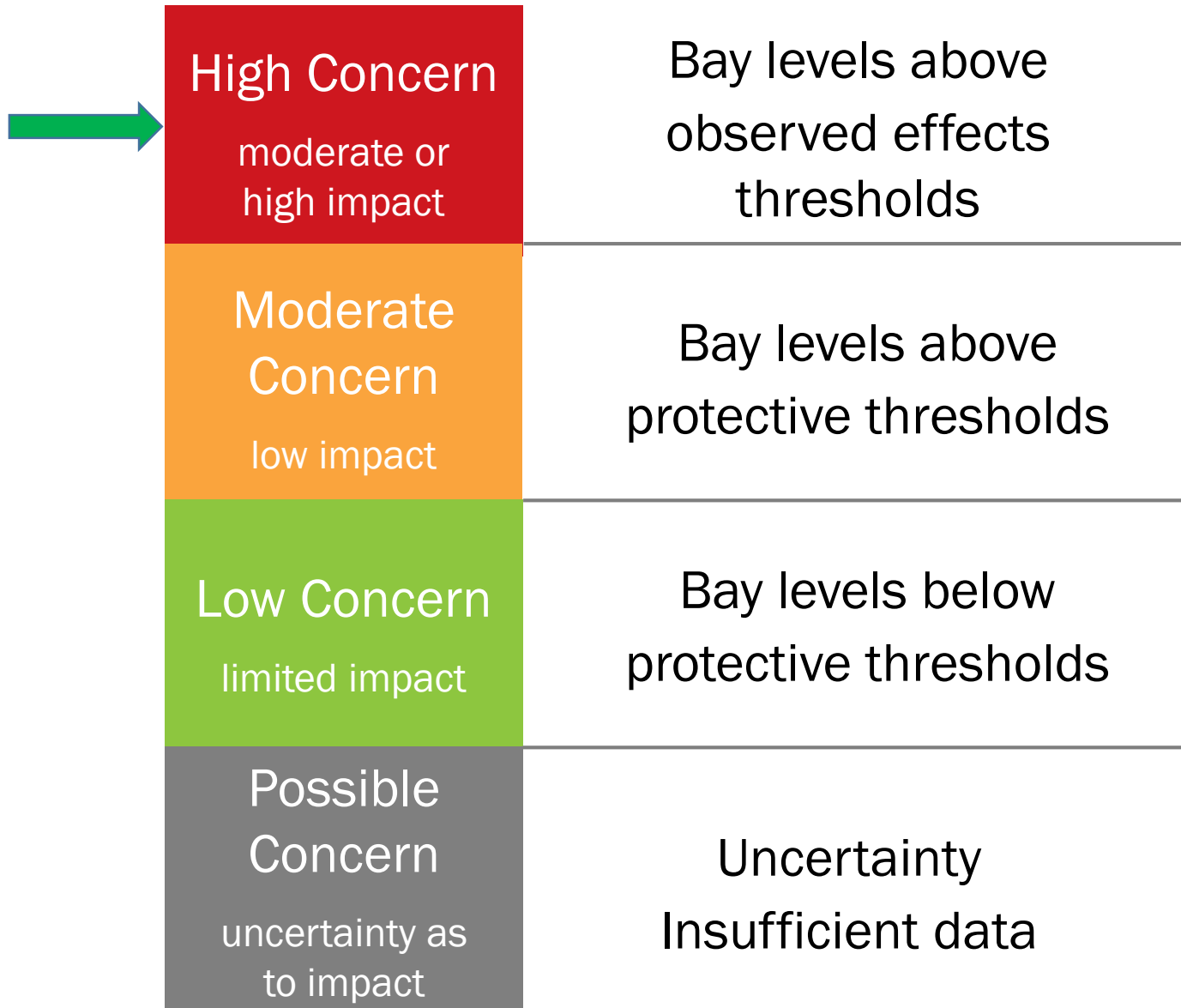




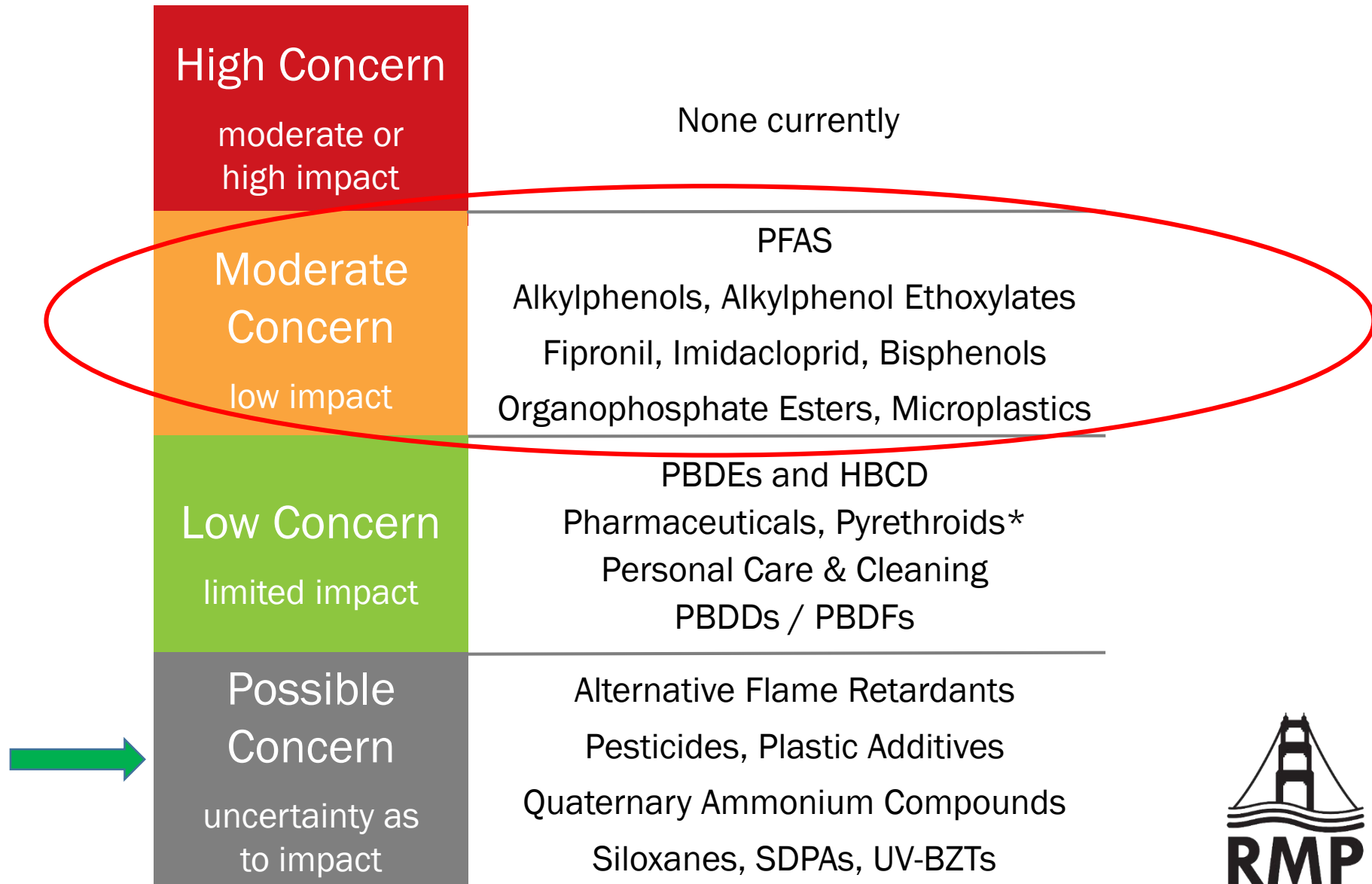
Contaminants of Emerging Concern in San Francisco Bay Update

Bay Area Pollution Prevention Group
Pollutant Prioritization Meeting
Diana Lin, PhD
August 3, 2022

Tiered risk-based framework



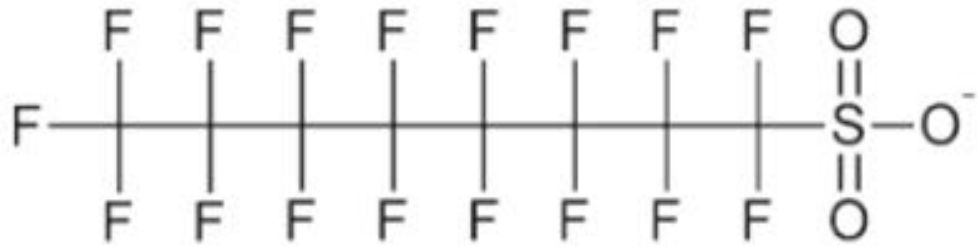
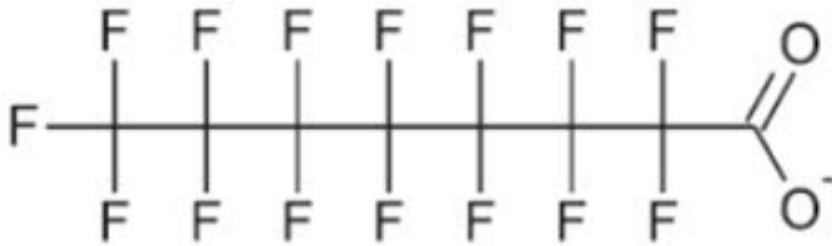
CECs in San Francisco Bay



Per- and Polyfluoroalkyl Substances (PFAS)

Moderate
Concern

low impact



PFAS in Bay



Stormwater



Fish



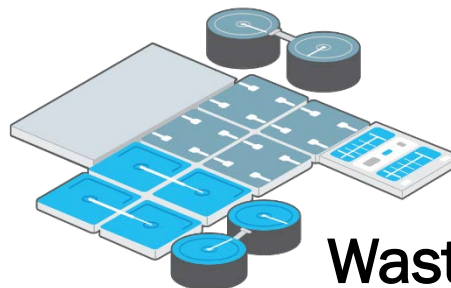
Water



Sediment



Mammals



Wastewater



BACWA
BAY AREA
CLEAN WATER
AGENCIES

PFAS Management

- **Bans/restrictions on PFAS in certain products**



- **Avoid use of PFAS containing products**
 - Resources: Green Science Policy Institute, City of San Francisco
- **Legislation requiring PFAS Disclosure (AB 2247)**

Plastic Ingredients: Organophosphate Esters (OPEs) and Bisphenols

Moderate
Concern
low impact

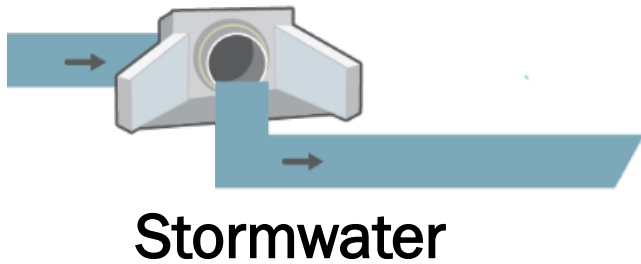
OPEs



Bisphenols



OPEs and Bisphenols in the Bay



Management of OPEs and Bisphenols

OPEs



Bisphenols

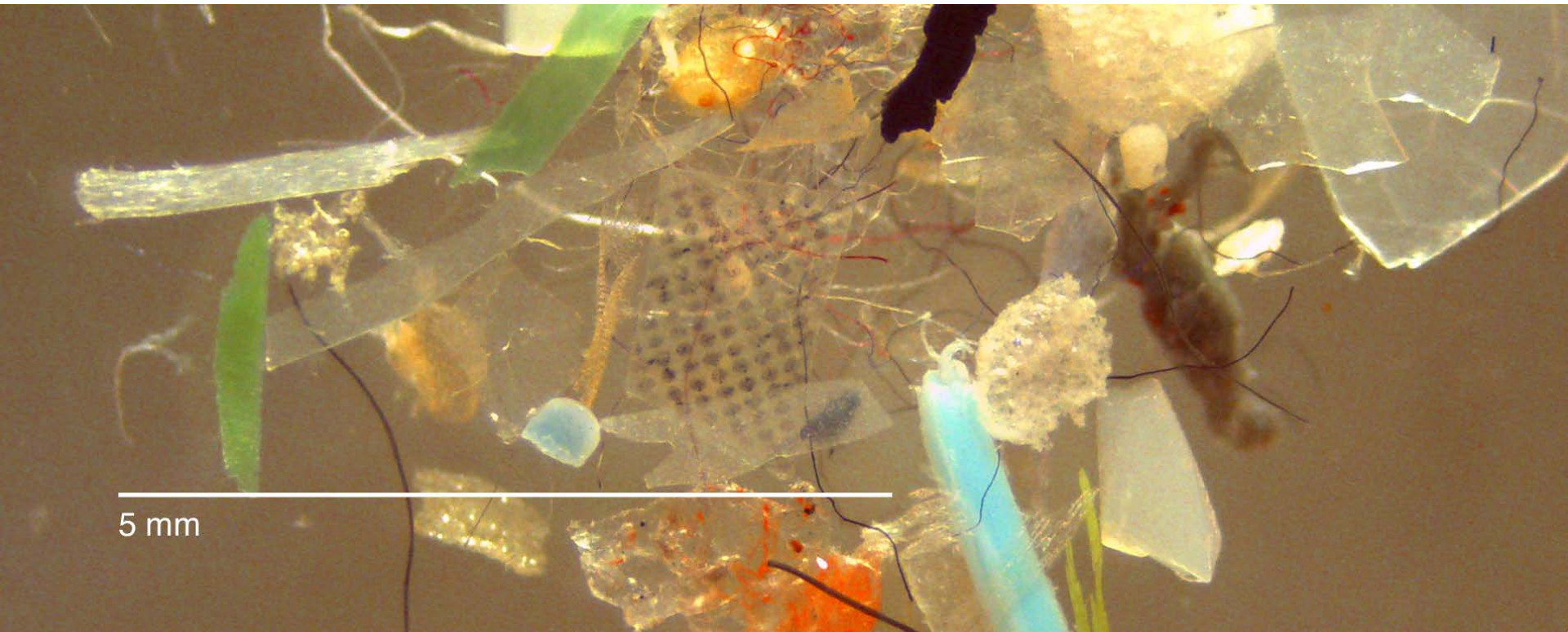


Microplastics

Moderate
Concern

low impact

Particles of plastic smaller than **5 mm**



5 mm

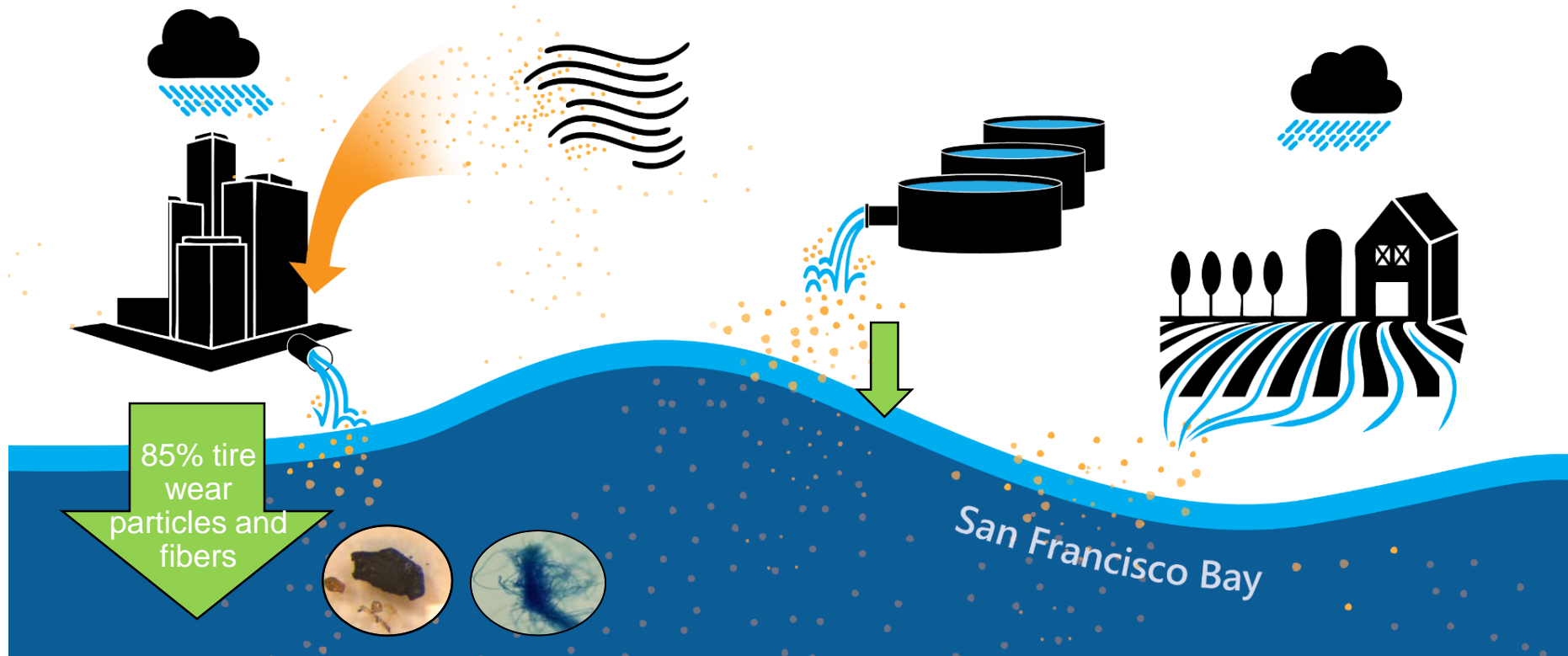
Tire-wear Particles and Fibers

URBAN
RUNOFF

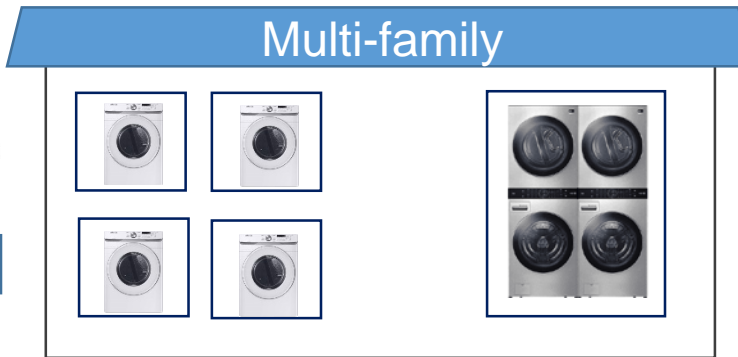
ATMOSPHERIC
DEPOSITION

WASTEWATER

AGRICULTURAL
RUNOFF



Investigating Dryers as Source of Fibers



Tires Ingredient – 6PPD-quinone



pubs.acs.org/journal/estlcu



Letter

Acute Toxicity of the Tire Rubber-Derived Chemical 6PPD-quinone to Four Fishes of Commercial, Cultural, and Ecological Importance

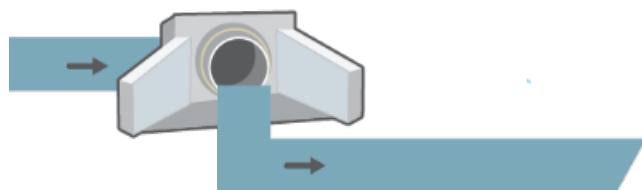
Markus Brinkmann, David Montgomery, Summer Selinger, Justin G. P. Miller, Eric Stock, Alper James Alcaraz, Jonathan K. Challis, Lynn Weber, David Janz, Markus Hecker,* and Steve Wiseman



Cite This: <https://doi.org/10.1021/acs.estlett.2c00050>



Read Online



Stormwater



Water



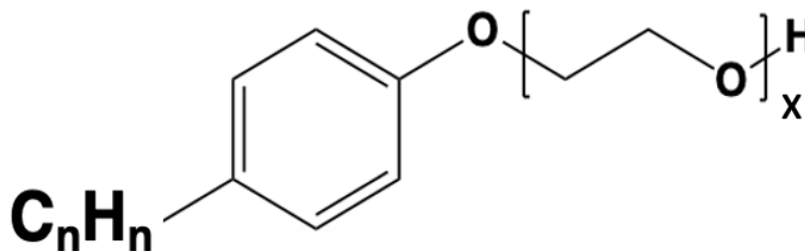
Department of
Toxic Substances
Control

Alkylphenol Ethoxylates

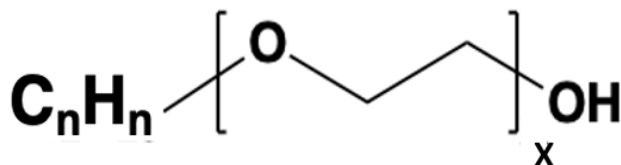
Moderate
Concern

low impact

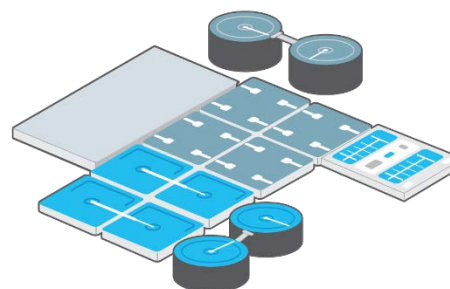
Alkylphenol ethoxylate



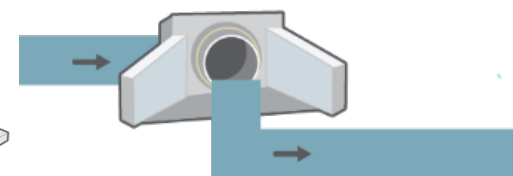
Alcohol ethoxylate



Alkylphenol Ethoxylates in Bay



Wastewater



Stormwater

Duke
UNIVERSITY



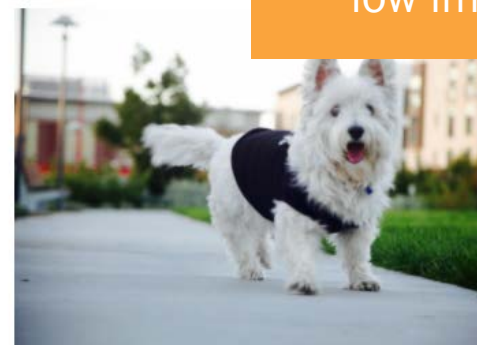
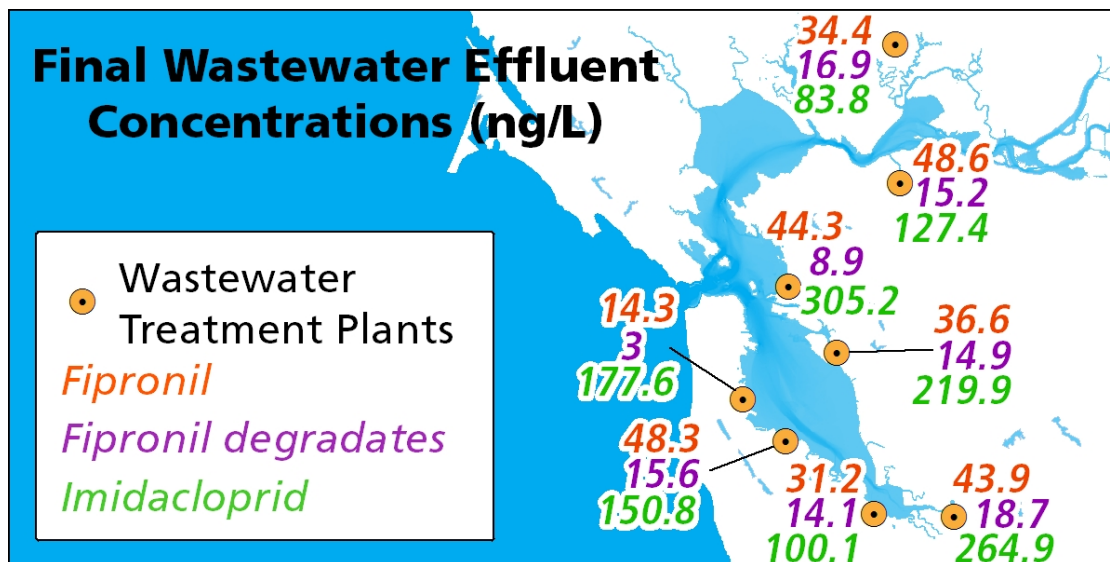
Department of
Toxic Substances
Control



Fipronil and Imidacloprid

Moderate
Concern

low impact



RECONSIDER FLEA AND TICK CONTROL OPTIONS FOR YOUR PETS

Products commonly used to treat fleas and ticks contain toxic pesticides that can harm your pet.



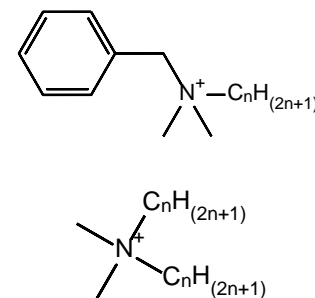
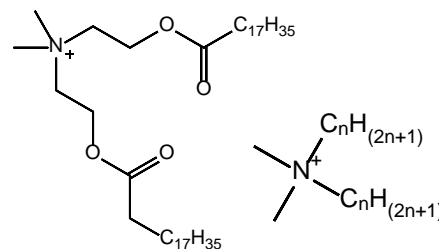
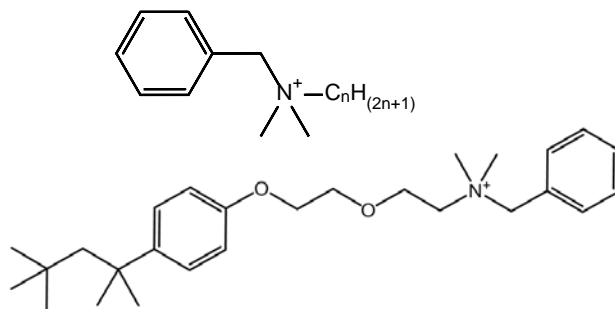
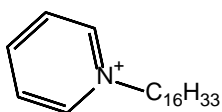
RESOURCES FOR VETERINARIANS

Professionals are encouraged to recommend oral medications to control fleas and ticks, and to discourage the use of topical treatments.

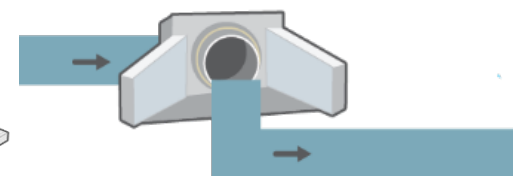
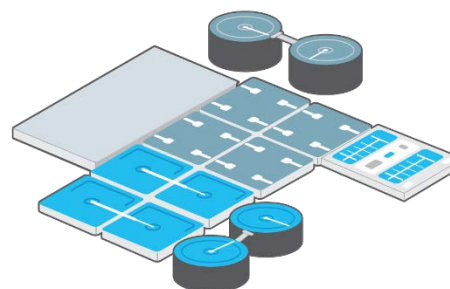
New Possible Concern: Quaternary Ammonium Compounds (QACs)

Possible
Concern

uncertainty as
to impact



QACs in Bay: Current Monitoring



- San Francisco has safer disinfectant guide to avoid QACs:
 - <https://www.sfapproved.org/safer-disinfectants-covid-19>



Upcoming: Sunscreen Chemicals

- Oxybenzone, avobenzone, octisalate and degradation products
- Environmental Working Group has sunscreen selection guide: <https://www.ewg.org/sunscreen/>





Thank you

www.sfei.org/CECs

diana@sfei.org