A Link Between Consumer Flea and Tick Control and San Francisco Bay

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Organizations involved in this project

- Bay Area Pollution Prevention Group (55 regional agencies)
- City of Palo Alto
- San Francisco Estuary Institute
- San Francisco Dept of Environment
- San Francisco Public Utilities Commission
- TDC Environmental, LLC
Our Concerns

• *Pesticides from common flea control products are discharged into sewer systems.*
• *Pesticide concentrations discharged into SF Bay can exceed toxicity thresholds for aquatic invertebrates*
Pesticides of concern are those that exhibit aquatic toxicity and persist in the environment

- Bifenthrin
- Deltamethrin
- Fipronil *
- Imidacloprid *
- Indoxacarb
- Permethrin

* Uses of fipronil and imidacloprid are currently under review by the California Department of Pesticide Regulation due to possible health risks posed to adults and children.
Which indoor-use products contain pesticides of concern?

- Topicals
  - Collars
  - Spot treatments
- Shampoos or dusts
- House sprays and foggers
We have evidence that fipronil and imidacloprid pass through wastewater treatment to the Bay

Topical treatments (spot and collar) do not remain where applied

Researchers incorporated a fluorescent dye into the spot treatment to photograph the spread

Fipronil Washes Off Pets
Wash-off continues for at least 28 days

How Pet Treatments Travel to Sewer Systems and San Francisco Bay

1. Indoor pet flea control product
2. Washing of pets, hands, pet bedding, floors, carpets, and clothing
3. Transport to sanitary sewer system
4. Discharge to water body, recycled water, and/or biosolids
Summary of Our Concerns

• Active ingredients:
  • transport around the home
  • wash off (contrary to product labels)
  • observed in wastewater effluent and waterbodies
    – sometimes at concentrations toxic to sensitive aquatic species
The flea pyramid suggests that relying on on-pet treatments may not be most effective

AVMA messages

- Treating only your pet won’t eliminate the problem
- Reduce the flea population in your house by thoroughly cleaning your pet’s sleeping quarters and vacuuming floors and furniture
- Careful and regular vacuuming/cleaning of pet living areas helps remove and kill flea eggs, larvae, and pupae

American Veterinary Medical Association, "External Parasites" brochure from AVMA web site, last updated December 2009.
Draft Outreach Messages

**Most Important:** mechanical controls (vacuuming, bed washing)

**Avoid:** topical collars and spot products

**Avoid:** fipronil, indoxacarb, imidaclorpid, bifenthrin, deltamethrin, and permethrin

When appropriate, consider **oral medication**
We seek your partnership and support

• Help us focus these messages
• Help develop an integrated strategy easy for clients to understand
• To further discuss, please provide us with a business card or contact:

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