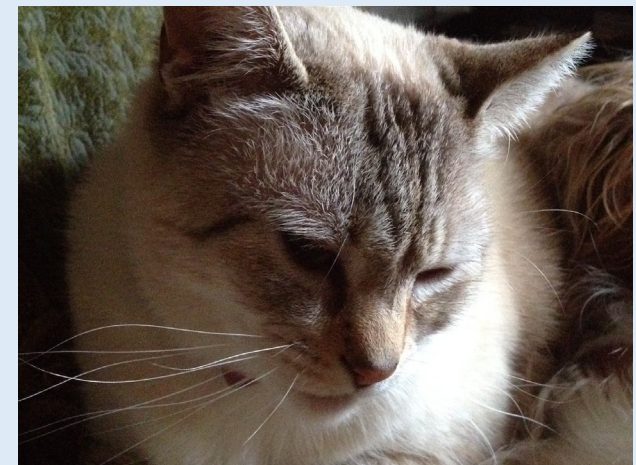


Pet Pesticides Update to BAPPG

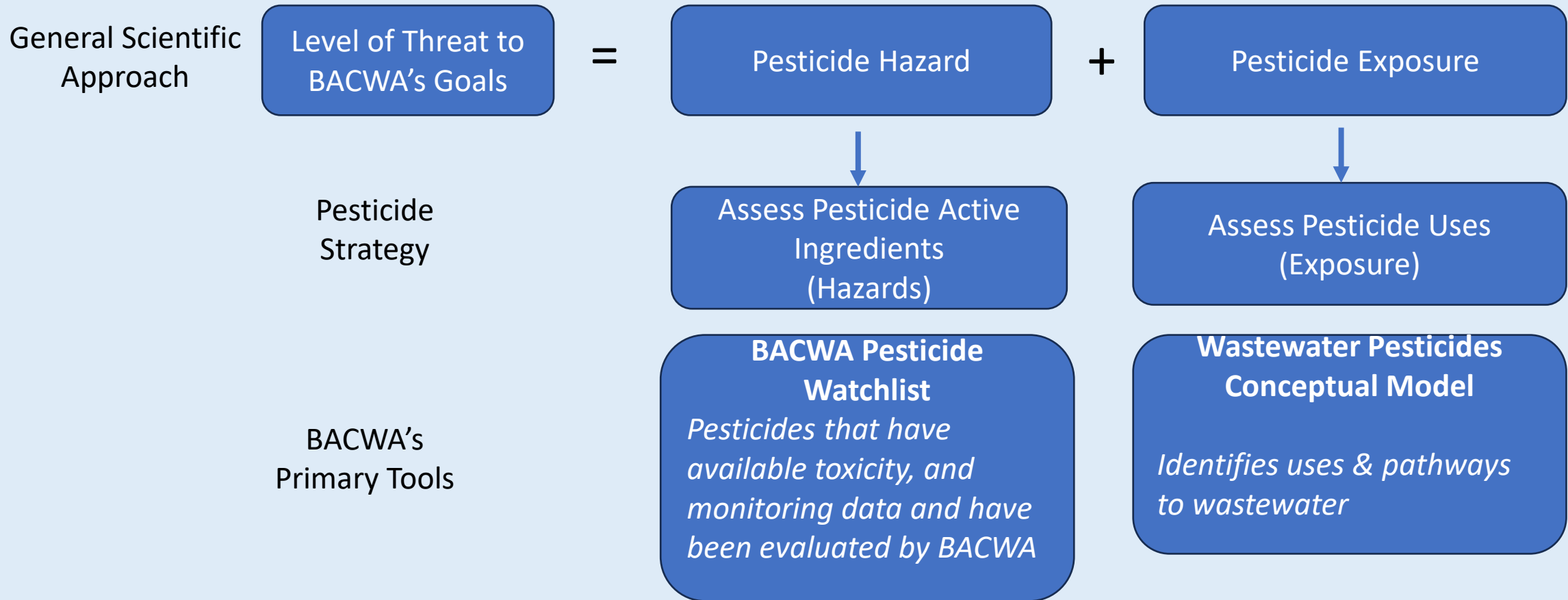
Stephanie Hughes, P.E.
August 2025



Pesticide Goals

1. Prevent effluent toxicity / Protect wastewater and recycled water quality
 - Protecting affordability and feasibility of reuse (potable and non-potable)
2. Prevent (Avoid) process interference / Ensure process operations
3. Prevent challenges with biosolids disposal / Protect biosolids reuse

Our science-based Pesticide Prioritization Process



Top Tier of the BACWA Pesticides Watch List

Priority	Basis for Priority Assignment	Pesticides
1 – High Concern	a) POTW effluent monitoring data exceeding benchmarks	Pyrethroids (21 chemicals) Fipronil Imidacloprid
	b) Known cause of process interference	
	c) Present in recycled water or biosolids at concentrations that limit use	
	d) SF Bay area receiving water 303(d) listing for the pesticide or degradate	Chlorpyrifos
	e) Identified by RMP as a High or Very High Concern	

Flea/tick
primary indoor
pathways

Only urban use is cockroach
control in sewers

2024 Flea/Tick Outreach Effort

- Communicated with veterinarians
 - Palo Alto continued shelter outreach
 - Obtained Continuing Education credit (nationally approved) for outreach presentation
 - National speaking engagements
 - Veterinary Information Network, February 2024
 - American Veterinary Medical Association, June 2024
 - University of Florida Shelter Vet training (online), Dec. 2024
 - National veterinary survey
 - 637 US veterinarians, including 73 California vets
- Drafted a multi-year BAPPG workplan

Workplan for 2025-2027

A. Update Colleagues

Educate wastewater colleagues on our outreach efforts to date, our findings from the veterinary community, and proposed next steps

B. Regulatory Communication

- Focus on several branches of DPR and the DTSC Safer Consumer Products Program
- Discuss opportunities and challenges based on findings from the veterinary community
- Seek opportunities to collaborate and/or pilot projects

C. Communicate with Veterinary Leadership

- Engage with the Veterinary Leadership – Bay Area and nationally
- Focus on One Health, sustainability, vet toxicologists and vet parasitologists

D. Continued BAPPG Outreach

- Replicate Palo Alto's municipal shelter outreach
- Reach out to local veterinary tech community colleges
- Media, ad, and online campaigns
- Reach out to Bay Area chains

Updating BACWA Members and Wastewater Colleagues

- NACWA December 4, 2024 Pretreatment Virtual Training – “Pesticides and Pets: A Practical Approach to Protecting POTWs and the Environment”
- BAPPG January 29, 2025 meeting
- CWEA P3S February 4, 2025 presentation
- BACWA Exec Committee, February 2025
- RWQCB Region 2 Wastewater NPDES staff, May 2025

Communication with Veterinary Leadership

- Met with AVMA members in June
 - Meeting again in October
- Met with veterinarians and other companion animal experts in the United Kingdom

BAPPG/AVMA June meeting attendees:

- **Dr. Maura Wade** – small animal vet in DC area; AVMA Committee on Environmental Issues (CEI)
- **Dr. Jane Sykes** – professor, UC Davis, and Science Chair and Sec/Treas for Companion Animal Infectious Diseases
- **Dr. Michael Lappin** – professor, Colorado State University (CSU)
- **Dr. Warren Hess** – CSU grad, AVMA staff, CEI and Aquatic Vet Med Committees
- **Dr. Puttappa Dodmane** – DPR toxicologist, CEI
- **Tina Keegan** – Palo Alto
- **Stephanie Hughes**

Insights from BAPPG/AVMA June meeting

- This is a relatively small community
- Continue to hear skepticism that spot ons are the source
 - Agriculture comes up (FYI - fipronil is only registered for potatoes in CA)
 - May need to clarify wastewater issues (toxicity; process interference; recycled water resource)
- Vets are horrified when they learn of these connections
 - Asking for more education
- They recognize that there are data gaps for other products
 - Fate of chewables
- Maybe we stay in our lane of WQ and let them figure out the solution from the zoonoses perspective?
 - Give them the WQ science

Imperial University, London

IMPERIAL

Grantham Institute – Climate Change and the Environment

Imperial Home / Grantham Institute – Climate Change and the Environment / Research / Parasiticides & Pollution

Parasiticides & Pollution: PREPP

**PREPP - Producing Rational
Evidence for Parasiticide
Prescription**



Dr Leon Barron

Chemist and Reader in
Analytical &
Environmental Sciences



Dr Tilly Collins

Ecologist and Senior
Fellow in Environmental
Policy



**Hamish Duncalf-
Youngson**

Research Postgraduate in
Environmental
Geochemistry at the
University of Nottingham



Dr Wendy Hein

Social Scientist:
Sustainability, Marketing
and Gender Research,
Birkbeck, University of
London



Dr Rose Perkins

Veterinary surgeon and
Research Postgraduate,
University of Sussex



Dr Andrew Prentis

Veterinary surgeon and
Grantham Institute
Visiting Fellow



Rhys Preston-Allan

Research Postgraduate in
Conservation Science &
Community Ecology



Professor Jeff Waage

Professor of International
Development, London
School of Hygiene and
Tropical Medicine

Discussions with UK animal professionals

- Due to Dr. Perkins studies of UK waterways, PREPP is having parallel discussions to ours
- Imperial PREPP Committee reviewing our website, latest PPT, outreach messages
- “One Health” is becoming a mantra in the veterinary community
 - One Health includes animal health, human health and environmental health



Contents lists available at [ScienceDirect](#)

One Health

journal homepage: www.elsevier.com/locate/onehlt



Control of companion animal parasites and impact on One Health

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Contents lists available at ScienceDirect

Veterinary Parasitology

journal homepage: www.elsevier.com/locate/vetpar



Antiparasitics against ectoparasites in small animals– important pharmaceutical substances or underestimated environmental hazards?

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Michael Leschnik^f 

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^f University Clinic for Small Animals, University of Veterinary Medicine Vienna, Veterinärplatz 1, Vienna A-1210, Austria

One Health for
flea and ticks is
risk-based

PROTECTING YOUR PET FROM PARASITES?




Always read the
product label and
leaflet before use


Questions?
Speak to your
vet team

Here's how to use treatments safely

Parasites such as fleas, ticks and worms can make your pet ill or uncomfortable. Some may also risk spreading disease to other animals or humans, so it's important to follow your vet's advice for treatment and prevention.

If not used carefully, the medicines which prevent and treat parasites may harm you, your pet, wildlife and the environment. Our tips help you use them safely.

Regulatory Agency Updates

DPR Surface Water Protection Program

- Joined the June Pesticide Workgroup meeting
- SWPP appreciate wastewater agencies engagement with their POTW monitoring
- Fipronil and imidacloprid (topicals) found in >90% of wastewater effluent samples:
 - FIPRONIL: The median effluent concentration was 2.3 times greater than the EPA's Aquatic Life Benchmark
 - IMIDACLOPRID: The median effluent concentration was 6.6 times greater than the EPA's ALB

DPR Sustainable Pest Management (new division)

- Along with CASQA, met the new lead, Sapna Thottathil
- Discussing possible funding opportunities for urban community engagement
- Preparing 2-page list of project concepts to further workshop
- Need to determine contracting mechanism
 - Seeking agencies with contracting experience with the State

BAPPG Bay Area Outreach



- Encouraging agencies to replicate Palo Alto's muni shelter outreach using BACWA-branded outreach
- Palo Alto and San Jose met in June; meeting again in September (also USD, SV & SM)
- While drafting a scope for possible DPR projects, the workgroup discussed a suite of next steps:
 - Identifying scientific data gaps
 - Economic and environmental impacts of alternatives
 - Avoiding regrettable substitutions
 - Community engagement / Alternatives assessment
 - Veterinary expertise
 - Current consumer use patterns
 - Community partners (pet store chain, groomers, shelters)

As we move forward:

- Continue veterinary communication
 - Clarifying POTW issues and why those are significant regardless of agri uses
 - Gather feedback as to barriers and opportunities of alternatives
- In consumer messages, consider whether we are ready to promote a risk-based approach to orals and topicals
 - Perhaps instead of or in addition to the “choose chewables” mantra

Questions and Discussion





Thank You for Your Attention!



Stephanie Hughes, P.E.
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408.499.9271

Extra slide: A risk-based approach to flea and tick control

Fleas	Ticks
<p>Thoroughly vacuum floors, upholstery, carpets, rugs, and under furniture. Wash pet bedding and other areas pets have access to, such as human bedding.</p> <p>When there is a evidence of flea infestation:</p> <ul style="list-style-type: none">•Vacuum more frequently; the vibration encourages cocooning adults to emerge from their protective pupa shell.•Use flea combs and flea traps•Crack-and-crevice sprays are preferable to foggers and carpet sprays•Consider a 24-hour OTC oral rather than topical•Speak to a vet about oral medications or prescription topical; consider only seasonal use	<p>During tick season or when there is a risk of ticks and associated diseases</p> <ul style="list-style-type: none">•Keep the leash short•Keep your dog on the trail, away from brush•If applicable, keep your dog's coat short during tick season•After each walk, thoroughly inspect your pet. Pay particular attention to the mouth, nose, eyes, ears (inside too), around tails and under the collar•Buy a tick remover and learn how to use it.•In your yard, control brush and tall grass to create a tick-free zone•Speak to a vet about oral medications or prescription topical; consider only seasonal use
Dissuade owners from washing their pets for at least 2 weeks after any treatment (oral or topical)	