both gels were ready to use. Excess liquid was drained from the gels through a strainer, resulting in about 840 and 750 g of conditioned gels for PAA and ALG, respectively.



Salsa cups (59.1 ml) were tared on the scale and 30 g of gel were added to each cup. Then the entire bait cup (cup+ gels + lid) was weighed. The cups were kept in a refrigerator until used (within 1-2 days) and also held on ice packs during transportation to the field sites.

Two cups containing PAA and two cups containing ALG gel were placed in opposite corners in each of the bait stations (Fig. 16). Six choice tests were set up (trap location #1, 5, 22, 39, 42, and 44, Fig. 1).

To estimate water loss from hydrogel baits, evaporation control stations containing five cups (trap location #39, 40, and 42) were hung alongside bait stations (Fig. 17). To prevent yellowjackets from feeding on the evaporation controls, a fine metal screen (1 mm mesh) was wrapped around these cages. The evaporation stations were removed at the end of the test, and the cups weighed. Two bait stations and five cups of ALG and PAA bait were set up for evaporation checks.

The choice test was initiated 8/19/2019 and the bait cups retrieved after 24 hours.

## Results

The PAA cups were completely empty or almost empty after 2-3 hours. For example, for trap location #1, PAA cups were completely empty by 1:20 PM. At the sites where the PAA cups were empty, ALG cups still had a good amount of bait left in them (Fig. 18). Based on “same day snapshot data” collected at 4:00 PM,  $19.0 \pm 11$  and  $5.0 \pm 3.4$  g (mean  $\pm$  SD,  $n = 6$  each) of baits were taken by wasps for PAA and ALG gels, respectively. These numbers were calculated by taking evaporation loss (about 2 g) into consideration.

Based on our observation at the sites, the wasps visited both gel baits with no particular preference. However, it seemed that the wasps spent more time with ALG beads before being able to take off with a small piece of hydrogel. Based on the observation, an individual wasp spends about 30 sec or more to take a piece of ALG bead. In contrast, wasps took a piece of PAA gel within 5 sec after landing in the bait cup (Fig. 19). This difference in “handling time” explains the initial difference in the amount of bait taken. If ALG beads were slightly smaller or cut into smaller pieces, then the amount of handling time might decrease.

For the ALG gels, some wasps often spent time “drinking” from the surface of gels in the cup. Based on “24 h data”, the wasp took all the bait from PAA cups as well as ALG cups. The PAA evaporation cups lost an average of 4.5 g at this time point (13.9%). The ALG gels lost an average 3.9 g (11.8%). Based on our observation at the site, it was not clear if there is any inherent preference between PAA and ALG gel baits.

## Conclusion

Significantly shorter handling time for the PAA gels might be important to maximize the amount of bait taken, especially when slow-acting insecticides are incorporated in the bait. The handling time for ALG beads might be shortened if the hydrogel beads were cut into small/irregularly shaped pieces or the beads were made smaller. The ALG beads lose less water than the PAA gels and this might extend the acceptability of the baits in the field.

Fig. 15. Bait station set up at trap location #5. Notice the presence of “ANT GUARD” on the wire above the bait station to prevent Argentine ants from accessing the baits.



Fig. 16. Bait cups inside of a bait station. From lower left, clockwise, cups contained PAA, ALG, PAA, and ALG hydrogels. Note the ALG hydrogels are spherical, and PAA hydrogels have an irregular shape.

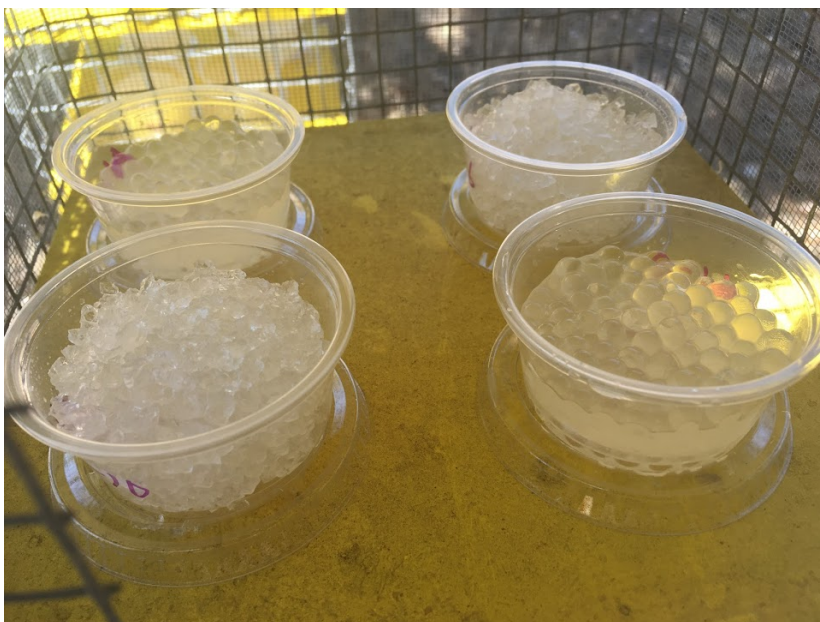


Fig. 17. A bait station (left) and an evaporation control station (right). Note the fine metal screen on the evaporation check station to prevent yellowjackets from foraging on the hydrogels.



Fig. 18. Bait station at trap location #1. The photo was taken about 2 hours after the initial setup. From lower left, clockwise, cups contained PAA, ALG, PAA, and ALG hydrogels. Note both of PAA cups are completely empty while ALG cups still have a good amount of ALG hydrogel.



Fig. 19. Two foragers are collecting PAA hydrogels.



#### *Choice Tests Chicken Juice:Water PAA Gels*

To determine the optimal amount of chicken juice in the hydrogels, PAA hydrogels were prepared with different dilutions of chicken juice (CJ) in water and tested in the field.

#### **Methods and Materials**

The gels were prepared with pure CJ, CJ (diluted 1:1) and CJ (diluted 1:3) with deionized water (Table 2). The gels were conditioned overnight in the refrigerator.

Table 2. Preparation of PAA gels containing various amounts of CJ and water.

Ratio (CJ:water)	Chicken Juice (ml)	Water (ml)	Total Mixture (ml)	PAA crystals (g)
1:3	30	90	120	6
1:1	30	30	60	3
	10	0	10	0.5

Salsa cups (59.1 ml) were tared on the scale and 30 g of gel were added to each cup. Then the entire bait cup (cup+ gels + lid) was weighed. Each cup was labelled. Six choice tests

were set up in the field in bait stations described above. Evaporation control stations were hung alongside bait stations as described above.

The choice test was initiated 8/19/2019 at 2:00 PM.

## **Results**

All the bait from cups containing pure CJ or CJ (1:1) was removed within 2 hours. Very little of the CJ (1:3) was removed at 2 hours, but by the following morning (18 hours later) it was completely removed.

## **Conclusions**

The findings were consistent with other observations at the wild animal park that CJ (1:3) was less preferred than pure CJ or CJ (1:1). To be competitive with food sources in the environment, the hydrogel baits need to be made with the higher concentrations of CJ.

### *Choice Tests with Bait Ingredients*

Choice tests were conducted to determine if whitefish, chicken broth, and chicken were attractive and palatable in PAA hydrogels. Previous studies have shown that certain pet food containing whitefish and canned minced chicken were highly preferred and removed by yellowjackets (Rust et al. 2010).

## **Methods and Materials**

*Food Baits.*- The canned minced chicken (Swanson White Premium Chunk Chicken, Campbell Soup Co., Camden, NJ) and the canned cat food (Friskies Flaked Ocean Whitefish Dinner, Nestle Purina Pet Care Co., St. Louis, MO) selected because they are attractive and removed by foraging yellowjackets (Rust et al. 2010). To extract the juices from the canned meats, the contents of can were poured into a large funnel lined with cheesecloth (Fig. 20). The liquid passed through into the glass container. The piece of cheesecloth containing the chicken or fish was squeezed over a bowl to collect the remaining juices. A 133-ml can of chicken (4.5 oz.) provided approximately 70-80 ml of juice. Chicken broth was obtained by slowly cooking a whole chicken in water for 6 hours. The meat, bones, and skin were removed, and the liquids contents were poured through a strainer. The filtered liquid was refrigerated and the fat hardened and solidified over the broth. The fat was removed and only the liquid broth portion was used for preparing the PAA gels.

Fig. 20. Extracting juices from canned minced chicken and whitefish pet food through cheesecloth.



The hydrogels were prepared with 20 g of PAA crystals (Watering Storing Crystals, Miracle-Gro Lawn Products, Inc., Marysville, OH) for every 400 ml total volume. The liquid consisted of either pure chicken broth, chicken or fish juice or juices diluted with water in 1:1 or in 1:3 ratio (Table 3). The gels were prepared as follows:

Step 1. Three types of baits (chicken juice, fish juice, and chicken broth) were prepared by extracting the juice from the canned meats or from a cooked whole chicken into three separate 1-L glass containers.

Step 2. All the juices and broth were collected, measured in a graduated cylinder, and poured into a 1-L glass beaker. Water was added to make up the appropriate ratios (either 100% juice or broth, 1:1, and 1:3 ratio). The mixtures and juice were stirred for approximately 2-3 minutes.

Step 3. The PAA crystals gels (20 g) were added to each of the mixtures and juices. The mixtures and the pure juice/broth were stirred using the stirring rod for an additional 2-3 minutes.

Step 4. The PAA gels were then conditioned by storing them inside the refrigerator for at least 16 hours (or overnight).

Step 5. After the gels were conditioned, they were stirred using a stirring rod before being transferred to bait cups and weighed.

Table 3. The recipes for the chicken and fish gels.

Chicken Juice (Canned -Original)				
Type	Total Volume	Chicken Juice Volume	Water Volume	PAA gels (g)
100% pure chicken juice	400 ml	400 ml	0 ml	20 g
1:1 ratio	400 ml	200 ml	200 ml	20 g
1:3 ratio	400 ml	100 ml	300 ml	20 g

Fish Juice (Canned)				
Type	Total Volume	Chicken Volume	Water Volume	PAA gels (g)
100% pure fish juice	400 ml	400 ml	0 ml	20 g
1:1 ratio	400 ml	200 ml	200 ml	20 g
1:3 ratio	400 ml	100 ml	300 ml	20 g

Chicken Broth				
Type	Total Volume	Chicken Volume	Water Volume	PAA gels (g)
100% pure chicken broth	400 ml	400 ml	0 ml	20 g
1:1 ratio	400 ml	200 ml	200 ml	20 g

*Preparation of hydrogel with hexane fraction / aqueous fraction of chicken juice and fish juice*

About 150 ml of the juice was collected in a 250 ml Erlenmeyer flask with a glass stopper. About 100 ml of hexane was added in the flask. With the stopper securely closed, the



flask was shaken vigorously. After shaking, the flask was left in a fume hood overnight until the two layers (bottom: aqueous fraction; top: hexane fraction) separated and settled. Each fraction was collected using a 5-ml glass pipette and transferred to a clean glass vial. In some cases (especially for the fish juice), the further fractionation and cleanup by centrifugation were necessary. The hexane and aqueous fractions were kept in the refrigerator with some amount of ventilation (aluminum foil cover) overnight before being used to PAA gels. This process helped in further removing any residual hexane from the aqueous fractions.

For “water extract” treatment, about a half of water fraction (50 ml) was used to hydrate 2.5 g of PAA. For “hexane extract” treatment, a half of hexane fraction (50 ml) was first placed in a glass jar (8 oz.) and hexane was evaporated under a gentle flow of N<sub>2</sub>, leaving an oily residue at the bottom. PAA hydrogels fully hydrated in 0.9% NaCl isotonic solution (B. Braum Medical Inc. Irvine, CA; 2.5 g of PAA in 50 ml of 0.9% NaCl solution) were subsequently added in the glass jar and mixed with the oil residue using a spatula. For “both extracts together” treatment, the PAA hydrogels hydrated with the aqueous fraction (50 ml) were subsequently treated with the oily residue from the hexane fraction (50 ml) by following the similar processes described above.

Bait stations served as choice test arenas. The salsa cups were filled with about 15 g of food and gels and weighed. The choice tests were placed at active monitoring sites where the number the number of yellowjackets trapped per day ranged from 7 to 39 on 10/14/2019. The choice tests were conducted on 10/25/2019.

To estimate water loss from hydrogel baits, evaporation control stations containing five cups were hung alongside bait stations. To prevent yellowjackets from feeding on the evaporation controls, a fine metal screen (1 mm mesh) was wrapped around these cages. The evaporation stations were removed after at the end of the test, and the cups weighed.

## Results

The most preferred food baits were Swanson chicken, Swanson chicken juice, and diluted Swanson chicken juice (Table 4). When the removal data is adjusted for the foraging activity at the test sites, the chicken broth was also attractive and well taken by the yellowjackets. The whitefish was consistently less preferred in choice tests with the chicken. The hexane and water extracts of the whitefish and chicken were less attractive than the original meats from the can or juice.

When the juices from the chicken meat or broth were added to the crystals, firm cubes of bait formed after 24 hours of conditioning. The juices of the whitefish resulted in a gelatinous mass in the cups after conditioning. The gels were stuck together.

From the trials with PAA hydrogels prepared with hexane fraction, water fraction, or both fractions of the chicken juice the, it was evident that foraging yellowjackets still preferred the original chicken juice even after removing most (if not all) of the hexane soluble oils from it. The hexane soluble portion of the juice was not effective in making the yellowjackets take the PAA hydrogel bits conditioned in 0.9% NaCl isotonic solution. The presence of hexane-soluble oils on the surface of hydrogels might attract the yellowjackets initially (unpublished data), but the presence of the oil was not sufficient to elicit the bait removal behavior of foraging yellowjackets. Our observation indicates that important phagostimulant(s) may be present in the aqueous fractions of the juice.

From the trials with PAA hydrogels prepared with hexane fraction, water fraction, or both fractions of the fish juice, it was evident that the fish extracts were not as attractive as the whitefish or whitefish juice.

Table 4. The removal of food materials and gels ranked from various choice tests conducted at IRP.

Food	Gel	% Evaporation (3 hours)	Rank - > 40% of all baits taken	Rank - < 40% of all baits taken
Swanson Chicken (S)	No	4.57	1,1,1,1	1
Swanson Chicken Juice (SCJ)	Yes	9.0	2,2,2,2,2,1	
SCJ (1:1) water	Yes	4.81	1,3,3,3	
SCJ (1:3) water	Yes	5.39	4,4,4,4,6	
Whitefish (WF)	No	5.38	3,3,4	
WF Juice (WFJ)	Yes	4.74	3,5	
Chicken Broth	Yes	2.21	2,2,2	
CB (1:1) water	Yes	9.08	2,2,3,4	
Extracts				
HE Chicken	Yes	14.3		3,3,3
H <sub>2</sub> O Chicken	Yes			2,1,1
BE Chicken	Yes	13.9		1,2,2
HE Fish	Yes	14.5		1
H <sub>2</sub> O Fish	Yes	12.9		2
BE Fish	Yes	12.6		3

<sup>a</sup>HE = hexane extract, H<sub>2</sub>O = water extract, BE = both extracts together.

#### *Dinotefuran Baiting Trials*

To determine the efficacy of dinotefuran baits against yellowjackets, baiting tests were conducted at Irvine Regional Park (IRP). Low concentrations of dinotefuran, 0.00075%, 0.001%, and 0.0025%, were prepared in the PAA hydrogels. The tests were conducted beginning 9/3/2019 and discontinued 56 days later.

### **Methods and Materials**

*Baits.*- The PAA gels were prepared with 100 ml chicken juice and 300 ml water (1:3). An aqueous stock solution of dinotefuran (Alpine 40WSG, BASF Corp., Research Triangle Park, NC) was added so that the final concentrations in the gels were 0.00075, 0.001, and 0.0025%. The PPA crystals (Watering Storing Crystals, Miracle-Gro Lawn Products, Inc., Marysville, OH) were added to this mixture and allowed to condition in the refrigerator overnight.

Salsa cups (59.1 ml) were tared on the scale and 30 g of gel were added to each cup. Then the entire bait cup (cup+ gels + lid) were weighed. Each cup was labelled.

*Baiting.*- Three of the hardware cloth bait stations described above were placed at each site. One station was placed at the monitoring location with the highest yellowjacket trap count and the other traps were placed within about 20 m (Fig. 21). Estimates of the water loss from the baits was conducted as described above.

## Results

The 0.0025% dinotefuran bait provided a 40.6 and 37.3% reduction at days 14 and 28, but the average counts were still above the action threshold of 10 YJTD (Table 1). The trap counts increased with 0.001 and 0.00075% baits (Table 54). On 10/15/2019, yellowjacket traps declined at all the sites at IRJ as cooler weather began (Fig. 22). About 20-25% of the baits placed out in stations was removed by the yellowjackets within 24 hours.

Fig. 21. The position of bait stations at IRP.

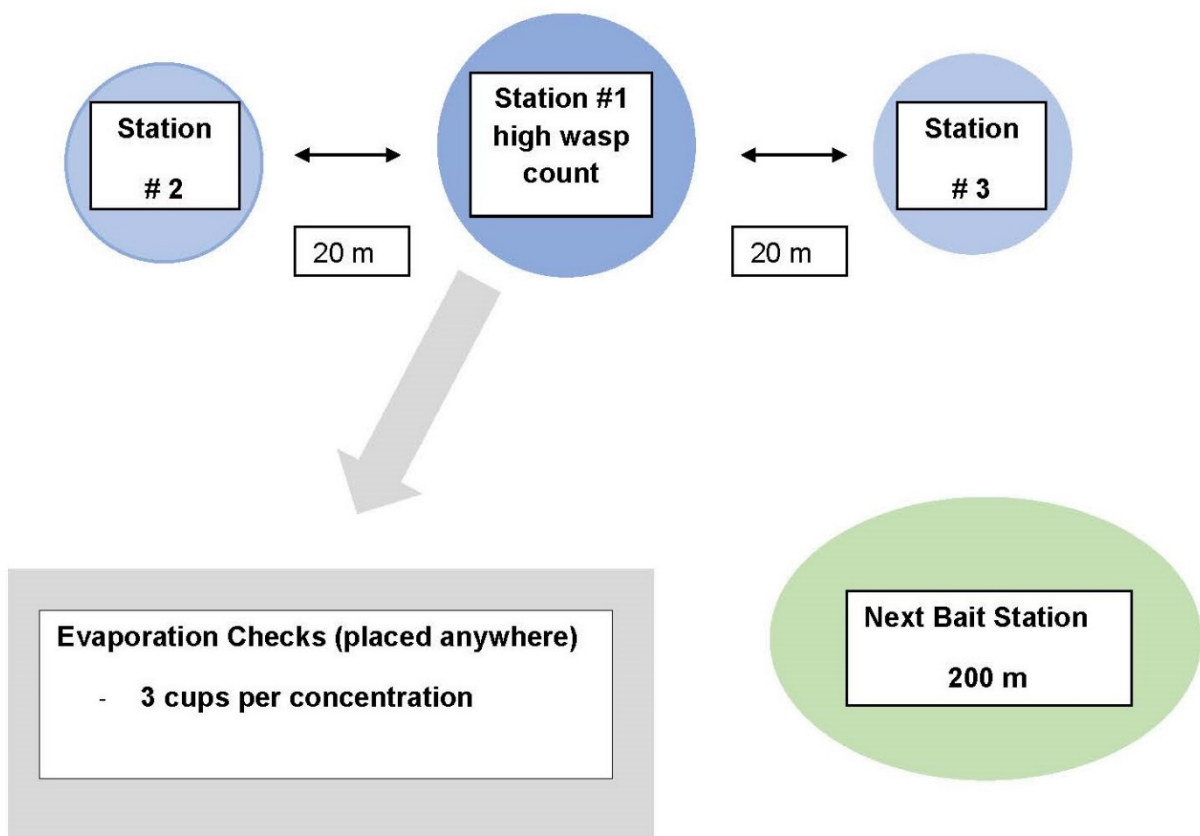
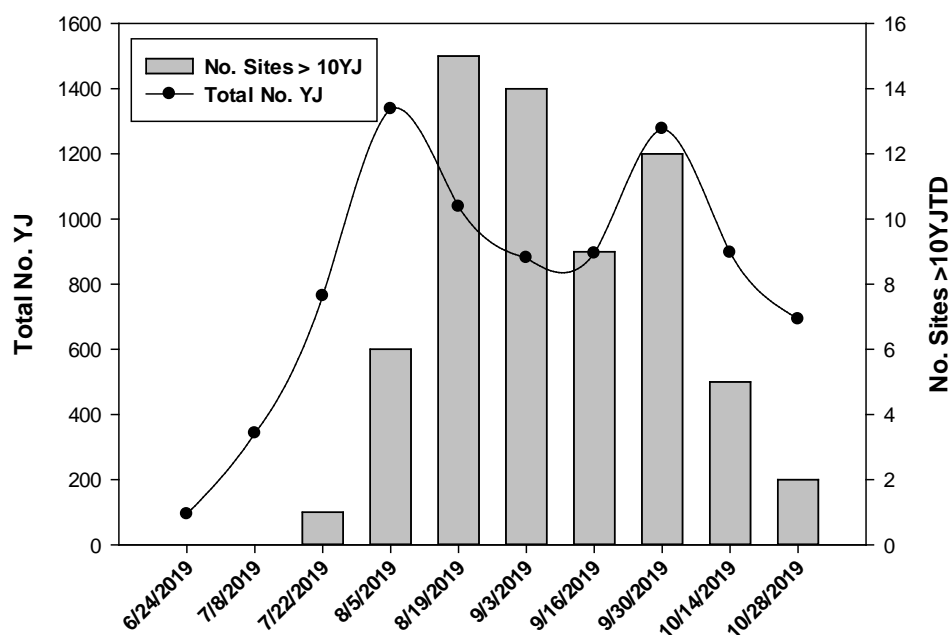


Table 5. Efficacy of 0.00075, 0.001, and 0.0025% dinotefuran PAA baits against western yellowjackets (YJ) at IRP.

Concn (%) <sup>a</sup>	Bait removed (g)	Avg. YJ/trap/day (% reduction)				
		Pre-Count	14 days	28 days	42 days	56 days
0.00075	69.1	17.6	18.5 (+4.9)	19.8 (+12.5)	13.3 (24.9)	9.2 (47.9)
0.001	65.9	10.9	9.6 (11.2)	21.1 (+94.5)	6.0 (45.0)	2.4 (78.3)
0.0025	41.5	28.9	17.1 (40.6)	18.1 (37.3)	10.0 (65.3)	6.0 (79.3)
Untreated		12.0	12.8 (+7.0)	20.0 (+66.7)	8.4 (29.9)	6.9 (42.6)

<sup>a</sup> Baits applied on 9/3/2019 for 24 hours.

Fig. 22. The number of yellowjackets trapped at IRP during 2019 and the number of sites that have > 10 yellowjackets/trap/day (YJTD).



### San Diego Wild Animal Safari

The park is a 728.4 ha animal sanctuary located within the San Pasqual Valley near Escondido, CA. It is largely surrounded by coastal sage scrub and chaparral which are ideal habitats for the western yellowjacket, *V. pensylvanica*. Several sites within the park had serious problems with foraging yellowjackets and park personnel had been monitoring them with disposable traps in

2019. A cooperative project with park personnel was established in September 2019 in which park personnel set up traps and bait stations in the park and monitored them. The experimental baits were prepared at UC Riverside and transported to the park. The trapped specimens were collected and sent to UCR to be counted and identified.

## Methods and Materials

### *Monitoring*

Six sites at the park were trapped with Rescue Disposable Yellowjacket Traps (Sterling International Inc., Spokane WA) with heptyl butyrate (Fig. 23). The sites included the Condor Enclosure (CON), Bird Breeding Complex (BBCH), Wings of the World (WOTW), Cheetah Breeding Compound (CBC), Burrowing Owl Site (BUR), and Forage Warehouse (FOR). The traps were hung under trees and bushes about 0.5-1.5 m off the ground. Instead of adding water to the trap collection bag, a mixture of a solution of antifreeze coolant (propylene glycol) and water (70:30 vol:vol) was used. The solution was effective in killing and preserving the insects. The contents of the bag were removed and the excess fluid drained. The contents were placed into 1-gal plastic zip lock bags and transported to UC Riverside where the number and species of yellowjackets were counted.

Fig. 23. Disposable Rescue yellowjacket trap.



### *Baiting Studies*

Baits were prepared with fipronil (Termidor SC, BASF Corp., Research Triangle Park, NC) and dinotefuran (Alpine 40WSG, BASF Corp., Research Triangle Park, NC). Dinotefuran baits containing 0.05, 0.025, and 0.0125% AI and fipronil baits containing 0.025% were tested at the park. Baits were prepared at UC Riverside. Salsa cups (59 ml) were loaded with the baits ( $\approx 30$  g), and a lid securely fastened to the cup and weighed. The baits were held on ice packs and transported to the animal park.

The cups of bait were placed inside Havahart® animal traps on the ground at each of the sites. The salsa cups with bait were collected after 24-72 hours and the cups were covered with lids. The baits were refrigerated until they were returned to UC Riverside. The cups were

weighed and the amount of bait removed was determined. Another set of cups of bait held in screened cages so that yellowjackets could not feed on them served as water evaporation checks.

The 0.025% fipronil hydrogel baits were placed out from 9/11/2019 to 9/13/2019, 10/1/2019 to 10/3/2019, and 11/15/2019 to 11/18/2019 at the CON site. Hydrogel baits containing 0.05, 0.025, and 0.0125% dinotefuran were placed out on 9/24/2019 to 9/26/2019 at the remaining five sites. All sites were baited with 0.025% dinotefuran on 10/15/2019 and 11/14/2019.

## Results

*Condor Enclosure (CON)*- The 0.025% fipronil baits provided a significant 53.2, 53.9, and 44.4% reduction in yellowjackets/trap/day (YJTD) counts at day 7, 14, and 21 (Fig. 24). The second baiting on 10/1/2019 with 0.025% fipronil resulted in an additional 57.6, 57.8, 80.9 and 93.1% reduction in trap counts. The yellowjacket trap counts dramatically declined throughout the park after 10/22/2019.

The baits lost 52.4% of the weight due to evaporation during the 48-hour exposure on 9/11/2019. The yellowjackets removed a total of 234.4 g of bait from 30 cups placed out at the site (Avg. = 8.68 g per cup). All 30 cups had detectable feeding during the first baiting period. During the second baiting period (10/1/2019 to 10/3/2019), the baits lost 65% of their weight due to evaporation. A total of 127.4 g of bait was consumed with an avg. 4.7 g being removed per bait cup. There was no detectable change in 7 of the 30 cups. The bait cups were inadvertently watered by the irrigation system during the third baiting period and the amount of bait removed was not determined.

*Five Other Sites* – The five sites were baited with 0.0125, 0.025 and 0.05% dinotefuran on 9/24/2019. The 0.05% dinotefuran bait at WOTW site provided a 60% reduction in trap counts at day 6, but the trap counts returned to 17.7 and 11.78 YJTD by day 13 and 20, respectively (Fig. 25). The bait lost 19.0% of its weight due to evaporation during the 48-hour exposure period. A total of 23.2 g of bait was removed from the 6 bait cups (Avg. = 3.9 g per cup). Then, the WOTW site was baited with 0.025% dinotefuran on 10/15/2019 and 11/14/2019. The trap counts decreased by 16% 8 days after baiting, but the counts increased afterwards until 11/13/2019. Six cups of bait were applied, but irrigation sprinklers filled two of bait stations. A total of 12.4 g of bait was removed from the other 4 cups.

The 0.025% dinotefuran bait provided 70.7, 43.8 and 67.6% reductions at day 8, 13, and 20, respectively, at BBCH (Fig. 26). A total of 48.8 g was removed (Avg. = 8.1 g/cup). After the second baiting, trap counts increased to 3.04, 3.04, and 3.35 YJTD at day 8, 15, and 30, respectively. A total of 37.9 g of bait was removed (Avg. = 6.3 g/cup).

At FOR site, the 0.025% dinotefuran provided 53.4, 0, and 11.1% reductions at day 8, 13, and 20 (Fig. 27). A total of 52.8 g of bait was removed (Avg. = 8.8 g/cup). After the second baiting, the YJTD counts remained unchanged ranging from 13.1 to 37.8. A total of 22.9 g of bait was removed (Avg. = 7.4 g/cup).

The 0.0125% dinotefuran baits were applied at the CBC and BUR sites. At CBC, the baits provided a 27.5, 38.3, and 86.3% reduction in trap counts at day 8, 13, and 20 (Fig. 28). A total of 49.3 g of bait was removed (Avg. = 8.2 g/cup). After the second baiting, the YJTD increased to 14.7, 6.8, and 7.6 at day 4, 11 and 26, respectively. A total of 34.6 g of bait was

removed (Avg. = 5.8 g/cup). At the BUR sites, there was a 20.4, 6.1, and 0.7% reduction in trap counts at day 8, 13, and 20 (Fig. 29). A total of 12.9 g of bait was removed (Avg. = 2.1 g/cup). The second baiting provided a 72.0, 33.1, and 55.9% reduction in trap counts. A total of 2.4 g was removed (Avg. = 0.4 g /cup).

The YJTD dropped dramatically after 11/13/2019 at all sites as the minimum temperatures dropped. The daily average high temperatures were 22.2°C (72.2°F) and low temperatures were 7.2°C (45°F) in the San Pasqual Valley in mid-November.

## Discussion

The monitoring traps at all the sites revealed very large numbers of yellowjacket foragers. The pre-bait monitors trapped a combined total of 4,112 yellowjackets (Avg. 128.5/trap, n = 32) with almost all being *V. pensylvanica*. The greatest numbers of yellowjackets trapped was at the CON site with > 47 yellowjackets/trap/day.

In previous studies, the action threshold of 10 yellowjackets/trap/day (YJTD) triggered the application of baits (Rust et al. 2010). Even though the 0.025% fipronil baits provided a steady decline of yellowjackets trapped, the numbers being collected in the monitoring traps were still well above 10 YJTD. About 25-50% of the bait (1:3 chicken juice:water) applied was removed and the baits were simply not attractive enough to compete with the food sources at the CON site.

The dinotefuran baits provided inconsistent results. The amount of bait removed varied between concentrations and the sites baited. Only 13% of 0.05% bait was taken compared with 17.3% at 0.0125% and 28.2% at 0.025%. In the second baiting, only 13.1% of the 0.025% dinotefuran bait was taken. The baits were simply not attractive enough to the yellowjackets.

Fig. 24. Baiting efficacy of 0.025% fipronil at the CON site. Red arrows indicate the dates when baits were applied. YJ – yellowjackets

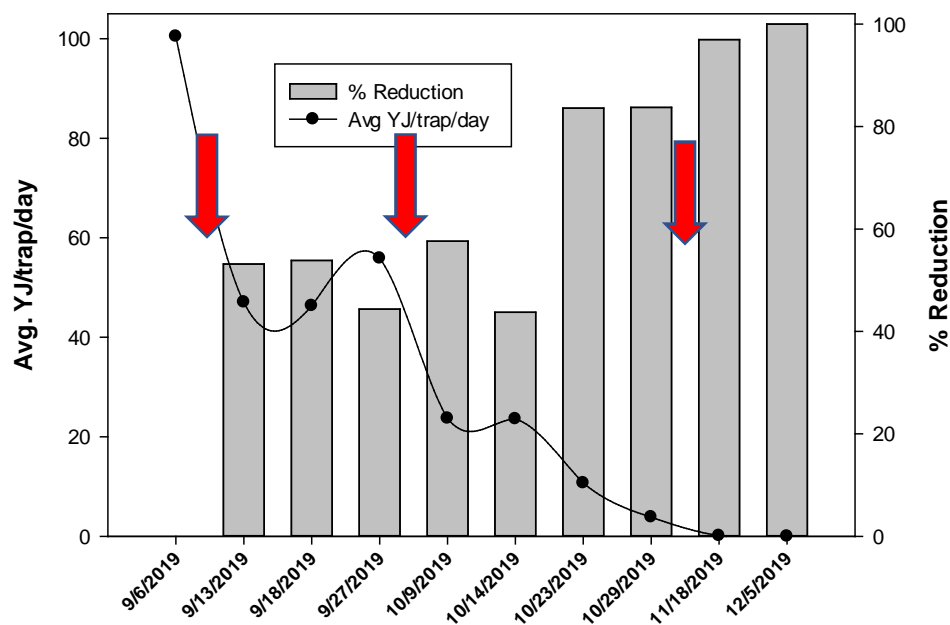


Fig. 25. Efficacy of 0.05% dinotefuran baits at the WOTW site applied on 9/24/2019. Subsequently 0.025% dinotefuran baits were applied on 10/15/2019 and 11/14/2019. Red arrows indicate when the site was baited. YJ – yellowjackets.

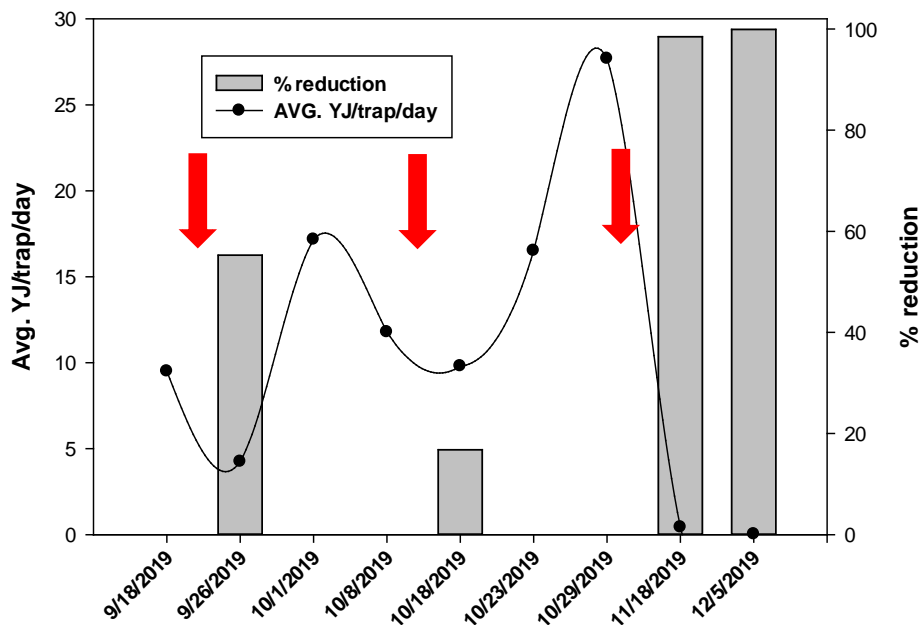


Fig. 26. Efficacy of 0.025% dinotefuran baits at the BBCH site applied on 9/24/2019, 10/15/2019 and 11/14/2019. Red arrows indicate when the site was baited. YJ – yellowjackets.

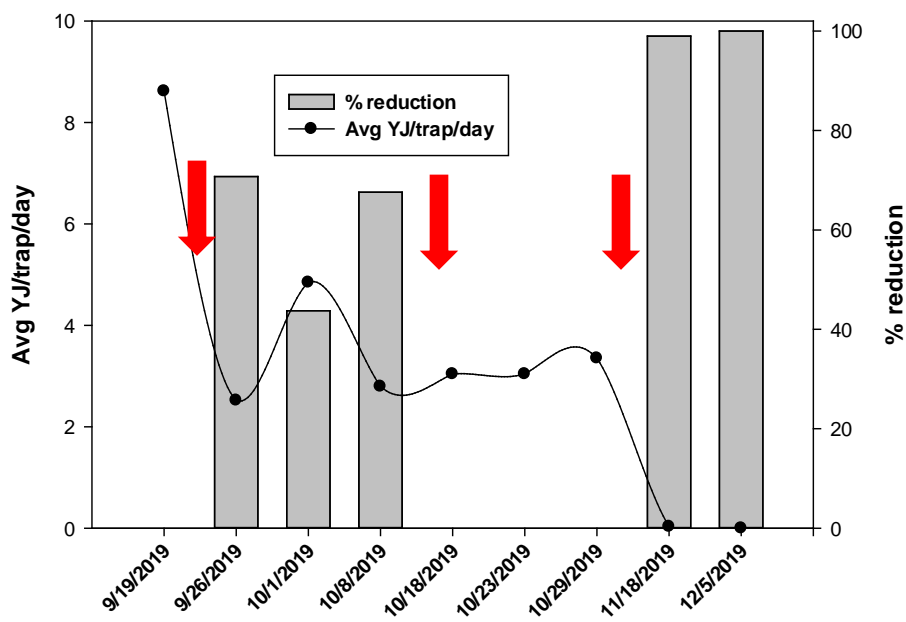




Fig. 27. The efficacy of 0.025% dinotefuran baits on 9/24/2019 followed by 0.025% bait on 10/15/2019 and 11/14/2019 at FOR. Red arrows indicate the dates that the site was baited. YJ – yellowjackets.

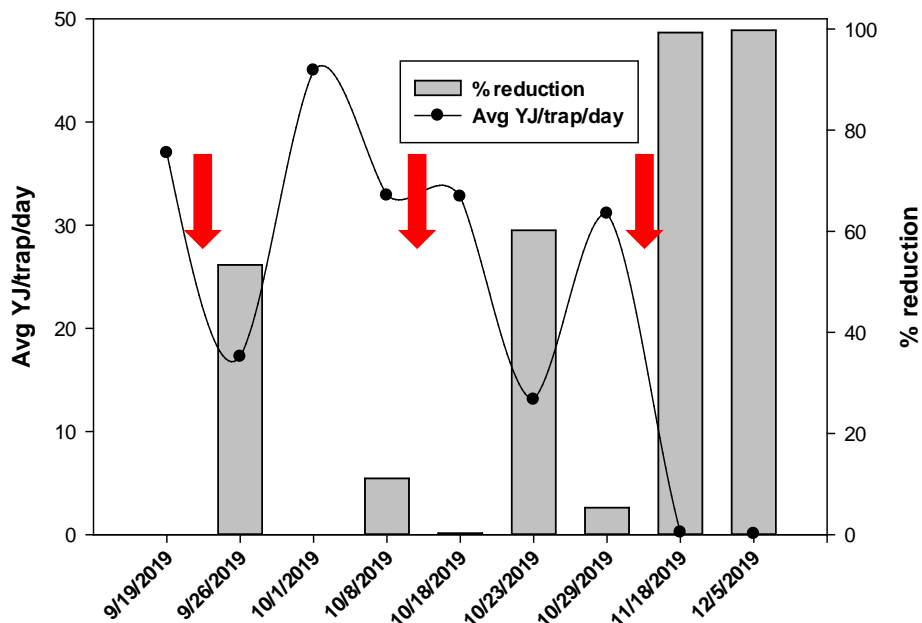


Fig. 28. The efficacy of 0.0125% dinotefuran baits on 9/24/2019 followed by 0.025% dinotefuran bait applied on 10/15/2019 and 11/14/2019 at CBC. Red arrows indicate the dates that the site was baited. YJ – yellowjackets.

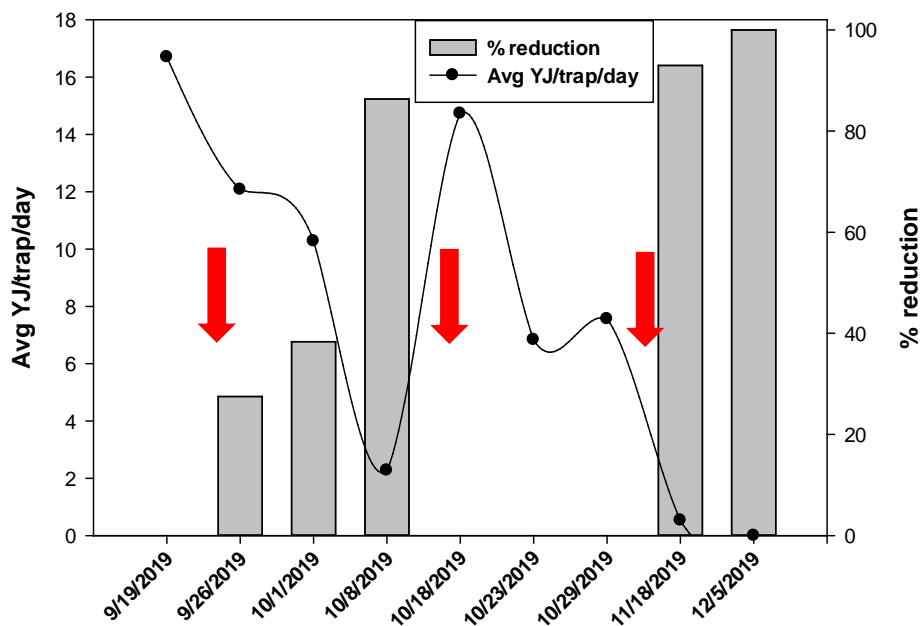
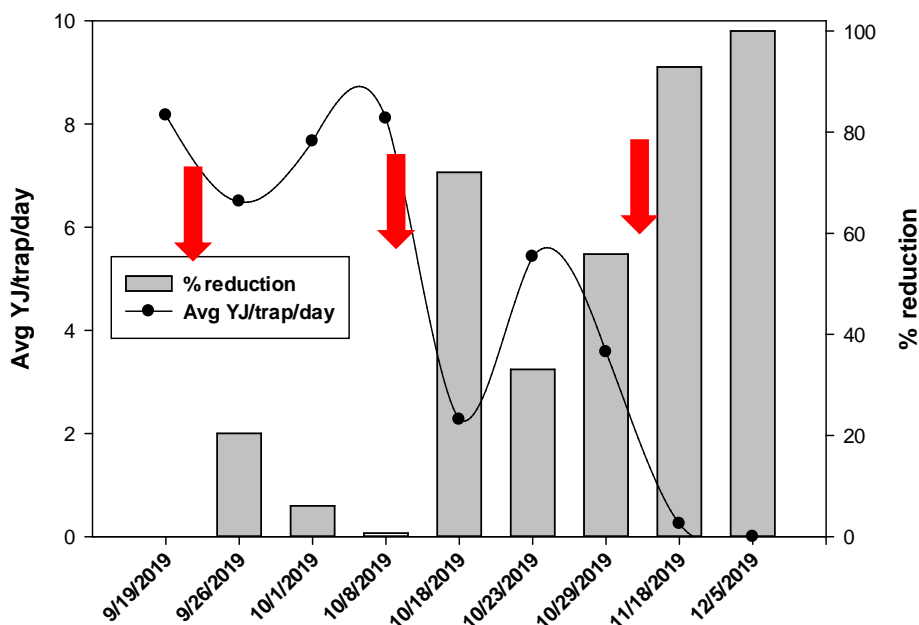


Fig. 29. The efficacy of 0.0125% dinotefuran baits on 9/24/2019 followed by 0.025% bait on 10/15/2019 and 11/14/2019 at BUR. Red arrows indicate the dates that the site was baited. YJ – yellowjackets.



### Silent Valley Park

Silent Valley Recreational Vehicle Camp is located about 8 km south of Banning, CA in the San Jacinto Mountains (33°50'57.51" N, 116°51'08.45" W; 1,093 m elevation) on California Route 243. The year around park consists of about 186.2 ha and has 850 campsites. The park has had a serious problem with yellowjackets on occasion throughout the last 10 years.

The maximum average temperatures are around 23.3°C (74°F) to 29.4°C (85°F) and the minimum average temperatures are around 10°C (50°F) and 13.9°C (57°F) in May and June (Fig. 30), respectively, and workers begin to appear in late June (Fig. 31). The low evening temperatures and minimal yellowjacket foraging early in the summer are typical for this mountainous site (Rust 2010).

### Methods and Materials

#### *Monitoring*

The foraging activity of yellowjackets was using a UCR trap. The traps were hung under trees and bushes about 0.5-1.5 m off the ground. A total of 44 monitoring traps were used. The length of each monitoring session was 14 days. The monitoring began on 6/3/2019.

#### *Baiting*

A 0.1% aqueous solution of dinotefuran (Alpine 40WSG) was prepared. Sufficient quantities of dinotefuran were added to 100g of PAA hydrogels to make baits containing

0.0025, 0.001, and 0.00075% active ingredient as described above. The chicken juice: water ratio was 1:3.

Each bait station was provisioned with three bait cups containing 30 g of bait and hung within 15 m of the monitoring traps. The baits were retrieved after 24 hours, covered with a lid, and returned to the laboratory. The bait cups were weighed and the amount of bait removed by the yellowjackets was determined. Water loss from the baits was estimated as described above.

## Results

Queens of *V. pensylvanica* were collected on 6/17/2019 (n=4), 7/1/2019 (n=3), 7/15/2019 (n=2), and 7/29/2019 (n=1). Low numbers of workers of *V. atropilosa* and *V. sulphurea* were collected beginning on 7/29/2019 (Table 6). The prevalence of yellowjacket workers trapped were *V. pensylvanica*. The total number of yellowjackets trapped increased dramatically in September (Fig. 18).

The 0.001 and 0.0025% dinotefuran baits resulted in 62.5 and 58.7% reductions in the number of yellowjackets trapped at week 4, respectively (Table 7). The 0.00075% baits failed to reduce the number of yellow jackets trapped. Of the 270 g of bait placed at each site about 15 to 21% of it was removed in 24 hours.

## Discussion

The moderate reductions in yellowjackets was probably due to the lack of aggressive bait acceptance by foragers. The chicken juice:water ratio of 1:3 in the hydrogels was too low. The hydrogels in the evaporation lost about 14% of their weight in 24 hours, and it is possible that the baits could have been left out for another 24 to 48 hours.

Table 6. Collection information regarding *V. atropilosa* and *V. sulphurea* workers at Silent Valley RV Park during 2019.

Species	7/29/2019	8/12/2019	8/26/2019	9/9/2019	9/23/2019	10/7/2019
<i>atropilosa</i>	0	3	19	5	7	0
<i>sulphurea</i>	3	5	11	10	1	2

Fig. 30. The average high and low temperatures and monthly rainfall for Silent Valley over the past 10 years.

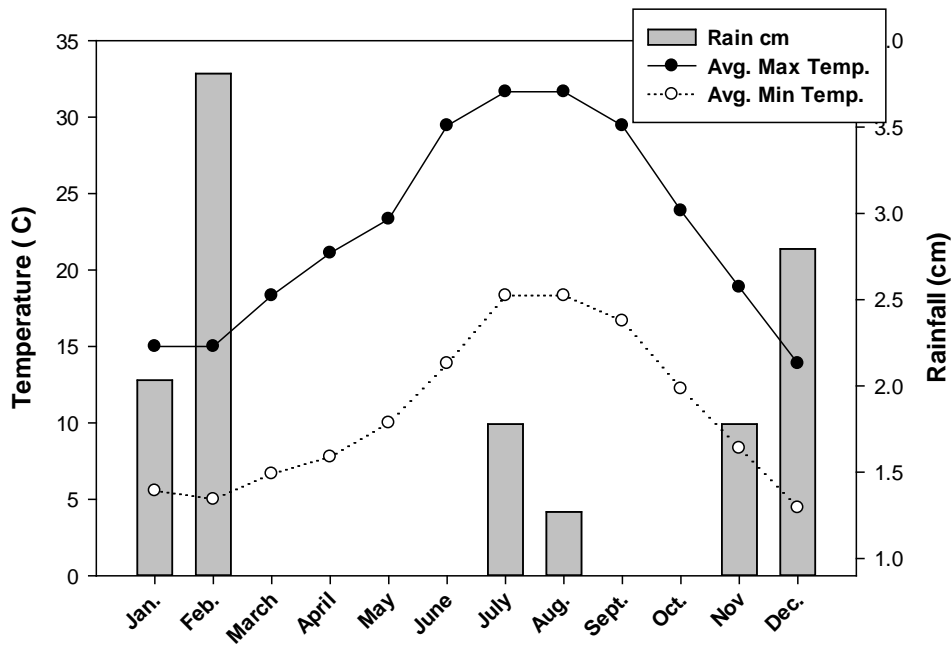


Fig. 31. The total number of yellowjackets trapped and the average number of yellowjackets/trap/day at 35 sites at Silent Valley RV Park during 2019.

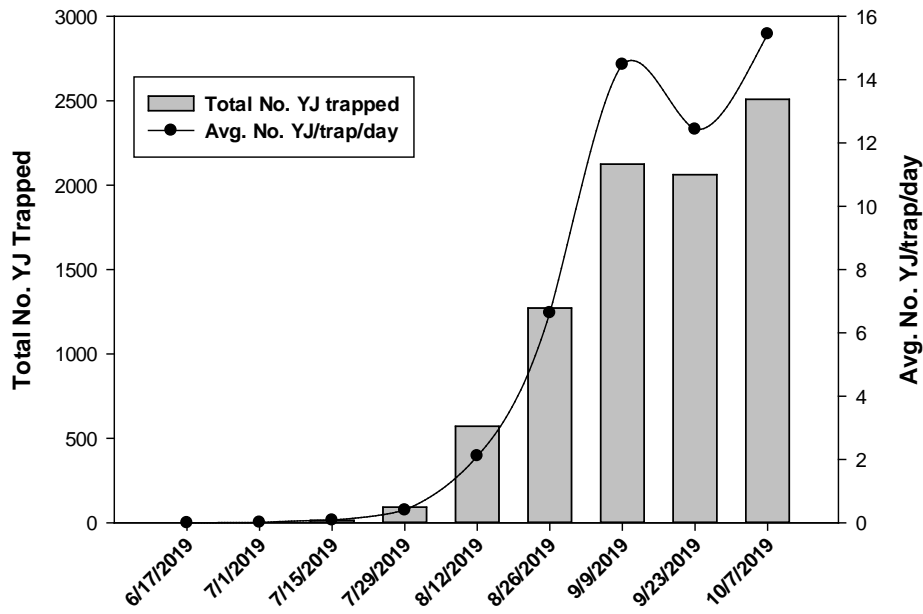


Table 7. Dinotefuran bait removal by yellowjackets (YJ) at Silent Valley RV Park 9/9 to 9/10/2019.

Treatment	No. baits	Total No. YJ (traps)	Total bait removed (g)	Avg. ( $\pm$ SD) per cup	% Reduction (day)	
					14	28
0.0025%	9	230 (1)	40.33	4.48 $\pm$ 1.69	48.3	58.7
0.001%	9	248 (2)	57.36	6.37 $\pm$ 1.79	35.1	62.5
0.00075%	9	617 (4)	43.67	4.85 $\pm$ 0.54	7.6	0.0
Untreated	44	7,297 (44)			14.1	+1.07

## UCR Campus Site

### *Monitoring*

The foraging activity of yellowjackets was measured using UCR traps. A total of 10 traps was placed along a driveway and parking lot adjacent to a hillside of native chaparral on the University of California Riverside campus. The traps were hung about 30 m apart beginning on 5/13/2019. The traps were checked every 2 weeks and the number of queens and workers trapped were recorded for the entire summer and fall.

### *Repellency Tests with Essential Oils*

A solution of four essential oils (EOs) was tested (Zhang et al. 2012). The EOs included clove oil natural (density 1.016 g/ml), geranium oil (0.91 g/ml), lemongrass oil (0.87 g/ml), and rosemary oil (0.906 g/ml). The oils were purchased from LorAnn Oils, Inc. (Lansing, MI).

The solution was prepared with 1 ml of each of the EOs and 10 ml of acetone. Pieces of cheesecloth were cut into 19 by 19 cm squares. Each square was impregnated with the solution and allowed to dry in the fume hood for about 1 hour.

To determine if the EO solution was repellent to yellowjacket foragers, a choice test was initiated on 11/25/2019. Two bait stations were placed about 2 m apart at each of three sites. In one station, one cup containing  $\approx$  20 g of minced chicken was placed in the center of the cage. In the other station, a piece of cheesecloth impregnated with 4 ml of the EOs was placed on the bottom and a cup containing about 20 g of minced chicken placed on it. The EO's on the cheesecloth had dried for 1 hour. The bait stations were observed hourly. At the end of the day the pieces of cheesecloth were removed from the cages, put in a plastic bag and stored in the refrigerator overnight. The test was repeated the next day.

The evaporation of water from baits was determined as described above.

## **Results**

*Monitoring.*- The only species collected at the UCR site was the western yellowjacket, *Vespula pensylvanica*. A total of 11 queens were trapped during May and 5 queens were trapped in the first two weeks of June. The total number of workers trapped gradually increased during the summer and finally peaked on 10/28/2019 with 950 workers (Fig. 32). At the peak, 6.8 yellowjackets were collected per trap per day. The numbers of yellowjackets trapped dramatically decreased after 11/12/2019. The decline in trap counts is associated with the declining minimum temperatures, especially after 11/12/2019 (Fig. 33).

The rainfall from January through March contributed to strong bloom of native wildflowers and to conditions conducive for queens emerging in April and May to establish nests (Fig. 34). A similar weather pattern occurred from 2012 to 2014 when yellowjacket populations were very high (Rust et al. 2017).

*Repellency Tests with Essential Oils.*- The bait stations with 1-hour-old deposits were checked hourly to determine if yellowjackets were foraging and removing the minced chicken. At about 6 hours, the yellowjackets had removed all the chicken from 2 of the 3 bait stations and about ½ was removed from the other without EOs. The chicken on top of the treated cheesecloth was untouched.

The treated cheesecloths were tested again at 24 hours. The yellowjackets continued to forage on the minced chicken in the stations without the treated cheesecloth (Table 8). No yellowjackets were observed in the bait stations with the treated cheesecloths.

Fig. 32. The number of yellowjackets (YJ) trapped at UCR during 2019.

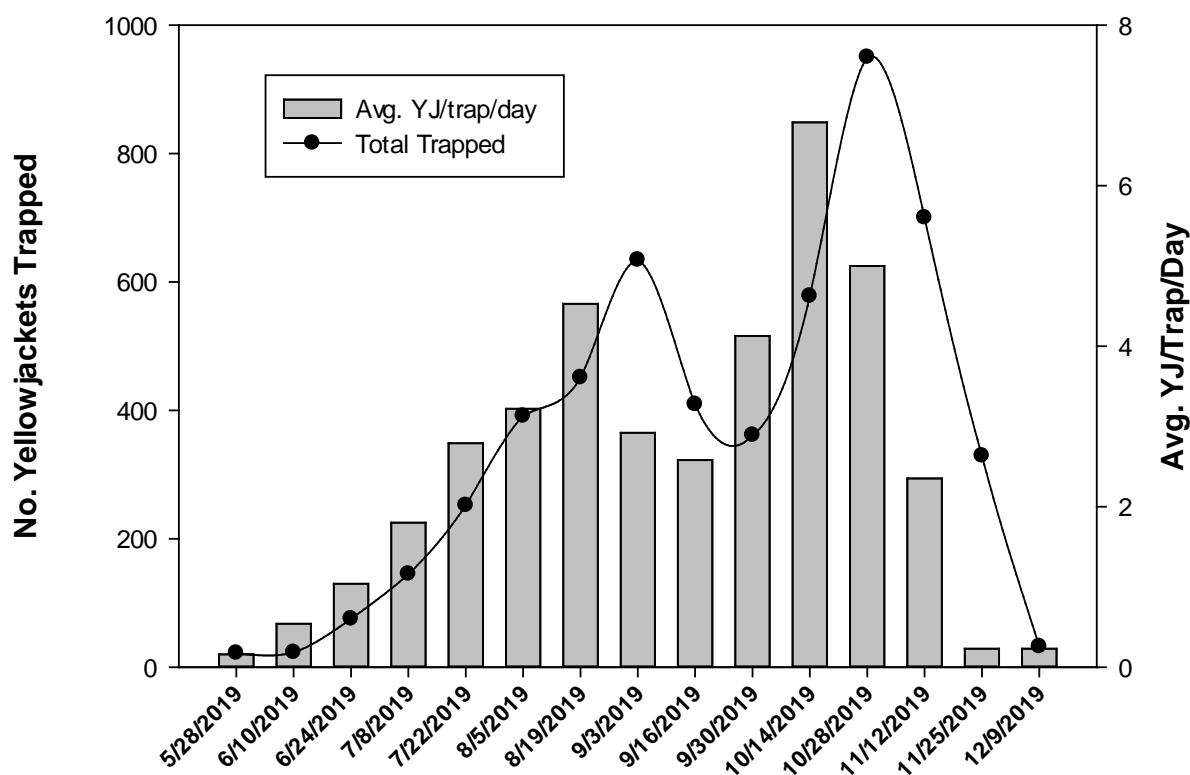


Fig. 33. The maximum and minimum temperatures and total number of yellowjackets (YJ) trapped during 2019.

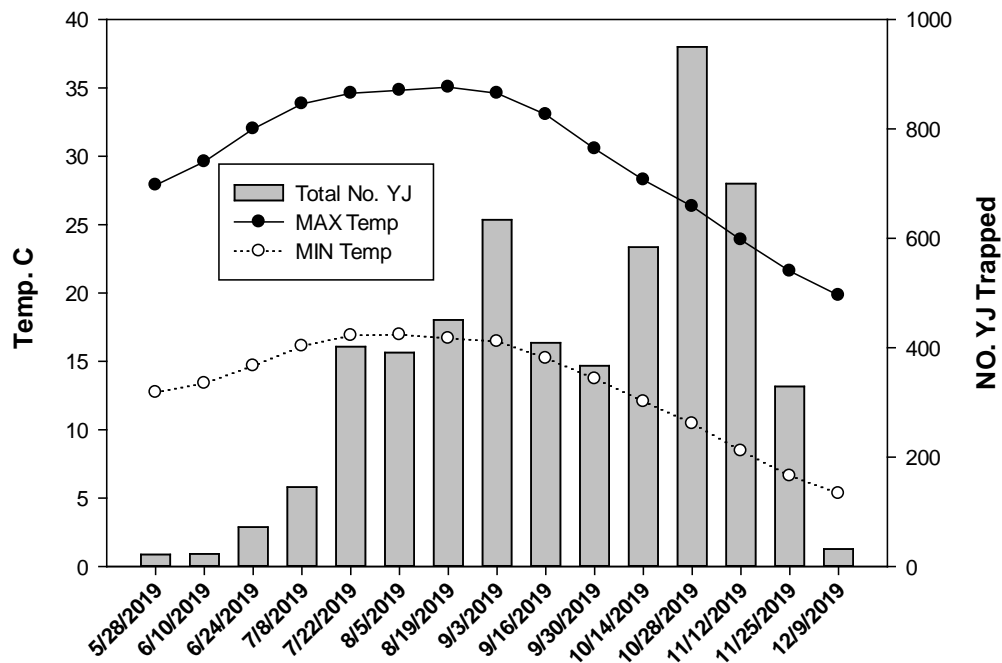


Fig. 34. Monthly rainfall at the UCR site during 2019.

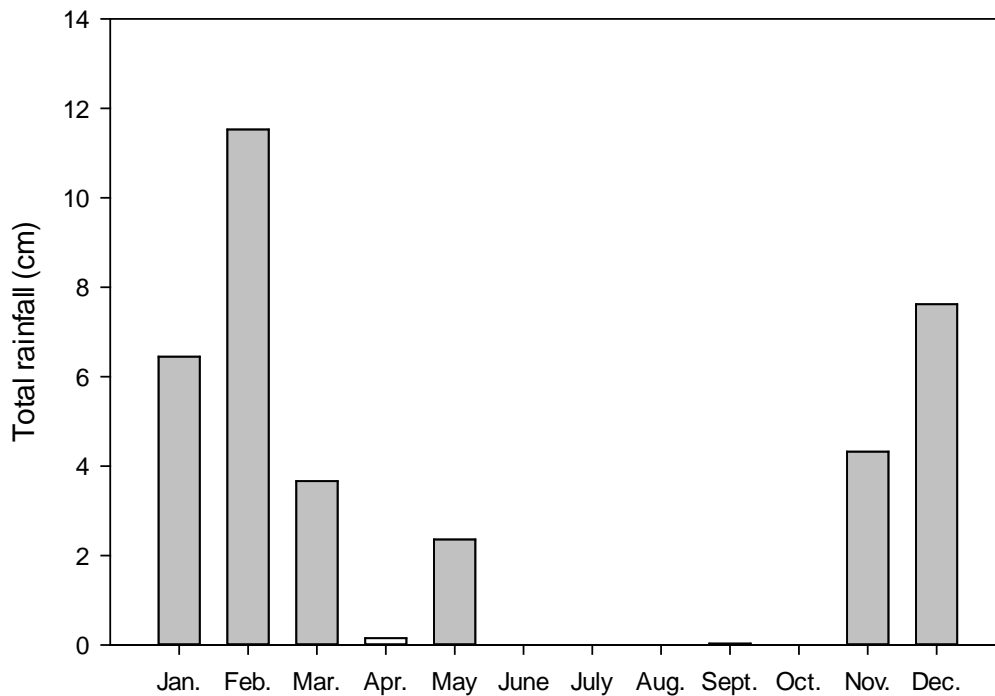


Table 8. The amount of minced chicken removed from the bait stations with and without cheesecloth treated with EOs.<sup>a</sup>

Sites	Treated Cheesecloth		No cheesecloth	
	Chicken removed (g)	% chicken removed	Chicken removed (g)	% chicken removed
1	0.29	1.52	12.11	90.3
2	0.22	1.43	2.69	17.7
3	0.0	0.0	13.99	91.8

<sup>a</sup> 1-d-old deposits tested 11/26/2019 for 6.67 hours. Control minced chicken lost 8.2% in 6 hours.

### References cited

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- Tay, J.-W., M.S. Hoddle, A. Mulchandani, and D.-H. Choe. 2017. Development of an alginate hydrogel to deliver aqueous bait for pest ant management. *Pest Manage. Sci.* 73: 2028-2038. DOI: 10.1002/ps.4616
- Zhang, Q.-H, R.G. Schneidmiller, and D.R. Hoover. 2013. Essential oils and their compositions as spatial repellents for pestiferous social wasps. *Pest Manage. Sci.* 69: 542-552.



**Progress Report: Investigation of Rodenticide Pathways in an Urban System Through the Use of Isotopically Labelled Bait**

We have finally attained IACUC approval. It has taken approximately 16 months to acquire this ethical approval to conduct this experiment. IACUC is an added layer of complication required when using vertebrate animals in research.

We have acquired the services of Richman Chemical and once they have been paid (Jan 14th) they will start the synthesis of the isotopically-marked bait.

If the committee have any questions about further steps in this project, we will be delighted to discuss them.

## Diet and Colony Structure of Two Emerging Invasive Pest Ants

### Interim Progress Report (12 month)

During the first 18 months of this research program we have made good progress on the proposed research. Below, I list each of the four proposed experiments and the respective goals for each. In each of the four sections, I also describe our activities and accomplishments during this review period.

The overarching goal of this research program is to develop fundamental biological knowledge about two recently emerging pest ants, the brown rover ant (*Brachymyrmex patagonicus*) and the Moorish sneaking ant (*Cardiocondyla mauritanica*). Specifically, we are focusing on two basic biological processes: diet and colony structure.

**1. Experiment 1A.** Overall goal: *Census subpopulations within 20 colonies: eggs, larvae, pupae, workers, males, mated and unmated queens.*

- **18-month goal (March 2020):** Collect and census 15 colonies each of *B. patagonicus* and *C. mauritanica*.

**ACTIVITIES AND ACCOMPLISHMENTS.** We are essentially on schedule for this experiment. To date, we have collected and censused both species at 14 sites, and should easily be able to accomplish our 24-month goal of 20 sites for each species. Once we have completed data collection for all 20 proposed sites, we will begin statistical analysis of the data.

*Brachymyrmex patagonicus:* Our current data show that the mean number of workers per queen is approximately 325:1 (rounded to nearest integer) and the worker:brood ratio was 8:1 (12 sites). An important caveat is that mated queens were only found at three of the sites, and we never found more than one queen, suggesting a monogyne colony structure. Interestingly, winged males were found at half of the sites, and sometimes in relatively large numbers (range = 0-41 males). When males were present, the average worker:male ratio was approximately 20:1. Winged (unmated) queens were also found in nearly half of sites (43%) and, when present, the worker:virgin queen ratio was 77:1. There is likely some degree of seasonal variation in colony composition, and we look forward to looking for such patterns as we add data from additional sites and time points.

*Cardiocondyla mauritanica:* The colony composition of this species appears to be quite different from *B. patagonicus*. Queens were found at 85.7% of sites and the worker:queen ratio across these sites was 22:1. The number of queens varied from 0 to 20, so this species can clearly be quite polygyne. The worker:brood ratio was 11:1. Unlike *B. patagonicus*, winged males were not found at any of the sites. Unmated, winged queens (gynes) were found at 8 of 14 sites, and the worker:gyn ratio was 29:1.

**2. Experiment 1B.** Overall goal: *Determine the spatial extent of colonies in the field using behavioral assays.*

- **18-month goal (March 2020):** Perform behavioral assays for *B. patagonicus* and *C. mauritanica* at 15 sites.

**ACTIVITIES AND ACCOMPLISHMENTS.** As above, we are on schedule with data collection for this experiment. We have collected behavioral data for both *B. patagonicus* and *C. mauritanica* using

Interim progress report: 18 mo.

ants from the 14 collection sites above for each species. As above, we should be able to easily complete data collection for the proposed 20 sites per species by the end of the 24-month period, as proposed.

Although we will not perform statistical analyses until data collection is complete, cursory examination of the data reveals a new and fascinating behavioral pattern for populations of *B. patagonicus*. Nearly all other introduced pest ant species form large “supercolonies” that lack territorial aggression across large spatial areas. It is well established that the formation of supercolonies is one of the factors that underlies population growth, and hence the success, of nearly all invasive ants. In addition, the absence of behavioral boundaries has important implications for pest control, as insecticides can be distributed across a larger effective area as workers move freely from one site to the next. Our data for *B. patagonicus*, however, shows a strikingly different social organization. Ants from nearly all sites, even those quite spatially close together (<100m) do not belong to the same colony, and aggressively reject each other. We look forward to finalizing our analysis and publishing this exciting new result in the near future.

The colony size and distribution of intraspecific aggression in the second focal species, *C. mauritanica*, is much more reminiscent of the typical invasive pest ant colony structure. Our data show a complete lack of intercolony aggression by workers, even from very distant sites. This lack of intraspecific aggression is typical of supercolony formation (e.g. unicoloniality).

**3. Experiment 2A. Overall goal:** *Perform dietary preference experiments in the laboratory.*

- **18-month goal (March 2020):** Complete 50% of dietary experiments. Collect additional lab colonies as necessary

**ACTIVITIES AND ACCOMPLISHMENTS.** We are on schedule for this experimental aim for the *Brachymyrmex* but slightly behind schedule on data collection for *Cardiocondyla*.

Our dietary experiments with *B. patagonicus* show a clear preference for sugar over protein. In 16 trials, each one hour in duration with recruitment measured every five minutes, *Brachymyrmex* workers showed rapid recruitment to the sugar water bait and consistently preferred it by a 2-5X margin over protein. We are currently testing the preference for sugar solutions of different concentration.

The dietary data collection for *C. mauritanica* has been more challenging, as sufficiently large colonies were difficult to collect in the field last Fall. However, we have been able to perform 13 one hour-long trials with recruitment quantified every five minutes, as above. Interestingly, *Cardiocondyla* shows the opposite preference compared to *Brachymyrmex*: *Cardiocondyla* consistently prefers protein baits by about a 2X margin. The more furtive foraging and recruitment behavior of this species is also evident, as the number of workers feeding at baits increases much more gradually than that observed for *Brachymyrmex*. As the weather warms in the coming months, we plan to focus our efforts on collecting large colonies from the field and continuing with the remaining dietary preference experiments.

**4. Experiment 2B. Overall goal:** *Quantify nitrogen (N) and carbon (C) stable isotope ratios to determine trophic position.*

- **18-month goal (March 2020):** Prepare and submit samples for stable isotope quantification at UCB Center for Stable Isotope Biogeochemistry, ten additional sites above (=15 total).

**ACTIVITIES AND ACCOMPLISHMENTS.** We are behind schedule for the number of sites that we anticipated having completed by this time point, but we are ahead of schedule for the total

Interim progress report: 18 mo.

number of samples for which we have completed stable isotope analysis. We have collected ant samples from 14 sites per species, as well as numerous other arthropod specimens from a subset of these sites. By quantifying the stable isotope ratios of focal *Cardiocondyla* and *Brachymyrmex* ants and comparing them to known herbivorous and predatory arthropods, we will be able to reconstruct how the ants fit into their local food web.

To date, we have completed stable isotope data collection from 192 individual specimens from 9 sites, and have several hundred more at various stages of preparation. During the coming months we will submit these additional samples to the Center for Stable Isotope Biogeochemistry at UC Berkeley for estimation of nitrogen (N) and carbon (C) isotope ratios.

**Evaluation of bait station system efficacy  
for reduced-risk subterranean termite management in CA**

**Progress Report**

Period Covered: April 1, 2019 – January 31, 2020

Project Team: Andrew Sutherland, Siavash Taravati, University of California Cooperative Extension (UCCE) staff members, collaborating pest control operators (PCOs), collaborating property owners, collaborating laboratories

This project aims to evaluate the efficacy of three CA-registered termite bait systems against subterranean termites, in collaboration with PCOs and property owners, at 15 single-family homes in the San Francisco Bay Area and the Los Angeles Basin. This project also aims to increase our knowledge about seasonal and spatial effects on subterranean termite incidence within bait stations in CA. Progress towards these objectives, as well as towards regular administration of this project, is reported below, following the objectives, tasks, and deliverables identified in the Scope of Work included in the successful proposal for funding.

**Objective 1. Conduct collaborative field research at participating single-family homes to evaluate bait system efficacy:**

We have made significant progress towards several important tasks associated with this objective. Delays were encountered, however, in identification of participating PCOs, participating homes, and installation of bait systems at these homes. We requested (April 2019) and were granted (October 2019) a one-year no-cost extension of this project due to documented and projected delays in progress towards this objective.

**Task 1.1:** Identify 15 participating homes, assemble necessary supplies and equipment, evaluate monitoring options, decide on specific monitoring protocols, and negotiate project subcontracts.

We have partnered with Western Exterminator, Omega Termite & Pest Control, Excellence Pest Control, HomeShield Pest Control, and Thrasher Termite & Pest Control to locate participating homes. Western has experience installing and servicing the Sentricon Always Active system and has agreed to participate at 3 homes in the SF Bay Area and 2 homes in the LA Basin. Omega has experience installing and servicing the ATBS-Trelona system and has agreed to participate at

3 homes in the SF Bay Area. Excellence, HomeShield, and Thrasher are all new to baiting systems but have agreed to participate in order to learn about the products and protocols used and, in the process, to consider offering these services to their customer bases moving forward. Excellence will demonstrate the ATBS-Trelona system in LA, HomeShield will demonstrate the Exterra system in LA, and Thrasher will demonstrate Exterra in the San Jose area. Processes to establish all five PCOs as vendors within the UC business offices, enabling payment for their services, has been completed or initiated, and at least one payment has been made. During the search for participating PCOs, we encountered skepticism about the utility of baits in CA or within specific business models, usually based on negative experiences with systems registered decades ago. Because of these sentiments, we believe that this project is vitally necessary to evaluate the field efficacy of newer bait systems and to extend the results to the industry.

After identifying collaborating PCOs, we encountered another process hurdle: finding homes that met our criteria. For this project, we sought homes where termite activity could be confirmed near the structure but not within the structure. Structures with termites actively consuming structural wood may require local treatment to immediately arrest the structural damage being incurred; previous research shows that it may take months for subterranean termites to find and access baits. Furthermore, we sought homes where no liquid termiticide treatments were made within the previous five years, since we know that these treatments provide years of residual activity, confounding any observed control we might attribute to the bait systems.

To date, we have identified 13 participating homes (see Table 1). Two homes are still needed to complete Task 1.1: Western / Sentricon sites (one in the SF Bay Area and one in the LA Basin).

We have assembled all supplies and equipment necessary for monitoring and data collection. As collaborating pest control operators and participating homes are identified, supplies and equipment required for bait installation and service have been provided by manufacturers.

Monitoring of termite activity has been conducted using Exterra / Isophor EZE stations containing wood monitoring blocks, installed immediately adjacent to bait stations (Figure 1). Participating homes have been and will be visited quarterly after installation to open monitoring stations, record termite incidence / number, and collect voucher specimens for DNA analysis. Additionally, bait stations will be serviced every six to 12 months by PCOs, according to product labels, presenting opportunities to measure termite incidence within bait stations, bait consumption, and to collect additional specimens for DNA analysis. Finally, collection kits (see Appendix 1) have been shared with each participating homeowner. These kits include collection supplies and instructions on collecting swarming and foraging termites. Collections resulting from these efforts will be subjected to DNA analysis and compared to voucher collections. Another vendor process has been completed with the New Orleans Mosquito, Termite, and Rodent Control Board, who will provide laboratory services (DNA analysis of all specimens).

**Task 1.2:** Install bait stations at all participating homes.

Installations have been completed at 12 homes (see Table 1), with another scheduled for Feb 13.

Table 1. Site information associated with Objective 1. Note that Site ID# 3, previously identified but not officially confirmed, is not included here. Site ID# 15 has not yet been identified.

ID#-Location	Participating PCO	Installation Date	Inspection (1)	Inspection (2)	Inspection (3)
1-Hayward	Omega	1-Mar-2019	3-Jun-2019	3-Sep-2019	16-Dec-2019
2-Oakland	Omega	23-Aug-2019	25-Nov-2019	25-Feb-2020	_____
4-San Jose	Thrasher	13-Nov-2019	18-Feb-2020	___	_
5-San Jose	Thrasher	13-Nov-2019	18-Feb-2020	___	_____
6-San Leandro	Western	21-Jan-2020			
7-Martinez	Western	21-Jan-2020	___		
8-Alameda	Omega	27-Jan-2020	___		
9-San Jose	Thrasher	18-Feb-2020	_____		
10-Huntington Beach	Western	5-Aug-2019	10-Dec-2019		
11-Monrovia	Excellence	27-Aug-2019	10-Dec-2019		
12-Pasadena	Excellence	25-Sep-2019	10-Dec-2019		
13-Pasadena	Homesield	7-Nov-2019			
14-Pasadena	Homesield	7-Nov-2019			



Figure 1. Exterra / Isopthor EZE station (black) containing wood monitoring blocks installed adjacent to a Sentricon Always Active termite bait station (green) at Site #6 in San Leandro.

**Task 1.3:** Visit each participating home every three months, collecting data, servicing stations, and monitoring as detailed above. Perform laboratory work, as detailed above, to determine colony presence and identity during study.

Ten quarterly inspections of monitoring stations have been conducted. Two six-month bait station inspections, with participating PCOs, have also been conducted. Voucher specimens (17 separate collections) of *Reticulitermes* foragers have been collected, curated, and sent (December 2019) for DNA analysis. Several more collections have been curated and will be sent, along with future collections, sometime in 2020. Data tables and collection sheets have been created.

Initial observations indicate that wood monitoring blocks serve as accurate proxies for termite incidence in adjacent bait stations (Figure 2). Foraging termites have been recovered from wood blocks during quarterly inspections at several sites and from bait matrices at two sites. Given that sites have been established for less than one year, no conclusions about efficacy can yet be made.



Figure 2. Foraging termites observed on a wood monitoring block adjacent to an ATBS-Trelona bait station at Site #11 in Monrovia.

**Task 1.4:** Analyze and summarize data, publish all reports and articles, perform all outreach and extension activities.

This task cannot be completed until this project concludes, though outreach has already begun, at UC Riverside's Urban Pest Management Conferences (March 2019, another planned for March 2020) and at PCOC District meetings (Bay Area, Diablo).



**Objective 2. Conduct observational and manipulative research at UC field station(s) to describe colony attributes, seasonal phenology in CA, and determine time-to-attack for registered bait systems:**

We have made steady progress towards this objective, completing and initiating several key tasks, as detailed below.

**Task 2.1:** Identify study sites, detect and delimit colonies (based on monitoring of swarms and activity associated with wooden monitors), identify and characterize colonies using DNA analysis of voucher specimens.

Five study sites have been established at the UC Berkeley Richmond Field Station, with corresponding DNA characterization of associated *Reticulitermes* colonies (see Initial Progress Report for details). We have completed this task.

**Task 2.2:** Install station arrays.

As detailed in our Initial Progress Report, we procured bait stations and ‘inactive’ bait matrices from participating bait manufacturers (Dow-Corteva, BASF, and Ensystem) and installed these stations at our five sites in arrays along three distance radii (1m, 3m, and 5m from array center) and according to four seasonal dates (spring: March 25, 2019; summer: June 24, 2019; autumn: September 23, 2019; and winter: December 16, 2019) for a total of 180 stations (3 bait systems x 5 arrays x 3 distance radii x 4 installation dates). One monitoring station was also installed at each distance radius at each array, for a total of 15 (5 arrays x 3 distance radii).

We have completed this task. Stations will be monitored for two years, recording time-to-attack by *Reticulitermes* termites as a factor of installation season and distance from observed activity.

**Task 2.3:** Collect all data.

We began data collection along these arrays in May 2019 and have continued every 60 days following seasonal installation dates. We have now completed ten data collection events; five associated with the spring installation, three with the summer installation, and two with autumn.

Initial findings indicate that ‘inactive’ bait within all three systems installed have been attractive to foraging *Reticulitermes* termites. Time-to-attack has been recorded after only 60 days in one case (Sentricon Always Active, summer installation, three meters from observed activity) and after 120 days in several cases (ATBS-Trelona and Exterra, several installation seasons, several distances from observed activity). Data points are not yet sufficient for statistical analysis. In one interesting case, we observed several *Reticulitermes* nuptial pairs colonizing ‘inactive’ Isopthor bait (Exterra system) about one month after observations of swarming activity (Figure 3).



Figure 3. Observations (January 2020) of several nuptial pairs of *Reticulitermes* termites colonizing an ‘inactive’ Isophor bait cartridge following noted swarm activity (December 2019).

**Task 2.4:** Analyze data, publish reports and articles, perform outreach and extension activities.

This task cannot be completed until this project concludes, though project outreach has already begun, at UC Riverside’s Urban Pest Management Conference and PCOC District meetings. A significant outreach event, the *PCOC / UC Berkeley Termite Academy*, where experimental protocols and site arrays will be showcased, is scheduled for February 19, 2020.

**Objective 3. Grant Administration:** Conduct general grant administration: meetings, progress reports, invoices, presentations, and final report as required.

We have completed all tasks and met all deadlines associated with this objective. Project team members have met several times via phone and Zoom video conference as well as in-person. We will continue to meet as necessary. This report serves as the second semi-annual progress report, partially completing this task. Additional reports will be provided semi-annually, annually, and as requested. Project team members will report at a future Board meeting upon direction by Board staff.

## Appendix 1



### Additional Information

If you have any questions about this process, please don't hesitate to contact:

Dr. Andrew Sutherland  
[amsutherland@ucanr.edu](mailto:amsutherland@ucanr.edu)

For more information on termite biology and management visit: UCIPM's Termite Pest Note:

<http://ipm.ucanr.edu/PMG/PESTNOTES/pn7415.html>



UNIVERSITY OF CALIFORNIA  
AGRICULTURAL AND  
NATURAL RESOURCES

## Termites



### The Western Subterranean Termite *Reticulitermes hesperus*



## Collecting Termites For Science

California has a rich diversity of fauna and you can find a variety of termite species within your own back yard. For the purposes of this study, we are interested in the western subterranean termite *Reticulitermes hesperus*. It can be encountered in nearly all regions of the state and are considered the most destructive termites found in California.

We would like to learn more about termite colony distributions. To do this we send termite collections out for DNA analysis and compare them to previously collected specimens. This will hopefully shed light on the colony dynamics and termite activity we are seeing at your home.



Reproductive termites often look like flying ants. However, you can distinguish termites from ants by these two features: Ants have bent or "elbowed" antennae, while termites have pearl or sting like antennae.

Termites also have two sets of wings that are of equal size, while ants have one set of wings that are larger than the other.

When in doubt, collect!

### What they look like



ALATES

Reproductive winged forms of subterranean termites are dark brown to black with opaque brownish-gray wings. In spring and fall they emerge as males and females to reproduce and begin new colonies. Only mature colonies of subterranean termites will send out these reproductive adults.



WORKERS

Workers are wingless with creamy white to light caramel colored bodies. These workers prefer to stay underground, either in colony tunnels or foraging for wood. They are not as noticeable as their reproductive counterparts and so are often overlooked.

On warm, sunny days following the first fall or spring rains, swarms of reproductive termites may be seen emerging en masse from their underground nests.

Because subterranean termites prefer moist wood in contact with the ground, swarms are often found near tree stumps and wooden planter boxes, but finding swarms indoors can indicate that you have a termite infestation within your home.

### Collecting

If you have the opportunity to collect swarming termites from your yard, please make sure you follow the steps below. Termites are soft bodied insects and are prone to desiccation.

When collecting, place termites directly into ethyl alcohol at 75% or higher. Most local drug stores will carry Ethyl Rubbing Alcohol, but pre-prepared vials will be provided for you.

If you do not have any ethyl alcohol on hand,

you can store the termites in a freezer safe container and keep them in the freezer until our next visit.

At least 20-30 termites should be collected per swarm location (the point of exit for the winged adults). If you find multiple areas of the yard where termites are swarming, please store them in separate containers as they might originate from different colonies. Remember to make notes on where in the yard your termites were found.

## SPCB RESEARCH TRACKING

RESEARCHER	TRACKING	CONTRACT BALANCE
<p><b>Dr. Dong-Hwan Choe</b> University of California, Riverside Agreement No. 26710 “Improving Urban Pest Ants Management by Low-Impact IPM Strategies”  Term Dates: 10/22/18 - 12/31/19</p> <p><b>Total Contract: \$77,309.00</b></p>	<p>10/23/18 – UC Riverside notified of contract approval effective 10/22/18. 1/28/19 – received invoice #80105-001 for \$689.61 4/30/19 – Received April 2019 Progress Report 5/11/19 – received invoice #80105-002 for \$2,645.77 7/17/19 – received invoice #80105-003 for \$3,468.85 10/17/19 – received invoice #80105-004 for \$29,042.96 1/24/20 – received invoice #80105-005 for \$17,532.01 **Pending no cost extension. Extends current contract from December 31, 2019 to June 30, 2020.</p> <p><b>Total Expenditures: \$53,379.20</b></p>	<p><b>\$23,929.80</b></p>
<p><b>Dr. Michael Rust</b> University of California, Riverside Agreement No. 26732 “Development and Evaluation of Baiting Strategies for Control of Pest Yellowjackets in California”  Term Dates: 10/23/18 - 12/31/20</p> <p><b>Total Contract: \$280,017.00</b></p>	<p>10/23/18 – UC Riverside notified of contract approval effective 10/23/18. 1/11/19 – received invoice #80108-001 for \$141.99 4/18/19 – received April 2019 Progress Report 5/11/19 – received invoice #80108-002 for \$6,093.28 7/17/19 – received invoice #80108-003 for \$21,870.43 10/16/19 -received invoice #80108-004 for \$12,361.04 1/14/20 – received invoice #80108-005 for \$18,431.65</p> <p><b>Total Expenditures: \$59,040.38</b></p>	<p><b>\$220,976.62</b></p>
<p><b>Dr. Niamh Quinn</b> University of California, Agriculture and Natural Resources Agreement Number: 26727 “Investigation of Rodenticide Pathways in an Urban System Through the Use of Isotopically Labelled Bait”  Term Dates: 10/16/18 - 08/31/20</p> <p><b>Total Contract: \$329,749.33</b></p>	<p>10/16/18 – UCANR notified of contract approval effective 10/16/18. 4/30/19 – Received April 2019 Progress Report 1/27/20 – received invoice #56318501 for \$11,947.50</p> <p><b>Total Expenditures: \$11,947.50</b></p>	<p><b>\$317,801.50</b></p>

RESEACHER	TRACKING	CONTRACT BALANCE
<p><b>Neil Tsutsui</b> University of California, Berkeley Agreement Number: 26735 “Diet and Colony Structure of Two Emerging Invasive Pest Ants” Term Dates: 10/18/18 - 08/31/21</p> <p><b>Total Contract: \$146,325.00</b></p>	<p>10/18/18 – UC Berkeley notified of contract approval effective 10/18/18. 1/3/19 – received invoice #GM00159910 for \$6,079.05 1/29/19 – received invoice #GM00162310 for \$7,011.98 2/25/19 – received invoice #GM00166580 for \$2,000.00 4/7/19 – received April 2019 Progress Report 5/29/19 – received invoice #GM00175634 for \$681.23 7/2/19 – received invoice #GM00178838 for \$1,220.99 8/9/19 – received invoice #GM00184114 for \$22,099.22 8/19/19 - received invoice #GM00186274 for \$764.23 9/19/19 – received invoice #GM00188490 for \$10,290.87 10/19/19 – received invoice #GM00190757 for \$517.02 11/19/19 – received invoice #GM00193312 for \$827.24 12/19/19 – received invoice #GM00196412 for \$2,849.02 1/20/20 – received invoice #GM00197182 for \$1,259.45</p> <p><b>Total Expenditures: \$55,600.30</b></p>	<p><b>\$90,724.70</b></p>
<p><b>Dr. Andrew Sutherland</b> University of California, Agriculture and Natural Resources Agreement Number: 26730 “Evaluation of bait station system efficacy for reduced-risk subterranean termite management in California” Term Dates: 10/10/18-08/31/<del>21</del><b>22</b></p> <p><b>Total Contract: \$190,425.00</b></p>	<p>10/10/18 – UCANR notified of contract approval effective 10/10/18. 12/11/18 – received invoice #51140867 for \$270.67 12/19/18 – received invoice #51464298 for \$1,075.53 3/4/14 – received invoice #52326394 for \$3, 671.22 4/2/19 – received invoice #52526107 for \$2,617.68 4/26/19 – received April 2019 Progress Report 5/1/19 – received invoice #52892570 for \$4,179.03 5/30/19 – received invoice #5330024 for \$3,220.42 7/26/19 – received invoice #54113894 for \$4,040.68 10/3/19 – received invoice #54886547 for \$272.95 11/13/19 – no cost extension approved by BSO to extend contract term from August 31, 2021 to August 31, 2022. 1/21/20 – received invoice #56314886 for \$1,475.42</p> <p><b>Total Expenditures: \$20,823.60</b></p>	<p><b>\$169,601.40</b></p>

**STRUCTURAL PEST CONTROL BOARD**

**REGULATORY ACTION STATUS**

<b>SECTION</b>	<b>SUBJECT</b>	<b>STATUS</b>
<b>1902</b>	<b>Definitions</b>	<b>March 1, 2020 – Staff Preparing Regulatory Proposal</b>
<b>1911</b>	Addresses – Permits licensees to request a mailing address other than the address of record.	March 13, 1996 – Approved by the Office of Administrative Law
	Addresses – Requires applicators to report change of address.	August 12, 1996 – Approved by the Office of Administrative Law
	Change of Address / Employment  Allow Employers to Notify Board of Employee Disassociation	November 5, 2014 — Act Review Committee Recommended Change to Allow Companies to Notify the Board of Employee Disassociation  July 1, 2017 – The Language Proposed by the Act Review Committee is Included in Senate Bill (SB) 800 to Amend B&P Code Section 8567 and Will Accomplish the Regulatory Effect of the Proposed Changes to CCR 1911

1912	<p>Branch Office Registration – Section 100 Change. To change the phrase “A registered company who opens a branch shall ...” to “A registered company which opens a branch office shall...”</p>	<p>Section 100 Change – Approved by the Office of Administrative Law on May 17, 2004</p>
1914	<p>Name Style – Delete Board’s responsibility to disapprove confusingly similar name styles</p>	<p>December 16, 1998 – Public Hearing Disapproved by the Board April 4, 2003 - Public Hearing - Board voted to adopt February 14, 2004 Rulemaking File expired due to Executive Order Noticed for Public Hearing: April 8, 2005 Adopted by the Board. March 21, 2006 Approved by the Office of Administrative Law</p>
1914	<p>Name Style – Company Registration  Will Prohibit the Approval or Use of a Company Name or Telephone Number That is the Same as the Name or Telephone Number of a Company Whose Registration has Been Surrendered</p>	<p>October 13, 2016 – Public Hearing was Conducted and Board Directed Staff to Begin Final Rulemaking Process  October 2, 2017 – Approved by Office of Administrative Law and Effective January 1, 2018</p>
1918	<p>Supervision – Clarifies that a field representative or an operator can supervise.  Supervision – Permits qualifying managers to supervise multiple locations.</p>	<p>August 12, 1996 – Approved by the Office of Administrative Law.  December 16, 1998 – Public Hearing. Referred to Rules and Regulations Committee. August 6, 1999 – Modified language mailed. January 11, 2001 Public Hearing. Adopted by the Board. Rulemaking file not completed by deadline of December 1, 2001</p>

1918	Re-states supervision of multiple locations, clarifies liability / responsibility of qualifying manager[s] & supervisor(s).	April 4, 2003 Public Hearing, referred to Rules and Regs Committee. Committee meeting held September 17, 2003. Placed on agenda for October 17, 2003 Bd. Mtg. Modified Text mailed Nov. 19, 2003. Comments due Dec. 3, 2003. No comments rec'd. February 14, 2004 Rulemaking File expired due to Executive Order. Noticed for Public Hearing: April 8, 2005. Adopted by the Board. March 21, 2006 - Approved by the Office of Administrative Law.
1919	Research Panel – Deletes reference to public board member on panel.	March 13, 1996 – Approved by the Office of Administrative Law.
1920	Cite & Fine – Authorizes board staff to issue citations and fines.	August 13, 1998 – Approved by the Office of Administrative Law.
	Cite & Fine – Amends to clarify no appeal after modification of decision.	October 15, 1999 – Public Hearing - Board voted to adopt.
1920 (e)(1)(2)(3)	Cite & Fine – Specifies that a second informal conference for a modified citation will not be allowed.	January 11, 2001 - Public Hearing - Board voted to adopt. December 1, 2001 Rulemaking File not completed by deadline. April 4, 2003 - Public Hearing - Board voted to adopt. February 14, 2004 Rulemaking File expired due to Executive Order. Noticed for Public Hearing: April 8, 2005. Adopted by the Board. March 21, 2006 - Approved by the Office of Administrative Law.



<p>1920(b)</p>	<p>Citation - Assessment of Fines – SB 362 increased max fine amount to \$5000.</p> <p>Repealed specific criteria required in assessing fines in excess of \$2,500.</p>	<p>Section 100 Change pending Administrative decision to go forward. Filed with Sec. of State: 12-18-03. Board approved DCA’s four sets of circumstance for max. fine on October 8, 2004. Noticed for Public Hearing July 15, 2005. December 30, 2005 – Approved by the Office of Administrative Law.</p> <p>Agency subsequently agreed that the specific criteria from 2004 for fines in excess of \$2,500 should no longer apply. Board approved on April 22, 2010.</p> <p>December 22, 2010 Notice, ISOR, Language, Std 399 submitted to Linda Otani for review/approval by DPR and Agency.</p> <p>April 12, 2011 DPR returned package with approval signatures.</p> <p>May 10, 2012 – Public Hearing – Board voted to adopt.</p> <p>March 22, 2013 rulemaking file filed with Office of Administrative Law</p> <p>May 8, 2013 – Disapproved by OAL</p> <p>Economic Impact Statement not included</p> <p>June 25, 2013 – 15 day notice to add Economic Impact Statement</p> <p>July 17, 2015 – Resubmitted to OAL</p> <p>August 8, 2013 – Approved by OAL</p> <p>Became Effective October 1, 2013</p>
<p>1920(e)(2)</p>	<p><b>Citations and Fines</b></p> <p><b>Allows the Board 30 Days Rather Than 10 to Notify Respondents of Informal Conference Decisions</b></p>	<p><b>March 1, 2020 – Staff Preparing Regulatory Proposal</b></p>

1922	Civil Penalty Actions by Commissioners – Specifies penalty ranges. Penalty ranges serious, minor and moderate upped to mirror new law.	May 14, 1998 – Approved by the Office of Administrative Law. Noticed for Public Hearing: October 7, 2005. Adopted by the Board. August 25, 2006 – Approved by the Office of Administrative Law.
1922.3	Course requirements by County Agricultural Commissioners - Will place into regulation specific guidelines for licensee / County Ag Commissioners re: civil penalty actions.	Noticed for the April 23, 2004 Board Meeting. Approved by the Office of Administrative Law - July 6, 2005.
1923	Consumer Complaint Disclosure.  DCA created new document: Public Information System – Disclosure.	July 18, 2003 - Public Hearing - Board approved to adopt after proposed language modified with a 15-day public comment period. Rulemaking file placed on hold due to Executive Order. Withdrawn by DCA Legal Dept. Noticed for Public Hearing: October 7, 2005. Board voted to not proceed. (Language needs re-drafting – (a)4(d)(A) and (B)(ii) – now conforms to healing arts situation, and, if [A] is satisfied – so is [B])
1934	Board Approved Operator’s License Course – Specifies time period in which courses must be completed.	August 13, 1998 – Approved by the Office of Administrative Law.

<p>1936</p>	<p><b>AB 2138 Compliance — Operator and Field Representative Forms Being Amended to Remove Questions About Criminal History</b></p>	<p><b>February 21, 2020 — Notice of Proposed Rulemaking Published in Notice Register</b></p>
<p>1936.1</p>	<p><b>AB 2138 Compliance — Company Registration Form Being Amended to Remove Questions About Criminal History</b></p>	<p><b>February 21, 2020 — Notice of Proposed Rulemaking Published in Notice Register</b></p>
<p>1936.2</p>	<p><b>AB 2138 Compliance — Applicator Form Being Amended to Remove Questions About Criminal History</b></p>	<p><b>February 21, 2020 — Notice of Proposed Rulemaking Published in Notice Register</b></p>
<p>1937</p>	<p>Qualification of Applicant – Specifies minimum number of hours of training and experience.  IPM training and experience – Requires that branch 2 and/or 3 applicants complete training and experience in structural Integrated Pest Management as part of their pre-licensing requirements</p>	<p>August 13, 1998 – Approved by the Office of Administrative Law.  January 2008 – Noticed for Public Hearing to amend the current regulation.  April 18, 2008 - Public Hearing - Board approved to adopt.  June 26, 2008 - Rulemaking file submitted to DCA for Director review.  November 18, 2008 – Clarification of the effective date needed for section 1950 of the rulemaking file.  January 6, 2009 – Rulemaking file submitted to DCA for Director review.  March 20, 2009 - Approved by the Office of Administrative Law.</p>

<p>1937.11</p>	<p>Disciplinary Guidelines – Incorporates by reference the Manual of Disciplinary Guidelines and Model Disciplinary Orders. Clean up language to change reference of UC Berkeley correspondence course to a CE course approved by board.</p>	<p>April 14, 1997 – Approved by the Office of Administrative Law.  Board approved on October 28, 2010.  December 22, 2010 Notice, ISOR, Language, Std 399 submitted to Linda Otani for review/approval by DPR and Agency.  April 12, 2011 DPR returned package with approval signatures.  May 10, 2012 – Public Hearing - Board voted to adopt.  March 22, 2013 rulemaking file filed with Office of Administrative Law  May 8, 2013 – Disapproved by OAL  Economic Impact Statement not included  June 25, 2013 – 15 day notice to add Economic Impact Statement  July 17, 2015 – Resubmitted to OAL  August 8, 2013 – Approved by OAL  Became Effective October 1, 2013</p>
<p>1937.11</p>	<p>Revisions Regarding When Suspension Time Must be Served, Length of Probation, Tolling of Probation, etc.</p>	<p>October 13, 2016 – Public Hearing was Conducted and Board Directed Staff to Begin Final Rulemaking Process   January 3, 2018 – Approved by Office of Administrative Law and Effective April 1, 2018.</p>

<p>1937.17</p>	<p>Customer Notification of Licensure – Adopts regulation requiring practitioner notification to customer of licensure.</p>	<p>October 15, 1999 – Public Hearing - Referred to committee.  January 18, 2002 - Public Hearing adopted by the board with modified text.  December 16, 2002 - Approved by the Office of Administrative Law.</p>
<p>1940  1941  1942</p>	<p>Applicator – Amends these actions to make distinction between field representatives, operators and applicators.</p>	<p>August 12, 1996 – Approved by the Office of Administrative Law.</p>

<p>1948</p> <p>1948</p>	<p>Applicator Renewal Fee – Establishes the fee for applicator license renewal. Applicator – Establish and specify fee for applicator’s license and license renewal.</p> <p>Applicator license/renewal fee lowered to \$10, Operator license/renewal fee lowered to \$120.</p>	<p>June 26, 1998 – Public Hearing. Pending approval by Department of Finance. January 20, 2000 – Public Hearing - Board voted to adopt. March 13, 2002 disapproved by OAL. April 12, 2002 Public Hearing: Board voted to take no action. May 5, 2002: Rulemaking file submitted to the Director. July 7, 2002 file disapproved, DCA opposed approval due to Board’s current fund condition. April 4, 2003 - Public Hearing - Board voted to adopt. February 14, 2004 Rulemaking File expired due to Executive Order. Noticed for Public Hearing: April 8, 2005. Adopted by the Board. April 2005 - DCA opposed proposal. Withdrawn from rulemaking file on April 28, 2005 for separate submission. Noticed for Public Hearing: October 7, 2005. Adopted by the Board. August 25, 2006 – Approved by the Office of Administrative Law.</p>
	<p>Field Representative – Increase field representative examination fee.</p>	<p>October 15, 1999 – Public Hearing - Adopted by the Board. January 20, 2000 Board decided to drop this section.</p>
<p>1950</p>	<p>Continuing Education - Deletes outdated renewal requirements.</p>	<p>August 12, 1996 - Approved by the Office of Administrative Law.</p>

1950	Applicator Continuing Education – Establish and specify number and type of continuing education hours required for renewal of applicator’s license. At April 2005 Hearing CE hours were changed to 12 hrs total, 8 covering pesticide application/use and 4 covering SPC Act & its rules & regulations or structural pest related agencies’ rules & regulations.	<p>June 26, 1998 - Public Hearing. Pending approval by Department of Finance.</p> <p>January 20, 2000 - Public Hearing Board voted to adopt. March 13, 2001 disapproved by the OAL. April 12, 2002 - Public Hearing. Board voted to adopt. Disapproved by the Director July 7, 2002.</p> <p>April 4, 2003 - Public Hearing - Board voted to proceed after 15-Day Notice. Notice mailed June 11, 2003, final comments due June 30, 2003. February 14, 2004 Rulemaking File expired due to Executive Order. Noticed for Public Hearing: April 8, 2005. Board voted to proceed after a 15-Day Notice. Notice mailed: May 27, 2005. March 21, 2006 - Approved by the Office of Administrative Law.</p>
1950	Continuing Education - Deletes language regarding Wood Roof Cleaning & Treatment Continuing Education - Hours.	Change without Regulatory Effect - Approved by the Office of Administrative Law effective March 26, 2002.
	Continuing Education - To establish four hours in ethics for license renewal of Operators and Field Representatives.	Noticed for April 23, 2004 Bd. Mtg. Matter considered and rejected at July 23, 2004 Special Mtg. Withdrawn July 2004 with Notice of Decision Not to Proceed.
1950	Continuing Education - Requires that branch 2 and/or 3 licensees gain continuing education hours in structural Integrated Pest Management as part of their license renewal requirements.	<p>Noticed for the April 18, 2008 Board Meeting.</p> <p>April 18, 2008 - Public Hearing - Board approved to adopt after proposed language modified with a 15-day public comment period.</p> <p>June 26, 2008 - Rulemaking file submitted to DCA for Director review.</p> <p>November 18, 2008 – Clarification of the effective date needed for section 1950 of the rulemaking file.</p> <p>January 6, 2009 – Rulemaking file submitted to DCA for Director review.</p> <p>March 20, 2009 - Approved by the Office of Administrative Law.</p>

<p>1950</p>	<p><b>CE IPM Review Committee's Recommended Continuing Education Amendments</b></p>	<p><b>July 17, 2019 — Board Approved Language and Authorized Staff to Begin Rulemaking Process</b></p> <p><b>March 1, 2020 — On Hold Pending EPA Approval of Proposed Regulatory Language</b></p>
<p>1950.1</p>	<p>Armed Services Exemption – Grants a one-year extension for a licensee to complete his/her continuing education requirements if his/her license expired while serving for the United States armed services.</p>	<p>Noticed for the January 23, 2009 Board Meeting.</p> <p>January 23, 2009 - Public hearing, Board voted to send out 15-day notice of modified text.</p> <p>February 9, 2009 – Notice of modified text sent out.</p> <p>June 10, 2009 - Rulemaking file submitted to DCA for Director review.</p> <p>August 5, 2009 – Received approved rulemaking file from DCA.</p> <p>August 5, 2009 – Final rulemaking file submitted to OAL.</p> <p>September 16, 2009 – Approved by the Office of Administrative Law</p>



<p style="text-align: center;"><b>1950.5</b></p>	<p style="text-align: center;"><b>CE IPM Review Committee's Recommended Continuing Education Amendments</b></p>	<p style="text-align: center;"><b>March 1, 2020 — On Hold Pending EPA Approval of Proposed Regulatory Language</b></p>
<p>1950.5(c),(d)(g),(h),[g]</p>	<p>Continuing Education - Requires that course providers administer a second examination.</p>	<p>March 13, 1996 - Approved by the Office of Administrative Law.</p>
<p>1950.5(c),(d)(g),(h),[g]</p>	<p>Continuing Education Requirements, Hour Value System, removal of language regarding wood roof cleaning and treatment.</p>	<p>March 26, 2002 - Approved by the Office of Administrative Law</p>
<p style="text-align: center;">1950.5</p>	<p style="text-align: center;">Hour Value System - Require all C.E. providers to administer written tests after licensees complete approved courses in technical or rules and regulations; equivalent activities will no longer be granted C.E.; Board mtg. attendance will drop to 4 hrs total C.E. credit - 1 hr General Ed and 1 hr Rules &amp; Regs per meeting.</p>	<p style="text-align: center;">Noticed for the April 23, 2004 Board Meeting. Approved by the Office of Administrative Law - July 6, 2005.</p>

1950.5	Hour Value System - Establish an hour value for board approved Integrated Pest Management courses.	<p>Noticed for the April 18, 2008 Board Meeting.</p> <p>April 18, 2008 - Public Hearing - Board approved to adopt.</p> <p>June 26, 2008 - Rulemaking file submitted to DCA for Director review.</p> <p>November 18, 2008 – Clarification of the effective date needed for section 1950 of the rulemaking file.</p> <p>January 6, 2009 – Rulemaking file submitted to DCA for Director review.</p> <p>March 20, 2009 - Approved by the Office of Administrative Law.</p>
<b>1951</b>	<b>Removal of Continuing Education Challenge Examination</b>	<b>March 1, 2020 — On Hold Pending EPA Approval of Proposed Regulatory Language</b>
<b>1953</b>	<b>CE IPM Review Committee’s Recommended Continuing Education Amendments</b>	<b>March 1, 2020 — On Hold Pending EPA Approval of Proposed Regulatory Language</b>
1953(a)	<p>Providers of Continuing Education - C.E. providers that providers do not charge an attendee fee to be exempt from the \$25 course approval fee. Thus eliminating financial burden to the provider.</p> <p>Adopt a revised form 43M-18.</p>	<p>January 11, 2001 - Public Hearing - Board voted to adopt. February 2001-DCA opposed proposal.</p> <p>July 18, 2003 - Public Hearing Board voted to adopt new form. March 17, 2004 Rulemaking file on hold due to Executive Order.</p> <p>Approved by Office Of Administrative Law on August 12, 2004.</p>

1953(f)(3)	Approval of Activities - Revised Form.	July 18, 2003 Public Hearing - Board voted to adopt the revised form. Approved by Office Administrative Law, Section 100 Change effective on May 2, 2003.
1953(f)(3)	Section 100 Change – Typo. The dates for the form numbers were duplicated. Delete (New 5/87) and replace it with (Rev. 11/99) Revise the form - Return it back to 43M-38 (5/87). Current form (Rev.11/99) is obsolete.  Correction of reversal of form numbers 43M-38 and 43M-39 in language and 43M-39 given Rev.10/03 date.	Section 100 Change to OAL on May 13, 2004. Withdrawn June 17, 2004. Change requires language be re-noticed. Board needs to notice for public hearing.  Approved by the Office of Administrative Law - July 6, 2005
1953(3) (A)(C)(D)(E) (4)(g)	Approval of Activities - Clean up language in item (3)(A), define “syllabus” in item (3)(C), revision of form No 43M-39, and language regarding the cost of postage in item (3)(D), delete the words “or products” and language regarding the approval for meetings of in-house staff or employee training being approved in item (4)(g).	Noticed for April 23, 2004 Board Meeting. Approved by the Office of Administrative Law - July 6, 2005.
1953(f)(3)(D)	Approval of Activities - Remove the requirement that continuing education course providers provide course evaluation forms to students.	Noticed for the April 18, 2008 Board Meeting. April 18, 2008 - Public Hearing - Board approved to adopt. June 26, 2008 - Rulemaking file submitted to DCA for Director review. November 18, 2008 – Clarification of the effective date needed for section 1950 of the rulemaking file. January 6, 2009 – Rulemaking file submitted to DCA for Director review. March 20, 2009 - Approved by the Office of Administrative Law.

1960	Fingerprint Requirement – requires all licensees who have not previously been fingerprinted to do so upon license renewal	<p>March 26, 2015 - Text Approved by Board Members</p> <p>June 4, 2015 - Noticed for Public Hearing</p> <p>July 23, 2015 - Public Hearing – Adopted by Board.</p> <p>August 20, 2015 – To DCA for review.</p> <p>December 1, 2015 – Approved by DCA, to Agency for review.</p> <p>January 21, 2016 – To OAL for final review.</p> <p>February 29, 2016 – Approved and effective.</p>
1970	Standards - Construction elements allowing passage of fumigants.	<p>October 12, 2000 - Public Hearing - Board voted to adopt with modifications.</p> <p>November 23, 2001 - Approved by the Office of Administrative Law.</p>
	<p>Fumigation Log - Delete the reporting requirements of the name and address of the guard, and delete the date and hour the police department was notified of fumigation. Rev. form 43M-47.</p> <p>Add additional fumigant calculators on the Fumigation Log</p>	<p>January 11, 2001 - Public Hearing - Board voted to adopt. Rulemaking file not complete by deadline of December 1, 2001.</p> <p>April 4, 2003 - Public Hearing. Due to errors in language, re-noticed for July 18, 2003 - Public Hearing. Board voted to adopt new language and revise log form number 43M-47. Approved by Office of Administrative Law on August 12, 2004.</p> <p>Noticed for Public Hearing July 20, 2007.</p> <p>July 20, 2007 - Public Hearing. Board voted to adopt.</p> <p>September 26, 2007 language under DCA legal review by the Director.</p> <p>March 17, 2008 – Approved by the Director, filed with the Office of Administrative Law.</p> <p>April 29, 2008 – Approved by the Office of Administrative Law.</p>

1970	Standards and Record Requirements - Fumigating contractors will be required to provide a complete fumigation log to its prime contractors and retain the log for 3 years.	<p>July 18, 2003 - Board voted to place on October 17, 2003 board meeting agenda. October 17, 2003 Board voted not to adopt.</p> <p>Noticed for Public Hearing July 20, 2007. July 20, 2007 - Public Hearing. Board voted to adopt.</p> <p>September 26, 2007 language under DCA legal review by the Director.</p> <p>March 17, 2008 – Approved by the Director, filed with the Office of Administrative Law.</p> <p>April 29, 2008 – Approved by the Office of Administrative Law.</p>
1970.3	Securing Against Entry - Includes clamshell locks and pins in general description of secondary locks.	March 13, 1996 - Approved by the Office of Administrative Law.
1970.4	Pesticide Disclosure Requirement - Requires primary contractor to retain OFN for three years.	July 28, 1995 - Board voted to adopt. Technical error - Necessary to re-notice all amendments.
	Pesticide Disclosure Requirement - Includes the required Occupants Fumigation Notice into regulation.	May 12, 1995 - Public Hearing. Referred to the Laws and Regulations Committee for further review. December 8, 1995 - Board adopted revision to the OFN. Technical error-Necessary to re-notice all amendments.
1970.4	Pesticide Disclosure Requirement - Requires primary contractor to retain Occupants Fumigation Notice (OFN) for three years. Includes the required OFN into regulation.	April 28, 1998 – Approved by the Office of Administrative Law.
	Pet Notification - Amends OFN to include notification regarding neighboring pets.	<p>January 20, 2000 - Board voted to adopt. June 23, 2000 Board voted not to proceed. January 2005 Board voted to proceed. Noticed for Public Hearing July 15, 2005. December 30, 2005 – Approved by the Office of Administrative Law.</p>

1970.4	Disclosure Requirement - Deletes language regarding Wood Roof Cleaning & Treatment Pesticide.	March 26, 2002 change without regulatory effect approved by the Office of Administrative Law.
1970.4	Disclosure Requirement – Include presence of conduit language on the OFN	Noticed for Public Hearing July 20, 2007. July 20, 2007 - Public Hearing. Board voted to adopt. September 26, 2007 language under DCA legal review by the Director. March 17, 2008 – Approved by the Director, filed with the Office of Administrative Law. April 29, 2008 – Approved by the Office of Administrative Law.
1970.4	Allows for signed Occupants Fumigation Notice to be in electronic format	January 15, 2015 - Text Approved by Board Members June 4, 2015 - Noticed for Public Hearing July 23, 2015 - Public Hearing. August 20, 2015 – To DCA for review. February 17, 2016 – To OAL for final review. March 22, 2016 – Approved to become effective July 1, 2016. Industry notified May 31, 2016.
1970.4	<b>Pesticide Disclosure Requirements — Pre and Post Pesticide Application Procedures</b>	<b>March 1, 2020 – Presenting Proposed Language to Board for Approval</b>

1970.5	<p>Aeration - Clarifies that a field representative or operator must be present during aeration.</p> <p>Amendment regarding when licensee is required to be present to correlate with DPR's CAP regulation. – DEAD 05/10/12</p>	<p>August 12, 1996 – Approved by the Office of Administrative Law.</p> <p>December 22, 2010 Notice, ISOR, Language, Std 399 submitted to Linda Otani for review/approval by DPR.</p> <p>March 11, 2011 DPR request this regulation be repealed.</p> <p>April 28, 2011 Board voted to repeal regulation.</p> <p>May 10, 2012 – Public Hearing – Board voted to non-adopt proposed repeal of regulation.</p>
1970.6	Fumigation - Construction elements allowing passage of fumigants.	<p>December 16, 1998 - Public Hearing - Action postponed until further input.</p> <p>June 18, 1999 - Board voted to adopt with modifications.</p> <p>November 23, 2001 - Approved by the Office of Administrative Law.</p>
1971	Gas Masks – Removed the subsection concerning gas masks. B&P Code section 8505.15 was repealed January 1, 2008	<p>Noticed for Public Hearing July 24, 2009</p> <p>July 24, 2009 – Board members voted to carryover to next board meeting.</p> <p>October 22, 2009 – Board members voted not to proceed with amending the regulation.</p>
1973	<p>Re-entry Requirements - Requires use of proper testing equipment and changes printing on re-entry notice from red to black.</p> <p>Notice of Re-entry – Replace a product trade name with the active ingredient.</p>	<p>March 13, 1996 - Approved by the Office of Administrative Law.</p> <p>Noticed for Public Hearing July 20, 2007.</p> <p>July 20, 2007 - Public Hearing. Board voted to adopt.</p> <p>September 26, 2007 language under DCA legal review by the Director.</p> <p>March 17, 2008 – Approved by the Director, filed with the Office of Administrative Law.</p> <p>April 29, 2008 – Approved by the Office of Administrative Law.</p>

1974	<p>Fumigation Warning Signs - Specifies size and placement of signs.</p> <p>Fumigation warning signs to include the name of the fumigant used and its active ingredient.</p>	<p>March 13, 1996 - Approved by the Office of Administrative Law.</p> <p>Noticed for Public Hearing January 21, 2010 Public hearing held January 21, 2010 – Board voted to adopt .</p> <p>May 18, 2010, Rulemaking File submitted to DPR for approval.</p> <p>September 23, 2010 DPR returned package with approval signatures.</p> <p>September 30, 2010 Rulemaking File submitted to OAL.</p> <p>November 8, 2010 approved by OAL</p>
1983(i)	<p>Handling, Use and Storage of Pesticides - Clarification of bait station (rodenticide and avicide) reference.</p>	<p>December 16, 1998 - Public Hearing December 30, 1998 - Notice of Modification mailed. January 11, 2001 - Public Hearing - Board voted to adopt. Rulemaking File not complete by deadline date of December 1, 2001.</p> <p>April 4, 2003 - Public Hearing - Board voted to adopt. February 14, 2004 Rulemaking File expired due to Executive Order. Noticed for Public Hearing: April 8, 2005. Adopted by the Board. March 21, 2006 - Approved by the Office of Administrative Law.</p>
1983(j)	<p>Language regarding the removal of termite bait stations when a contract for service is terminated.</p>	<p>July 18, 2003 - Public hearing Board voted to adopt with proposed amendments. Approved by the Office of Administrative Law on August 12, 2004</p>



1984	Proposed regulation to define structural Integrated Pest Management	<p>October 2007 – Noticed for Public Hearing to adopt new section.</p> <p>March 10, 2008 – Final rulemaking file submitted to the Department.</p> <p>June 6, 2008 – Approved by the Director, filed with the Office of Administrative Law.</p> <p>July 9, 2008 - Approved by the Office of Administrative Law.</p> <p>Noticed for the January 23, 2009 Board Meeting.</p> <p>January 23, 2009 - Public hearing, Board voted to adopt with proposed amendments.</p> <p>June 10, 2009 - Rulemaking file submitted to DCA for Director review.</p> <p>August 5, 2009 – Received approved rulemaking file from DCA.</p> <p>August 5, 2009 – Final rulemaking file submitted to OAL.</p> <p>September 16, 2009 – Approved by the Office of Administrative Law</p>
1990	Report Requirements - Defines separated reports and structural members, and addresses reporting requirements for carpenter ants/bees.	March 13, 1996 - Approved by the Office of Administrative Law.
1990	<p><b>Report Requirements Under Section 8516</b></p> <p><b>Makes Various Changes to Clarify and Update Existing Language.</b></p>	<p><b>March 1, 2020 - Staff Preparing Regulatory Proposal</b></p>
1990(g)	Report Requirements – Inspection of wooden decks.	April 28, 1998 - Approved by the Office of Administrative Law.
1990.1	Report Requirements - Repeal language under Section 8516.1(b) and (c)(1)(8).	March 26, 2002 change without regulatory effect - Approved by the Office of Administrative Law.

1991	Report Requirements - Eliminates requirement to cover accessible pellets and frass, and requires replacement of wood members no longer serving purpose to support or adorn the structure.	March 13, 1996 - Approved by the Office of Administrative Law.
1991(A)(B)(C)	Report Requirements - Specifies the restoration, refastening, removal or replacement of wooden decks, wooden stairs or wooden landings.	April 28, 1998 - Approved by the Office of Administrative Law.
1991(a)(5) 1991(a)(5)	Report Requirements – Allows for reinforcement of fungus infected wood and permits surface fungus to be chemically treated or left as is once the moisture is eliminated.	April 3, 1996 – Approved by the Office of Administrative Law.
1991(a)(8)c	Report Requirements – Requires registered companies to report that local treatment and/or corrective work will not eradicate other undetected infestations which may be located in other areas of the structure.	October 6, 1995 – Public Hearing - Board voted to non-adopt. Referred to committee to consider the matter of an all-encompassing disclosure statement on all inspection reports addressing inaccessible areas and potential infection and infestations.
	Report Requirements - Local treatment notification.	October 15, 1999 Public Hearing - Board voted to adopt. January 11, 2001 - Referred back to committee for comments. October 19, 2001 Public Hearing - Board voted to non-adopt, referred language back to committee. August 31, 2002 publication date expired. October 11, 2002 - Re-noticed -Public Hearing. Board voted to adopt. January 8, 2003 language under DCA legal review by the Director. February 21, 2003 filed with the Office of Administrative Law. Rulemaking file withdrawn from OAL March 27, 2003 pending a 15-Day Notice. File resubmitted to OAL. July 26, 2003 - Approved by the Office of Administrative Law.
1991 (cont.)		

1991(a)(9)	Report Requirement - Corrective Measures for extermination of a subterranean termite infestation and termite tubes. Exception for above ground termite bait stations.	January 11, 2001 Board voted to amend 1991(a)(9). October 19, 2001 Board passed unanimously to modify language with a 15-Day Notice. Notice mailed January 28, 2002, 1 year past the publication date. Bd. needs to re-notice. Noticed for Public Hearing July 15, 2005. December 30, 2005 – Approved by the Office of Administrative Law.
1991(13)(A) (B)(C)	Report Requirements - Delete specific recommendations regarding wooden decks, wooden stairs and landings. Language already exists in 1991(a)(5).	October 19, 2001 Board voted to repeal the language. August 31, 2002 publication date expired. April 4, 2003 - Public Hearing. Board voted to go forward after 15-Day Notice. Notice mailed June 11, 2003, final comments due June 30, 2003. February 14, 2004 rulemaking file expired due to Executive Order. Noticed for Public Hearing: April 8, 2005. Adopted by the Board. March 21, 2006 - Approved by the Office of Administrative Law.
1991(b)(10)	Report Requirements – Non-substantive correction to heading.	March 28, 2000 – Filed with the Office of Administrative Law. May 15, 2000 - Approved by the Office of Administrative Law.
<b>1991</b>	<b>Report Requirements Makes Various Changes to the Language in Order to Promote Clarity and Consistency</b>	<b>March 1, 2020 - Staff Preparing Regulatory Proposal</b>

1992	<p align="center"><b>Secondary Recommendations</b></p> <p align="center"><b>Changes Language to Specifically State That Secondary Recommendations Must be Listed on the Notice of Work Completed / Not Completed</b></p>	<p align="center"><b>March 1, 2020 - Staff Preparing Regulatory Proposal</b></p>
1993(a)(b) (c)(d)(e)	<p>Inspection - Specifies that reports shall comply With 8516 and defines different types of inspection reports. Also clarifies difference between duties performed by a field representative, operator and applicator.</p>	<p>March 13, 1996 - Approved by the Office of Administrative Law.</p>
	<p>Inspection Reports - Clarifies that the requirement applies to licensed field representative and licensed operators, not license applicators.</p>	<p>August 12, 1996 - Approved by the Office of Administrative Law.</p>
	<p>Deletes language regarding the filing of stamps.</p>	<p>April 4, 2003 - Public Hearing - Board voted to adopt. February 14, 2004 rulemaking file expired due to Executive Order. Noticed for Public Hearing: April 8, 2005. Adopted by the Board. March 21, 2006 -Approved by the Office of Administrative Law.</p>
1993, 1998	<p>Report Requirements – To eliminate reference to filing inspection reports and notices of work completed and require companies to file the address of properties inspected.</p>	<p>January 20, 2000 - Public Hearing Board voted to adopt. March 13, 2001 Rulemaking File disapproved by the Office of Administrative Law. April 4, 2003 - Public Hearing. Sec.1996 proceed with a 15-Day Notice, Sec. 1996.3 re-notice for July 18, 2003 meeting, Sec.1993 &amp; 1998 Board voted to adopt. February 14, 2004 Rulemaking File expired due to Executive Order. Noticed for Public Hearing: April 8, 2005. Adopted by the Board. March 21, 2006 - Approved by the Office of Administrative Law.</p>

1993.1	Reinspection Language – To adopt section 1993.1 to require Wood Destroying Pest and Organism Inspection Reports to contain statement that work performed by others must be reinspected within ten days of request at a charge no greater than the original inspection fee.	May 22, 1998 – Rulemaking file disapproved by Office of Administrative Law. December 16, 1998 – Public Hearing. December 30, 1998 - Notice of Modifications mailed. January 11, 2001 - Public Hearing. Board voted to adopt. December 1, 2001 rulemaking file not completed by deadline. April 4, 2003 re-noticed for Public Hearing. Approved by the Office of Administrative Law - July 6, 2005.
1993.2	Bait Stations.	October 19, 2001 Board passed to adopt new language. Publication date expired. October 11, 2002 language re-noticed for Board meeting. December 23, 2002 rulemaking file under review. January 8, 2003 under DCA legal review by the Director. February 21, 2003 filed with the Office of Administrative Law. March 27, 2003 rulemaking file withdrawn from OAL pending a 15-Day Notice. July 26, 2003 - Approved by the Office of Administrative Law.
1993.2	Termite Bait Stations.  Defines above and below ground termite bait stations as devices containing pesticide bait. Specifies that use of termite bait stations are a control service agreement.	October 13, 2016 – Public Hearing was Conducted and Board Directed Staff to Begin Final Rulemaking Process  October 6, 2017 – Approved by Office of Administrative Law.  Effective January 1, 2018

1993.3	In-Ground Termite Bait Stations.	<p>October 12, 2001 Board passed to adopt new language. Publication date expired. Language re-noticed for October 11, 2002 Board meeting. Rulemaking package under review 12-23-02. January 8, 2003 – Under DCA legal review by the Director. February 21, 2003 filed with the Office of Administrative Law. March 27, 2003 rulemaking file withdrawn from OAL pending a 15-Day Notice. July 26, 2003 - Approved by the Office of Administrative Law.</p>
1993.3	<p>In-Ground Termite Bait Stations. Being repealed. Language in 1993.2 &amp; 1993.4 make this section obsolete.</p>	<p>October 13, 2016 – Public Hearing was Conducted and Board Directed Staff to Begin Final Rulemaking Process</p> <p>October 6, 2017 – Approved by Office of Administrative Law.</p> <p>Effective January 1, 2018</p>
1993.4	<p>Termite Monitoring Devices. New section defining termite monitoring devices and providing guidelines for their installation and use.</p>	<p>October 13, 2016 – Public Hearing was Conducted and Board Directed Staff to Begin Final Rulemaking Process</p> <p>October 6, 2017 – Approved by Office of Administrative Law.</p> <p>Effective January 1, 2018</p>
1996	Pre-Treatment - Specifies Pre-Treatment Inspection Report/Notice of Intent form.	August 30, 1996 - Public Hearing. Amendment was not adopted. Board referred to Pre-Treatment Committee.
	Inspection Report – Includes a first page of the Inspection Report for scanning purposes.	August 13, 1998 – Approved by the Office of Administrative Law.

<p>1996</p> <p>1996.2</p>	<p>Requirements for Reporting All Inspections Under Section 8516(b).</p> <p>Revised Inspection Report Form and Standard Notice of work Completed and Not Completed.</p>	<p>January 18, 2002 Public Hearing - Board voted to adopt. Form Rev. date completed 1-15-03. April 4, 2003 Board again voted to adopt regulatory lang. Noticed for Public Hearing July 15, 2005. December 30, 2005 - Approved by the Office of Administrative Law.</p> <p>December 16, 2002 - Approved by the Office of Administrative Law.</p>
<p>1996.1</p>	<p>Inspection and Completion Tags - The completion tag shall include the method(s) of treatment.</p> <p>Completion tag to include the trade name of any pesticide used and active ingredient.</p>	<p>July 18, 2003 Public Hearing - Board members voted to adopt. Rulemaking file placed on hold due to Executive Order. Approved by Office of Administrative Law August 12, 2004</p> <p>Noticed for Public Hearing January 21, 2010 Public hearing held January 21, 2010 - Board voted to adopt. May 18, 2010, Rulemaking File submitted to DPR for approval. September 23, 2010 DPR returned package with approval signatures. September 30, 2010 Rulemaking File submitted to OAL. November 8, 2010 approved by OAL.</p>
<p>1996.2</p>	<p>Completion Notice - Includes a first page of the Completion Notice for scanning purposes.</p> <p>Revised Completion Notice Form.</p>	<p>August 13, 1998 - Approved by the Office of Administrative Law.</p> <p>January 18, 2002 Public Hearing - Adopted by the Board. December 16, 2002 - Approved by the Office of Administrative Law.</p>

<p>1996.3</p>	<p>Requirements for Reporting property addresses. Adopt new language that will provide guidelines of what is required when filing the WDO form with the Board.</p> <p>Increase filing fee to \$2.00 on form</p> <p>Increase filing fee to \$2.50 on form</p>	<p>March 17, 2003 Rulemaking file on hold due to Executive Order. July 18, 2003 Public Hearing - Board voted to adopt after a 15-Day Notice of modified language. Approved by Office of Administrative Law July 13, 2004</p> <p>Noticed for Public Hearing July 24, 2009 July 24, 2009 – Board voted to adopt. Sept. 3, 2009 – Rulemaking file submitted to DCA for review. January 21, 2010, Board considered 15-day comments to increase fee to \$2.50. Board voted to adopt at \$2.50 per activity. May 20, 2010 Office of Administrative Law approves Rulemaking File to increase fee to \$2.50 effective July 1, 2010.</p>
<p>1997</p>	<p>Filing Fee – Inspection Reports and Completion Notices.</p> <p>Filing Fee – Inspection Reports and Completion Notices – Fee increase.</p>	<p>October 15, 1996 – Approved by the Office of Administrative Law.</p> <p>December 16, 1998 – Public Hearing Adopted by Board. Rulemaking file not submitted based on recommendations from DCA that fee increase not necessary to fund condition.</p> <p>December 16, 1999 – Non-substantive change without regulatory effect filed with the Office of Administrative Law.</p> <p>January 28, 2000 - Approved by the Office of Administrative Law.</p>



<p>1997</p>	<p><b>WDO Activity Filing Fee.</b></p>	<p>Noticed for Public Hearing July 24, 2009  July 24, 2009 Board voted to adopt.  Sept. 3, 2009 – Rulemaking file submitted to DCA for review.</p> <p>Dec. 28, 2009 – Board passed unanimously to modify language with a 15-Day Notice. Notice mailed on December 29, 2009, final comments due January 13, 2010</p> <p>January 21, 2010, Board considered 15-day comments to increase fee to \$2.50. Board voted to adopt at \$2.50 per activity.  May 20, 2010 Office of Administrative Law approves Rulemaking File to increase fee to \$2.50 effective July 1, 2010.</p> <p><b>April 19, 2018 – Board Approved Language to Raise Fee From \$2.50 to \$3.00 per Property Address Reported</b></p> <p><b>May 24, 2018 – Staff Submitted Regulatory Proposal to DCA Legal</b></p> <p><b>May 7, 2019 – Approved by OAL. July 1, 2019 Effective Date.</b></p> <p><b>July 1, 2019 – Emergency Reg to Raise Fee From \$3.00 to \$4.00 Undergoing DCA Review</b></p> <p><b>August 22, 2019 – Emergency Reg Raising Fee to \$4.00 Approved by OAL.</b></p> <p><b>March 1, 2020 – In Rulemaking Process Being Reviewed at Agency</b></p>
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<p>1999.5</p>	<p>Advertising Guidelines.</p>	<p>June 18, 1999 – Public Hearing  August 27, 1999 – Modified language mailed  November 22, 2001 approved by the Office of Administrative Law.  September 24, 2002 non-substantive change without regulatory effect approved by the Office of Administrative Law.</p> <p>October 2007 – Noticed for Public Hearing to amend the current regulation.  January 2008 – Board moved to request further analysis by Legal Counsel and staff.  June 26, 2008 - Rulemaking file submitted to DCA for Director review.</p>
<p>1999.5 (cont.)</p>	<p>Include an introductory statement to clarify the purpose of the regulation. Clarify that certain subsections pertain only to Branch 3 companies.</p>	<p>September 11, 2008 - Rulemaking file submitted to OAL for approval.  October 24, 2008 - Rulemaking file disapproved by OAL.  February 19, 2009 – Task Force meeting held to discuss OAL’s disapproval  March 2009 – Extension granted by OAL.  June 2, 2009 – Resubmittal submitted to DCA for Director review.  June 8, 2009 – Resubmittal submitted to OAL for approval.  July 17, 2009 – Approved by OAL</p>

**§ 1970.4. Pesticide Disclosure Requirement-~~for Structural Fumigations.~~**

(a) ~~The primary contractor for fumigation shall have in his or her possession and shall provide to any subcontractor for fumigation a~~ must possess an a completed Occupants Fumigation Notice and Pesticide Disclosure form (See Form 43M-48 (Rev. 5/07) at the end of this section) signed by the occupants or and owner or owner's agent of a structure. (See Form 43M-48 (Rev. xx/xxxx) at the end of this section). ~~The primary contractor for fumigation must provide to any subcontractor for fumigation a~~ completed and signed copy of Form 43M-48 (Rev. xx/xxxx). ~~The primary contractor for fumigation and the subcontractor for fumigation shall~~ must retain a signed copy of the each occupants fumigation notice Form 43M-48 (Rev. xx/xxxx) for a period of at least three years. ~~In the case of multiple-family dwellings~~ multi-unit structure(s), the owner or owner's agent, manager or designated agent of the building may ~~multi-unit structure(s) must~~ may obtain signatures and/or verify the notification of the occupants on behalf of the prime contractor.

(b) In addition to the health cautionary statement as required under section 8538(a)(3) of the code, a completed Form 43M-48 (Rev. xx/xxxx) must include:

- (1) The name of the pest to be controlled,
- (2) The pesticide(s)/ fumigant(s) proposed to be used, the active ingredient,(s) and the health cautionary statement as required under section 8538 of the code, brand or product name,
- (3) The structure's street address, city and zip code,
- (4) The name, PR#, and emergency contact information of the prime contractor and of the subcontractor (when applicable).
- (5) The dates of intended fumigation. The statement printed in capital letters: "THIS STRUCTURE WILL BE FUMIGATED WITH A LETHAL GAS ON THE DATES INDICATED. ALL PERSONS AND ANIMALS MUST VACATE THE PREMISES ON OR BEFORE ARRIVAL OF THE FUMIGATION CREW."
- (6) The statement printed in capital letters: "IT IS UNSAFE TO RETURN TO THE STRUCTURE PRIOR TO THE TIME AND DATE LISTED ON THE CERTIFICATION NOTICE FOR RE-ENTRY POSTED BY THE LICENSED FUMIGATOR."
- (7) The printed question regarding conduits: Are you aware of any conduits, pipes, common drains, central vacuum systems, air ducts, or any other construction elements that would allow passage of a fumigant from the structure to be fumigated to any other adjacent or adjoining structure?
- (8) The printed statement: We suggest that you notify nearby neighbors of the date of fumigation and to keep pets away during the fumigation. Close off any open access to the subarea to prevent pets from entering.
- (9) An adult occupant of each currently-occupied unit or structure has received the prime contractor's instructions fumigation preparation, procedures for leaving the structure, and the Fact Sheet for the intended fumigant.
- (10) Acknowledgment by the occupant (or owner or owner's agent if there is no occupant) of the fumigation dates, fumigation information listed in (b)(8), conduits, and pet protection where indicated.
- (11) Signatures of the occupant, and owner or owner's agent, and date signed by each.

**§ 1970.4. Pesticide Disclosure Requirement-~~for Structural Fumigations.~~** (continued)

~~(c) The completed and signed Form 43M-48 (Rev. xx/xxxx) or a copy, written or electronic, thereof must be on-site, in the possession of the licensed fumigator when the fumigant is released. Such form must be attached to and become a permanent part of the fumigation log upon completion of the fumigation.~~

~~shall must also state that a lethal gas (poison) will be used in the building structure on indicated dates and that it is unsafe to return to the building structure until a certification notice for reentry is posted by the licensed fumigator. The form shall must also indicate that the occupant an adult occupant of each currently occupied unit has received the prime contractor's information regarding the procedures for leaving the structure.~~

~~The properly signed form or a copy, written or electronic, thereof shall must be on-site, in the possession of the licensed fumigator when the fumigant is released. Such form shall be attached to and become a permanent part of the fumigation log upon completion of the fumigation.~~

~~(b)(d) Any death or serious injury relating to a pesticide application or use structural fumigation, whether to a worker the owner or an employee of the registered structural pest control company or a member of the public, shall must be reported immediately to the nearest Structural Pest Control Board office immediately.~~

~~(c) Whenever a licensee employed by a branch 2 or branch 3 registered company applies a pesticide within, around or to any structure such person shall leave in a conspicuous location a written notice identifying the common, generic or chemical name of each pesticide applied. In case of a multiple family structure, such notice may be given to the designated agent or the owner. Such pesticide identification notice may be a door hanger, invoice, billing statement or other similar written document which contains the registered company's name, address, and telephone number.~~

~~(d) All pest control operators, field representatives, applicators and employees in all branches shall comply in every respect with the requirements of section 8538 of the code. Failure to comply with section 8538 of the code is a misdemeanor and shall constitute grounds for discipline.~~

~~(e) Where notification is required under section 8538 of the code, and the premises on which the work is to be performed is a multiple family dwelling consisting of more than 4 units, the owner/owner's agent shall receive notification and other notices shall be posted in heavily frequented, highly visible areas including, but not limited to, all mailboxes, manager's apartment, in all laundry rooms, and community rooms on all external pest control servicing.~~

~~Complexes with fewer than 5 units will have each affected unit notified. Any pest control servicing done within a tenant's apartment requires that the tenant be notified according to section 8538 of the code.~~

~~(f) A registered company which applies any pesticide within, around or to any structure shall provide to any person, within 24 hours after request therefore, the common, generic or chemical name of each pesticide applied.~~

Note: Authority cited: Section 8525, Business and Professions Code.

Reference: Section 8505.7, 8505.13 and 8538, Business and Professions Code.

**§ 1970.41 Pesticide Pre-Application Notice Requirements for Commercial, Industrial, or Multi-Unit Structures.**

When pesticides are to be applied by a licensee employed by a registered Branch 2 or Branch 3 company, in addition to notification requirements of section 8538 of the code, the licensee must post a pre-application notification prior to the application or use as follows:

- (a) When the work to be performed is on the premises of a commercial or industrial single or multi-unit structure, a pre-application notification must be posted in a conspicuous place on the property unless the owner or owner's agent objects.
- (b) When the work to be performed is on the premises of a multi-unit residential structure, the notification must be posted in a conspicuous place on the property and be provided to the occupant, if there is an occupant, and the owner or owner's agent by at least one of the following:
  - (1) First class or electronic mail, or
  - (2) Personal delivery.
- (c) The notice required by (a) or (b), must state:
  - (1) The name of the pest to be controlled,
  - (2) The brand or product name, the active ingredient(s) of each pesticide to be applied or used, and
  - (3) The health cautionary statement as required under section 8538 of the code.
- (d) "Conspicuous place" means heavily frequented areas, including, but not limited to: the on-site manager's office or unit, and all multi-unit or cluster mailboxes, laundry rooms, and community rooms.

Note: Authority cited: Section 8525, Business and Professions Code.

Reference: Section 8525 and 8538, Business and Professions Code.

**§ 1970.42 Pesticide Post-Application Notice Requirements,**

(a) In addition to notification required by section 8538 of the code, whenever a licensee employed by a registered Branch 2 or Branch 3 company has applied or used a pesticide the licensee must provide a post-application notice immediately after the service visit as follows:

- (1) When applied around or to the exterior of any structure, the post-application notice must be provided in writing or electronically to the owner or owner's agent.
- (2) When applied within a unit or structure where there is an occupant, the post-application notice must be provided in writing and left in a visible location within the unit or structure.
- (b) The post-application notice specified in (a) may be a door hanger, invoice, billing statement or other similar document and must include:
  - (1) The brand or product name, and the active ingredient(s) of each pesticide applied,
  - (2) The date of service
  - (3) The registered company's name, address, and telephone number

**§ 1970.43 Providing Requested Pesticide Information.**

A registered company must provide to any person, within 24 hours after request, the brand or product name and the active ingredient of each pesticide applied or used within, around, or to any structure.

Note: Authority cited: Section 8525, Business and Professions Code.

Reference: Section 8525 and 8538, Business and Professions Code.

**§ 1970.44 Grounds for Discipline.**

All registered companies, pest control operators, field representatives, applicators, and employees in all branches must comply in every respect with the requirements of section 8538 of the code. Failure to comply with section 8538 of the code is a misdemeanor and constitutes grounds for discipline.

Note: Authority cited: Section 8525, Business and Professions Code.  
Reference: Section 8525 and 8538, Business and Professions Code.

**§ 1970.45 Reporting Death or Serious Injury.**

Any death or serious injury relating to a pesticide application or use, whether to the owner, or an employee of the registered structural pest control company, or a member of the public, must be reported immediately to the nearest Structural Pest Control Board office.

Note: Authority cited: Section 8525, Business and Professions Code.  
Reference: Section 8525 and 8538, Business and Professions Code.

DRAFT

# OCCUPANTS FUMIGATION NOTICE AND PESTICIDE DISCLOSURE

## OCCUPANTS FUMIGATION NOTICE:

JOB ADDRESS: \_\_\_\_\_ CITY: \_\_\_\_\_ ZIP: \_\_\_\_\_

### FUMIGATION SITE DESCRIPTION:

Single-Unit Residential Structure: Adult Occupant Name: \_\_\_\_\_ (Print Legibly)  
Phone:  Cell or  Landline ( ) \_\_\_\_\_ EMER. No. ( ) \_\_\_\_\_

Single Unit Commercial, Industrial or  Other Structure: \_\_\_\_\_

Multi-Unit Structure:  Residential  Commercial, Industrial or  Other \_\_\_\_\_

SITE CONTACT: \_\_\_\_\_  Owner  Owner's Agent  Manager  Other \_\_\_\_\_  
(Print Name Legibly)

Phone:  Cell or  Landline ( ) \_\_\_\_\_ EMER. No. ( ) \_\_\_\_\_

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### CONTRACTORS:

PRIME: \_\_\_\_\_ PR/BR No. \_\_\_\_\_ EMER. No. ( ) \_\_\_\_\_

SUB (Fumigator): \_\_\_\_\_ PR No. \_\_\_\_\_ EMER. No. ( ) \_\_\_\_\_

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CONDUITS: Are you aware of any conduits, pipes, common drains, central vacuum systems, air ducts, or any other construction elements that would allow passage of a fumigant from the structure to be fumigated to any other adjacent or adjoining structure?  NO  YES

If Yes, Describe in detail: \_\_\_\_\_

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### NEIGHBOR NOTIFICATION and PET PROTECTION:

We suggest that you notify nearby neighbors of the fumigation dates and to keep pets, particularly cats, away during the fumigation. Close off any open access to the subarea to prevent pets from entering.

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### FUMIGATION INFORMATION: I have received a copy of: (Check all that apply)

Site Contact: \_\_\_\_\_ Adult Occupant: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Initials Initials

Fumigation Dates: (Release to Clearance) \_\_\_\_\_  
 Changes/Alternate Dates: \_\_\_\_\_  
 Vikane Fact Sheet or  Zythor Fact Sheet  
 Fumigation Preparation Instructions  
 Pre-Fumigation Procedures  
 Other Documents: \_\_\_\_\_

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### ACKNOWLEDGMENTS: I hereby acknowledge receipt of a written or electronic copy of this OCCUPANTS FUMIGATION NOTICE and the information checked above:

Adult Occupant(s): \_\_\_\_\_  
Signature(s) Date

Owner  Owner's Agent  Manager \_\_\_\_\_  
Signature Date

# OCCUPANTS FUMIGATION NOTICE AND PESTICIDE DISCLOSURE

## PESTICIDE DISCLOSURE:

Target Pest(s):  Drywood Termites  Beetles  Bed Bugs  Roaches  \_\_\_\_\_  
Other

Fumigant to be used: Sulfuryl Fluoride:  Vikane  Zythor  Other: \_\_\_\_\_  
Product Name

CHLOROPICRIN WILL BE USED AS A WARNING AGENT

### **IMPORTANT – READ CAREFULLY**

THIS BUILDING WILL BE FUMIGATED WITH LETHAL GASES ON THE DATES INDICATED. ALL PERSONS AND ANIMALS MUST VACATE THE PREMISES ON OR BEFORE ARRIVAL OF THE FUMIGATION CREW.

UNDER NO CIRCUMSTANCES CAN ANYONE ENTER THE BUILDING UNTIL THE FUMIGATION COMPANY'S NOTICE IS POSTED WITH THE TIME AND DATE FOR SAFE REENTRY.

"State law requires that you be given the following information: CAUTION – PESTICIDES ARE TOXIC CHEMICALS. Structural pest control companies are registered and regulated by the Structural Pest Control Board and apply pesticides which are registered and approved for use by the California Department of Pesticide Regulation and the United States Environmental Protection Agency. Registration is granted when the State finds that based on existing scientific evidence there are no appreciable risks if proper use conditions are followed or that the risks are outweighed by the benefits. The degree of risk depends upon the degree of exposure, so exposure should be minimized."

"If within 24 hours you experience symptoms of dizziness, headache, nausea, reduced awareness, slowed movement, garbled speech or difficulty in breathing, leave the structure immediately and seek medical attention by contacting your physician or Poison Control Center (telephone number) and your pest control company immediately." The warning agent, chloropicrin, can cause symptoms of tearing, respiratory distress and vomiting. Entry into the space during fumigation can be fatal."

"For further information, contact the following: Your pest control company (telephone no.); for Health Questions: the County Health Department (telephone no.); for Application Information: the County Agricultural Commissioner (telephone no.) and for Regulatory Information: the Structural Pest Control Board, (800) 737-8188, 2005 Evergreen Street, Suite 1500, Sacramento, CA 95815."

I hereby acknowledge receipt of a written or electronic copy of this PESTICIDE DISCLOSURE.

Owner  Owner's Agent  Manager \_\_\_\_\_  
Signature Date

Adult Occupant(s): \_\_\_\_\_  
Signature(s) Date



## Assembly Bill No. 434

### CHAPTER 780

An act to add Section 11546.7 to the Government Code, relating to state government.

[Approved by Governor October 14, 2017. Filed with  
Secretary of State October 14, 2017.]

#### legislative counsel's digest

AB 434, Baker. State Web accessibility: standard and reports.

Existing law establishes, within the Government Operations Agency, the Department of Technology under the supervision of the Director of Technology, who also serves as the State Chief Information Officer. Existing law provides that the department is generally responsible for the approval and oversight of information technology projects. Existing law requires the heads of state agencies and entities to appoint chief information officers, requires state agencies and entities to report certain information to the department, and further requires state agencies to take all necessary steps to achieve the targets set forth by the department in its information technology performance management framework and report their progress to the department on a quarterly basis.

This bill, before July 1, 2019, and before July 1 biennially thereafter, would require the director of each state agency or entity and the chief information officer of that state agency or entity to post on the home page of the agency's or entity's Internet Web site a signed certification that the agency's or entity's Internet Web site is in compliance with specified accessibility standards. The bill would require the director to create a standard form that each state agency's or state entity's chief information officer would be required to use to determine whether the state agency's or state entity's Internet Web site is in compliance with the specified accessibility standards.

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

SECTION 1. Section 11546.7 is added to the Government Code, to read:

11546.7. (a) Before July 1, 2019, and before July 1 biennially thereafter, the director of each state agency or state entity, as defined in subdivision (e) of Section 11546.1, and each chief information officer appointed under Section 11546.1, shall post on the home page of the state agency's or state entity's Internet Web site a signed certification from the state agency's or state entity's director and chief information officer that they have determined that the Internet Web site is in compliance with Sections 7405 and 11135,

and the Web Content Accessibility Guidelines 2.0, or a subsequent version, published by the Web Accessibility Initiative of the World Wide Web Consortium at a minimum Level AA success criteria.

(b) The Director of Technology shall create a standard form that each state agency's or state entity's chief information officer shall use to determine whether the state agency's or state entity's Internet Web site is in compliance with the accessibility standards specified in subdivision (a).

### Non-Compliant Documents Per Program

The following table reflects the per program inventory of non-compliant documents, the resulting page counts and the estimated fiscal liability based on the average of the budgetary quotes received, set at \$5 per page.

Program	Total Enforcement Documents	Total Enforcement Pages	Total Operational Documents	Total Operational Pages	Estimated Fiscal Liability
Acupuncture Board	332	3407	407	1048	\$22,275
Arbitration Certification Program	0	0	4	61	\$305
Board for Professional Engineers, Land Surveyors, and Geologists	351	5,547	569	6,687	\$61,170
Board of Barbering and Cosmetology	2,164	20,862	1,538	16,627	\$187,445
Board of Behavioral Sciences	2,202	31,518	310	4,227	\$178,725
Board of Chiropractic Examiners	124	1,006	922	12,599	\$68,025
Podiatric Medical Board of California	0	0	583	8,209	\$41,045
Board of Psychology	1,873	19,227	2,323	26,347	\$227,870
Board of Registered Nursing	22,116	414,416	175	1,505	\$2,079,605
Board of Vocational Nursing and Psychiatric Technicians	4,747	70,263	151	1,527	\$358,950
Bureau for Private Postsecondary Education / Office of Student Assistance and Relief	2,051 0	13,142 0	4,234 4	55,643 36	\$344,105
Bureau of Automotive Repair	15,487	376,401	580	7,902	\$1,921,515
Bureau of Cannabis Control	0	0	220	4,952	\$24,760

Bureau of Household Goods and Services	23	201	302	5,729	\$29,650
Bureau of Real Estate Appraisers	279	5,022	123	1,476	\$32,490
Bureau of Security and Investigative Services	9,361	72,522	259	2,191	\$373,565
Physical Therapy Board of California	1,760	16,883	560	10,017	\$134,500
Physician Assistant Board	0	0	340	7,718	\$38,590
Professional Fiduciaries Bureau	105	692	112	362	\$5,270
Respiratory Care Board of California	2,230	17,024	150	2,997	\$100,105
California Architects Board / Landscape Architects Technical Committee	46 10	1,124 1,098	587 327	18,870 5,009	\$130,505
California Board of Accountancy	2,923	60,606	3,837	8,904	\$347,550
California Board of Occupational Therapy	986	4,614	608	12,512	\$85,630
California State Athletic Commission	0	0	1,059	7,433	\$37,165
California State Board of Optometry	234	5,260	915	29,001	\$171,305
California State Board of Pharmacy	7,104	112,347	9,063	71,600	\$919,735
Cemetery and Funeral Bureau	374	5,050	589	1,847	\$34,485
Contractors State License Board	9,083	81,967	2,182	53,117	\$675,420
Court Reporters Board of California	51	454	236	2,879	\$16,665
Dental Board of California	4,224	34,827	1,288	22,585	\$287,060
Dental Hygiene Board of California	223	1,883	450	8,646	\$52,645
Medical Board of California	17,379	260,685	2,792	41,880	\$1,512,825
Naturopathic Medicine Committee	2	49	8	47	\$480
Osteopathic Medical Board of California	327	6,498	125	4,051	\$52,745
Speech-Language Pathology and Audiology and	230	947	568	8,206	\$45,765

Hearing Aid Dispensers Board					
<b>Structural Pest Control Board</b>	<b>1,868</b>	<b>22,244</b>	<b>2,312</b>	<b>4,641</b>	<b>\$134,425</b>
Veterinary Medical Board	916	11,680	653	11,875	\$117,775
Department of Consumer Affairs	0	0	23	256	\$1,280
<b>TOTALS</b>	<b>111,185</b>	<b>1,679,466</b>	<b>41,488</b>	<b>491,219</b>	<b>\$10,853,425</b>

Questions / Decision Points to be made by February 14, 2020:

1. How will [Enter Board/Bureau/Commission] remediate their historical documents?
  - a. Via a department-wide remediation contract structured to be completed by July 1, 2021?
  - b. Via board/bureau/commission resources, temp or otherwise, and completed by July 1, 2021? (A detailed plan shall be completed by March 1, 2020, outlining reasonable completion by July 1, 2021.)
2. Does the Board/Bureau/Commission plan to remain a part of a funding request for the fiscal liability outlined in the table above?
3. A. Does the Board/Bureau/Commission intend on analyzing current web content for non-essential items that may be removed and reduce the inventory of non-compliant documents? (The response to this question must remain aligned with the administration's direction to not remove essential business content from the internet in order to comply with AB 434.)  
OR  
B. Does the Board/Bureau/Commission intend on proceeding with remediation activities based on the non-compliant inventory outlined in the table above?

**ASSEMBLY BILL**

**No. 613**

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**Introduced by Assembly Member Low**

February 14, 2019

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An act to add Section 101.1 to the Business and Professions Code, relating to professions and vocations, and making an appropriation therefor.

LEGISLATIVE COUNSEL'S DIGEST

AB 613, as introduced, Low. Professions and vocations: regulatory fees.

Existing law establishes the Department of Consumer Affairs, which is comprised of boards that are established for the purpose of regulating various professions and vocations, and generally authorizes a board to charge fees for the reasonable regulatory cost of administering the regulatory program for the profession or vocation. Existing law establishes the Professions and Vocations Fund in the State Treasury, which consists of specified special funds and accounts, some of which are continuously appropriated.

This bill would authorize each board within the department to increase every 4 years any fee authorized to be imposed by that board by an amount not to exceed the increase in the California Consumer Price Index for the preceding 4 years, subject to specified conditions. The bill would require the Director of Consumer Affairs to approve any fee increase proposed by a board except under specified circumstances. By authorizing an increase in the amount of fees deposited into a continuously appropriated fund, this bill would make an appropriation.

Vote: majority. Appropriation: yes. Fiscal committee: yes.  
State-mandated local program: no.

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

1 SECTION 1. Section 101.1 is added to the Business and  
2 Professions Code, to read:

3 101.1. (a) Notwithstanding any other law, no more than once  
4 every four years, any board listed in Section 101 may increase any  
5 fee authorized to be imposed by that board by an amount not to  
6 exceed the increase in the California Consumer Price Index, as  
7 determined pursuant to Section 2212 of the Revenue and Taxation  
8 Code, for the preceding four years in accordance with the  
9 following:

10 (1) The board shall provide its calculations and proposed fee,  
11 rounded to the nearest whole dollar, to the director and the director  
12 shall approve the fee increase unless any of the following apply:

13 (A) The board has unencumbered funds in an amount that is  
14 equal to more than the board’s operating budget for the next two  
15 fiscal years.

16 (B) The fee would exceed the reasonable regulatory costs to the  
17 board in administering the provisions for which the fee is  
18 authorized.

19 (C) The director determines that the fee increase would be  
20 injurious to the public health, safety, or welfare.

21 (2) The adjustment of fees and publication of the adjusted fee  
22 list is not subject to the Administrative Procedure Act (Chapter  
23 3.5 (commencing with Section 11340) of Part 1 of Division 3 of  
24 Title 2) of the Government Code.

25 (b) For purposes of this section, “fee” includes any fees  
26 authorized to be imposed by a board for regulatory costs. “Fee”  
27 does not include administrative fines, civil penalties, or criminal  
28 penalties.

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AMENDED IN ASSEMBLY JANUARY 16, 2020

CALIFORNIA LEGISLATURE—2019–20 REGULAR SESSION

**ASSEMBLY BILL**

**No. 1024**

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**Introduced by Assembly Member Frazier**

February 21, 2019

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An act to ~~add Section 7195.1 to~~ amend Section 7198 of, to amend and renumber Sections 7195.5, 7195.7, 7196, 7196.1, 7196.2, and 7197 of, to amend, renumber, and repeal Section 7199 of, to add the heading of Article 1 (commencing with Section 7195) and Article 5 (commencing with Section 7198) to Chapter 9.3 of Division 3 of, to add Article 2 (commencing with Section 7195.2), Article 3 (commencing with Section 7196), Article 4 (commencing with Section 7197), and Article 6 (commencing with Section 7199) to Chapter 9.3 of Division 3 of, and to add Sections 7195.1, 7196.4, 7198.1, and 7198.2 to, the Business and Professions Code, relating to ~~contractors~~: *home inspectors*.

LEGISLATIVE COUNSEL'S DIGEST

AB 1024, as amended, Frazier. ~~Home inspectors; licensing; Contractors' State License Board; Inspector Licensure Act.~~

*Existing law regulates a person who performs certain home inspections for a fee in connection with a transfer of real property. Existing law provides that it is the duty of a home inspector who is not licensed as a general contractor, structural pest control operator, or architect, or registered as a professional engineer to conduct a home inspection with the degree of care that a reasonably prudent home inspector would exercise. Under existing law, contractual provisions that purport to waive this duty, or limit the liability of the home inspector to the cost of the home inspection report, are contrary to public policy and invalid. Existing law prohibits commencement of a legal action for*



*breach of duty arising from a home inspection report more than 4 years from the date of the inspection. Under existing law, certain activities by a home inspector or a company that employs a home inspector constitute unfair business practices.*

*This bill would enact the Home Inspection Licensure Act, which would revise and recast those provisions, and would make the substantive changes described below operative on and after January 1, 2025.*

*This bill would require the Department of Consumer Affairs to administer and enforce the provisions of the act. The bill would prohibit a person from acting or holding themselves out as a home inspector unless that person has an active license, except as specified. The bill would make a willful violation of this provision a public offense punishable by imprisonment, by a fine not exceeding an unspecified amount, or by both imprisonment and fine. By creating a new crime, the bill would create a state-mandated local program.*

*This bill would require an applicant for a license to, among other things, submit to the department an original completed application containing specified personal information, proof of completion of a prelicensing education course from an approved provider, and payment of an unspecified application fee. The bill would require a license issued to be valid for 2 years following the date of issuance. The bill would authorize a person to renew their expired license upon the filing of a completed renewal application containing proof of completion of a continuing education course from an approved provider and payment of an unspecified renewal fee, except as specified. The bill would authorize a licensee to apply for an inactive license, and would prohibit the department from requiring an inactive license to be renewed after the licensee pays an unspecified one-time retired license fee.*

*This bill would authorize the department to enter into a reciprocity agreement with another state that authorizes a home inspector from that state to act or hold themselves out as a home inspector, if the department makes specified determinations and issues a temporary license to that home inspector that is valid for a period not exceeding one year.*

*This bill would require the department to approve a provider of professional home inspection educational courses that meets certain requirements, and would authorize the department to remove the approval if the course provider has failed to comply with those requirements. The bill would require the department to provide on its*

*internet website certain information regarding every licensee and course provider, as specified.*

*This bill, instead, would prohibit commencement of a legal action for breach of duty arising from a home inspection report more than 2 years from the date of the inspection. The bill would require a home inspector, before beginning a home inspection, to provide to the client, and to obtain the client's signature on, an inspection agreement containing specified information. The bill would require a home inspector to provide an inspection report to the client on or before 5 days following the completion of the home inspection, unless a different date is specified in the inspection agreement.*

*This bill would establish the Home Inspectors License Fund, and would require all fees, fines, and penalties collected pursuant to these provisions to be deposited into the fund, which the bill would make available for administration of these provisions, upon appropriation by the Legislature.*

*The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.*

*This bill would provide that no reimbursement is required by this act for a specified reason.*

~~Existing law, the Contractors' State License Law, provides for the licensure and regulation of contractors by the Contractors' State License Board in the Department of Consumer Affairs. Existing law requires the board to appoint a registrar of contractors to carry out administrative duties, as provided.~~

~~Existing law defines home inspection and establishes a standard of care for persons performing home inspections.~~

~~This bill, beginning January 1, 2022, would require a person performing a home inspection, as defined, to be licensed by the Contractors' State License Board. The bill would authorize the board to establish criteria for licensing home inspectors and establish fees for licensing and renewal. The bill would authorize the registrar to enforce the licensing provisions. The bill would exempt a licensed general contractor, pest control operator, architect, or professional engineer from these licensing provisions.~~

Vote: majority. Appropriation: no. Fiscal committee: yes.  
State-mandated local program: ~~no~~-yes.

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

1     *SECTION 1. This act shall be known, and may be cited, as the*  
2     *Home Inspector Licensure Act.*

3     *SEC. 2. The heading of Article 1 (commencing with Section*  
4     *7195) is added to Chapter 9.3 of Division 3 of the Business and*  
5     *Professions Code, to read:*

6  
7                             *Article 1. Definitions*  
8

9     *SEC. 3. Section 7195.1 is added to the Business and Professions*  
10    *Code, to read:*

11    7195.1. (a) *For purposes of this chapter, the following*  
12    *definitions also apply:*

- 13    (1) *“Application” means an application for a license.*
- 14    (2) *“Course provider” means a provider of educational course*  
15    *related to the professional practice of conducting home inspections.*
- 16    (3) *“Department” means the Department of Consumer Affairs.*
- 17    (4) *“License” means a state license issued by the department*  
18    *under this chapter.*

19    (b) *This section shall become operative on January 1, 2025.*

20    *SEC. 4. Article 2 (commencing with Section 7195.2) is added*  
21    *to Chapter 9.3 of Division 3 of the Business and Professions Code,*  
22    *to read:*

23  
24                             *Article 2. Administration*  
25

26    7195.2. *The Department of Consumer Affairs shall administer*  
27    *and enforce this chapter.*

28    7195.3. *Protection of the public shall be the highest priority*  
29    *for the department in exercising its licensing, regulatory, and*  
30    *disciplinary functions pursuant to the Home Inspector Licensure*  
31    *Act. Whenever the protection of the public is inconsistent with*  
32    *other interests sought to be promoted, the protection of the public*  
33    *shall be paramount.*

34    7195.4. (a) (1) *The department shall provide on its internet*  
35    *website information regarding the status of every licensee and*  
36    *course provider approved by the department in accordance with*  
37    *the California Public Records Act (Chapter 3.5 (commencing with*  
38    *Section 6250) of Division 7 of Title 1 of the Government Code)*

1 *and the Information Practices Act of 1977 (Chapter 1 (commencing*  
2 *with Section 1798) of Title 1.8 of Part 4 of Division 3 of the Civil*  
3 *Code). The public information to be provided on the internet shall*  
4 *include information on suspensions and revocations of licenses,*  
5 *approvals issued by the department, and accusations filed pursuant*  
6 *to the Administrative Procedure Act (Chapter 3.5 (commencing*  
7 *with Section 11340) of Part 1 of Division 3 of Title 2 of the*  
8 *Government Code) relative to persons or businesses subject to*  
9 *licensure, approval, or regulation by the department. The*  
10 *information shall not include personal information, including home*  
11 *telephone number, date of birth, or social security number. The*  
12 *department shall disclose a licensee's or approved course*  
13 *provider's address of record. However, the department shall allow*  
14 *a licensee or course provider to provide a post office box number*  
15 *or other alternate address, instead of their home address, as the*  
16 *address of record. The department may require a licensee or course*  
17 *provider who has provided a post office box number or other*  
18 *alternative mailing address as their address of record to provide*  
19 *a physical business address or residence address exclusively for*  
20 *the department's internal administrative use and not for disclosure*  
21 *on the internet as the licensee's or course provider's address of*  
22 *record.*

23 *(2) In addition to the information required by paragraph (1),*  
24 *the department shall provide, on the internet, the continuing*  
25 *education course information provided by a licensee in their*  
26 *application for licensure renewal.*

27 *(b) The department shall not provide on the internet identifying*  
28 *information with respect to private reprovals or letters of warning,*  
29 *which shall remain confidential.*

30 *7195.5. The department may enter into a reciprocity agreement*  
31 *with another state that authorizes a home inspector from that state*  
32 *to act or hold themselves out as a home inspector, and to assume or*  
33 *use the title of or any title designation or abbreviation as a licensed*  
34 *home inspector, if the department does all of the following:*

35 *(a) Determines that the state provides reciprocal authority for*  
36 *California licensees.*

37 *(b) Determines that state's licensure requirements are equal to*  
38 *or exceed those of this state.*

1 (c) Issues a temporary license to that home inspector upon the  
2 terms and conditions as may be determined by the department for  
3 a period not exceeding one year.

4 7195.6. (a) The department shall approve a course provider  
5 that demonstrates to the satisfaction of the department that they  
6 will do all of the following:

7 (1) Ensure that the instructors teaching qualified education  
8 courses are proficient and knowledgeable in the subject matter.

9 (2) Monitor and evaluate the quality of courses, curricula,  
10 instructors, and instructor training.

11 (3) Maintain records of attendance or independent study and  
12 distribute to each participant a certificate of completion that  
13 identifies the education provider and documents the subject taught,  
14 the date of completion of the education course, and the amount of  
15 education credit offered.

16 (4) Maintain documentation of approved education courses  
17 offered for prelicensing and continuing education credit under  
18 this article for a period of at least five years from the date the  
19 education course was offered.

20 (5) Provide to the department upon request any documentation  
21 of approved education courses for prelicensing and continuing  
22 education credit, including records of attendance or independent  
23 study.

24 (b) The department may remove the approval of a course  
25 provider that, in the determination of the department, has failed  
26 to comply with any of the requirements for approval specified in  
27 subdivision (a).

28 7195.7. This article shall become operative on January 1, 2025.

29 SEC. 5. Section 7195.5 of the Business and Professions Code  
30 is amended and renumbered to read:

31 ~~7195.5.~~

32 7196.6. (a) For purposes of improving landscape water use  
33 and irrigation efficiency, a home inspection report on a dwelling  
34 unit prepared pursuant to this chapter on a parcel containing an  
35 in-ground landscape irrigation system, the operation of which is  
36 under the exclusive control of the owner or occupant of the  
37 dwelling, may include an irrigation system inspection report,  
38 prepared by either a home inspector or certified landscape irrigation  
39 auditor, that contains all of the following:

- 1 (1) Examination of the irrigation system controller, if present,  
2 noting observable defects in installation or operation, or both.
- 3 (2) Activation of each zone or circuit providing irrigation water  
4 to turf grass, noting malfunctions observed in the operation of each  
5 of the following:
- 6 (A) The irrigation valve.
  - 7 (B) Visible irrigation supply piping.
  - 8 (C) Sprinkler heads and stems.
- 9 (3) During activation of the system pursuant to paragraph (2),  
10 observation of any of the following during the period of operation,  
11 in minutes, specified in the report:
- 12 (A) Irrigation spray being directed to hardscape.
  - 13 (B) Irrigation water leaving the irrigated area as surface runoff.
  - 14 (C) Ponding of irrigation water on the surface of the irrigated  
15 area.
- 16 (4) Notation whether inspection is limited due to snow, ice, or  
17 other site conditions that impede an inspection.
- 18 (b) Notwithstanding any other law, a sanction or penalty  
19 regarding prohibited hours, days, or effects of operation of a  
20 landscape irrigation system shall not be levied upon either the  
21 home inspector, the landscape irrigation auditor, the occupant, or  
22 the owner of a property by any state or local agency or water  
23 purveyor as a consequence of the operation of a landscape irrigation  
24 system for the purpose of an irrigation system inspection carried  
25 out under this section.
- 26 (c) A home inspector is encouraged to provide information or  
27 access to information regarding water-efficient landscape irrigation  
28 systems within the home inspection report.
- 29 (d) To the extent funds are available, the Department of Water  
30 Resources, in consultation with the California Real Estate  
31 Inspection Association and the Department of Housing and  
32 Community Development, shall compile an estimate of the number  
33 of properties for which an irrigation system inspection report has  
34 been prepared each year, beginning with 2018, for inclusion in an  
35 update to the California Water Plan.
- 36 *SEC. 6. Section 7195.7 of the Business and Professions Code*  
37 *is amended and renumbered to read:*
- 38 ~~7195.7.~~
- 39 *7196.2.* A home inspector shall not give an opinion of valuation  
40 on a property.

1 SEC. 7. Section 7196 of the Business and Professions Code is  
2 amended and renumbered to read:

3 ~~7196.~~

4 7196.1. It is the duty of a home inspector who is not licensed  
5 as a general contractor, structural pest control operator, or architect,  
6 or registered as a professional engineer to conduct a home  
7 inspection with the degree of care that a reasonably prudent home  
8 inspector would exercise.

9 SEC. 8. Article 3 (commencing with Section 7196) is added to  
10 Chapter 9.3 of Division 3 of the Business and Professions Code,  
11 to read:

12  
13 Article 3. General Provisions

14  
15 7196. (a) Except as provided in Section 7197.4, a person shall  
16 not act or hold themselves out as a home inspector, or assume or use  
17 the title, designation, or abbreviation as a licensed home inspector  
18 unless that person has an active license.

19 (b) Every advertisement by a licensee shall contain their  
20 business name, business address or telephone number, and license  
21 number as they appear in the records of the department.

22 (c) This section shall become operative on January 1, 2025.

23 SEC. 9. Section 7196.1 of the Business and Professions Code  
24 is amended and renumbered to read:

25 ~~7196.1.~~

26 7196.7. (a) Nothing in this chapter shall be construed to allow  
27 home inspectors who are not registered engineers to perform any  
28 analysis of the systems, components, or structural integrity of a  
29 dwelling that would constitute the practice of civil, electrical, or  
30 mechanical engineering, or to exempt a home inspector from  
31 Chapter 3 (commencing with Section 5500), Chapter 7  
32 (commencing with Section 6700), Chapter 9 (commencing with  
33 Section 7000), Chapter 14 (commencing with Section 8500) of  
34 Division 3, or Part 3 (commencing with Section 11300) of Division  
35 4.

36 (b) This chapter does not apply to a registered engineer, licensed  
37 land surveyor, or licensed architect acting pursuant to their  
38 professional registration or license, nor does it affect the obligations  
39 of a real estate licensee or transferor under Article 1.5 (commencing  
40 with Section 1102) of Chapter 2 of Title 4 of Part 3 of Division 2

1 of, or Article 2 (commencing with Section 2079) of Chapter 3 of  
2 Title 6 of Part 4 of Division 3 of, the Civil Code.

3 (c) Except as required to comply with standards set forth in law  
4 or regulation, a real estate appraiser licensed under Part 3  
5 (commencing with Section 11300) of Division 4, performing a  
6 real estate appraisal, shall not engage in the activity of a home  
7 inspector performing a home inspection.

8 *SEC. 10. Section 7196.2 of the Business and Professions Code*  
9 *is amended and renumbered to read:*

10 ~~7196.2.~~

11 7196.5. (a) If a home inspector observes any shade of yellow  
12 corrugated stainless steel tubing during a home inspection, the  
13 home inspector shall include that observation, and the following  
14 notification, in the home inspection report:

15  
16 “Manufacturers of yellow corrugated stainless steel tubing  
17 believe that yellow corrugated stainless steel tubing is safer if  
18 properly bonded and grounded as required by the manufacturer’s  
19 installation instructions. Proper bonding and grounding of this  
20 product can only be determined by a licensed electrical contractor.”

21  
22 (b) For purposes of this section, “corrugated stainless steel  
23 tubing” means a flexible, stainless steel pipe used to supply natural  
24 gas and propane in residential, commercial, and industrial  
25 structures.

26 (c) The degree of care specified in Section 7196 shall be used  
27 in determining whether a home inspector has complied with the  
28 requirements of subdivision (a).

29 *SEC. 11. Section 7196.4 is added to the Business and*  
30 *Professions Code, to read:*

31 7196.4. (a) *Before beginning a home inspection, a home*  
32 *inspector shall provide to the client, and shall obtain the client’s*  
33 *signature on, an inspection agreement that includes all of the*  
34 *following:*

35 (1) *The standards and work to be performed by the home*  
36 *inspector.*

37 (2) *The name and license number of the home inspector.*

38 (3) *The following statement:*

39



1 *“THE HOME INSPECTOR WILL NOT DETERMINE, AND THE*  
 2 *REPORT PROVIDED UPON COMPLETION OF THE HOME*  
 3 *INSPECTION WILL NOT CONTAIN A DETERMINATION OF,*  
 4 *WHETHER THE HOME OR COMPONENTS OR SYSTEMS OF*  
 5 *THE HOME THAT HAVE BEEN INSPECTED CONFORM TO*  
 6 *LOCAL OR STATE BUILDING CODE REQUIREMENTS.”*

7  
 8 *(b) An inspection report shall be provided to the client by the*  
 9 *date set forth in the inspection agreement and, in the event that*  
 10 *the agreement does not set forth a date by which the report shall*  
 11 *be provided to the client, the home inspector shall provide the*  
 12 *report to the client on or before five days following the completion*  
 13 *of the home inspection.*

14 *(c) This section shall become operative on January 1, 2025.*  
 15 *SEC. 12. Section 7197 of the Business and Professions Code*  
 16 *is amended and renumbered to read:*

17 ~~7197.~~  
 18 7196.3. (a) It is an unfair business practice for a home  
 19 inspector, a company that employs the inspector, or a company  
 20 that is controlled by a company that also has a financial interest  
 21 in a company employing a home inspector, to do any of the  
 22 following:

23 (1) To perform or offer to perform, for an additional fee, any  
 24 repairs to a structure on which the inspector, or the inspector’s  
 25 company, has prepared a home inspection report in the past 12  
 26 months.

27 (2) Inspect for a fee any property in which the inspector, or the  
 28 inspector’s company, has any financial interest or any interest in  
 29 the transfer of the property.

30 (3) To offer or deliver any compensation, inducement, or reward  
 31 to the owner of the inspected property, the broker, or agent, for  
 32 the referral of any business to the inspector or the inspection  
 33 company.

34 (4) Accept an engagement to make an inspection or to prepare  
 35 a report in which the employment itself or the fee payable for the  
 36 inspection is contingent upon the conclusions in the report,  
 37 preestablished findings, or the close of escrow.

38 (b) A home protection company that is affiliated with or that  
 39 retains the home inspector does not violate this section if it

1 performs repairs pursuant to claims made under the home  
2 protection contract.

3 (c) This section shall not affect the ability of a structural pest  
4 control operator to perform repairs pursuant to Section 8505 as a  
5 result of a structural pest control inspection.

6 (d) Paragraph (1) of subdivision (a) shall not affect the ability  
7 of a roofing contractor who holds a C-39 license, as defined in  
8 Section 832.39 of Title 16 of the California Code of Regulations,  
9 to perform repairs pursuant to the contractor's inspection of a roof  
10 for the specific purpose of providing a roof certification if all of  
11 the following conditions are met:

12 (1) Different employees perform the home inspection and the  
13 roof inspection.

14 (2) The roof inspection is ordered prior to, or at the same time  
15 as, the home inspection, or the roof inspection is completed before  
16 the commencement of the home inspection.

17 (3) The consumer is provided a consumer disclosure before ~~he~~  
18 ~~or she~~ ~~authorizes~~ *they authorize* the home inspection that includes  
19 all of the following:

20 (A) The same company that performs the roof inspection and  
21 roof repairs will perform the home inspection on the same property.

22 (B) Any repairs that are authorized by the consumer are for the  
23 repairs identified in the roofing contractor's roof inspection report  
24 and no repairs identified in the home inspection are authorized or  
25 allowed as specified in the roof inspection.

26 (C) The consumer has the right to seek a second opinion.

27 (4) For purposes of this subdivision, "roof certification" means  
28 a written statement by a licensed C-39 Roofing Contractor who  
29 has performed a roof inspection, made any necessary repairs, and  
30 warrants that the roof is free of leaks at the time that the  
31 certification is issued and should perform as designed for the  
32 specified term of the certification.

33 *SEC. 13. Article 4 (commencing with Section 7197) is added*  
34 *to Chapter 9.3 of Division 3 of the Business and Professions Code,*  
35 *to read:*

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*Article 4. Licensure*

*7197. (a) An applicant for a license shall submit to the department an original completed application package that contains the following:*

*(1) Name, residence address, mailing address if different from residence address, and telephone number of the applicant.*

*(2) Date of birth and social security number of the applicant.*

*(3) Proof of completion of a prelicensing education course from a course provider approved by the department pursuant to Section 7195.6.*

*(4) Payment of a fee as specified in Article 6 (commencing with Section 7199).*

*(b) An applicant for licensure as a home inspector shall submit to the Department of Justice fingerprint images and related information required by the Department of Justice via LiveScan for the purposes of allowing the department to obtain information as to the existence and content of a record of state or federal convictions and state or federal arrests and also information as to the existence and content of a record of state or federal arrests for which the Department of Justice establishes that the person is free on bail or on their own recognizance pending trial or appeal. If the applicant is located out of state, then the applicant shall include their fingerprint card with the application package and the department shall submit the fingerprint cards to the Department of Justice for the purposes of this subdivision.*

*7197.1. (a) As a condition of the issuance, reinstatement, reactivation, or continued valid use of a license under this chapter, a licensee shall maintain a policy or policies of insurance against liability imposed on or against it by law for damages arising out of claims based upon acts, errors, or omissions arising out of the home inspection services they provide.*

*(b) The limit of liability under the policy or policies of insurance required under this section shall not be less than twenty-five thousand dollars (\$25,000) per occurrence.*

*7197.2. The department shall review all applications. The department shall approve an application and shall issue a "Certificate of Licensure" if all of the following are met:*

*(a) The application is complete and in the proper form.*

1 (b) The department is satisfied that all statements on the  
2 application are true.

3 (c) The applicant has submitted payment of a fee as specified  
4 in Article 6 (commencing with Section 7199).

5 (d) The applicant is eligible in all other aspects to be licensed  
6 as a home inspector.

7 7197.3. (a) A license issued shall be valid for two years  
8 following the date of issuance.

9 (b) (1) Except as provided in paragraphs (2) and (3), a person  
10 may renew their expired license upon the filing of a completed  
11 application for renewal containing proof of completion of  
12 continuing education courses from a course provider approved  
13 by the department pursuant to Section 7195.6 and payment of a  
14 renewal fee in the amount specified in Article 6 (commencing with  
15 Section 7199).

16 (2) If a license is renewed more than 30 days after its expiration,  
17 the licensee, as a condition prior to renewal, shall also pay a late  
18 delinquency fee as set forth in Article 6 (commencing with Section  
19 7199).

20 (3) A license that has expired and has not been renewed for a  
21 period of 12 months or longer shall be terminated.

22 (c) (1) A licensee may apply to the department for an inactive  
23 license at any time while their original license is current and active  
24 or eligible for renewal and it is not suspended, revoked, or  
25 otherwise punitively restricted by the department or subject to  
26 disciplinary action.

27 (2) The department shall not require an inactive license to be  
28 renewed after the licensee pays a one-time retired license fee as  
29 provided in Article 6 (commencing with Section 7199).

30 (3) A person with an inactive license may return to active status  
31 if the person does both of the following:

32 (A) Submits a complete and proper form, as determined by the  
33 department, on or before five years from the date of expiration of  
34 the original license.

35 (B) Pays all accrued and unpaid renewal fees to bring the  
36 license current, including any delinquency fees.

37 7197.4. The provisions of this article do not apply to a person  
38 who, prior to January 1, 2022, has completed all of the following:

39 (a) Passed an accredited home inspector examination as  
40 determined by the authority within the past five years.

1 (b) Obtained two years of home inspection experience.  
2 (c) Provided a minimum of 500 home inspections for  
3 compensation.

4 7197.5. This article shall become operative on January 1, 2025.

5 SEC. 14. The heading of Article 5 (commencing with Section  
6 7198) is added to Chapter 9.3 of Division 3 of the Business and  
7 Professions Code, to read:

8  
9 Article 5. Offenses and Enforcement

10  
11 SEC. 15. Section 7198 of the Business and Professions Code  
12 is amended to read:

13 7198. Contractual provisions that purport to waive the duty  
14 owed pursuant to Section ~~7196~~, 7196.1, or limit the liability of the  
15 home inspector to the cost of the home inspection report, are  
16 contrary to public policy and invalid.

17 SEC. 16. Section 7198.1 is added to the Business and  
18 Professions Code, to read:

19 7198.1. (a) Any person who willfully violates Section 7196 is  
20 guilty of a public offense punishable by imprisonment pursuant to  
21 subdivision (h) of Section 1170 of the Penal Code, or in a county  
22 jail for not more than one year, by a fine not exceeding (\_\_\_\_)  
23 dollars (\$\_\_\_\_), or by both the imprisonment and fine.

24 (b) This section shall become operative on January 1, 2025.

25 SEC. 17. Section 7198.2 is added to the Business and  
26 Professions Code, to read:

27 7198.2. (a) A legal action for breach of duty arising from a  
28 home inspection report shall not be commenced more than two  
29 years from the date of the inspection.

30 (b) This section shall become operative on January 1, 2025.

31 SEC. 18. Section 7199 of the Business and Professions Code  
32 is amended and renumbered to read:

33 ~~7199. The time for commencement of a~~

34 7198.3. (a) A legal action for breach of duty arising from a  
35 home inspection report shall not ~~exceed~~ be commenced more than  
36 four years from the date of the inspection.

37 (b) This section shall become inoperative on and after January  
38 1, 2025, and as of that date is repealed.

1 SEC. 19. Article 6 (commencing with Section 7199) is added  
2 to Chapter 9.3 of Division 3 of the Business and Professions Code,  
3 to read:

4  
5 Article 6. Revenue  
6

7 7199. (a) The Home Inspectors License Fund is hereby  
8 established within the State Treasury. Moneys in the fund shall be  
9 used, upon appropriation by the Legislature, by the department  
10 for the administration of this chapter.

11 (b) All moneys, including fines or penalties imposed under this  
12 chapter, collected pursuant to this chapter shall be deposited into  
13 the fund.

14 7199.1. (a) The department shall establish regulatory fees  
15 based upon the reasonable regulatory cost of enforcing and  
16 administering this chapter.

17 (b) The application fee for a license under this chapter shall  
18 not exceed (\_\_\_\_) dollars (\$\_\_\_\_).

19 (c) The renewal fee for a license under this chapter shall not  
20 exceed (\_\_\_\_) dollars (\$\_\_\_\_).

21 (d) The delinquent renewal fee for a license under this chapter  
22 shall not exceed (\_\_\_\_) dollars (\$\_\_\_\_).

23 (e) The one-time retired license fee for a license under this  
24 chapter shall not exceed (\_\_\_\_) dollars (\$\_\_\_\_).

25 7199.2. This article shall become operative on January 1, 2025.

26 SEC. 20. No reimbursement is required by this act pursuant  
27 to Section 6 of Article XIII B of the California Constitution because  
28 the only costs that may be incurred by a local agency or school  
29 district will be incurred because this act creates a new crime or  
30 infraction, eliminates a crime or infraction, or changes the penalty  
31 for a crime or infraction, within the meaning of Section 17556 of  
32 the Government Code, or changes the definition of a crime within  
33 the meaning of Section 6 of Article XIII B of the California  
34 Constitution.

35 ~~SECTION 1. Section 7195.1 is added to the Business and~~  
36 ~~Professions Code, to read:~~

37 ~~7195.1. (a) Beginning January 1, 2022, a person who performs~~  
38 ~~home inspections, as defined in Section 7195, shall obtain a license~~  
39 ~~from the Contractors' State License Board.~~

- 1     ~~(b) The Contractors' State License Board shall establish criteria~~
- 2     ~~for licensing home inspectors under this section, including setting~~
- 3     ~~reasonable fees for licensing and renewal.~~
- 4     ~~(c) The registrar shall have the authority to enforce these~~
- 5     ~~licensing requirements.~~
- 6     ~~(d) This section shall not apply to a person performing home~~
- 7     ~~inspections who is a licensed general contractor, pest control~~
- 8     ~~operator, architect, or professional engineer.~~

AMENDED IN ASSEMBLY JANUARY 6, 2020

AMENDED IN ASSEMBLY APRIL 1, 2019

CALIFORNIA LEGISLATURE—2019–20 REGULAR SESSION

**ASSEMBLY BILL**

**No. 1616**

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**Introduced by Assembly Member Low**  
*(Coauthor: Assembly Member Eduardo Garcia)*

February 22, 2019

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An act to ~~amend Section 10295.6 of the Insurance Code, relating to insurance;~~ *add Section 493.5 to the Business and Professions Code, relating to professions and vocations.*

LEGISLATIVE COUNSEL'S DIGEST

AB 1616, as amended, Low. ~~Accelerated death benefits—Department of Consumer Affairs: boards: expunged convictions.~~

*Existing law establishes the Department of Consumer Affairs, which is composed of various boards, and authorizes a board to suspend or revoke a license on the ground that the licensee has been convicted of a crime substantially related to the qualifications, functions, or duties of the business or profession for which the license was issued. Existing law, the Medical Practice Act, provides for the licensure and regulation of the practice of medicine by the Medical Board of California and requires the board to post certain historical information on current and former licensees, including felony and certain misdemeanor convictions. Existing law also requires the Medical Board of California, upon receipt of a certified copy of an expungement order from a current or former licensee, to post notification of the expungement order and the date thereof on its internet website.*



*This bill would require a board within the department that has posted on its internet website that a person’s license was revoked because the person was convicted of a crime to, within 6 months of receiving the expungement order for the underlying offense from the person, post notification of the expungement order and the date thereof on the board’s internet website if the person applies for licensure or is relicensed, or remove the initial posting on its internet website that the person’s license was revoked if the person is not currently licensed and does not reapply for licensure, as specified. The bill would require a person to pay a fee, to be determined by the department, to the board for the cost of administering the bill’s provisions.*

~~Existing law regulates classes of insurance, including life insurance, and prescribes certain requirements governing the payment of an accelerated death benefit under a life insurance policy. Existing law authorizes an accelerated death benefit to be added to a life insurance policy to provide for the advance payment of a part of the death proceeds if a qualifying event, including a terminal or chronic illness, occurs. Existing law prohibits an accelerated death benefit from being effective more than 30 days following the effective date of the policy provision, rider, endorsement, or certificate.~~

~~This bill would authorize the effective period of an accelerated death benefit to be extended to not more than 60 days following the effective date of the policy provision, rider, endorsement, or certificate.~~

Vote: majority. Appropriation: no. Fiscal committee: ~~no~~ yes. State-mandated local program: no.

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

- 1 SECTION 1. Section 493.5 is added to the Business and
- 2 Professions Code, to read:
- 3 493.5. (a) A board within the department that has posted on
- 4 its internet website that a person’s license was revoked because
- 5 the person was convicted of a crime, upon receiving from the
- 6 person a certified copy of an expungement order granted pursuant
- 7 to Section 1203.4 of the Penal Code for the underlying offense,
- 8 shall, within six months of receiving the expungement order, unless
- 9 it is otherwise prohibited by law, or by other terms or conditions,
- 10 do either of the following:

1 (1) *If the person reapplies for licensure or has been relicensed,*  
2 *post notification of the expungement order and the date thereof*  
3 *on its internet website.*

4 (2) *If the person is not currently licensed and does not reapply*  
5 *for licensure, remove the initial posting on its internet website that*  
6 *the person’s license was revoked.*

7 (b) *A person described in subdivision (a) shall pay to the board*  
8 *a fee in an amount to be determined by the department that does*  
9 *not exceed the reasonable cost of administering this section. The*  
10 *fee shall be deposited by the board into the appropriate fund and*  
11 *shall be available only upon appropriation by the Legislature.*

12 (c) *For purposes of this section “board” means an entity listed*  
13 *in Section 101.*

14 (d) *If any provision in this section conflicts with Section 2027,*  
15 *Section 2027 shall prevail.*

16 ~~SECTION 1. Section 10295.6 of the Insurance Code is~~  
17 ~~amended to read:~~

18 ~~10295.6. (a) If a policyholder or certificate holder requests an~~  
19 ~~acceleration of death benefits, the insurer shall send a statement~~  
20 ~~to the policyholder or certificate holder and irrevocable beneficiary~~  
21 ~~showing any effect that the payment of the accelerated death benefit~~  
22 ~~would have on the policy’s cash value, accumulation account,~~  
23 ~~death benefit, premium, policy loans, and policy liens. The~~  
24 ~~statement shall disclose that receipt of accelerated death benefit~~  
25 ~~payments may adversely affect the recipient’s eligibility for~~  
26 ~~Medicaid or other government benefits or entitlements. In addition,~~  
27 ~~receipt of an accelerated death benefit payment may be taxable~~  
28 ~~and assistance should be sought from a personal tax adviser. If a~~  
29 ~~previous disclosure statement becomes invalid as a result of an~~  
30 ~~acceleration of the death benefit, the insurer shall send a revised~~  
31 ~~disclosure statement to the policyholder or certificate holder and~~  
32 ~~irrevocable beneficiary.~~

33 ~~(b) The accelerated death benefit shall be effective not more~~  
34 ~~than 60 days following the effective date of the policy provision,~~  
35 ~~rider, endorsement, or certificate.~~

36 ~~(c) If the insurer charges a separate premium for the accelerated~~  
37 ~~death benefit, then the insurer may also offer a waiver of premium~~  
38 ~~benefit as defined in subdivision (a) of Section 10271.1. At the~~  
39 ~~time the waiver of the accelerated death benefit premium benefit~~

1 is claimed, the insurer shall explain any continuing premium  
2 requirement to keep the underlying policy in force.

3 (d) ~~An insurer shall not unfairly discriminate among insureds  
4 with different qualifying events covered under the policy or among  
5 insureds with similar qualifying events covered under the policy.  
6 An insurer shall not apply further conditions on the payment of  
7 the accelerated death benefits other than those conditions specified  
8 in the accelerated death benefit.~~

9 (e) ~~No later than one month after payment of an accelerated  
10 death benefit, the insurer shall provide the policyholder or  
11 certificate holder with a report of any accelerated death benefits  
12 paid out during the prior month, an explanation of any changes to  
13 the policy or certificate, death benefits, and cash values on account  
14 of the benefits being paid out, and the amount of the remaining  
15 benefits that may be accelerated at the end of the prior month. The  
16 insurer may use a calendar month or policy or certificate month.~~

17 (f) ~~The conversion benefit available to group certificate holders  
18 on termination of employment pursuant to paragraph (2) of  
19 subdivision (a) of Section 10209 shall include a benefit comparable  
20 to the accelerated death benefit. This requirement may be satisfied  
21 by an individual policy or certificate. This requirement, subject to  
22 the approval of the commissioner, may be satisfied by arrangement  
23 with another insurer to provide the required coverage.~~

24 (g) ~~If payment of an accelerated death benefit results in a pro  
25 rata reduction in cash value, the payment may be applied toward  
26 repaying a portion of the loan equal to a pro rata portion of any  
27 outstanding policy loans if disclosure of the effect of acceleration  
28 upon any remaining death benefit, cash value or accumulation  
29 account, policy loan, and premium payments, including a statement  
30 of the possibility of termination of any remaining death benefit,  
31 is provided to the policyholder or certificate holder. The  
32 policyholder or certificate holder shall provide written consent  
33 authorizing any other arrangement for the repayment of outstanding  
34 policy loans.~~

- 1
- 2 **REVISIONS:**
- 3 **Heading—Line 2.**
- 4

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AMENDED IN SENATE JUNE 24, 2019

AMENDED IN ASSEMBLY APRIL 2, 2019

AMENDED IN ASSEMBLY MARCH 19, 2019

CALIFORNIA LEGISLATURE—2019–20 REGULAR SESSION

**ASSEMBLY BILL**

**No. 1788**

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**Introduced by Assembly Member Bloom**  
**(Coauthor: Assembly Member Friedman)**  
*(Coauthor: Senator Stern)*

February 22, 2019

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An act to amend Section 12978.7 of, and to add Section 12978.8 to, the Food and Agricultural Code, relating to pesticides.

LEGISLATIVE COUNSEL'S DIGEST

AB 1788, as amended, Bloom. Pesticides: use of anticoagulants.

~~Existing~~

*(1) Existing* law regulates the use of pesticides and authorizes the Director of Pesticide Regulation to adopt regulations to govern the possession, sale, or use of any pesticide, as prescribed. Existing law prohibits the use of any pesticide that contains one or more of specified anticoagulants in wildlife habitat areas, as defined. Existing law exempts from this prohibition the use of these pesticides for agricultural activities, as defined. Existing law requires the director, and each county agricultural commissioner under the direction and supervision of the director, to enforce the provisions regulating the use of pesticides. A violation of these provisions is a misdemeanor.

This bill would create the California Ecosystems Protection Act of 2019 and expand this prohibition against the use of a pesticide containing specified anticoagulants in wildlife habitat areas to the entire

state. The bill would expand the exemption for agricultural activities to include activities conducted in certain locations and would also exempt from its provisions the use of pesticides by any governmental agency employee who uses pesticides for public health ~~activities and a~~ *activities, a mosquito or vector control district that uses pesticides to protect the public ~~health.~~ health, and the use of any pesticide or rodenticide used for the eradication of nonnative invasive species inhabiting or found to be present on offshore islands in a manner that is consistent with all otherwise applicable federal and state laws and regulations.*

*(2) Existing law provides that the above-described provisions do not preempt or supersede any federal statute or the authority of any federal agency.*

*This bill would additionally provide that these provisions do not preempt or supersede special local need or emergency exemptions for the use of pesticides under the Federal Insecticide, Fungicide, and Rodenticide Act.*

~~The~~

*(3) The bill would also prohibit the use of any pesticide that contains one or more specifically identified anticoagulants on state-owned property.*

~~By~~

*(4) By imposing additional duties on county agricultural commissioners, and expanding the definition of a crime, this bill would impose a state-mandated local program.*

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that with regard to certain mandates no reimbursement is required by this act for a specified reason.

With regard to any other mandates, this bill would provide that, if the Commission on State Mandates determines that the bill contains costs so mandated by the state, reimbursement for those costs shall be made pursuant to the statutory provisions noted above.

Vote: majority. Appropriation: no. Fiscal committee: yes.  
State-mandated local program: yes.

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

1 SECTION 1. (a) The Legislature finds and declares all of the  
2 following:

3 (1) Wildlife, including birds of prey, mountain lions, bobcats,  
4 fishers, foxes, coyotes, and endangered species such as the northern  
5 spotted owl, pacific fisher, and San Joaquin kit fox, are an  
6 irreplaceable part of California’s natural ecosystems. As predators  
7 of small mammals, they play an important role in regulating and  
8 controlling the population of rodents throughout the state to  
9 improve public health and welfare.

10 (2) Millions of people annually visit California for the purposes  
11 of viewing and photographing wildlife, and these visits contribute  
12 millions of dollars to California’s economy.

13 (3) Urban areas are increasingly being used by predatory  
14 mammals and birds of prey and the public enjoys seeing them and  
15 values these animals and the ecosystem services they provide.

16 (4) The ecosystem services provided by native wildlife predators  
17 are a public trust, just like clean air and water. We, as California  
18 residents, are obligated to conserve these wildlife populations for  
19 future generations of Californians.

20 (5) Scientific research and state studies have found rodenticides  
21 in over 75 percent of animals tested. These rodenticides lead to  
22 direct mortality and chronic long-term health impacts for natural  
23 predators, nontarget organisms, and endangered species and further  
24 steps are needed to reduce rodenticide exposure in nontarget  
25 animals.

26 (6) While all anticoagulant rodenticides have a harmful impact  
27 on nontarget animals, second generation anticoagulant rodenticides  
28 (SGARs) are particularly dangerous to nontarget wildlife as SGARs  
29 are higher potency than prior generations and a single dose has a  
30 half-life of more than 100 days in a rodent’s liver. Due to high  
31 toxicity and concern for impact on nontarget wildlife, *the*  
32 Department of Pesticide Regulation banned consumer sales and  
33 use of SGARs in 2014, restricting their purchase and use to  
34 certified pesticide applicators.

35 (7) Despite the 2014 regulations issued by the Department of  
36 Pesticide Regulation, scientific research and state studies have  
37 found no significant reduction in the number of nontarget wildlife  
38 with detectable levels of SGARs in their system. From 2014

1 through 2018, the Department of Fish and Wildlife found SGARs  
2 in more than 90 percent of tested mountain lions, 88 percent of  
3 tested bobcats, 85 percent of protected Pacific fishers tested, and  
4 70 percent of northern spotted owls tested. Such data indicates  
5 that a consumer sales and use ban of SGARs has been insufficient  
6 to reduce rodenticide exposure in nontarget animals and further  
7 steps must be taken.

8 (8) Rodenticides can be counterproductive to rodent control by  
9 poisoning, harming, and killing natural predators that help regulate  
10 rodent populations throughout California.

11 (9) *The use of pesticides and rodenticides to reduce or eliminate*  
12 *nonnative invasive species inhabiting or found to be present on*  
13 *offshore islands is critically important for the environmental and*  
14 *ecosystem health of these islands, and for allowing federally and*  
15 *state-listed endangered and threatened species, including species*  
16 *presumed extinct or on the verge of extinction, to recover and*  
17 *propagate back to population levels that existed before the*  
18 *presence of these nonnative invasive species and for avoiding*  
19 *federal or state listing of native and endemic species due to their*  
20 *displacement by nonnative invasive species.*

21 (b) It is the intent of the Legislature in enacting this act to ensure  
22 that aquatic, terrestrial, and avian wildlife species remain a fully  
23 functional component of the ecosystems they inhabit and move  
24 through in California.

25 (c) This act shall be known, and may be cited, as the California  
26 Ecosystems Protection Act of 2019.

27 SEC. 2. Section 12978.7 of the Food and Agricultural Code is  
28 amended to read:

29 12978.7. (a) Except as provided in subdivision (c), (d), or (e),  
30 the use of any pesticide that contains one or more of the following  
31 anticoagulants is prohibited in this state:

32 (1) Brodifacoum.

33 (2) Bromadiolone.

34 (3) Difenacoum.

35 (4) Difethialone.

36 (b) State agencies are directed to encourage federal agencies to  
37 comply with subdivision (a).

38 (c) This section does not apply to ~~either~~ any of the following:



1 (1) The use of pesticides used by any governmental agency  
2 employee who complies with Section 106925 of the Health and  
3 Safety Code, who uses pesticides for public health activities.

4 (2) A mosquito or vector control district formed under Chapter  
5 1 (commencing with Section 2000) of Division 3 or Chapter 8  
6 (commencing with Section 2800) of Division 3 of the Health and  
7 Safety Code, that uses pesticides to protect the public health.

8 (3) *The use of any pesticide or rodenticide used for the*  
9 *eradication of nonnative invasive species inhabiting or found to*  
10 *be present on offshore islands in a manner that is consistent with*  
11 *all otherwise applicable federal and state laws and regulations.*

12 (d) (1) This section does not apply to the use of pesticides for  
13 agricultural activities, as defined in Section 564.

14 (2) For purposes of paragraph (1), “agricultural activities”  
15 include activities conducted in any of the following locations:

16 (A) A warehouse used to store foods for human or animal  
17 consumption.

18 (B) An agricultural food production site, including, but not  
19 limited to, a slaughterhouse ~~and~~ or cannery.

20 (C) A factory, brewery, or winery.

21 (e) This section does not preempt or supersede any federal  
22 statute or the authority of any federal ~~agency.~~ *agency, including*  
23 *special local need or emergency exemptions for the use of*  
24 *pesticides under the Federal Insecticide, Fungicide, and*  
25 *Rodenticide Act (7 U.S.C. 135 et seq.).*

26 SEC. 3. Section 12978.8 is added to the Food and Agricultural  
27 Code, to read:

28 12978.8. (a) Except as provided in subdivision (d), the use of  
29 any pesticide that contains one or more of the following  
30 anticoagulants is prohibited on any state-owned property in  
31 California:

32 (1) Chlorophacinone.

33 (2) Diphacinone.

34 (3) Warfarin.

35 (b) State agencies are directed to encourage federal agencies to  
36 comply with subdivision (a).

37 (c) This section does not apply to the use of pesticides for  
38 agricultural activities, as defined in Section 564.

39 (d) This section does not preempt or supersede any federal  
40 statute or the authority of any federal agency.

1 SEC. 4. No reimbursement is required by this act pursuant to  
2 Section 6 of Article XIII B of the California Constitution for certain  
3 costs that may be incurred by a local agency or school district  
4 because, in that regard, this act creates a new crime or infraction,  
5 eliminates a crime or infraction, or changes the penalty for a crime  
6 or infraction, within the meaning of Section 17556 of the  
7 Government Code, or changes the definition of a crime within the  
8 meaning of Section 6 of Article XIII B of the California  
9 Constitution.

10 However, if the Commission on State Mandates determines that  
11 this act contains other costs mandated by the state, reimbursement  
12 to local agencies and school districts for those costs shall be made  
13 pursuant to Part 7 (commencing with Section 17500) of Division  
14 4 of Title 2 of the Government Code.

**ASSEMBLY BILL**

**No. 2028**

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**Introduced by Assembly Member Aguiar-Curry**

January 30, 2020

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An act to amend Sections 11125 and 11125.7 of the Government Code, relating to public meetings.

LEGISLATIVE COUNSEL'S DIGEST

AB 2028, as introduced, Aguiar-Curry. State agencies: meetings.

Existing law, the Bagley-Keene Open Meeting Act, requires that all meetings of a state body, as defined, be open and public, and that all persons be permitted to attend any meeting of a state body, except as otherwise provided in that act. Existing law requires the state body to provide notice of its meeting, including specified information and a specific agenda of the meeting, as provided, to any person who requests that notice in writing and to make that notice available on the internet at least 10 days in advance of the meeting.

This bill would, except for closed sessions, require that this notice include all writings or materials provided for the noticed meeting to a member of the state body by staff of a state agency, board, or commission, or another member of the state body, that are in connection with a matter subject to discussion or consideration at the meeting. The bill would require these writings and materials to be made available on the internet at least 10 days in advance of the meeting. The bill would provide that a state body may only distribute or discuss these writings or materials at a meeting of the state body if it has complied with these requirements.

Existing law requires that a state body provide an opportunity for members of the public to directly address the body on each agenda item.

Existing law exempts from this requirement, among other things, an agenda item that has already been considered by a committee composed exclusively of members of the state body at a public meeting where members of the public were afforded an opportunity to address the committee on the item.

This bill would delete this exception, thereby making the requirement to provide an opportunity to address the state body applicable to an agenda item for which the public had an opportunity to address it at a public meeting of a committee of the state body.

Vote: majority. Appropriation: no. Fiscal committee: yes.  
State-mandated local program: no.

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

- 1 SECTION 1. The Legislature finds and declares the following:
- 2 (a) The Bagley-Keene Open Meeting Act (Article 9
- 3 (commencing with Section 11120) of Chapter 1 of Part 1 of
- 4 Division 3 of Title 2 of the Government Code) (hereafter
- 5 “Bagley-Keene”) was intended to implement Section 3 of Article
- 6 I of the California Constitution, which states in part, “The people
- 7 have the right of access to information concerning the conduct of
- 8 the people’s business, and, therefore, the meetings of public bodies
- 9 and the writings of public officials and agencies shall be open to
- 10 public scrutiny.”
- 11 (b) Bagley-Keene was written to protect public meetings and
- 12 public notice and to ensure the transparency of actions taken by
- 13 state agencies, boards, and commissions.
- 14 (c) Californians have the right to participate in state body
- 15 deliberations. This includes the public’s ability to comment on all
- 16 agenda items discussed at a meeting of the state body, regardless
- 17 of whether an item has been discussed previously in a committee
- 18 of the state body.
- 19 (d) The purpose of public notice is so that state bodies give the
- 20 public adequate time for review of the substance of a state body
- 21 meeting and for comment.
- 22 (e) Public notice must also include any writings or materials
- 23 provided by a state body’s staff or by a member of the state body
- 24 to other members of the state body for a noticed meeting of the
- 25 body held at least 10 days prior to the meeting.

1 (f) Bagley-Keene affirms these rights by stating in Section 11120  
2 of the Government Code, “The people of this state do not yield  
3 their sovereignty to the agencies which serve them. The people,  
4 in delegating authority, do not give their public servants the right  
5 to decide what is good for the people to know and what is not good  
6 for them to know. The people insist on remaining informed so that  
7 they may retain control over the instruments they have created.”

8 SEC. 2. Section 11125 of the Government Code is amended  
9 to read:

10 11125. (a) The state body shall provide notice of its meeting  
11 to any person who requests that notice in writing. Notice shall be  
12 given and also made available on the ~~Internet~~ *internet* at least 10  
13 days in advance of the meeting, and shall include the name,  
14 address, and telephone number of any person who can provide  
15 further information prior to the meeting, but need not include a  
16 list of witnesses expected to appear at the meeting. The written  
17 notice shall additionally include the address of the ~~Internet~~ *internet* site  
18 *internet website* where notices required by this article are made  
19 available.

20 (b) The notice of a meeting of a body that is a state body shall  
21 include a specific agenda for the meeting, containing a brief  
22 description of the items of business to be transacted or discussed  
23 in either open or closed session. A brief general description of an  
24 item generally need not exceed 20 words. A description of an item  
25 to be transacted or discussed in closed session shall include a  
26 citation of the specific statutory authority under which a closed  
27 session is being held. No item shall be added to the agenda  
28 subsequent to the provision of this notice, unless otherwise  
29 permitted by this article.

30 (c) (1) *Except as otherwise provided in paragraph (4), any*  
31 *notice provided pursuant to subdivision (a) shall include all*  
32 *writings or materials provided for the noticed meeting to a member*  
33 *of the state body by the staff of a state agency, board, or*  
34 *commission, or another member of the state body, that are in*  
35 *connection with a matter subject to discussion or consideration*  
36 *at the meeting.*

37 (2) *The writings or materials described in paragraph (1) shall*  
38 *be made available on the internet at least 10 days in advance of*  
39 *the meeting, and to any person who requests that notice in writing.*

1 (3) A state body may distribute or discuss writings or materials  
2 described in paragraph (1) at a meeting of the state body only if  
3 it has complied with this subdivision.

4 (4) This subdivision does not apply to writings or materials  
5 prepared for a matter to be discussed in a closed session of the  
6 state body.

7 ~~(e)~~

8 (d) Notice of a meeting of a state body that complies with this  
9 section shall also constitute notice of a meeting of an advisory  
10 body of that state body, provided that the business to be discussed  
11 by the advisory body is covered by the notice of the meeting of  
12 the state body, provided that the specific time and place of the  
13 advisory body’s meeting is announced during the open and public  
14 state body’s meeting, and provided that the advisory body’s  
15 meeting is conducted within a reasonable time of, and nearby, the  
16 meeting of the state body.

17 ~~(e)~~

18 (e) A person may request, and shall be provided, notice pursuant  
19 to subdivision (a) for all meetings of a state body or for a specific  
20 meeting or meetings. In addition, at the state body’s discretion, a  
21 person may request, and may be provided, notice of only those  
22 meetings of a state body at which a particular subject or subjects  
23 specified in the request will be discussed.

24 ~~(e)~~

25 (f) A request for notice of more than one meeting of a state body  
26 shall be subject to the provisions of Section 14911.

27 ~~(f)~~

28 (g) The notice shall be made available in appropriate alternative  
29 formats, as required by Section 202 of the Americans with  
30 Disabilities Act of 1990 (42 U.S.C. Sec. 12132), and the federal  
31 rules and regulations adopted in implementation thereof, upon  
32 request by any person with a disability. The notice shall include  
33 information regarding how, to whom, and by when a request for  
34 any disability-related modification or accommodation, including  
35 auxiliary aids or services may be made by a person with a disability  
36 who requires these aids or services in order to participate in the  
37 public meeting.

38 SEC. 3. Section 11125.7 of the Government Code is amended  
39 to read:

1 11125.7. (a) Except as otherwise provided in this section, the  
2 state body shall provide an opportunity for members of the public  
3 to directly address the state body on each agenda item before or  
4 during the state body’s discussion or consideration of the item.  
5 ~~This section is not applicable if the agenda item has already been~~  
6 ~~considered by a committee composed exclusively of members of~~  
7 ~~the state body at a public meeting where interested members of~~  
8 ~~the public were afforded the opportunity to address the committee~~  
9 ~~on the item, before or during the committee’s consideration of the~~  
10 ~~item, unless the item has been substantially changed since the~~  
11 ~~committee heard the item, as determined by the state body.~~ Every  
12 notice for a special meeting at which action is proposed to be taken  
13 on an item shall provide an opportunity for members of the public  
14 to directly address the state body concerning that item prior to  
15 action on the item. In addition, the notice requirement of Section  
16 11125 shall not preclude the acceptance of testimony at meetings,  
17 other than emergency meetings, from members of the public if no  
18 action is taken by the state body at the same meeting on matters  
19 brought before the body by members of the public.

20 (b) The state body may adopt reasonable regulations to ensure  
21 that the intent of subdivision (a) is carried out, including, but not  
22 limited to, regulations limiting the total amount of time allocated  
23 for public comment on particular issues and for each individual  
24 speaker.

25 (c) (1) Notwithstanding subdivision (b), when a state body  
26 limits time for public comment the state body shall provide at least  
27 twice the allotted time to a member of the public who utilizes a  
28 translator to ensure that non-English speakers receive the same  
29 opportunity to directly address the state body.

30 (2) Paragraph (1) shall not apply if the state body utilizes  
31 simultaneous translation equipment in a manner that allows the  
32 state body to hear the translated public testimony simultaneously.

33 (d) The state body shall not prohibit public criticism of the  
34 policies, programs, or services of the state body, or of the acts or  
35 omissions of the state body. Nothing in this subdivision shall confer  
36 any privilege or protection for expression beyond that otherwise  
37 provided by law.

38 (e) This section is not applicable to ~~closed~~ *any of the following*:

39 (1) *Closed* sessions held pursuant to Section 11126.

40 (f) ~~This section is not applicable to decisions~~

1 (2) *Decisions* regarding proceedings held pursuant to Chapter  
2 5 (commencing with Section 11500), relating to administrative  
3 adjudication, or to the conduct of those proceedings.  
4 ~~(g) This section is not applicable to hearings~~  
5 (3) *Hearings* conducted by the California Victim Compensation  
6 Board pursuant to Sections 13963 and 13963.1.  
7 ~~(h) This section is not applicable to agenda~~  
8 (4) *Agenda* items that involve decisions of the Public Utilities  
9 Commission regarding adjudicatory hearings held pursuant to  
10 Chapter 9 (commencing with Section 1701) of Part 1 of Division  
11 1 of the Public Utilities Code. For all other agenda items, the  
12 commission shall provide members of the public, other than those  
13 who have already participated in the proceedings underlying the  
14 agenda item, an opportunity to directly address the commission  
15 before or during the commission’s consideration of the item.



**ASSEMBLY BILL**

**No. 2373**

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**Introduced by Assembly Member Blanca Rubio**

February 18, 2020

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An act to add Section 8505.18 to the Business and Professions Code, relating to professions and vocations.

LEGISLATIVE COUNSEL'S DIGEST

AB 2373, as introduced, Blanca Rubio. Structural pest control: second generation anticoagulant rodenticides.

Existing law provides for the licensure and regulation of structural pest control by the Structural Pest Control Board in the Department of Consumer Affairs. Existing law designates each county agricultural commissioner as the lead agency for inspections and routine investigations of structural pest control operators and registered companies. A violation of these provisions is a misdemeanor.

This bill would require a licensee, beginning July 1, 2021, to complete a training course of at least one hour on the ecological impact of second generation anti coagulant rodenticides, as defined, on wildlife with respect to primary and secondary poisoning. The bill would require the training course to be developed by the board or a provider approved by the board, and to meet and apply to the continuing education requirements for licensees established by the board.

By imposing additional duties on county agricultural commissioners, and by expanding the definition of a crime, this bill would impose a state-mandated local program.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that with regard to certain mandates no reimbursement is required by this act for a specified reason.

With regard to any other mandates, this bill would provide that, if the Commission on State Mandates determines that the bill contains costs so mandated by the state, reimbursement for those costs shall be made pursuant to the statutory provisions noted above.

Vote: majority. Appropriation: no. Fiscal committee: yes.  
State-mandated local program: yes.

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

1 SECTION 1. Section 8505.18 is added to the Business and  
2 Professions Code, to read:

3 8505.18. (a) (1) Beginning July 1, 2021, a licensee shall  
4 complete a training course of at least one hour on the ecological  
5 impact of second generation anticoagulant rodenticides on wildlife  
6 with respect to primary and secondary poisoning.

7 (2) The training course shall be developed by the board or a  
8 provider approved by the board, and shall meet, and may be applied  
9 to, the continuing education requirements for licensees established  
10 by the board.

11 (b) For purposes of this section, “second generation  
12 anticoagulant rodenticide” or “SGAR” means a product that  
13 contains brodifacoum, bromadiolone, difenacoum, or difethialone.

14 SEC. 2. No reimbursement is required by this act pursuant to  
15 Section 6 of Article XIII B of the California Constitution for certain  
16 costs that may be incurred by a local agency or school district  
17 because, in that regard, this act creates a new crime or infraction,  
18 eliminates a crime or infraction, or changes the penalty for a crime  
19 or infraction, within the meaning of Section 17556 of the  
20 Government Code, or changes the definition of a crime within the  
21 meaning of Section 6 of Article XIII B of the California  
22 Constitution.

23 However, if the Commission on State Mandates determines that  
24 this act contains other costs mandated by the state, reimbursement  
25 to local agencies and school districts for those costs shall be made  
26 pursuant to Part 7 (commencing with Section 17500) of Division  
27 4 of Title 2 of the Government Code.

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AMENDED IN SENATE MARCH 5, 2019

**SENATE BILL**

**No. 53**

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**Introduced by Senator Wilk**

~~(Coauthor: Assembly Member Lackey)~~

**(Coauthors: Senators Bates, Glazer, Jones, and Portantino)**

*(Coauthors: Assembly Members Choi, Gallagher, Lackey, Mathis, and Patterson)*

December 10, 2018

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An act to amend Section 11121 of the Government Code, relating to state government, and declaring the urgency thereof, to take effect immediately.

LEGISLATIVE COUNSEL'S DIGEST

SB 53, as amended, Wilk. Open meetings.

The Bagley-Keene Open Meeting Act requires that all meetings of a state body, as defined, be open and public and that all persons be permitted to attend and participate in a meeting of a state body, subject to certain conditions and exceptions.

This bill would specify that the definition of "state body" includes an advisory board, advisory commission, advisory committee, advisory subcommittee, or similar multimember advisory body of a state body that consists of 3 or more individuals, as prescribed, except a board, commission, committee, or similar multimember body on which a member of a body serves in ~~his or her~~ *their* official capacity as a representative of that state body and that is supported, in whole or in part, by funds provided by the state body, whether the multimember body is organized and operated by the state body or by a private corporation.

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

Vote:  $\frac{2}{3}$ . Appropriation: no. Fiscal committee: yes.  
State-mandated local program: no.

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

1 SECTION 1. Section 11121 of the Government Code is  
2 amended to read:

3 11121. As used in this article, “state body” means each of the  
4 following:

5 (a) Every state board, or commission, or similar multimember  
6 body of the state that is created by statute or required by law to  
7 conduct official meetings and every commission created by  
8 executive order.

9 (b) A board, commission, committee, or similar multimember  
10 body that exercises any authority of a state body delegated to it by  
11 that state body.

12 (c) An advisory board, advisory commission, advisory  
13 committee, advisory subcommittee, or similar multimember  
14 advisory body of a state body, if created by formal action of the  
15 state body or of any member of the state body, and if the advisory  
16 body so created consists of three or more persons, except as  
17 provided in subdivision (d).

18 (d) A board, commission, committee, or similar multimember  
19 body on which a member of a body that is a state body pursuant  
20 to this section serves in ~~his or her~~ *their* official capacity as a  
21 representative of that state body and that is supported, in whole or  
22 in part, by funds provided by the state body, whether the  
23 multimember body is organized and operated by the state body or  
24 by a private corporation.

25 (e) Notwithstanding subdivision (a) of Section 11121.1, the  
26 State Bar of California, as described in Section 6001 of the  
27 Business and Professions Code. This subdivision shall become  
28 operative on April 1, 2016.

29 SEC. 2. This act is an urgency statute necessary for the  
30 immediate preservation of the public peace, health, or safety within  
31 the meaning of Article IV of the California Constitution and shall  
32 go into immediate effect. The facts constituting the necessity are:

1 In order to avoid unnecessary litigation and ensure the people's  
2 right to access the meetings of public bodies pursuant to Section  
3 3 of Article 1 of the California Constitution, it is necessary that  
4 this act take effect immediately.

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# July 2020

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7 SPCB Meeting (Claremont)	8 SPCB Meeting (Claremont)	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

# October 2020

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20 <b>SPCB Meeting (Sacramento)</b>	21 <b>SPCB Meeting (Sacramento)</b>	22	23	24
25	26	27	28	29	30	31

# March 2021

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			