CONTRA COSTA COUNTY

AGENDA

Integrated Pest Management Advisory Committee

Thursday, September 18, 2025 **10:00 AM** **2380 Bisso Lane, Concord**
11780 San Pablo Ave.,
Suite D, El Cerrito
https://zoom.us/j/97982014544
Call in: (669) 900-6833
Meeting ID: 97982014544

Susanna Thompson (Chair)
Gabriel Chan (Vice Chair)

Agenda Items may be taken out of order at the discretion of the Chair

1. Convene and Introductions

2. Public comment on items not on this agenda (speakers will be limited to three minutes unless otherwise indicated by the Chair)

3. CONSIDER approval of the March 20, 2025 Integrated Pest Management Advisory Committee meeting minutes. **25-3886**

Attachments: 3A_2025 0320 IPM Advisory Committee Minutes_Draft

4. CONSIDER approval of the revised ground squirrel decision document. **25-3887**

Attachments: 4A_2025 0918 Dec Doc for GS_DRAFT

5. RECEIVE general updates from subcommittees

6. DISCUSS pending changes to the IPM Program and ADVISE on these and other potential program adjustments. **25-3888**

Attachments: 6A_ADMIN BULL 542-IPM
6B_IPM Policy
6C_IPMAC Bylaws
6D_Posting and Notification Policy
6E_IPM Coordinator Class Spec

7. RECEIVE updates and announcements from Committee members and staff

8. RECOMMEND future agenda items

Adjourn

The Committee will provide reasonable accommodations for persons with disabilities planning to attend the Committee meetings. Contact the staff person listed below at least 72 hours before the meeting. Any disclosable public records related to an open session item on a regular meeting agenda and distributed by the County to a majority of members of the Committee less than 96 hours prior to that meeting are available for public inspection at 4585 Pacheco Blvd. Martinez, CA 94553, during normal business hours. Staff reports related to items on the agenda are also accessible online at www.contracosta.ca.gov. If the Zoom connection malfunctions for any reason, the meeting may be paused while a fix is attempted. If the connection is not reestablished, the committee will continue the meeting in person without remote access. Public comment may be submitted via electronic mail on agenda items at least one full work day prior to the published meeting time.

For additional information, contact Wade.Finlinson@cchealth.org or 925.655.3214

1025 ESCOBAR STREET
MARTINEZ, CA 94553

CONTRA COSTA COUNTY

Staff Report

File #: 25-3886 **Agenda Date:** 9/18/2025 **Agenda #:** 3.

Advisory Board: Integrated Pest Management Advisory Committee
Subject: 3. CONSIDER approval of the March 20, 2025 Integrated Pest Management Advisory Committee meeting minutes.
Presenter: Wade Finlinson
Contact: 925.655.3214

Information:
County Ordinance (Better Government Ordinance 95-6, Article 25-205, [d]) requires that each County Body keep a record of its meetings. Though the record need not be verbatim, it must accurately record the Committee's official decisions and actions. Minutes should include a brief description of any motion considered (whether or not it is approved), and must record the vote taken on the motion. Votes must be recorded in the minutes using the format required in California law.

Referral History and Update:
The draft minutes for the March 20, 2025 meeting of the Integrated Pest Management Advisory Committee (IPMAC) are included in this agenda packet.

Recommendation(s)/Next Step(s):
Staff recommends approval of the March 20, 2025 minutes with any necessary corrections.

DRAFT Minutes

CONTRA COSTA COUNTY INTEGRATED PEST MANAGEMENT ADVISORY COMMITTEE
An Advisory Body to the Board of Supervisors

March 20, 2025
10:00 AM

Held at the Agriculture Department Office, 2380 Bisso Lane in Concord and the Office of Supervisor John Gioia, 11780 San Pablo Avenue, Suite D, in El Cerrito.

Members Present: Carlos Agurto (Secretary), Susan Heckly, Jutta Burger, Michele Mancuso, Matt Slattengren (for Gabe Chan), Kimberly Hazard, Thomas Fenster

Members Absent: Susanna Thompson (Chair) Andrew Sutherland, Chris Lau, Roxana Lucero

Staff Present: Wade Finlinson

1. **Convene and introductions**
   Acting in the Chair role, Carlos Agurto called the meeting to order at 10:02 AM.

2. **Public comment on items not on this agenda**
   None

3. **Consider approval of the January 16, 2025 Integrated Pest Management Advisory Committee meeting minutes**
   A motion was made and seconded (SH/JB) to approve the minutes as written.
   Ayes:, Heckly, Mancuso, Burger, Hazard, Agurto
   Noes: None
   Abstain: Slattengren
   Absent: Sutherland, Fenster, Lucero, Lau, Thompson

   Public Speakers: None

   Thomas Fenster arrived at 10:08 AM, prior to item #4.

4. **Receive a presentation on pesticides measured in indoor dust from child care centers in Northern California**
   Dr. Kimberly Hazard presented the attached slides and answered questions from Committee members and staff.

   A motion was made and seconded (MM/SH) to accept the slide presentations for item #4 and #5 as part of the record.
   Ayes:, Heckly, Mancuso, Burger, Hazard, Fenster, Agurto, Slattengren.
   Noes: None
   Abstain: None
   Absent: Sutherland, Lucero, Lau, Thompson

   Public Speakers: None

5. **Discuss the formation of this year's subcommittees and advise on potential goals, objectives, and other areas of focus for each one.**
The Committee reviewed the IPM Coordinator's proposed subcommittee assignments and work plans. Committee members provided additional feedback. No formal action was taken. For 2025, the subcommittees will be comprised as follows:

Decision-Making Subcommittee: Carlos Agurto (Chair), Susanna Thompson, Andrew Sutherland, Gabe Chan, Chris Lau

IPM Training Subcommittee: Michele Mancuso (Chair), Susan Heckly, Carlos Agurto, Roxana Lucero, Ivan Godwyn (Ag. Department)

Nature-based Solutions Subcommittee: Thomas Fenster (Chair), Jutta Burger, Susanna Thompson, incoming Sustainability Commission representative, applicable representative from Public Works or Ag. Department

Public speakers: None

6. **Receive updates and announcements from Committee members and staff**
The following updates were provided:
   - The IPM Coordinator reported on his attendance at recent seminars that included the International IPM Symposium in San Diego, and local events pertaining to vertebrate pest management and rangeland science.
   - Carlos Agurto announced pending updates to the approved pesticide list for facilities, and highlighted attendance at the International IPM Symposium and Vertebrate Pest Conference seminar in Walnut Creek. He also provided an update on ground squirrel trapping and fumigation efforts.
   - The Agriculture department has hired three Weed and Vertebrate Technicians this year instead of the usual two.
   - Multiple organizations recently teamed up to submit a grant application to restore the Alameda/Contra Costa Weed Management Area (WMA). Grant results are expected to be announced in June.

Public Speakers: None

7. **Recommend future agenda items**
The next meeting of the full Committee is scheduled for September 18, 2025.

Public Speakers: None

The meeting adjourned at 11:53 AM.

Attachments:

Pesticides measured in indoor dust from child care centers in N. California
Item #5 staff report presentation slides

—end of meeting minutes—

Pesticides measured in indoor dust from child care centers in Northern California

Kimberly Hazard, PhD

Environmental Health Sciences, UC Berkeley

CA Dept. of Toxic Substances Control: kim.hazard@dtsc.ca.gov

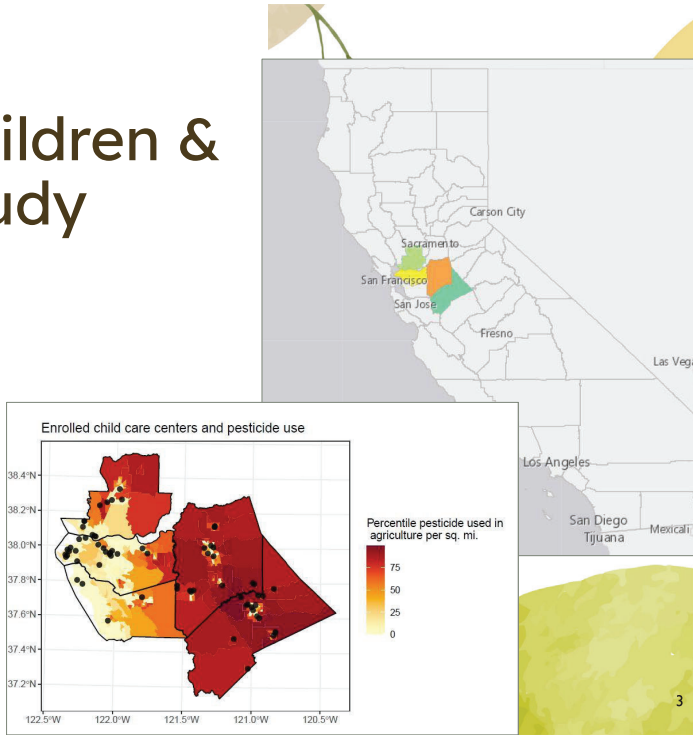
Photo: ©UCSF CCHP

Background

- Young children are exposed to pesticides in their environment and may be at risk for long-term adverse health outcomes.
- Children are uniquely vulnerable to exposures.
- One million children in California under six years of age attend child care programs.
- Little is known about health risks from exposures in child care centers, particularly pesticide mixtures.

UCSF Healthy Children & Environments Study

- What is the effect of an Integrated Pest Management (IPM) intervention on pesticide levels in child care?
- Randomized-control trial of licensed child care centers in 4 counties
  - Contra Costa & Solano/Alameda
  - San Joaquin & Stanislaus
- Indoor carpet dust samples



What is Integrated Pest Management (IPM)?

- An approach to managing pests that focuses on:
  - Preventing infestations (by keeping pests out and getting rid of food, water, and shelter)
  - Monitoring pests
  - Reducing the use of harmful pesticides
  - Minimizing health risks to people and the environment.

Photo: ©UCSF CCHP

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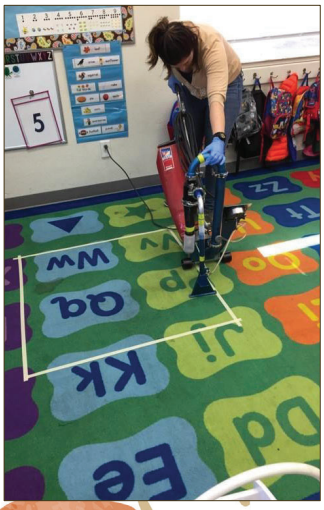
Dust collection & analysis



- 51 baseline carpet dust samples, collected 2017-2019
- Southwest Research Institute (SwRI) analyzed samples for 14 structural and agricultural pesticides by GC/MS

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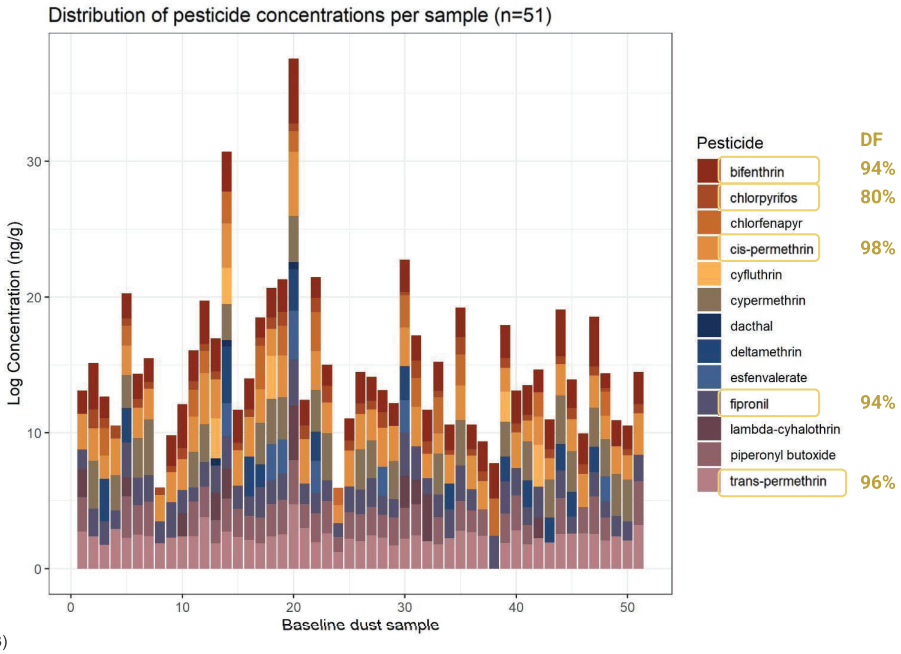
Pesticides measured in carpet dust

Pesticide by Chemical Classification	Baseline Detection Frequency	Use
Pyrethroid		
Bifenthrin	94%	Commercial (some ag.)
Cyfluthrin	10%	Mostly agriculture
Cypermethrin	55%	Mostly commercial & residential
cis-Permethrin	98%	Mostly commercial & residential
trans-Permethrin	96%	
Deltamethrin	27%	Non-agricultural
Esfenvalerate	18%	Agriculture
Lambda-Cyhalothrin	18%	Mostly agriculture
Synergist		
Piperonyl Butoxide	73%	Added to formulations

Pesticide by Chemical Classification	Baseline Detection Frequency	Use
Alkyl Phthalate		
Dacthal	0%	Herbicide
Organophosphate		
Chlorpyrifos	80%	Agriculture (restricted 2020)
Diazinon	0%	Agriculture
Phenylpyrazole		
Fipronil	94%	Commercial & residential
Pyrrole		
Chlorfenapyr	24%	Non-food uses

Pesticides are ubiquitous and children are exposed to mixtures.



Hazard K, et al. *JESEE* (2023)

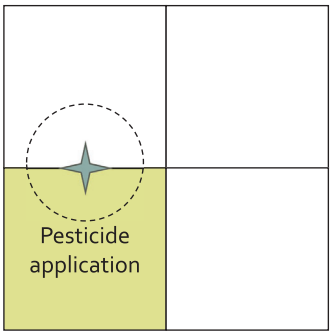
Predictors of pesticide levels in carpet dust

Objective: Characterize pesticide contamination in early care and education (ECE) centers and identify predictors of pesticide concentrations and loading in dust collected from classroom carpets.

Methods

Study Population: UCSF Healthy Children & Environments Study

- 51 baseline dust samples, collected 2017-2019
- Integrated Pest Management (IPM) Checklist, observations & director interviews
- CA Dept. of Pesticide Regulation Pesticide Use Report (PUR) data
- Multivariable Tobit regression for most frequently detected pesticides



50% of buffer within section

Key Takeaways

Location in the San Joaquin Valley strongest predictor of pesticide levels in dust

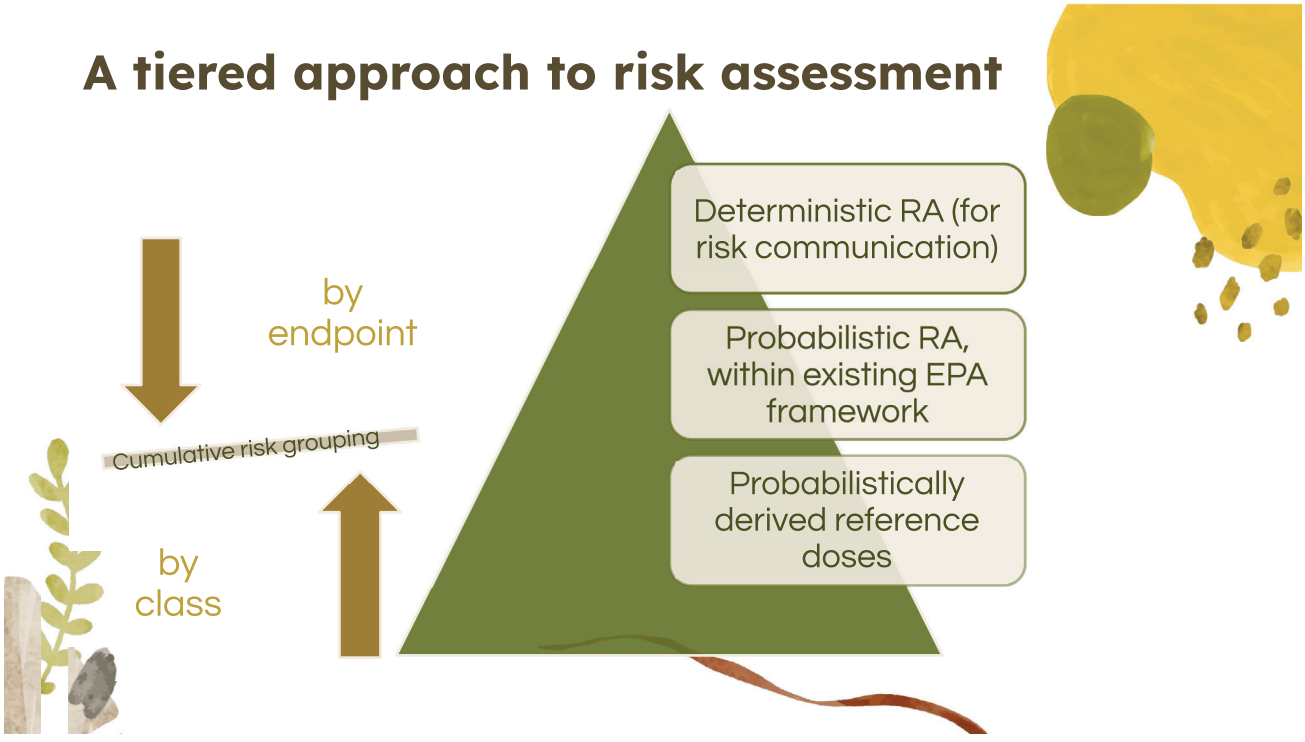
Associations between:

- ↑ bifenthrin & ↑density of **agricultural bifenthrin use** within 3 km in the past year / location in San Joaquin Valley
- ↓ chlorpyrifos levels & **better IPM practices**
- ↓ chlorpyrifos levels & **more carpet throughout room**
- ↑ fipronil levels & **professional applications** of fipronil at the child care center in the past year

Health risk assessment

Objective: Determine if children's exposures to pesticides in child care via non-dietary ingestion and dermal absorption exceed health-protective reference values, and compare traditional risk calculations to methods that account for uncertainty, variability, and cumulative risk.


Traditional risk assessment
Assess one chemical at a time
Estimate potential exposure using single value inputs
Compare to "bright line" reference dose (RfD)


A tiered approach to risk assessment
by endpoint
Cumulative risk grouping
by class
Deterministic RA (for risk communication)
Probabilistic RA, within existing EPA framework
Probabilistically derived reference doses

Exposure: Potential daily intake (PDI) (mg/kg-day)

Assumption: in care 6 hours, 5 days, 48 weeks

Measured body weight (kg)

EPA assumptions (children ages 2-6yr / in child care):

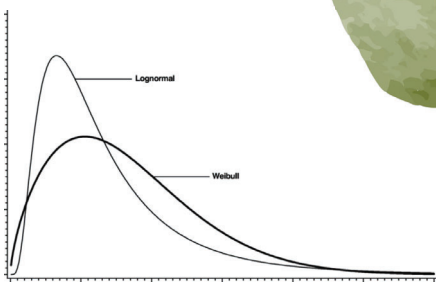
- **Dust ingestion** (g/day)
- **Surface area** to body weight ratio (m2/kg)
- Fraction of **body surface exposed** and **soil adhered** to body parts (g/m2)
- How much pesticide is **absorbed** through skin (10%)

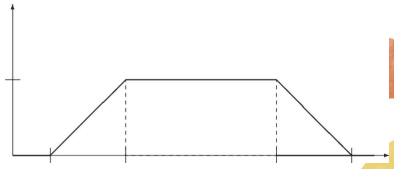
Measured pesticide concentrations (ng/g)

Illustration by Icons 8 from Ouch!

Probabilistic Dose Calculations

Input	Distribution
Body weight	Log-normal, measured min/max
Pesticide concentrations	Log-normal for most Weibull for cypermethrin and ∑permethrin
Time	Trapezoidal 15-50 hrs/week, most 30-36 hrs 0.8-3.2 years, most 1-2 years
Surface area exposed Soil adherence factor Dust ingestion rate	Log-normal Based on US EPA Exposure Factors / ATSDR Exposure Dose Guidance





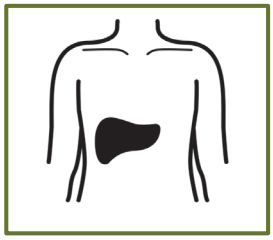
Estimating risk:
Compare exposure to health benchmark

- Hazard Quotient (HQ)
  - PDI / RfD
  - HQ >1 = risk
  - Cumulative risk: sum HQs by endpoint (Hazard Index)
- Margin of Exposure (MOE)
  - MOE = POD / Exposure
  - MOE <300 = risk
  - Cumulative risk: for pyrethroids, apply Relative Potency Factors (RPFs) to PDIs

$$MOE = \frac{BMD_{index}}{\sum RPF_p \times PDI_p}$$

Cumulative risk by endpoint

Measured Pesticides		Reference Dose (RfD) (mg/kg-day)	
Class	Pesticide	RfD	Source
Organophosphate	Chlorpyrifos	0.0001	OEHHA
Pyrethroid	Bifenthrin	0.0150	IRIS
	Cyfluthrin	0.0117	HHBP
	Cypermethrin	0.0716	HHBP
	Deltamethrin	0.0150	HHBP
	Esfenvalerate	0.0110	HHBP
	Lambda-Cyhalothrin	0.0009	HHBP
	Permethrin	0.0500	IRIS
Other	Fipronil	0.0002	HHBP
	Chlorfenapyr	0.0500	HHBP
	Piperonyl Butoxide	0.1600	HHBP



Noun Project images created by: Gregory Montigny & mungang kim

Cumulative risk by class

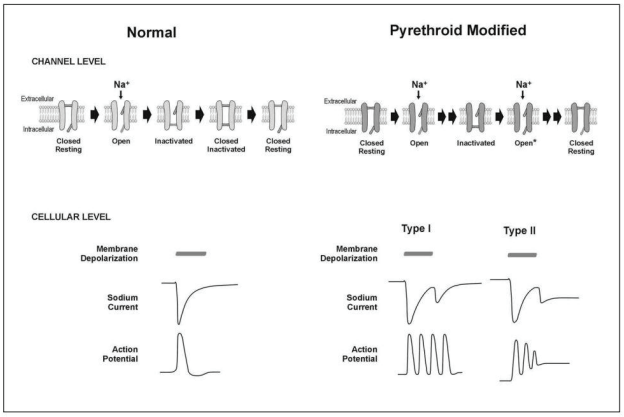


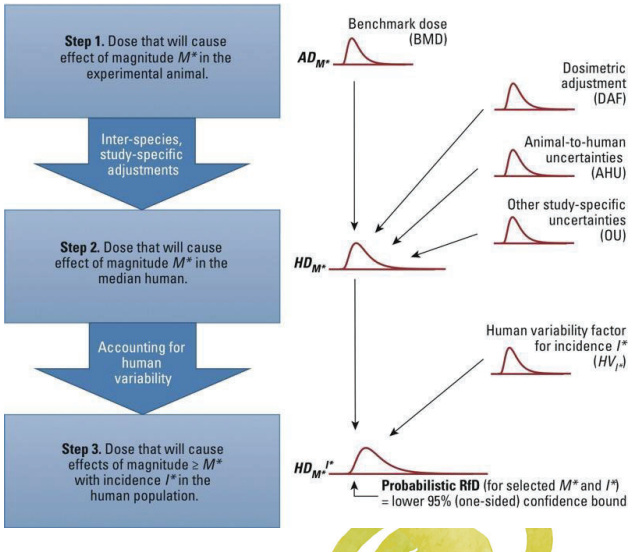
Figure 2.2. Effects of pyrethroids on Na channels, currents, and action potentials (From Shafer et al. (2005))

Table 4.5.1. Relative Potency Estimates for Pyrethroids Included in the Screening Level Cumulative Risk Assessment

Pyrethroid	Oral BMD_{20}	Oral RPF[b,d]
Allethrin[c]	135	0.11
Bifenthrin	14.3	1.01
Cyfluthrin	12.6	1.15
Lambda-Cyhalothrin	8.9	1.63
Cyphenothrin	100[a]	0.15
Cypermethrin	76.3	0.19
Deltamethrin	**14.5**	**1.0**
Esfenvalerate	40.5	0.36
Fenpropathrin	29	0.50
Tau-Fluvalinate	14.5	1.0
Imiprothrin	750[a]	0.02
Permethrin	156	0.09
Prallethrin	150[a]	0.10
Pyrethrins	800[a]	0.02
Resmethrin	291	0.05

Beyond the RfD

Use a probabilistically derived reference dose in risk estimations (Hazard Index)



$PrRfD = HD_{05}^{01}$

Human Dose at which 1% of population shows an effect of 5% (such as change in locomotor activity) with 95% confidence

Key Takeaways

- We found that estimated pesticides exposures to young children in child care centers, using both deterministic and probabilistic methods to estimate exposures distributions and cumulative risk, were not likely to exceed established RfDs.
- Using probabilistic dose estimates with PrRfDs did not result in Hazard Indices exceeding 1.
- These estimated exposures represent just a portion of the true potential total daily exposure for young children.

Concluding thoughts

- Pesticides are ubiquitous in CA, child care settings are not unique
- Focus for children's environments: IPM & dust management
- Upstream IPM practices matter
- Keep studying and investing in child care programs!

Thank you!

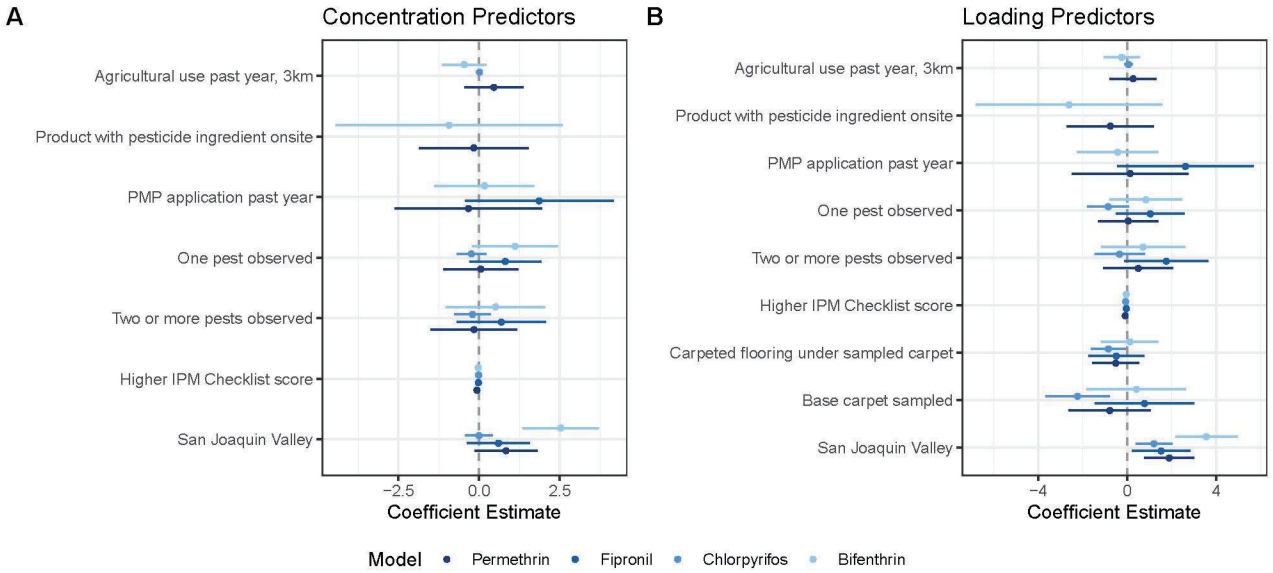
Acknowledgements:

- HCES study participants – providers, children, and families
- Research staff & child care health consultants & advisors
- Funding: NIEHS R01ES027134

UCSF California Childcare Health Program

cerch Center for Environmental Research & Children's Health

Predictors of pesticide levels in ECE carpet dust



Hazard K, et al. *Journal of Exposure Science & Environmental Epidemiology* (2023)

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Program and director characteristics (n=51)	
Geographic region	n (%)
San Francisco Bay Area	25 (49%)
San Joaquin Valley	26 (51%)
Program type	
Non-profit private	15 (29%)
For-profit private	10 (20%)
Head Start/Early HS	6 (12%)
CA State Preschool	5 (10%)
Blended	15 (29%)
Program size	
10-49 children	21 (41%)
50-99 children	20 (39%)
100-200 children	10 (20%)
Director years of experience in child care	
4-19 years	21 (41%)
20-35 years	26 (51%)
>36 years	4 (8%)

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Child characteristics (n=253)	
	Mean (SD), Range
Age	4.2 (0.6), 2.8 – 5.2
Body weight	18.0 (3.1), 11.2 – 34.2
Sex	n (%)
Male	125 (49%)
Female	128 (51%)
Race & ethnicity	n (%)
Asian / Pacific Islander	12 (5%)
Black	21 (8%)
Hispanic / Latine	68 (27%)
Native American / Native Alaskan	5 (2%)
White	60 (24%)
Multi-Racial	43 (17%)
Other / missing	44 (17%)

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Most frequently detected pesticides	Uses and Products
Permethrin	A pyrethroid insecticide. Products containing permethrin may be liquids, powders, dusts, aerosol solutions, sprays, and treated clothing. Permethrin is used in cattle ear tags and flea collars, or in spot-on treatments for dogs. Present in Raid, head lice and scabies treatments for humans.
Bifenthrin	A pyrethroid insecticide. Various agricultural crops and in homes. Available in sprays, granules, and aerosols.
Cypermethrin	A synthetic pyrethroid used as an insecticide in large-scale commercial agricultural applications as well as in consumer products for domestic purposes (such as Raid).
Fipronil	A powder-based insecticide used to control many insects in residential and agriculture. Fipronil is used in granular products for grass, gel baits, spot-on pet care products, liquid termite control products, and products for agriculture. It is a white powder with a moldy odor.
Chlorpyrifos	Banned for residential use in 2000, the only legal indoor use for chlorpyrifos is in baits. Still used in agriculture and other settings (i.e. mosquito control; golf courses, green houses). Virtually all agricultural use of the pesticide chlorpyrifos in California will end by December 31, 2020.

March 20, 2025 Meeting of the Integrated Pest Management Advisory Committee (IPMAC)

Item #5

DISCUSS the formation of this year's subcommittees and ADVISE on potential goals, objectives, and other areas of focus for each one.

CONTRA COSTA HEALTH

2025 IPMAC Subcommittees

- IPM Decision-Making Subcommittee
- IPM Training Subcommittee
- A new subcommittee to review potential overlap with IPM practices and nature-based climate solutions (NBS Subcommittee).
- Potentially reconvene an IPM Outreach Subcommittee.

IPM Decision-Making Subcommittee

Description: Create and revise documentation that transparently depicts the rationale for pest management decisions within County operations and make recommendations for operational refinement.

IPM Decision-Making Subcommittee

Proposed composition:

- Carlos Agurto (Chair)
- Susanna Thompson
- Andrew Sutherland
- Chris Lau
- Gabe Chan

IPM Decision-Making Subcommittee

Background: This is the only standing IPMAC subcommittee. The work of this body grew out of community advocacy for County departments to consider alternatives to chemical controls and to be transparent about how pest-related decisions are made.

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IPM Decision-Making Subcommittee

Draft goals/objectives for 2025

1. Revise ground squirrel decision document.
2. Review commensal rodent and gopher documents.
3. Review grazing documents
4. Consider alternate formats for the IPM Decision Tree to encourage greater adoption.

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IPM Decision-Making Subcommittee

Potential collaborators:
University of California Cooperative Extension subject matter experts, East Bay Regional Parks, Contra Costa Water District, East Bay Municipal Utility District, Metropolitan Water District of Southern California, various reclamation districts, CA Department of Fish and Wildlife, CA Division of Water Resources, and other applicable representatives.

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IPM Training Subcommittee

Description: Advise the IPM Coordinator in developing training programs to ensure that County employees and contracted service providers understand IPM techniques and County policy.

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IPM Training Subcommittee

Proposed composition:

- Michele Mancuso (Chair)
- Susan Heckly
- Carlos Agurto
- Roxana Lucero
- Ag. Dept Representative

IPM Training Subcommittee

Background: The County IPM Policy states that “The IPM Advisory Committee will also work with the County IPM Coordinator to develop IPM training programs for County Departments, their employees, and applicable vendors and contractors to assist in compliance with the County’s IPM Policy.” This subcommittee initially met in 2023 and is looking to reconvene in regular intervals in 2025.

IPM Training Subcommittee

Draft goals/objectives for 2025

1. Identify IPM training mandates
2. Review the quality of existing programs
3. Evaluate cost data for existing programs
4. Identify areas for improvement and project associated costs

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IPM Training Subcommittee

Potential collaborators:
County Risk Management, applicable staff from Agriculture/Weights & Measures Department, Public Works Department administrative staff, existing trainers and Agricultural Pest Control Advisors (PCA) under contract with Public Works, County Human Resources, Contra Costa Television, and others as applicable.

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NBS Subcommittee

Description: Research applicable land management practices whose co-benefits may include pest prevention, cultural pest management controls, carbon storage in healthy soils, runoff prevention, improved range lands and other elements of heightened stewardship.

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NBS Subcommittee

Proposed composition:

- Tommy Fenster (Chair)
- Jutta Burger
- Susanna Thompson
- incoming Sustainability Commission Representative
- applicable representative from the Public Works or Agriculture Departments

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NBS Subcommittee

Background: The first purpose of the County IPM Policy and IPMAC is to “Minimize risks and maximize benefits to the general public, staff and the environment as a result of pest control activities conducted by County staff and contractors” Additional Contra Costa County documents that promote these practices include the 2024 Climate Action and Adaptation Plan Update and Healthy Lands, Healthy People: A Carbon Sequestration Feasibility Study.

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NBS Subcommittee

Draft goals/objectives for 2025

1. Identify NBS practices that overlap with IPM strategies
2. Identify County parcels that could benefit from these practices
3. Evaluate cost/benefit projections for potential pilot demonstrations
4. Make recommendations for implementation.

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NBS Subcommittee

Potential collaborators:
Contra Costa Resource Conservation District, researchers from Galindo Creek Field Station at the Concord Campus of California State University East Bay, Green Government Group (G3) champions from Agriculture/Weights & Measures & Public Works Departments, UC system experts, StopWaste, Civicorps, and other similar institutions.

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IPM Outreach Subcommittee

Description: Promote IPM principles within Contra Costa County and the broader region.

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IPM Outreach Subcommittee

Proposed composition:

- TBD pending IPMAC action

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IPM Outreach Subcommittee

Background: One goal of the County IPM Policy is to "Create public awareness of IPM through education" IPMAC previously convened a subcommittee on IPM outreach in 2017 and 2018. One result of that effort included the development and circulation of articles that promoted IPM awareness and encouraged IPM practices in a variety of settings.

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IPM Outreach Subcommittee

Draft goals/objectives for 2025

1. Evaluate existing IPM outreach resources
2. Identify gaps in the availability of locally-relevant information
3. Produce materials or recommendations that enhance the circulation of related information to fill those gaps.

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IPM Outreach Subcommittee

Potential collaborators:
UC Cooperative Extension/Master Gardeners, Our Water Our World partners, communications personnel from applicable County departments, and others identified by the subcommittee.

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Staff Recommendations

Staff recommends that IPMAC members provide feedback and suggest modifications to the above information. It is also recommended to postpone consideration of forming an outreach subcommittee until the September meeting. IPMAC members are also encouraged to identify what information the IPM Coordinator can provide at the respective kickoff of each subcommittee that will help achieve desired aims.

Presenter: Wade Finlinson

Contact: 925.655.3214

CONTRA COSTA HEALTH

File #: 25-3887 **Agenda Date:** 9/18/2025 **Agenda #:** 4.

Advisory Board: Integrated Pest Management Advisory Committee
Subject: 4. CONSIDER approval of the revised ground squirrel decision document
Presenter: Wade Finlinson
Contact: 925.655.3214

Information:
The bylaws of the Integrated Pest Management Advisory Committee (IPMAC) list several purposes of the Committee. Those include:

- Making policy recommendations upon assessment of current pest issues and evaluation of possible IPM solutions.
- Providing a forum for communication and information exchange among members in an effort to identify, encourage, and stimulate the use of best or promising pest management practices.
- Promoting transparency in pest management decision-making by County Departments.

Referral History and Update:
The IPM Decision-Making Subcommittee is currently the only standing subcommittee of IPMAC. In pursuit of the above purposes, the Subcommittee creates and revises documentation to transparently depict rationale for pest management decisions within County operations. These documents often include recommendations for operational refinement.

The last revision of the ground squirrel decision document was completed in 2019. Since then, regulatory restrictions on anticoagulant rodenticides has limited access to one of the two control tactics deemed “high efficacy” by the University of California Statewide Integrated Pest Management Program (UCIPM). The Subcommittee provided input into various drafts during meetings held on April 17, 2025, May 15, 2025, July 17, 2025, and August 21, 2025.

Recommendation(s)/Next Step(s):
Staff recommends reviewing the attached draft of this version of the decision document and approving it with any additional modifications.

DRAFT

Contra Costa County
DECISION DOCUMENTATION for GROUND SQUIRREL MANAGEMENT

Date: 9/18/2025 DRAFT

Department: Public Works (Airports, Maintenance Division, Facilities Services), Agriculture

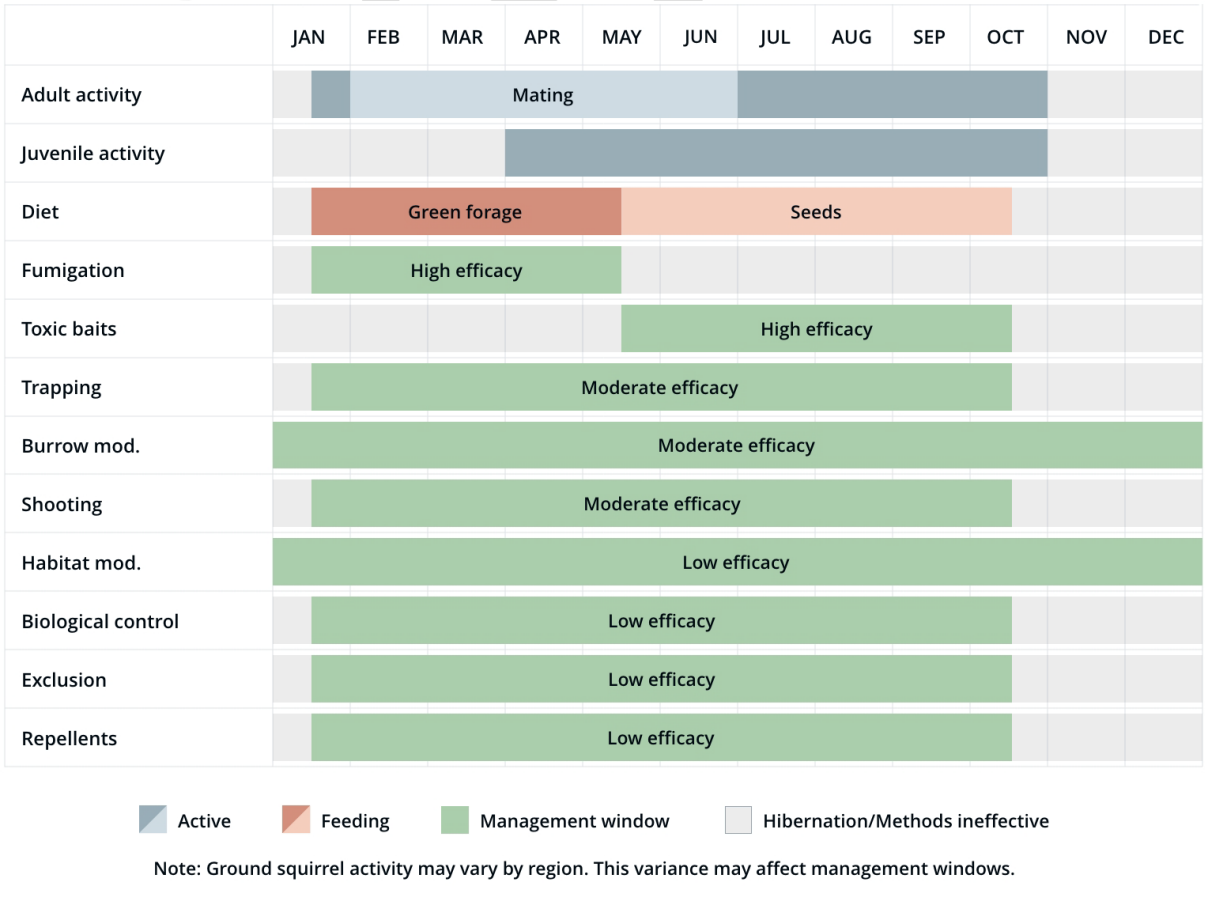
Location: Countywide

Introduction: Prior to 2025, the Agriculture Department provided internal contractual services to control ground squirrel issues on critical infrastructure managed by the Public Works Department primarily through the application of first-generation anticoagulant baits. Other treatments were considered and occasionally deployed by each operational division within Public Works, but the baiting program was the only consistent tactic used on a regular basis.

On January 1, 2025, Assembly Bill #2552 (AB 2552)[i]—also known as the Poison-Free Wildlife Act—took effect. That legislation prohibits the use of first-generation and second-generation anticoagulant rodenticides in California. There are some exceptions for public health, vector control, water supply facilities, and other situations. However, it appears that none of the exceptions apply to properties maintained by the County according to the current legislation and its interpretation.

This document aims to capture the decision-making process and promote a roadmap for the implementation of integrated efforts to protect infrastructure and keep our communities safe.

The problem species has been identified as the following:	**California Ground Squirrel** (*Otospermophilus beecheyi*) Burrowing by ground squirrels can be very destructive, and they can cause severe erosion and loss of structural integrity. Ground squirrels are a problem in levees, in flood control facilities and canals, in earthen dams, on roads, on railroad berms, around foundations and retaining walls, and in landscaping where they chew on irrigation lines. In addition, California ground squirrels are known to be carriers of many transmissible diseases, including bubonic plague and tularemia.
What mandates or standards relating to ground squirrel management apply?	**All operational divisions in the County** Contra Costa County Administrative Bulletin #542 "The County will provide pest management in and on County maintained properties and facilities using integrated pest management (IPM). The purpose of this policy is to promote the combined use of physical, cultural, biological, and chemical control methods to effectively manage pests with minimal risk to humans and the environment." **Airports Division** (Airport infield surfaces, runway safety areas, taxiway safety areas, grazing areas, habitat management lands, etc. at Buchanan Field & Byron Airports): Section 9.2.b of the Federal Aviation Administration (FAA) *Wildlife Hazard Management at Airports*[ii] describes habitat modification and exclusion practices. The FAA has requirements for the safety areas of Part 139[iii] airports like Buchanan Field to be smooth, free of ruts and other obstructions, and able to support aircraft that leave the paved surfaces. Caltrans also has similar requirements for general aviation airports such as Byron Airport. Additionally, ground squirrels are an attractant for other species such as coyotes or hawks that could potentially cause catastrophic consequences for airplanes. **Public Works Maintenance Division** (dams, levees, creeks, basins, roads, bridges, flood control structures, retaining walls): Inspectors from U.S. Army Corps of Engineers (USACE) and state agencies have discretion to determine whether damage caused by burrowing animals on dams and levees is problematic. **Public Works Facilities Services Division** (County buildings, communication towers, and landscapes/open space adjacent to facilities, within special district service areas, and in County-owned parks): No known formal standards apply, but burrow systems that undermine building foundations, paved areas, and other structures are not tolerated. Similarly, burrowing activity that creates trip hazards or other safety concerns in parks and other publicly accessible landscapes are prioritized for treatment controls.

What is the process for how sites are monitored for ground squirrel activity?	**Airports Division**: Airport Operations staff at both sites monitor ground squirrel activity. Abatement procedures are used whenever those activities enter safety areas and sometimes before when the timing is right for our control methods. Any population in the safety areas is the threshold, we cannot have any. Airport Safety Officers determine whether abatement is needed as part of their wildlife hazard management duties. **Public Works Maintenance Division**: Activity is monitored during levee inspections conducted in coordination with the U.S. Army Corps of Engineers (USACE). Monitoring for ground squirrel activity is critical component of evaluating levee integrity. These inspections are typically led by the USACE inspection team alongside local representatives such as Flood Control Crew Supervisor—who oversees site readiness and facilitates issue tracking. State inspectors annually monitor the structural integrity of each dam and they convey site-specific concerns. Other reports of rodent activity come from citizen calls, as well as Public Works and Agriculture Department staff. **Public Works Facilities Services Division**: Facility occupants typically alert the Division to ground squirrel concerns at County-owned buildings. The contracted structural pest control operator similarly reports any activity observed during routine service visits. For parks and special district landscapes, community members occasionally report applicable concerns. Special district service areas retain a contracted trapper for gophers and moles, but that does not include ground squirrels. **Department of Agriculture/Weights & Measures:** The vertebrate pest management program provides assistance and advice on a cooperative basis to the Public Works Department, other public agencies, and growers for the control of ground squirrels. In some cases, Agriculture personnel assist Public Works in monitoring squirrel activity.
Control Methods	**This is not an attempt to consider all control methods available. The following sections identify the types of controls that are most likely to be incorporated into County operations. It is not an exhaustive list. For more information on controls see http://www.groundsquirrelbmp.com/** **The County continues to investigate and review new control methods as they become available.**
Timing and Efficacy of Management Methods	**The following chart[iv] depicts the yearly activities of the California ground squirrel and times when baiting, trapping, fumigation, and other management practices are generally most effective.**  Note: Ground squirrel activity may vary by region. This variance may affect management windows.

Which cultural controls were considered?	**Habitat modification:** Proactive Vegetation Management: This can involve the strategic planting of trees and shrubs and allowing herbaceous vegetation to grow more densely in order to make it more difficult to detect predators. Deep Ripping: Using tractor-mounted ripping bars where burrow entrances are present in order to reduce the likelihood of ground squirrel reinvasion. **EFFICACY:** Low **CONCLUSIONS**: **Airports Division:** Trees and shrubs are not appropriate for airport operations. Some areas surrounding the Byron Airport may be suitable for proactive planting, but are not being considered at this time. Deep ripping is not feasible at either location. **Maintenance Division:** Dams and levees typically are not suitable for woody vegetation. Recent projects have restored riparian plantings as part of broader flood risk reduction efforts along creeks, but those activities are not feasible with maintenance operations. Tree planting on certain roadsides may be considered in the future, but those situations are more likely when tied to capital improvements. Deep ripping is not presently being evaluated. **Facilities Services Division:** Many facilities would benefit from expanded tree planting. However, the locations where ground squirrel populations occur do not typically coincide with the most appropriate planting sites. The Division is not evaluating deep ripping. **Agriculture Department:** These services are not offered through existing programs within the Department. **Statement on efforts to prevent impacts on non-target species:** Deep ripping could impact species of concern. Guidance from the Public Works Environmental Services Division is recommended when considering habitat modification tactics.
Which physical controls were considered?	**Burrow modification**: Cement and grout: Injection of concrete, grout, or similar materials into burrow entrances. The Burrow Blocker: A patented system that injects a sand and water slurry into burrows. **Shooting**: The use of small caliber rifles to dispatch ground squirrels causing damage to critical infrastructure. **Trapping:** Various types of live traps and kill traps are available. Ground squirrels caught with live traps cannot be relocated and must be humanely euthanized. **Exclusion**: Includes a variety of materials installed in a manner that limits access to particular areas. **EFFICACY:** Moderate (with the exception of exclusion, which is considered low efficacy. Also, research is limited regarding the efficacy of the Burrow Blocker and similar strategies involving cementing/grouting burrow entrances.) **CONCLUSIONS**: **Airports Division:** Certain areas of Division properties have incorporated fencing that has slowed access to runways and taxiways. These renovations are expensive and it is unlikely that they will be implemented at the scale needed at both airports. Trapping and burrow modification efforts are currently being explored. **Maintenance Division:** The Division previously injected grout into the entrances of ground squirrel burrows at some sites. The practice has not been used for several years, but the Division is analyzing the continuation of burrow modification practices and incorporating trapping. Burrow entrances next to paved roads will likely be covered with suitable materials while the Division adapts to recent rodenticide restrictions. **Facilities Services Division:** Trapping services are currently carried out by a contracted service provider at certain sites. The Division is open to exploring the expansion of trapping and the implementation of limited pilot projects to evaluate burrow modification measures. Exclusion practices are also being explored at some locations. **Agriculture Department:** These services are not offered through existing programs within the Department. In 2012, the Department conducted an in-house trial of live trapping and found it to be expensive and time-consuming. Pending staffing changes may add capacity to revisit trapping trials that could inform the feasibility of Public Works potentially incorporating these practices into their operations at some locations in the future. **Statement on efforts to prevent impacts on non-target species:** Among physical controls, trapping and shooting represent the lowest risk of impacts to non-target species. Nonlead ammunition is required. Guidance from the Public Works Environmental Services Division is recommended when considering burrow modification tactics.
Which biological controls were considered?	**Biological controls available:** Raptor perches and barn owl boxes are often deployed to target burrowing pest species. Since ground squirrels are diurnal, raptors active during the day are more likely than barn owls to prey on them. Barn owls are crepuscular and nocturnal, so they may hunt ground squirrels that are active at dusk and dawn. Installations like these are usually ineffective at controlling targeted pests if not deployed alongside other integrated methods. Interested members of the public typically have a favorable view of these measures. **EFFICACY:** Low

	CONCLUSIONS: **Airports Division:** Due to safety concerns and federal regulations, raptor perches and owl boxes are not being considered at airports. **Maintenance Division:** Community groups and adjacent property owners have installed these types of structures on or near Flood Control properties in the past, but many have fallen into disrepair. The Division may consider this further in the future but is focused on other controls at present. **Facilities Services Division:** Some parks managed by Facilities Services have owl boxes, but it isn't clear if they are being maintained. The addition of new boxes and perches is feasible, but partnerships to take care of them need to be identified. **Agriculture Department:** These services are not offered through existing programs within the Department. Pending staffing changes may add capacity to research where proactive efforts to incorporate these types of measures. **Statement on efforts to prevent impacts on non-target species:** Negative impacts on non-targets are not anticipated with efforts described in this section.
Which chemical controls were considered?	*Toxic Baits:* **Zinc Phosphide:** A non-anticoagulant rodenticide that converts to phosphine gas when consumed by the target animal. Zinc phosphide is a restricted use material and is a hazard to the applicator. There are also endangered species concerns and restrictions to consider prior to use. **Diphacinone or Chlorophacinone-treated grain bait:** First generation anticoagulant rodenticides are no longer accessible to most County-managed properties unless existing exceptions are further researched or applicable legislation is amended. *Burrow fumigation methods:* **Gas cartridge**: The cartridge (made from sodium nitrate, charcoal, and cardboard) releases carbon monoxide gas into the burrow system. This method is only effective when the soil moisture is high in either winter or spring. Gas cartridges are more effective when used prior to breeding or emergence of young. The timing, though, conflicts with other programs for which staff are needed such as the noxious weed program, the pesticide use enforcement program and the pest exclusion program. There are endangered species restrictions and concerns to consider prior to use. **Aluminum phosphide**: Aluminum phosphide reacts with moisture in the soil and in the atmosphere to produce phosphine gas. This fumigant is only effective when soil moisture is high and so has the same timing issues as above. Aluminum phosphide is a restricted use material and is a hazard to the applicator. There are also endangered species concerns and restrictions to consider prior to use. **CO and CO_2**: These fumigants require a CO or CO_2 generating device, which must be moved from burrow to burrow and site to site during treatment. These are most effective when soil moisture is high, and they have the same timing issues as gas cartridges and aluminum phosphide. **EFFICACY:** High **CONCLUSIONS:** **Airports Division:** The Division is working with the Agriculture Department to study the potential of using alternative baits in high risk areas at each airport. They are also evaluating cost and other considerations related to potential burrow fumigation controls. **Maintenance Division:** Some initial efforts using CO were completed in a levee system a few years ago. The Division is reviewing the possibility of expanding those efforts in additional areas, but cost is a barrier. They also recently retained the services of Ag. personnel to deploy gas cartridges. Evaluation of additional chemical controls is ongoing. **Facilities Services Division:** The current contract for structural pest management services includes ground squirrel control on an on-call basis. The business under contract provides some chemical controls and owns a large carbon monoxide injection system known as a CO-Jack. This contract has been used by Facilities Services and other divisions within Public Works and is available as long as the approved dollar amount for total contract is not exceeded. **Agriculture Department:** The Department will continue to support Public Works' efforts to review chemical alternatives to anticoagulant rodenticides. In limited circumstances, Ag personnel may be able to assist with using gas cartridges on certain properties, but these staff members are usually engaged in important regulatory work during the season when the devices are most effective. **Statement on efforts to prevent impacts on non-target species:** Prior to recent legislative restrictions, the primary method of ground squirrel control to protect infrastructure at airports, dams, roadsides, and other County-owned sites was through the use of diphacinone or chlorophacinone-treated grain bait. Like most chemical and non-chemical pest management tactics, those applications represented a certain level of risk. Many reputable subject matter experts are concerned that these restrictions—which were intended to protect wildlife—were more targeted to the control of ground squirrels with limited off-target impacts. Burrow fumigation and other non-chemical tactics could threaten other species living in burrows. Since these considerations are often site-specific and subject to other key variables, the Public Works Environmental Services Division, the PRESCRIBE[v] database, and other applicable resources should be consulted.

Recommendations from the IPM Advisory Committee	1. Each applicable operational division within Public Works is encouraged to allocate resources to promote a year-round ground squirrel monitoring and treatment program at threatened sites. Control methods deemed "High Efficacy" and "Moderate Efficacy" by the University of California Statewide IPM Program should be prioritized. Such efforts may include: a) Coordinating an RFP (Request for Proposals) process to procure on-call services that are currently unavailable from County staff and existing contracts. Services may include burrow modification, shooting, and other tactics. b) Collaboration with UC partners in facilitating research that furthers understanding of the impacts and efficacy of under-studied management strategies. c) Assessing the feasibility of utilizing the IPM Coordinator[vi] to set up a trapping pilot program at one or two priority sites. The purpose of this program will be to: i. provide immediate support at critical locations while each operational division concurrently ramps up integrated strategies to address the anticipated increase in problematic ground squirrel populations. ii. Inform the potential development of operational staff or contractors performing long-term trapping operations where feasible. 2. The Board of Supervisors is encouraged to direct County lobbyists to follow and potentially shape legislative developments that expand exemptions for first generation anticoagulant rodenticides at airports, dams constructed for the purpose of flood risk reduction, roads, and other elements of critical infrastructure. Efforts relating to this may also include the following: a) Engage the California State Association of Counties (CSAC) and comparable local government entities to identify opportunities to closely study the potential impacts of AB 2552 and shape an effective plan of action. b) Support the efforts of County staff working with their equivalents in other local government agencies to further meaningful dialog about legislative refinements within the respective realm of each discipline or industry.

[i] Available at https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202320240AB2552

[ii] https://www.faa.gov/airports/airport_safety/wildlife/resources/media/2005_FAA_Manual_complete.pdf

[iii] FAA certification program for certain types of airports. More information available at the following link: https://www.faa.gov/airports/airport_safety/part139_cert

[iv] Chart is from the University of California Statewide IPM Program's Pest Note for Ground Squirrels available at: https://ipm.ucanr.edu/legacy_assets/PDF/PESTNOTES/pngroundsquirrel.pdf Quinn NM, Dimson MJ, Baldwin RA. 2025. UC IPM Pest Notes: Ground Squirrel. UC ANR Publication 7438. Oakland, CA

[v] PRESCRIBE stands for Pesticide Regulation's Endangered Species Custom Realtime Internet Bulletin Engine and is available at: https://calpip.cdpr.ca.gov/county.cfm

[vi] Labor costs associated with the IPM Coordinator are already covered by various Public Works funding streams; only fees associated with start-up costs, and ongoing materials and supplies would be needed if there is an appetite to move forward.

File #: 25-3888 **Agenda Date:** 9/18/2025 **Agenda #:** 6.

Advisory Board: Integrated Pest Management Advisory Committee
Subject: 6. DISCUSS pending changes to the IPM Program and ADVISE on these and other potential program adjustments.
Presenter: Wade Finlinson
Contact: 925.655.3214

Information:
The County IPM Policy states that IPMAC "serves as a resource to help both Department Heads and the Board of Supervisors periodically review, update, and improve existing programs and the processes used for making pest management decisions." The IPM Program will likely move from the Hazardous Materials Programs Division of Contra Costa Health to the Agriculture Commissioner's Office in the near future. This move marks an opportunity to evaluate how the broader program is structured and make recommendations for refinement.

Referral History and Update:
At the June 24, 2025 meeting of the Board of Supervisors, Chief Lewis Broschard of the Contra Costa Fire Prevention District indicated that the IPM Program would transition to the Agriculture Commissioners office. No further details of the timeline or logistics of this move have been shared with the IPM Coordinator. Nevertheless, the pending move may result in greater access to related resources within the Agriculture Department and improve the implementation of IPM principles into applicable County programs.

Additionally, other related factors may compel further consideration at this time. Those include but are not limited to the following:

- Limited public participation in meetings since the COVID-19 pandemic.
- Difficulty recruiting new members.
- Potential challenges regarding new training requirements for all County boards and commissions.
- Inconsistent engagement between the IPM Coordinator and each affected operational division.
- Limitations on pragmatic problem solving within the parameters of the Brown Act, Better Government Ordinance, and hybrid meeting requirements.
- Low rate of IPMAC recommendations being acknowledged or incorporated throughout the life of the program.

The County IPM Program consists of the IPM Advisory Committee and the IPM Coordinator. It is also cooperatively attached to certain County operational departments or divisions that manage pests. Applicable departments and divisions-along with their contracted service providers-are subject to the County IPM policies and practices.

Despite the challenges listed above, the IPM Program has successfully produced a variety of resources and practices that should retain a central focus moving forward. Those include decision documentation, IPM plan templates, the Pesticide Risk Footprint Tool, policy revisions, and the facilitation of public forums that promote a high level of transparency.

Various reference documents are attached to this staff report. Those include Administrative Bulletin #542, the County IPM Policy, IPMAC Bylaws, the Pesticide Use Posting and Notification Policy, and the IPM Coordinator class specification.

Recommendation(s)/Next Step(s):
Staff recommends that IPMAC members provide feedback or request additional information to support ongoing deliberations at future meetings. Potential areas of discussion could include:

- Suggestions to consider including in potential revisions to the IPM Coordinator job description.
- Comparisons of other similar IPM programs in the region.
- Consideration of alternative meeting formats and committee classifications.
- Other related advice.

CONTRA COSTA COUNTY
Office of the County Administrator

ADMINISTRATIVE BULLETIN

Number: 542
Date: April 1, 2013
Section: General

SUBJECT: Integrated Pest Management (IPM)

I. **APPLICABILITY** - This bulletin is applicable to all County departments.

II. **AUTHORITY** - In accordance with the provisions of County Ordinance Code Section 24-4.008, the County Administrator is responsible for implementing a system of County administrative bulletins.

III. INTEGRATED PEST MANAGEMENT DEFINITION

On November 12, 2002, the County Board of Supervisors adopted the Integrated Pest Management definition provided by the University of California Statewide IPM Project, which states: "Integrated Pest Management is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Pesticides are used only after monitoring indicates that they are needed according to established guidelines, and treatments are made with the goal of removing only the target organisms. Pest control materials are selected and applied in a manner that minimizes risks to human health, to beneficial and non-target organisms, and to the environment."

IV. INTEGRATED PEST MANAGEMENT (IPM) POLICY

The County will provide pest management in and on County maintained properties and facilities using integrated pest management (IPM). The purpose of this policy is to promote the combined use of physical, cultural, biological and chemical control methods to effectively manage pests with minimal risk to humans and the environment.

The Board of Supervisors adopted the original IPM Policy on November 12, 2002, most recently amended on February 7, 2012. The most recent version of the Policy is available from the IPM Coordinator. It can also be found at the following link: http://www.cchealth.org/groups/ipmac/

The purpose of this Administrative Bulletin is to outline the goals and objectives of the IPM Policy and to provide County staff with guidelines on their responsibilities under the Policy.

V. GOALS AND OBJECTIVES OF THE COUNTYWIDE IPM POLICY

The County's goals under the IPM Policy are to

1. Minimize risks to the general public, staff and the environment as a result of pest control activities conducted by County staff and contractors.
2. Create pest management programs that focus primarily on the long-term prevention of pests.
3. Limit the use of pesticides on County property to the least amount necessary to achieve Departmental pest management goals, and use the least toxic pesticide that is practical and effective against the target pest.
4. Promote public and employee awareness and input into written County pest management plans and records.
5. Create public awareness of IPM through education.

To achieve these goals, the County has established the following objectives:

1. County departments will routinely use IPM to manage pest problems.
2. County IPM policies and practices will be incorporated into County pest control contracts.
3. County Departments will report annually on development and implementation of IPM programs.
4. Annual IPM training and outreach programs will be provided to address the needs of County Departments and employees.

VI. RESPONSIBILITIES OF COUNTY DEPARTMENTS:

1. **IPM Contract Specifications**. In all pest control contracts or purchase orders, or contracts or purchase orders with a pest control component, all County Departments must ensure that the work is being performed by a licensed pest control contractor and that the contract or purchase order contains specifications that ensure the County's IPM Policy and practices are adhered to on County maintained properties and facilities. Department staff must contact the IPM Coordinator for review of all contracts or purchase orders for pest control.
2. **Pesticide Use.** County employees will not use pesticides outside the practices described in this Administrative Bulletin. Employees may not bring pesticides of their own to use in the workplace.
3. **Lease Contract Specifications.** When executing a lease for the use of real property with a term of more than three months, the County shall use reasonable efforts to negotiate the use of IPM practices as a part of that lease. The County shall encourage the use of IPM practices by lessors whenever practical.

VII. RESPONSIBILITIES OF THE AGRICULTURE AND PUBLIC WORKS DEPARTMENTS:

1. **Written IPM Plans**. The Agriculture and Public Works Departments will use the IPM principles set forth in this Administrative Bulletin whenever providing pest management services. Each department will establish an IPM program. As a part of the respective IPM programs, each department will develop and maintain a written IPM Plan, or its equivalent, specific to the operational needs of the department and consistent with the IPM definition above. Each Department will designate a Departmental IPM Coordinator responsible for implementation.
2. **Annual Reports on IPM Program Implementation**. Department IPM Coordinators will prepare annual reports on department pest control activities and submit them to the County IPM Coordinator no later than September 30 each year. The department annual reports will be reviewed by the IPM Advisory Committee and compiled into an annual report that will be submitted to the County Administrator, or designee, and the Board of Supervisors.

Orig. Dept.: Health Services

David Twa
County Administrator

CONTRA COSTA COUNTY
INTEGRATED PEST MANAGEMENT POLICY

To protect public health, County resources and the environment, it is the policy of Contra Costa County to manage pests within County pest management programs in and on County-maintained properties and facilities, using Integrated Pest Management (IPM) principles and techniques.

The mission is to promote the combined use of physical, cultural, biological and chemical control methods to effectively manage pests with minimal risk to humans and the environment.

For the purposes of this policy, the County adopts the Integrated Pest Management definition provided by the University of California Statewide IPM Project: Integrated Pest Management is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Pesticides are used only after monitoring indicates that they are needed according to established guidelines, and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and non-target organisms, and the environment.

The goals of this countywide policy are to:

1. Minimize risks and maximize benefits to the general public, staff and the environment as a result of pest control activities conducted by County staff and contractors.

2. Create, implement and periodically review written IPM plans in applicable County Departments specific to their operational needs and consistent with the U.C. definition above and this policy.

3. Promote availability, public awareness and public input into written county pest management plans and records.

4. Create public awareness of IPM through education.

To achieve these goals the County has established the following objectives

1. Require County departments to routinely use IPM.

2. Require County pest control contracts to incorporate County IPM policies and practices.

3. Require applicable Departments to report annually on the development and implementation of IPM programs.
4. Maintain a County IPM Coordinator position that reports to the County Administrator and Board of Supervisors.

5. Maintain an IPM Advisory Committee that provides advice to the Board of Supervisors and assists Departments in reviewing pest control alternatives and related costs or impacts.

6. Provide annual IPM training and outreach programs to address the needs of County Departments and employees.

Require County Departments to Routinely Use Integrated Pest Management:

- County Departments that manage pests are required to develop one or more written IPM Plans, or the equivalent, and designate a departmental/divisional[1] IPM Coordinator responsible for implementation.
- Department Heads, or their designees shall solicit input from the IPM Advisory Committee on the development and ongoing refinement of departmental/divisional IPM plans and decision-making documentation.

Require County Pest Control Contracts to Incorporate County IPM Policies and Practices

- All County Departments that contract for pest management services shall ensure that County IPM policies and practices are incorporated into contracts and adhered to by all licensed pest control contractors performing work on County-maintained properties and facilities. Such contracts shall also include a provision requiring the contractor to use IPM principles and techniques in their service delivery. Prospective contractors should be provided a copy of this policy during the bidding process.

Require Departments to Report Annually on the Development and Implementation of IPM Programs.

- Therefore, departmental/divisional IPM Coordinators shall prepare annual reports on department pest control activities to the County Administrator. The department annual reports will be reviewed by the IPM Advisory Committee. The IPM Advisory Committee shall compile the information into an annual report that will be submitted to the County Administrator and the Board of Supervisors.

Maintain a County IPM Coordinator Position that Reports to the Board of Supervisors.

- In recognition that development, implementation and oversight of a County IPM Program requires allocation of resources, the position of County IPM Coordinator has been established and funded. The County IPM Coordinator serves as a resource for Department Heads to ensure compliance with the County IPM policy.

[1] The term *"departmental/divisional"* is used to broadly convey the spectrum of organizational units with IPM responsibilities under this policy. Disparate pest management functions within large departments may be better suited for the implementation of divisional IPM plans and designated divisional IPM coordinators in order to accurately represent considerations unique to specific work units. Departmental IPM plans and coordinators are best suited for small or mid-size departments that manage pests within a single program.

The County IPM Coordinator is required to serve as staff to the IPM Advisory Committee to assist Department Heads in identifying priorities and in acquiring data to properly evaluate pest control needs and appropriate solutions.

- The County IPM Coordinator will provide an annual update to the County Fish and Wildlife Committee.

Maintain an IPM Advisory Committee that Provides Advice to the Board of Supervisors and Assists Departments in Reviewing Pest Control Alternatives and Related Costs or Impacts.

- An IPM Advisory Committee has been created. The Advisory Committee serves as a resource to help both Department Heads and the Board of Supervisors periodically review, update, and improve existing programs and the processes used for making pest management decisions.

- Information regarding preferred pest control solutions must include data regarding comparative efficacy, cost, environmental impact and hazards to the public and applicator. Information and recommendations must be based on the best science available.

- The IPM Advisory Committee will also work with the County IPM Coordinator to develop IPM training programs for County Departments, their employees, and applicable vendors and contractors to assist in compliance with the County's IPM policy. Additional support may also be provided to County Departments who wish to develop public outreach programs to address environmental and public health concerns.

- The membership of the IPM Advisory Committee is detailed in the IPM Committee bylaws.

Provide Annual IPM Training and Outreach Programs to Address the Needs of County Departments and Employees.

- Training programs will be developed under the direction of the County IPM Coordinator with the concurrence of the IPM Advisory Committee to ensure that County employees understand IPM techniques and County policy. Utilizing resources such as the U.C. Pest Management Guidelines that have been developed by the University of California Statewide IPM Program, training classes on integrated pest management techniques will be developed and made available for County employees.

- Public outreach programs to address environmental and public health concerns will also be developed to complement existing County programs.

CONTRA COSTA COUNTY
INTEGRATED PEST MANAGEMENT ADVISORY COMMITTEE
BYLAWS

I. Name and Definition

A. The name of this advisory body to the Contra Costa Board of Supervisors shall be the "Contra Costa County Integrated Pest Management Advisory Committee," hereafter referred to as the "Committee."

B. "Integrated Pest Management" (hereinafter, "IPM") is defined as "an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Pesticides are used only after monitoring indicates that they are needed according to established guidelines, and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and non-target organisms, and the environment."

II. Purpose (Mission Statement)

The general purposes of the Committee are to:

A. Protect and enhance public health, County resources, and the environment;
B. Minimize risks and maximize benefits to the general public, staff and the environment as a result of pest control activities conducted by County staff and contractors;
C. Promote a coordinated County-wide effort to implement IPM in the County in a manner that is consistent with the Board-adopted IPM Policy;
D. Periodically review departmental/divisional IPM plans and continuously monitor implementation of County IPM programs;
E. Make policy recommendations upon assessment of current pest issues and evaluation of possible IPM solutions;
F. Provide a forum for communication and information exchange among members in an effort to identify, encourage, and stimulate the use of best or promising pest management practices; and
G. Promote transparency in pest management decision-making by County Departments.

III. Membership

A. The Committee shall be composed of eleven (11) voting members as follows:
    1. Four (4) ex-officio members:
        i. County/Unincorporated County Storm Water Program representative
        ii. Agriculture Commissioner, or designee
        iii. Public Works Director, or designee
        iv. Representative of a current pest control operator under contract with the Public Works Facilities Division
    2. Six (6) public members:
        i. Sustainability Commission representative
        ii. County Fish and Wildlife Committee representative
        iii. Three (3) Public Member At Large Appointments,
        iv. One (1) At Large Appointment, for an environmental organization with either 501(c)(3) or 501(c)(4) status
    3. One (1) University of California representative

B. Membership Requirements
   1. Members must reside or work in Contra Costa County. Membership should reflect the ethnic, racial, and geographical diversity of the County.
   2. Contractors who provide pest management services to the County may not serve on the Committee. The exception is A.1.iv, above.
   3. If a member's work status or residence changes, he/she must notify the Committee in writing, within thirty (30) days of their change in status. The Chair will review the change of status and determine if the member is still eligible for membership according to these by-laws. If they are found to be ineligible, the member will be asked to resign his/her position.
   4. Current employees of Contra Costa County are not eligible to serve on the Committee as public members under A.2 or as the UC representative under A.3 above.
   5. Public members must disclose financial or familial relationships with County employees.

C. Responsibilities of Membership
   Each member must:
   1. Have an interest in and commitment to the Purpose (Mission Statement) of the Committee;
   2. Demonstrate knowledge of, interest in, and commitment to improvement of IPM practices in Contra Costa County;
   3. Attend Committee meetings;
   4. Notify the IPM Coordinator, in advance, of any unavoidable absence from a meeting; and
   5. Must comply with the Contra Costa County Policy for Board Appointees concerning Conflict of Interest and Open Meetings, Resolution No. 2002/376 and Resolution No. 2021/234.

D. Resignation
   Any member who desires to resign their position with the Committee must do so in writing and file it with the Chair and Secretary of the Committee.

IV. Staff to the Committee

The County IPM Coordinator shall serve as staff to the Committee. Staff shall issue and distribute agendas in accordance with the Brown Act and Better Government Ordinance. Staff shall finalize minutes and distribute to members in the agenda packet.

V. Organization of the Committee

A. *Officers*: The officers of the Committee shall be the Chair, Vice-Chair, and Secretary.

B. Duties of Officers:
   1. It shall be the duty of the Chair to preside at all meetings.
   2. In the absence of the Chair, the Vice-Chair shall assume the duties of the Chair. Should both senior officers be unavailable, the Secretary or another member shall preside.
   3. The Secretary shall coordinate with County staff concerning the advisory body's administrative needs and operating procedures.

C. Subcommittees:
   1. The purpose of a Subcommittee is to research and explore specific issues in-depth that come before the Committee.
   2. The goal of a Subcommittee is to provide a working forum for interaction and information exchange among experts and staff focusing on issues needing in-depth consideration.
   3. The Committee Chair shall designate Subcommittee members from the Committee with advice from the Committee.
   4. For those issues that are technical in nature, the Subcommittee Chair, with a majority vote from the Subcommittee members, may invite experts from other agencies or institutions, such as East Bay Regional Park District, Contra Costa Mosquito & Vector Control District, Contra Costa

Water District, the University of California Cooperative Extension, Pesticide Applicators Professional Association, Association of Applied IPM Ecologists, and/or Pest Control Operators of California and other appropriate representatives with technical expertise in a specific field to attend Subcommittee meetings to provide input and/or report to the Subcommittee.

5. Only the Subcommittee members will have voting rights to make final decisions regarding recommendations to send to the full Committee.

VI. Terms/Elections

A. Committee:

1. The terms for ex-officio (see III.A.1.[i]-[iv]) and UC seats (III.A.3) do not expire. The terms for representatives of other County advisory bodies (III.A.2.[i]-[ii]) shall align with the term expiration of their respective appointment to the Sustainability Commission or Fish and Wildlife Committee. All other members (III.A.2.[iii]-[iv]) shall serve for a term of four (4) calendar years. Any vacancies during the term of the member shall be filled for the remainder of that term. Members may serve more than one (1) term if reappointed.
2. The Committee shall elect its officers every two (2) years, at the first meeting of each even numbered calendar year. Officers shall be elected by a simple majority of those present.
3. New officers shall assume their duties immediately after the election.
4. Officers shall serve for a term of two (2) years. Any vacancies during the term of the officer shall be filled for the remainder of that two (2) calendar year term. Officers may serve more than one (1) two-year term if re-elected.
5. Should an officer resign, the vacancy will be filled by election at the next regular meeting.
6. Members with two (2) absences in a calendar year may be recommended by the Committee for removal from membership to the Board of Supervisors.
7. Committee vacancies will be filled from the Local Appointments List pursuant to the Maddy Local Appointive List Act of 1975 (Government Code section 54970, et seq.). (Note: See Resolution No. 2020/1 III.G for additional processes regarding vacancies.)

B. Subcommittees:

1. The Committee Chair selects Subcommittee members.
2. Subcommittee members recommend a Subcommittee chair to the Committee Chair, if needed.

VII. Duties of the Committee and Subcommittees

A. The general duties of the Committee shall include:

1. Supporting County Departments to create, promote, implement, and periodically evaluate IPM plans, programs, strategies, and policies specific to their operational needs and consistent with the County IPM Policy;
2. Recommending policies;
3. Providing input on the work priorities of the IPM Coordinator;
4. Monitoring pest management activities of all applicable County Departments;
5. Forming Subcommittees to assist in the work of the Committee as deemed necessary by the Committee;
6. Promoting ongoing and expanded cross training among departments on IPM issues;
7. Promoting availability, public awareness, and public input into written county pest management programs, protocols, and records;
8. Helping create public awareness of IPM and promote public education on IPM techniques; and
9. Providing an ongoing forum for consensus and resolution of IPM issues.

B. The general duties of the Subcommittees shall include:

1. Researching and discussing matters requiring in depth consideration; and
2. Making specific recommendations to the Committee as appropriate.

VIII. Meetings/Voting

A. The Committee shall agree on a meeting schedule during the first meeting of the calendar year. The first meeting of the calendar year shall be held on the third Thursday of January from 10:00 a.m. to 12:00 p.m.
B. All meetings of the Committee shall be open to the public and all interested persons shall be permitted to attend meetings. Time shall be set aside for limited public comment on items not on the posted agenda.
C. A notice of the regular meeting, with an attached agenda, shall be posted in a public notice area not less than ninety-six (96) hours prior to the meeting, pursuant to the Brown Act and the Better Government Ordinance.
D. "Quorum" is defined as a majority of all seats on the Committee, whether vacant or filled.
E. A quorum of the total membership (at least 6 members) must be present in order to hold a meeting. In the absence of a quorum, no formal action shall be taken except to adjourn the meeting to a subsequent date.
F. Voting at Meetings
    1. A quorum must be present before any vote on matters before the Committee can take place. Passage of a matter requires approval by a simple majority of the members present, except on matters involving policy recommendations to the Board of Supervisors.
    2. Passage of matters involving policy recommendations to the Board of Supervisors requires approval by a number of affirmative votes equal to or greater than the total quorum of the body (at least 6 members).

IX. Bylaws/Amendments

These bylaws will govern the membership, organization, and meetings of the Committee. These bylaws may be amended by majority vote at any regular Committee meeting, a quorum being present, with prior notice to the membership. Changes to bylaws shall not be operative until they have been approved by the Board of Supervisors.

X. Annual Objectives

The Committee shall review and adopt annual objectives at the first meeting of the calendar year.

XI. Reports to the Board of Supervisors

The Committee shall submit a status report on the activities of the Committee as directed, but no less frequently than annually, to the Transportation, Water & Infrastructure Committee of the Board of Supervisors. In addition, the Committee shall submit an annual report to the County Board of Supervisors in accordance with Resolution No. 2020/1.

XII. Committee Records

Records of the Committee shall be housed at the office of the IPM Coordinator. Meeting agendas and minutes shall be posted online on the Contra Costa County website.

CONTRA COSTA COUNTY PESTICIDE USE POSTING AND NOTIFICATION POLICY

General Provisions

This policy applies only to land and facilities owned by—AND under the control of— the County of Contra Costa.

Any County Department that uses or authorizes the use of a pesticide shall comply with the following posting and notification procedures:

- Signs shall be posted at least three (3) days before application of the pesticide and remain posted at least four (4) days after application. In specific situations/locations, permanent signs may also be used. See provisions below under "Permanent Signs".
- Application information shall be posted on the County website's pesticide posting page at least three (3) days before the application. If the application is postponed or changed, information on the website must be updated.
- If treatment is in an enclosed area, signs shall be posted at all major public and employee entry points.
- If treatment is in an open area, signs shall be posted at highly visible location(s).
- If treatment is on the property of an adult or juvenile detention facility where posting placement is limited, the chief medical officer at that facility must be notified annually by the IPM Coordinator of pesticides that may be used during the year.
- If rodenticides are used in bait stations for rats or mice, bait stations shall be posted at eye level on the wall or other structure above the bait station.
- Exceptions to these provisions are listed below under "Exemptions".

Contents of Signs

The signs shall be of a standardized design, easily recognizable by the public and County employees and shall contain the following information:

1. Name of pesticide product
2. Active ingredient(s) in the product
3. United States Environmental Protection Agency (USEPA) or California State registration number
4. Target pest
5. Acute health hazard warning (from the label's precautionary statement)
6. A check box indicating whether the product is on the Proposition 65 list and the following text: "Chemicals known to the state of California to cause cancer, birth defects or reproductive harm."
7. Area to be treated
8. Method of treatment
9. Date(s) of anticipated use; a window of time for anticipated use is acceptable
10. Date of re-entry for staff and the public to the treated area, if applicable
11. Date application is completed
12. Name and contact number of County Department responsible for the application
13. IPM website address for more information
14. IPM Coordinator name and contact information
15. National Pesticide Information Center contact information
16. A web address AND quick response (QR) code linking to the County website's pesticide posting page
17. A disclaimer saying, "Direct exposure to certain pesticides may cause acute or chronic health effects on humans and animals."

Exemptions

Departments shall *not* be required to post signs in accordance with the provisions above

1. In roadway rights-of-way
2. On airport property specifically regarding vegetation management
3. In other areas where the general public has not been granted access for use for recreation or pedestrian purposes. Recreation is defined as any activity where significant physical contact with the treated area is likely to occur.

   Note: In the case of numbers 1 or 3, each department that uses pesticides in such locations shall provide a

public access telephone number for information about pesticide applications. The public access telephone number shall be posted in a prominent location at the department's main office building. Information provided to callers shall include all items listed under "Contents of Signs", above.

4. In or around County-owned buildings, if the pesticide is on a list agreed to by the IPM Coordinator and is posted in accordance with provisions under "Permanent Signs" below.
5. In facilities subject to *The Healthy Schools Act (HSA)*. Posting requirements in such facilities will be in accordance with HSA laws and regulations as applicable. Where feasible, every effort should be made to post in a manner consistent with both HSA parameters and this policy in and around facilities that house school or childcare programs. In the event of conflicting posting and notification requirements, HSA guidelines supersede those outlined in this policy.
6. When using antimicrobial pesticides such as sanitizers and disinfectants intended for use on objects or surfaces. These products are pesticides and must be used according to the label by trained personnel. Annual HSA training is required by all staff who use antimicrobial pesticides at facilities that house school or childcare programs.

Any pesticide granted an emergency exemption for public health emergencies or other urgent situations by the County IPM Coordinator shall not be required to be posted prior to treatment. However, all other requirements for posting, as set forth above, shall be followed.

Use of any pesticide listed by the Organic Materials Research Institute or of any products on the FIFRA 25(b) list or in California Code of Regulations Section 6147 may be posted on the day of application. All other provisions listed above apply.

The County IPM Coordinator may, at his or her discretion, grant necessary exemptions to the posting requirements. Such exemptions will be documented with the reason for the exemption.

Permanent Signs

Each County building shall post a permanent sign in a prominent location with a list of pesticides that may be used in or around the structure without individual postings. Pesticides not on this list must be posted in accordance with the provisions above.

Any permanent sign shall contain the following information OR provide a link to the County website's pesticide posting page containing the following:

a. Name of the pesticide product
b. Active ingredient(s) in the product
c. Acute health hazard warning (from the label's precautionary statement)
d. Areas inside or outside the building where the pesticide might be used

Any permanent sign that does not contain items (a) through (d) above shall the include the following:

e. A web address <u>AND</u> quick response (QR) code that links to additional pesticide information for all products that may be used in and around the structure
f. A check box indicating whether any proposed product is on the Proposition 65 list along with the following text: "Chemicals known to the state of California to cause cancer, birth defects or reproductive harm."
g. Contact number of the County Department responsible for applications

In addition to the provisions above regarding permanent signs in and around buildings, the use of permanent signs is generally discouraged.

Other Uses of Permanent Signs

Permanent signs may be an effective public communication tool in certain locations. Some areas away from County-owned or leased buildings where pesticide applications are a regular, periodic occurrence and others such as parks and walkways that are specifically intended for public recreation or pedestrian purposes may be

appropriate. The following provisions apply:

1. At least three (3) days before any pesticide application, the application information must be posted on the County website's pesticide posting page. If the application is postponed or changed, information on the website must be updated.
2. On the actual day of the pesticide application prior to beginning application, a paper sign with the information listed above under "Contents of Signs" must be affixed to the permanent sign and remain for at least four (4) days.

NOTICE
OF PESTICIDE TREATMENT

Contra Costa County Public Works Facilities and Grounds

Contra Costa County has reduced its pesticide use by 88% since the County initiated its Integrated Pest Management (IPM) Program. The County's IPM Policy focuses on long-term pest prevention and combines the use of physical, horticultural, biological, and chemical methods to manage pests. When pesticides must be used, they are selected and applied in a manner that minimizes risks to human health, to beneficial and non-target organisms and to the environment.

PREVENTION FIRST ▶ **NON-CHEMICAL METHODS NEXT** ▶ **LEAST-HAZARDOUS PESTICIDES AS A LAST RESORT**

Considering the above, it has been decided that a pesticide treatment is necessary in this area.

Avoid area during active pesticide application.

Pesticide Trade Name:

Active Ingredient(s):

Acute (short-term) health hazard warning:

Proposition 65* listed: Yes ☐ No ☐
*Chemicals known to the state of California to cause cancer, birth defects or reproductive harm.

EPA Number:

Target Pest(s):

Area(s) to be Treated:

Date of Scheduled Application:

Method of Treatment:

Date/Time it is okay to re-enter (per EPA label):

Date Completed:

Direct exposure to certain pesticides may cause acute or chronic health effects on humans and animals.

For more information about this treatment, contact
Contra Costa County Public Works at 925-313-7052 or
Wade Finlinson, IPM Coordinator at wade.finlinson@cchealth.org

For more information on IPM: cchealth.org/ipm/notification.php
Scan the QR Code at right to be taken to the County IPM website.

For more information on pesticides, contact
National Pesticide Information Center at 800-858-7378 or
www.npic.orst.edu. Open 8:00 AM to noon, Monday-Friday.

County of Contra Costa

Integrated Pest Management Coordinator

CLASS CODE	VLSB	**SALARY**	$61.86 - $66.62 Hourly $10,723.04 - $11,547.54 Monthly $128,676.48 - $138,570.49 Annually
BARGAINING UNIT	Local 21 - Supervisory Management	**REVISION DATE**	April 18, 2019

Definition

Bargaining Unit: Local 21 - Supervisory Management

Under direction, implement and manage the County's Integrated Pest Management (IPM) Program. This position will work cooperatively with county departments and pest control vendors to implement IPM Policy on county owned and maintained property. Communicates with internal county staff, other government agencies, citizens' groups, and the general public on pest management issues and policies.

Distinguishing Characteristics

The incumbent in this class is assigned to the Hazardous Materials Division of the Health Services Department. And, under the direction of the Director of Hazardous Materials Programs, is responsible for the implementation of the County Integrated Pest Management Policy.

Minimum Qualifications

License Required: Possession of a valid California Motor Vehicle Operator License is required for incumbents appointed to this position. Out of state Motor Vehicle Operator's License may be accepted for up to six (6) months.

Education: Possession of a Master's degree in pest management, plant protection, agricultural or biological sciences, or closely related field.

Experience: Three (3) years of full-time or its equivalent experience in the field of landscape and/or structural pest management.

Substitution: Possession of a Bachelor's degree in one of the aforementioned areas and two (2) additional years of qualifying experience may be substituted for the required Master's degree.

Knowledge, Skills, and Abilities

Knowledge of:

- Theory and practice of integrated pest management
- The elements of an effective IPM policy
- Effective pest control measures including prevention, and mechanical, cultural, biological and chemical controls
- Components of a monitoring program for pests
- Field test criteria to evaluate the efficacy of varied pest management techniques and pesticide applications
- The signs and symptoms of plant stresses including pests, diseases, and abiotic responses
- Ecology of pest plant, vertebrae, and insect species
- Pesticide uses and toxicology
- Equipment, methods, tools, practices, and procedures utilized in the safe and effective management of pests
- Safe pesticide work practices, procedures, and applications, including federal, state and local regulations for pesticide use
- Computer software programs, including word processing, spreadsheets, databases and presentations

Ability to:

- Facilitate stakeholder groups for collaborative problem solving
- Formulate policy and develop and implement new strategies and procedures
- Examine and re-engineer operations and procedures, using IPM methods
- Plan, coordinate and train employees in the principles of IPM
- Research pest management alternatives and analyze the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems, including budgetary considerations
- Compile, track, and analyze data, and generate effective and well-written reports
- Work cooperatively with county administrators and staff, the Board of Supervisors, and members of the public
- Communicate effectively (both oral and written) with staff, elected officials, and members of the public
- Use pesticide toxicity databases to effectively assess toxicity characteristics
- Make transparent decisions and modify action plans based on data collected and results obtained

Typical Tasks

- Coordinates and staffs the IPM Advisory Committee and its subcommittees and performs work for the committees as needed
- Develops, coordinates and implements the County Integrated Pest Management (IPM) Policy through an effective county-wide IPM program
- Works with county departments to implement the IPM program county-wide
- Assists departments with the design and coordination of their IPM programs
- Assists departments by providing IPM training and technical assistance to staff
- Works with county departments and county-hired pest management service providers to create specific pest management plans
- Collects and analyzes pest management data from county departments
- Accurately identifies pests and sets pre-determined threshold levels
- Monitors and records pest problems

- Develops a recordkeeping system for county inventory of pesticide use, pest management cost, and pest management actions
- Researches and develops IPM economic evaluations with costs and environmental benefits for management of pests in a variety of settings, such as roadside, grounds and parks, and buildings
- Keeps current with the latest research and information on pest ecology and the most effective, least toxic pest management practices
- Coordinates with the County Facilities Manager to ensure implementation of pest prevention measures, such as structural repairs, and housekeeping and sanitation
- Ensures that contracts and contractor performance for pest management services are consistent with the County IPM Policy
- Assists departments to develop maintenance and design guidelines for new construction, remodeling, maintenance and landscaping that take pest prevention and pest management into consideration
- Evaluates established performance measures and overall program, reporting on progress towards meeting County IPM Policy and making recommendations for any necessary revisions to the County IPM Policy
- Serves as the primary contact regarding pest management issues for internal county staff and members of the community and press
- Educates employees and the general public about IPM and pesticide use
- Maintains a network of colleagues engaged in IPM throughout the Bay Area, California, and the nation; participates in and helps coordinate periodic meetings of Bay Area IPM coordinators
- Assists municipal staff in Contra Costa County with IPM issues

Spec History

Established: October 2008 OP
Revised: April 2019 LJ