

San Francisco Reduced-Risk Pesticide List
for City-owned properties

Green shading = product added
Yellow shading = changes to listing
Pink shading = product removed

Product Name	Type	EPA #/ SF code*	Ingredients	Pesticide Hazard Tier**	Use Limitation Type***	Use Limitations Other uses require an exemption	Changes for 2020	Status
GENERAL USE PRODUCTS								
Actinovate products	Fungicide	73314-1, 524-641	<i>Streptomyces lydicus</i> WYEC 108	Least hazardous (Tier III)	Least Limited		Updated EPA number	CHANGED
Advance 360A Dual Choice Ant Bait Stations	Insecticide	499-496	abamectin B1, 0.011%	Most hazardous (Tier I)	Least limited			
Advion Ant Gel	Insecticide	100-1498	Indoxacarb 0.05%	Least hazardous (Tier III)	Least Limited		Updated EPA number and product name	CHANGED
Advion Cockroach Bait Arena	Insecticide	100-1486	Indoxacarb 0.5%	Least hazardous (Tier III)	Least Limited		Updated EPA number and product name	CHANGED
Advion Evolution Cockroach Gel Bait	Insecticide	100-1484	Indoxacarb 0.6%	Least hazardous (Tier III)	Least Limited		Updated EPA number and product name	CHANGED
Agri-Fos Systemic Fungicide	Fungicide	71962-1	Potassium phosphite 45.8%	Least hazardous (Tier III)	Least Limited	For use on high-value <i>Coast Live Oaks</i> (<i>Quercus agrifolia</i>) susceptible to <i>Phytophthora</i> or in experiments with <i>Phytophthora</i> control, or on high-value Monterey Pines (<i>Pinus radiata</i>) susceptible to <i>Fusarium subglutinans</i> . In accordance with label restrictions for use in California, injection and basal bark spray is the only application method permitted.		
Alligare Rotary 2 SL	Herbicide	81927-6	Imazapyr, isopropylamine salt 28%	More hazardous (Tier II)	More Limited	Subject to "Restrictions on herbicides." Alternative to Tier I herbicides. Use caution with adjoining desirable vegetation.	REMOVED - other imazapyr products preferred	REMOVED
Ant and crawling insect baits - borate based - self contained, gel, liquid	Insecticide	Various	Boric acid, sodium tetraborate decahydrate, or other borate salts	Most hazardous (Tier I)	Least Limited		CHANGED - Added "and crawling insect" to product name. Safer alternative for irrigation control boxes.	CHANGED
Aquatrols Capsil	Adjuvant	9037- 50003	Polyether Modified Polysiloxane, 20%	Least hazardous (Tier III)	Least limited	Alternative surfactant to CMR product	Updated product name	CHANGED
Avenger Weed Killer Concentrate	Herbicide	92967-1	d-Limonene 60%	Least hazardous (Tier III)	More Limited	Subject to "Restrictions on herbicides." Burndown herbicide. Not for use near water.	Updated EPA number and product name	CHANGED
Axxe	Herbicide	70299-23	Nonanoic acid, 61%	More hazardous (Tier II)	More Limited	Subject to "Restrictions on herbicides." Burndown herbicide.		

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Azatrol EC Insecticide	Insecticide	2217-836	Azadirachtin (2328) 1.2%	More hazardous (Tier II)	More Limited	For greenhouses and established plants for interiorscapes. Do not apply on flowering plants when bees are active. USE UP EXISTING STOCKS - NO LONGER AVAILABLE.		
Bacillus thuringiensis insecticides (excluding mosquito control)	Insecticide	Various	<i>Bacillus thuringiensis</i> (various subsp.)	Least hazardous (Tier III)	Least Limited			
BestYet Cedarcide	Insecticide	exemptprod-009	Cedarwood oil, amorphous silica	Least hazardous (Tier III)	Least Limited			
BioLink Buffer & Penetrant	Adjuvant	exemptprod-010	Citric acid 20%, garlic extract 7%	More hazardous (Tier II)	Least Limited			
Cambistat	Growth regulator	74779-3	Paclobutrazol, 22.3%	More hazardous (Tier II)	More limited	For use only on Ficus trees in difficult to access sites due to Muni overhead Lines, track clearances, or similar restrictions that require transit modifications or disallow pruning during normal business hours.		
Cimexa Insecticide Dust	Insecticide	73079-12	Amorphous silica gel 100%	Least hazardous (Tier III)	Least Limited	Only for use on ants, rat mites, bedbugs, lice, and yellowjackets in walls when nonchemical techniques prove ineffective.		
Clearcast Herbicide	Herbicide	241- 437	Imazamox, ammonium salt	More hazardous (Tier II)	More Limited	Subject to "Restrictions on herbicides."		
Competitor	Adjuvant	2935-50173	Ethyl oleate	Least hazardous (Tier III)	Least Limited			
Conserve SC Turf and Ornamental	Insecticide	62719-291	Spinosad 11.6%	More hazardous (Tier II)	Least Limited	For use as a last resort in greenhouses. If feasible, alternate with other products to avoid the development of resistance. Use on high value ornamentals only.		
Coyote urine based products	Mammal repellant	exemptprod-014	Coyote urine	Least hazardous (Tier III)	Least Limited			
Debug Turbo	Nematicide	70310-5	Fats & glyceridic oils margosa 65.8%, azadirachtin 0.7%	More hazardous (Tier II)	Least Limited			
Detour	Mammal repellant	exemptprod-015	White pepper 3%, white mineral oil 87%, silica 10%	Least hazardous (Tier III)	Least Limited			

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Essentria IC3	Insecticide	exemptprod-013	Rosemary oil 10%, geraniol 5%, peppermint oil 2%, wintergreen oil, white mineral oil, vanillin, polyglyceryl oleate	Least hazardous (Tier III)	Least Limited			
Garlon 4 Ultra	Herbicide	62719-527	Triclopyr, butoxyethyl ester 60.45%	Most hazardous (Tier I)	Most Limited	Subject to "Restrictions on herbicides" Use only for targeted treatments of high profile or highly invasive exotics via dabbing or injection. May use for targeted spraying only when dabbing or injection are not feasible. USE UP EXISTING STOCKS (Vastlan is safer alternative)		
Havahart Critter Ridder	Mammal repellent	50932-10	Oil of black pepper 0.48%	Least hazardous (Tier III)	Least Limited			
Hydroprene-only products	Various	Various	Hydroprene	Least hazardous (Tier III)	Least Limited			
Lifeline Herbicide	Herbicide	70506-310	Glufosinate, ammonium, 24.5%	More hazardous (Tier II)	More Limited	Subject to "Restrictions on herbicides."		
Maxforce Complete Granular Insect Bait	Insecticide	432-1255	hydramethylnon, 1%	Most hazardous (Tier I)	More Limited	Only for use in bait stations.		
Maxforce Impact Roach Gel Bait	Insecticide	432-1531	Clothianidin, 1%	More hazardous (Tier II)	Least Limited	Rotate active ingredients to manage resistance		
Met 52 Granular Bioinsecticide	Insecticide	70127-8	Metarhizium anisopliae strain F52, 11%	Least hazardous (Tier III)	Least Limited	Preferred alternative to spinosad products	Updated EPA number and product name	
Milestone	Herbicide	62719-519	Aminopyralid, triisopropanolamine salt (5928) 40.6%	More hazardous (Tier II)	More Limited	Subject to "Restrictions on herbicides." For invasive species in natural areas or parklands where other alternatives are ineffective, especially for invasive legumes and composites such as yellow star thistle and purple star thistle.		
Milestone VM Plus, Capstone	Herbicide	62719-572	Aminopyralid, triisopropanolamine salt, 2%; Triclopyr, triethylamine salt, 16%	More hazardous (Tier II)	More Limited	Subject to "Restrictions on herbicides." Use only for cut stump or injection		

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M-pede products	Insecticide	53219-6, 10163-324	Potash soap 49%	More hazardous (Tier II)	Least Limited	USE UP EXISTING STOCK; Safer Soap preferred	Added "USE UP EXISTING STOCK; Safer Soap preferred," Updated EPA number and product name	CHANGED
Nibor-D	Insecticide	64405-8	Disodium Octaborate Tetrahydrate, 98%	Most hazardous (Tier I)	Least limited			
Nufarm Polaris Herbicide	Herbicide	228-534	Imazapyr, isopropylamine salt, 28%	More hazardous (Tier II)	More Limited	Subject to "Restrictions on herbicides." Alternative to Tier I herbicides. Use caution with adjoining desirable vegetation.		
OhYeah!	Insecticide	exemptprod-002	Sodium lauryl sulfate	Least hazardous (Tier III)	Least Limited			
Orange Guard	Insecticide	61887-1	D-limonene (orange oil) 5.8%	More hazardous (Tier II)	More Limited	Soap spray is preferred for removing ant trails. Minimize use in enclosed areas due to scent. Potential aquatic hazard - do not apply directly to water.		
Organocide	Insecticide	exemptprod-010	Sesame oil 5%	Least hazardous (Tier III)	Least Limited			
Oust XP Herbicide (DuPont)	Herbicide	352-601	Sulfometuron-methyl 75%	More hazardous (Tier II)	Most Limited	Subject to "Restrictions on herbicides." For use only on airport operational areas subject to FAA requirements, or PG&E leased yards.		
Pentra-bark Bark Penetrating Surfactant	Adjuvant	83416-50001	Polyalkyleneoxide modified heptamethyltrisiloxane	Least hazardous (Tier III)	Least Limited		Updated product name	CHANGED
Prescription Treatment Brand Wasp-Freeze Wasp and Hornet Killer	Insecticide	499-362	Phenothrin .12%, d-trans allethrin .129%, CO2	Most hazardous (Tier I)	Most Limited	Use only when a concern for public safety, and in situations where use of soap-based products, Suspend, or physical removal is inadequate or unsafe.	Removed "USE UP EXISTING STOCKS." (Still needed for aerial nests of stinging insects in public safety situations). Added "Suspend."	CHANGED
Roundup Custom Herbicide (Aquamaster)	Herbicide	524-343	Glyphosate, isopropylamine salt 53.8%	Most hazardous (Tier I)	Most Limited	Subject to "Restrictions on herbicides."		
Safer Soap O-Insecticidal Soap Concentrate	Insecticide	42697-60	Potassium laurate, 49.52%	More hazardous (Tier II)	Least Limited			
Sluggo Slug and Snail Bait	Molluscicide	67702-3	Phosphoric acid, iron(3+) salt (1:1) 1%	Least hazardous (Tier III)	Least Limited			

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Spraytech Oil	Insecticide	65328-50001	Soybean oil	More hazardous (Tier II)	Least Limited			
Suppress Herbicide EC	Herbicide	51517-9	Caprylic acid, 47%; capric acid, 32%	More hazardous (Tier II)	Least Limited	Subject to "Restrictions on herbicides." Alternative to Tier I herbicides. Burndown product.		
Suspend Polyzone	Insecticide	432-1514	Deltamethrin, 4.75%	Most hazardous (Tier I)	Most limited	Restricted to treatments of stinging insect nests in highly public areas, where slower-working alternatives could result in hazards to the public. May also be used for carpenter bees at Camp Mather when preventive measures have failed	Added: "May also be used for carpenter bees at Camp Mather when preventive measures have failed."	CHANGED
Vastlan	Herbicide	62719-687	Triclopyr choline, 45.2%; glycerol, 3%	More hazardous (Tier II)	Most limited	Subject to "Restrictions on herbicides" Use only for targeted treatments of high profile or highly invasive exotics via dabbing or injection. May use for targeted spraying only when dabbing or injection are not feasible.		
Weed Slayer + Agro Gold	Herbicide	TBD	Eugenol 6.0%; water and molasses 94%. Mixed with <i>Bacillus megaterium</i>	Least hazardous (Tier III)	Least Limited			ADDED
Zoecon PreCor IGR Concentrate	Insecticide	2724-352	S-Methoprene, 1.2%; mineral oil, refined, 98.8%	Least hazardous (Tier III)	Least Limited		Updated product name	CHANGED
GOLF PRODUCTS								
Civitas Turf Defense Pre-Mixed	Fungicide	69526-17	Mineral oil, refined, 89%	Least hazardous (Tier III)	Least Limited		Updated product name	CHANGED
Fosphite Fungicide	Fungicide	68573-2	Potassium phosphate	Least hazardous (Tier III)	More Limited	Only for use on golf courses.		
Heritage Fungicide	Fungicide	100-1093	Azoxystrobin 50%	Most hazardous (Tier I)	Most Limited	For use on Harding Park/Fleming golf courses only in preparation for tournament play		
Lontrel Turf and Ornamental Herbicide	Herbicide	62719-305	Clopyralid, 40.9%	More hazardous (Tier II)	More Limited	Subject to "Restrictions on herbicides." For use on Harding Park/Fleming golf courses only in preparation for tournament play. May be used 1x/year in other golf courses on greens only.		

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Primo Maxx	Growth regulator	100-937	Trinexapac-ethyl 11.3%, tetrahydrofurfuryl alcohol (THEFA)	More hazardous (Tier II)	More Limited	Only use on Harding/Fleming golf courses in preparation for major golf tournaments.		
Quinclorac 1.5L	Herbicide	53883-336	Quinclorac, dimethylamine salt, 18.92%	More hazardous (Tier II)	More Limited	Subject to "Restrictions on herbicides." For use on Harding Park/Fleming golf courses only in preparation for tournament play.		
Rhapsody	Fungicide	264-1155	QST 713 strain of dried Bacillus subtilis, 1.34%	Least hazardous (Tier III)	Least Limited		Updated product name	CHANGED
Sapphire	Herbicide	62719-547	Penoxsulam	More hazardous (Tier II)	More Limited	Subject to "Restrictions on herbicides." Only use on City-owned golf courses in preparation for major golf tournaments, or for pilot testing elsewhere as a glyphosate alternative.		
Tourney	Fungicide	59639-144	Metconazole, 50%; Silica-crystalline quartz	Most hazardous (Tier I)	More Limited	For management of pink snow mold (Microdochium nivale) on Harding Park/Fleming golf courses only in preparation for tournament play.		
Trimmit 2SC	Growth regulator	100-1014	Paclobutrazol 22.3%	More hazardous (Tier II)	More Limited	For use only on golf courses in preparation for tournament play.	Updated product name	CHANGED
Trinity Fungicide	Fungicide	7969-257	Triticonazole, 19.2%	Most hazardous (Tier I)	More Limited	For use on Harding Park/Fleming golf courses only in preparation for tournament play. May be used 1x/year in other golf courses on greens only.	Updated product name	CHANGED
Turflon Ester	Herbicide	62719-258	Triclopyr, butoxyethyl ester 61.6%	More hazardous (Tier II)	Most Limited	Subject to "Restrictions on herbicides." Subject to "Restrictions on herbicides". Targeted treatment of golf course turf. Quinclorac should be the first option. HIGH PRIORITY TO FIND ALTERNATIVE.		
VECTOR CONTROL PRODUCTS								
Agnique MMF	Mosquito control - other	53263- 30	Poly(oxy-1,2-ethanediyl),alpha-isodecyl-omega-hydroxy-phosphate 32%	More hazardous (Tier II)	More Limited	Use for late instar mosquito larvae and pupae, in combination with microbial products. USE UP EXISTING STOCK - NO LONGER SOLD	Updated product name. Added "NO LONGER SOLD"	CHANGED

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Contrapest	Rodent contraceptive	91601- 1	Triptolide, 0.001%; 4- vinyl cyclohexene diepoxide, 0.1%	Most hazardous (Tier I)	Least Limited	For long term reductions in rat populations.		ADDED
Giant Destroyer (smoke bomb)	Rodenticide	10551-1	Carbon, 9%; Sodium nitrate, 50%; Sulfur, 38%	Most hazardous (Tier I)	Most Limited	Alternative to baits for rodents in burrows. Observe label limitations on endangered species and potential for human smoke exposure. Not for use beneath or adjacent to structures	Added: "Not for use beneath or adjacent to structures."	CHANGED
Mosquito control - microbial	Mosquito control - microbial	Various	<i>Bacillus thuringiensis</i> (Berliner or Israelensis) or <i>Bacillus sphaericus</i>	Least hazardous (Tier III)	Least Limited	Any microbial mosquito larvicide with active ingredients <i>Bacillus thuringiensis</i> (Berliner or Israelensis) or <i>Bacillus sphaericus</i> is categorized as Least limited.		
Mosquito control products - IGRs	Mosquito control - IGRs	Various	S-Methoprene (5026	Least hazardous (Tier III)	More Limited	Use for tanks with limited access, or other areas where frequent treatments are infeasible. For City catchment basins, microbial products are preferred. Not for use in estuarine environments except under control of San Mateo Mosquito Abatement District.		
Mosquito control products - oils	Mosquito control - other	Various	Highly refined petroleum distillate (mineral oil) - no aromatics	More hazardous (Tier II)	More Limited	Use as a pupacide for public health mosquito treatments.		
Rat Ice	Rodenticide	12455- 148	Carbon dioxide	More hazardous (Tier II)	More Limited			
Rodent control - cholecalciferol block baits	Rodenticide	Various	Cholecalciferol	More hazardous (Tier II)	More Limited	See Site-Specific Limitations. For commensal rodent control only in situations with high public health concerns, where trapping is infeasible. In all cases, monitoring shall be used whenever feasible to minimize rodenticide use.		
Rodent control - diphacinone baits	Rodenticide	Various	Diphacinone	More hazardous (Tier II)	More Limited	See Site-Specific Limitations. For rat control only in situations with high public health concerns, where trapping is infeasible. Burrow baits not permitted in parks. In all cases, monitoring shall be used whenever feasible to minimize rodenticide use. HIGH PRIORITY TO FIND ALTERNATIVE.		

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Top Gun All Weather Bait Block Rodenticide	Rodenticide	67517-66	Bromethalin 0.01%	Most hazardous (Tier I)	Most Limited	For use only in City-owned sewer lines, San Francisco International Airport Terminal Areas, or for commercial lessees on city properties that are not adjacent to natural areas. In commercial establishments, use of product shall be a last resort after other, less-toxic measures have been implemented, including sanitation and trapping, and only where a significant public health hazard is recognized by the San Francisco Dept. of Public Health . In all cases, monitoring shall be used whenever feasible to minimize rodenticide use.		

*For products exempt from US EPA registration (usually 'Generally Regarded as Safe'), SF creates its own product code

**A product's tier ranking reflects *hazard* (the possibility of harm) but not *risk* (probability of harm). It does not include consideration of likely exposure. Tier rankings determined using the SF Pesticide Hazard Screening Protocol,

<http://sfenvironment.org/download/guide-to-the-reduced-risk-pesticide-list-revised-2013>

***Use limitation type is an informal rating of *risk* (probability of harm), determined by considering a product's hazard tier rating, formulation, likely exposure, and typical uses. Applications of "most limited" pesticides must be justified at an annual public hearing.

San Francisco Reduced Risk Pesticide List: Restrictions on Herbicides for City Properties

Background

The use of chemical pesticides is always a method of last resort in San Francisco's Integrated Pest Management (IPM) Program. The Reduced Risk Pesticide List and these accompanying restrictions below were created in a public process by the San Francisco Department of the Environment in close consultation with affected City & County of San Francisco departments, in keeping with the Precautionary Principle and Integrated Pest Management ordinances (Environment Code, Chapters 1 and 3). *Any other uses of herbicides require an exemption granted by the San Francisco Department of the Environment.*

Goals

1. Reduce the use of herbicides to those situations where they are only used in situations critical to public health, public safety, and protection of major public assets, including biodiversity assets.
2. Ensure that the restrictions are attainable through continued collaboration among City IPM staff.
3. Minimize potential harm to the environment, City workers, and the general public from any pest management activities, in keeping with the Precautionary Principle.
4. Maximize the ability of city residents to know when and where pesticides are being used.

A. Conditions of use - ALL HERBICIDES

Requirements

1. All treatments must be posted as per City ordinance (Env Code §304). All postings must clearly identify the area to be treated. Postings should be placed in location(s) most likely to be seen by users of the treated area.
2. Blue indicator dyes must be used for spray treatments. The use of blue dye must be noted on the posting. Dye must be mixed at a concentration that makes it clearly visible.

Exceptions:

- a. Blue indicator dye is not required on golf courses, hardscapes, or in cases where posting is not otherwise required.
3. For treatment sites that cannot be readily described using the posting sign alone, a map showing the general location of expected treatment area(s) must be attached to the posting sign.
4. Contractors must be fully briefed and trained in, and implement the San Francisco IPM program's ordinance, requirements and policies.
5. All uses must comply with the California Red-legged Frog Stipulated Injunction.
6. No use on plants with edible berries when ripe fruits are present.
7. No use on green roofs or green wall features.

B. Conditions of use - TIER I HERBICIDES

Tier I ("Most Hazardous") herbicides are subject to Conditions of Use for "ALL HERBICIDES" list above, plus the following:

Requirements

8. Any application of 'most hazardous' herbicides on City property within the City limits or at San Francisco International Airport must be under the direct supervision of a licensed person. A licensed person is defined for these purposes as a person possessing either an Agricultural Pest Control Advisor license, a Qualified Applicator License, or a Qualified Applicator Certificate issued by the California Department of Pesticide Regulation. "Direct supervision" means that the licensed person must be physically present at the site of application.
9. Within the City limits, when 'most hazardous' herbicides are used on publicly accessible parcels, either access to the treatment area must be blocked or a physical demarcation must be set up around the treatment area. Acceptable physical demarcations include fencing, rope, tape, or staked plastic cones.

Exceptions:

- a. Golf courses
- b. Street medians

ATTACHMENT A

c. Areas managed for habitat conservation

10. No use for purely cosmetic purposes.
11. No use on the grounds of or within 15 feet of the boundaries of schools, preschools, childrens' playgrounds and other areas frequented by children.
12. No use within 15 feet of designated, actively maintained public paths. "Designated public paths" are walking paths that appear on City maps. If maps do not exist, then "designated public paths" means paths that are actively maintained by City operations.

Exceptions:

- a. Areas falling under state or federal vegetation management requirements, including utility rights of way and easements, dams, reservoir embankments, and watershed lands.
 - b.
 - c. Cases where alternative control methods pose a significant public safety, public health or fire risk, for example, poison oak along popular trails.
 - d. Street median strips.
 - e. Trails that have been closed to public access, with informative signage (see #1) and physical barriers (see #8).
13. No broadcast spraying using a spray boom is permitted. Use of a backpack sprayer is not considered broadcast spraying, provided that the applicator is targeting specific plants that have been identified for treatment.

Exceptions:

- a. Targeted treatments at Harding Park golf course in preparation for tournament play.