

BAPPG/BACWA Wastewater Pesticides Watch List

Currently registered pesticides that may occur in wastewater

Priority	Basis for Priority Assignment	Pesticides	
1 – High Concern	a) POTW effluent monitoring data ¹ exceeding benchmarks 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 e) Identified by Regional Monitoring Program (RMP) as a High or Very High Concern	Pyrethroids [#] (21 chemicals ²) Fipronil [#] * Imidacloprid [#] Chlorpyrifos	
2 – Moderate Concern	a) Pesticide contains a Clean Water Act Priority Pollutant b) Possible cause of process interference c) SF Bay area receiving water 303(d) listing for the pesticide, degradate or contaminant that also has non-pesticide sources d) Identified by RMP as a Moderate Concern	Carbendazim Copper pesticides ⁺ Silver pesticides ⁺ Zinc pesticides ⁺ Quaternary Ammonium Compounds (QACs) ⁺³	
3 – Possible Concern	Monitoring data ¹ approaching <u>or</u> wastewater discharge modeling predicting: a) effluent or receiving water benchmark exceedances b) process interference c) limitations on use of recycled water or biosolids d) Potential for aquatic toxicity with significant down-the-drain pathways	Ammonium bromide Bronopol (Bioban) Cetylpyridinium Chloride Chlorhexidine Chlorinated isocyanurates ⁺ Clothianidin 2,2-Dibromo-3-Nitrilopropionamide (DBNPA) Dichlobenil [^] Dinotefuran [#] Diquat dibromide [^] Folpet Halohydantoin ⁺ Indoxacarb [*] IPBC Isothiazolinones ⁶ Malathion (lice)	Metam sodium [^] Methoprene [#] Nanopesticides (all) 10,10 oxybisphenoxarsine (OBPA) o-Benzyl-p-chlorophenol (OBPC) Othilinine Organic Esters of Phosphoric Acid (OEPA) o-Phenyl phenol Polyhexamethylenebiguanidine (PHMB) ⁺ Potassium Peroxymonosulfate ⁺⁴ Pyriproxyfen ^{##} Spinetoram [#] Tetrachlorvinphos [#] (TCVP) Triclosan Tri-n Butyl Tetradecyl Phosphonium Chloride (TTPC)
Pending	New pesticides that could threaten wastewater depending on uses approved and market volumes for existing minor indoor uses	Abamectin Broflanilide* Chlorfenapyr* Chlorantraniliprole Cyantraniliprole Cyclaniliprole	Isocycloseram* Neonicotinoids not listed above ⁵ Novaluron* Propiconazole SI-183 (1R-Phenothrin)
No Concern	No tracking trigger	Most of the 1,000 existing pesticides	
Unknown	Lack of information. No systematic screening has ever been completed for urban pesticides.	Unknown. EPA will be reviewing many antimicrobials and fungicides, so more data will be forthcoming.	

¹Based on SF Bay Area POTW monitoring data or California Department of Pesticides Regulation statewide wastewater data (which is anonymized and not restricted to the SF Bay Area)

²Pyrethroids = Allethrin*, Bifenthrin*, Cyfluthrin*, Cyhalothrin*, Cypermethrin, Cyphenothrin, Deltamethrin, Esfenvalerate, Etofenprox, Flumethrin*, Imiprothrin, Metofluthrin*, Momfluorothrin*, Permethrin, Prallethrin, Resmethrin, Sumethrin [d-Phenothrin], Tau-Fluvalinate*, Tefluthrin*, Tetramethrin, Tralomethrin

³ QACs used indoors include ADBAC, BAC, ATMAC, DADMAC, DDAC, EBAC, APyrC, and others. Additional QACs are listed on the pool/spa pesticide table below.

⁴ Included under EPA registration review name for Hypochlorous Acid; EPA may determine that it is an adjuvant subject only to CA registration.

⁵ Neonicotinoids = Acetamiprid, Clothianidin, Dinotefuran, Imidacloprid, Nitenpyram, Thiacloprid, Thiamethoxam

⁶ Isothiazolinones include 2-methyl-4-isothiazolin-3-one (MIT), 5-chloro-2-methyl-4-isothiazolin-3-one (CMIT), 1,2-Benzisothiazolin-3-one (BIT), 4,5-dichloro-2-octyl-3(2H)-isothiazolone (DCOIT), 1,2-Benzisothiazol-3(2H)-one,2-butyl (BBIT), and 2-n-Octyl-4-isothiazoline-3-one (OIT).

[#]Has pet flea/tick use (Full table of pet parasite control chemicals below)

+Has pool and/or hot tub use in California (Full table of pool and hot tub pesticides below)

^Has root control use in California

*Contains Perfluoroalkyl and polyfluoroalkyl substances or "PFAS", a class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom. (Based on the definition set by the Organisation for Economic Co-operation and Development (OECD). The state of Minnesota compiled a list of PFAS pesticides here: <https://www.mda.state.mn.us/environment-sustainability/pfas-pesticide-active-inert-ingredients> Full OECD PFAS definition here: https://www.oecd.org/content/dam/oecd/en/publications/reports/2021/07/reconciling-terminology-of-the-universe-of-per-and-polyfluoroalkyl-substances_a7fbcba8/e458e796-en.pdf

BAPPG/BACWA Watch List of Parasite Control Chemicals for Pets

Priority	Active Ingredient	# Registered Products in California ¹	
1 - High Concern	Fipronil	52 spots; 2 sprays	
	Imidacloprid	4 collars; 44 spots (plus FDA oral & spot)	
	Pyrethroids	Bifenthrin	1 shampoo
		Cyphenothrin	1 spot
		Deltamethrin	17 collars
		Etofenprox	17 spots, 4 sprays
		Flumethrin	4 collars
		Permethrin	1 dip; 9 shampoos; 40 spots; 3 sprays
Phenothrin	3 shampoos		
3 - Possible Concern	Dinotefuran	12 spots	
	Fluralaner ³	Not Applicable ² (FDA oral, spot, inject)	
	Moxidectin ³	Not Applicable ² (FDA oral)	
	Pyriproxyfen (Nylar)	5 collars; 9 shampoos; 68 spots; 5 sprays	
	Selamectin ³	Not Applicable ² (FDA spot)	
	S-Methoprene	15 collars; 7 shampoos; 55 spots; 9 sprays	
	Spinatoram	3 spots	
Tetrachlorvinphos	22 collars; 4 sprays		
Low Concern	Pyrethrins	2 dips; 14 ear drops; 21 shampoos; 9 sprays; 1 wipe	
No concern	Limonene	1 shampoo	
	N-Octyl bicycloheptene dicarboximide	1 dip; 8 shampoos; 5 spots; 8 sprays; 1 wipe; 1 ear drop	
	Piperonyl butoxide	3 dips; 15 ear drops; 28 shampoos; 5 spots; 8 sprays; 1 wipe	
	Sodium diisooctyl sulfosuccinate	1 shampoo	
	Undecylenic acid	1 shampoo	
Unknown	Afoxolaner	Not Applicable ² (FDA oral)	
	Lotilaner	Not Applicable ² (FDA oral)	
	Lufenuron	Not Applicable ² (FDA oral & inject)	
	Nitenpyram	Not Applicable ² (FDA oral)	
	Pyrantel	Not Applicable ² (FDA oral)	
	Sarolaner	Not Applicable ² (FDA oral & spot)	
	Spinosad	Not Applicable ² (FDA oral)	

¹ Email communication from A. Main to S. Hughes, California Department of Pesticide Regulation, December 16, 2025.

² Veterinary drugs regulated by the US Food and Drug Administration (FDA) are outside the jurisdiction of the California Department of Pesticide Regulation.

³The University of York completed predictive modeling in 2023 that suggested possible aquatic toxicity to receiving waters for three FDA-regulated pharmaceuticals. Monitoring data to assess the accuracy of predictive modeling was not available.

BAPPG/BACWA Watch List of Pool and Hot Tub Pesticides

Priority	Pool Pesticide Group	Pool Pesticide	
1 - High Concern	none		
2 – Moderate Concern	Copper	Copper Sulfate (Pentahydrate) Copper Ethanolamine Complexes Mixed Copper Triethanolamine Complex	Copper Citrate Copper
	Silver	Metallic Silver Silver Chloride	Silver Iodide, Colloidal
	Zinc	Zinc Sulfate Monohydrate	
	Quaternary Ammonium Compounds (QACs; also called Quats/ADBAC, DDAC, and EBAC family chemicals)	-Alkyl (50%C14, 40%C12, 10%C16) Dimethylbenzyl Ammonium Chloride -Alkyl (60%C14, 30%C16, 5%C12, 5%C18) Dimethylbenzyl Ammonium -N-Dialkyl (60%C14, 30%C16, 5%C12, 5%C18) Methyl Benzyl Ammonium Chloride -Alkyl (68%C12, 32%C14) Dimethylethylbenzyl Ammonium Chloride -Didecyl Dimethyl Ammonium Chloride Alkyl (58%C14, 28%C16, 14%C12) Dimethylbenzyl Ammonium Chloride -Alkyl (67%C12, 25%C14, 7%C16, 1%C8,C10,C18) Dimethylbenzyl Ammonium Chloride	-Alkyl (95%C14, 3%C12, 2%C16) Dimethyl Benzyl Ammonium Chloride -Alkyl (50%C14, 40%C12, 10%C16) Dimethylbenzyl Ammonium Saccharinate -Alkyl (61%C12,23%C14,11%C16,2.5%C8 & C10,2.5%C18) Dimethyl Benzyl Ammonium Chloride -Alkyl (67%C12, 25%C14, 7%C16, 1%C18) Dimethylbenzyl Ammonium Chloride
3 - Possible Concern	Chlorinated isocyanurates	Sodium Dichloro-S-Triazinetrione	Sodium Dichloro-S-Triazinetrione Dihydrate
	Halohydantoins	Trichloro-S-Triazinetrione 1-Bromo-3-Chloro-5,5-Dimethyl Hydantoin 1,3-Dichloro-5,5-Dimethylhydantoin	1,3-Dichloro-5-Ethyl-5-Methylhydantoin 1,3-Dibromo-5,5-Dimethylhydantoin Imidazolidinedione
	Potassium Peroxymonosulfate	Potassium Peroxymonosulfate	Potassium Peroxymonosulfate Sulfate
	Polyhexamethylene Biguanidine (PHMB)		
	Pyriproxyfen		
Unknown	Hypochlorites	Calcium Hypochlorite Sodium Hypochlorite	Potassium Hypochlorite Lithium Hypochlorite
	Busan-77 [a polyquat also known as Polixetonium Chloride or Poly(Oxyethylene) (Dimethylimino) Ethylene Dichloride]		
	Sodium Bromide (EPA “Inorganic halides”)		
	Chlorine		
	Sodium Tetraborate (Pentahydrate) (EPA “Boric Acid/Sodium Salts”)		
	10,10 oxybisphenoxarsine (OBPA): used in coating interiors of pools and hot tubs		