



2005 San Francisco Reduced-Risk Pesticide List for City Operations

San Francisco Department of the Environment
January 2005

Preamble

The following list represents the pesticide products approved for use under San Francisco's Integrated Pest Management Ordinance (Adopted 10/96, Chapter 3, San Francisco Environmental Code). The list will be updated on an as-needed basis to reflect the availability of new reduced risk products and the removal of products with the greatest human health and environmental concern. Products are designated as Allowed (A), Limited Use (L), and Limited Use of Special Concern (L*). Each limited use product is accompanied by the specific circumstances under which it is approved for use. In all cases, restrictions on use as determined by the label are to be followed as required by law.

Integrated Pest Management (IPM) Programs involve a number of elements to control pests while ensuring a safe working and play environment. **Chemical pesticides represent only a single control strategy and are used only as a last resort.** Thus all chemicals included in the RRPL are assumed to be used only after programs are in place to improve sanitation, prevent pest infestation, and implement non-chemical management measures. If such a pest management program proves insufficient to control a pest then the chemicals listed below may be utilized as tools according to the restrictions specified for each pesticide product.

San Francisco's IPM ordinance allows for chemicals to be used that are not on the List through an exemption process. The Department of the Environment reviews all exemption requests and exemptions will only be granted in cases of well-documented need for the pesticide and when all other alternatives have been tried or deemed impractical. In addition, requesting departments must develop a pest management plan for preventing further use of the pesticide.

For more information on the creation of this list, see the "Guide to the City of San Francisco's Reduced-Risk Pesticide List." For more information on the City's IPM Program, see www.sfenvironment.org

Key Points

- **A pesticide list is not an IPM program!** Pesticides should be the last resort, when all other tactics have failed.
- **This list is for institutions, not residents.** Many pesticides on the list were added for specialized purposes not found in residential settings. Homeowners will usually need few or no pesticides to successfully manage common pest problems.

SORTED BY PRODUCT

KEY
Pesticide Types: A=adjuvant, F=fungicide, H=herbicide, I=insecticide, M=molluscicide, P=plant hormone, V=vertebrate control, W=herbicide in water, Z=public health/ mosquitoes
Use Category: A = allowed, L= limited, L* = special concern
Hazard Tier: * = highest hazard, *** = lowest hazard, / = insufficient data to complete a hazard assessment, see narrative description
EPA Reg #: US EPA registraton number, from Dept. of Pesticide Regulation databases. *OLD* = inactive or soon to be inactive registration #. First two groups of numbers (XXXX-XXX) identify the product.

Pesticide Type	Use Categ	Hazard Tier	Product Name	Active Ingredients	EPA Reg #	Use Limitations	Amount used in 2003
I	L	*	20 Mule Team Tim-Bor Industrial	disodium octaborate 98%	1624-39-ZC	For control and prevention of termites, wood-destroying beetles, and carpenter ants. Recommendation of Branch II pest control operator required for termites and beetles; recommendation of Branch II pest control operator required for carpenter ants.	
F	L*	*	3336 WP Turf	methyl thioallophanate 50%	1001-63-AA	For use in greenhouse situations only	5.1 lbs
I	L	**	Agnique MMF	poly(oxy-1,2-ethanediyl), alpha-isodecyl-omega-hydroxy phosphate 99.99%	2302-14-AA-2302	Standing water, human health concerns.	7.25 gals
F	A	***	Agri-Fos Systemic Fungicide	potassium phosphite 45.8%	71962- 1-AA	For use on oaks (<i>Quercus</i> spp.) infected with sudden oak death syndrome	
W	L	**	Aquamaster Herbicide (equivalent to Rodeo)	glyphosate, isopropylamine salt 53.8%	524-343-ZF	May damage non-target plants. Use for emergent plants in ponds, lakes, drainage canals, and areas around water or within watershed areas. Only as a last resort when other management practices are ineffective. NOTE: Equivalent to "Rodeo Emerged Aquatic Weed and Brush Herbicide," an older product. Rodeo in storage may be used under the same limitations.	
W	A	***	Aquashade	tartrazine 2.39% acid blue 9, diammonium salt 23.63%	33068-1-AA		36 gals
I	L	**	Avid 0.15EC Miticide/Insecticide	abamectin 2%	618-96-AA(OLD) 100- 896-ZA(NEW)	Nursery use only.	0.27 gals
I	L	**	Azatin XL Biological Insecticide	azadirachtin 3%	70051-27-AA-59807	Nurseries and established plants for interiorscapes.	0.06 gals
I	L	***	BotaniGard ES	<i>Beauveria bassiana</i> strain GHA 11.3%	65626-8-ZA(OLD)	Control of thrips on landscaped plants. Biological product but some concern over bee toxicity.	1.2 gals
I	A	***	Cinnamite 30%	cinnamaldehyde	58866-12-ZA(OLD)		0.02 gals
A	L	***	CMR Silicone Surfactant	polymethylsiloxane, nonionic	1050775-50025-AA	Use other alternatives pending new review of siloxanes	
I	A	***	Concern From The Earth, For The Earth Pesticidal Spray Oil Dormant And Growing Season Insect Spray	canola oil 96%	67702- 4-ZA- 50932		
I	L	*	Conserve SC Turf and Ornamental	spinosad 11.6%	62719-291-AA	For use as a last resort in greenhouses. If feasible, alternate with other products to avoid the development of resistance.	0.2 gals
V	L	*	Contrac All-Weather Blox	bromadiolone 0.005%	12455-79-AA	High concern over 2nd poisoning, see site specific limits.	66 lbs
P	A	***	Dip'n Grow	indole-3-butyric acid 1%; NAA 0.5%	64388-1-AA		
V	L	**	Ditrac supersize blox	diphacinone 0.005%	12455-14-ZA	Concern over 2nd poisoning, see site specific limits.	497 lbs
H	L	/	EcoExempt HC	eugenol (clove oil) 21.4%; 2-phenethyl propionate 21.4%	Exempt from EPA Reg.	Do not use in enclosed areas.	
I	A	***	EcoExempt IC	Rosemary oil 10%; wintergreen oil, mineral oil (inerts)	Exempt from EPA Reg.		
I	L	***	Enstar II Insect Growth Regulator	S-kinoprene 64.1%	2724-476-AA-2724	Nurseries, roses.	0.4 gal
H	L	**	Ezject Selective Injection Herbicide	glyphosate, isopropylamine salt 83.5%	524-435-AA-524(OLD)	Tree stump injection especially where resprouting is likely, prefer mechanical methods when possible such as stump grinding	0.1 lbs + 0.03 gals
H	L	**	Garlon 4	triclopyr, butoxyethyl ester 61.6%	62719-40-ZB	Targeted treatment of invasive exotics in parks, natural areas, right of ways. OK for fuel reduction, pilot alternative strategies.	8.6 gals

2005 Reduced-Risk Pesticide List

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I	L	/	GC-Mite	cottonseed oil 40%, clove oil 20%, garlic extract 10%	Exempt from EPA Reg.	Limit use in enclosed areas.	
V	L	/	Generation Mini-blocks	difethialone 0.0025%	7173- 218-AA	Unknown effects on 2nd poisoning, single feed	95 lbs
I	A	/	Genrol IGR Concentrate	hydroprene 9%	2724-351-ZA(OLD)		
Z	L	**	Golden Bear Mosquito Larvicide GB-1111	Aliphatic Petroleum Hydrocarbon	8329- 72-AA	Apply only in conjunction with appropriate prevention measures (such as increasing water flow), or when prevention measures are impractical. Use within requirements on vector control activities set by the Calif. Dept. of Health Services.	
F	L*	*	Heritage Fungicide	azoxystrobin 50%	10182-408-AA-10182	Consider/emphasize use of compost tea for preventative. To be used only as a spot treatment on greens, highest profile athletic fields. Improve aeration and monitoring programs.	1.3 lbs
I	A	***	Hot Pepper Wax Insect Repellent	capsicum oleoresin 0.00001%	67238-1-AA		
I	A	***	Javelin WG	<i>Bacillus thuringiensis</i> (berliner), subsp. kurstaki, strain sa-11 7.5%	70051-66-AA(OLD) 70051-66-AZ(NEW)		0.4 lbs
F/I	A	**	JMS Stylet Oil	petroleum distillates, refined 97.1%	65564-1-AA		1.4 gals
V	L	**	JT Eaton Answer for the Control of Pocket Gophers	diphacinone 0.005%	56-57-AA-56(OLD)	Damage to: dams, levies, athletic fields, active recreation areas, structures, high cultural value or landmark areas. Public Health concerns.	379 lbs
V	L	**	JT Eaton's Bait Blocks Rodenticide with Apple Flavorizer	diphacinone 0.005%	56- 41-AA(OLD); 56-41-ZA-56(NEW)	Concern over 2nd poisoning, see site specific limits.	6.3 lbs
F	A	***	Kaligreen	potassium bicarbonate 82%	70231-1-AA		2.3 lbs
V	L	*	Maki Mini Blocks	bromadiolone .005%	7173-202-AA	High concern over 2nd poisoning, see site specific limits	285 lbs
I	L*	*	Marathon 1% Granular Greenhouse & Nursery	imidacloprid 1%	3125-452-AA	Nursery use for control of white fly, not for use in propagation beds.	33.5 lbs
H	L	/	Matran 2	clove Oil	Exempt from EPA Reg.	Do not use in enclosed areas.	
I	A	**	Maxforce FC Professional Insect Control Ant Bait Stations	fipronil 0.01%	64248-10-ZA-64248(OLD) 432-1256-AA(NEW)	Minimize use through prevention, possible concern over active ingredient.	0.1 lbs + 0.003 gals
I	L	**	MaxForce FC Professional Insect Control Ant Killer Gel	fipronil 0.001%	64248-21-ZA(OLD) 432-1264-ZA(NEW)	Minimize use through prevention, possible concern over active ingredient.	
I	L	**	Maxforce FC Professional Insect Control Roach Bait Stations	fipronil 0.05%	64248-11-ZA(OLD) 432-1257-AA(NEW)	Minimize use through prevention, possible concern over active ingredient.	1 lb
I	L	**	Maxforce FC Professional Insect Control Roach Killer Bait Gel	fipronil 0.01%	64248-14-AA(OLD) 432-1259-AA(NEW)	Minimize use through prevention, possible concern over active ingredient	2.9 lbs + 0.07 gals
I	L	**	Maxforce IBF4 Carpenter Ant Bait	fipronil 0.001%	64248-21-ZA(OLD) 432-1264-AA(NEW)	Minimize use through prevention, possible concern over active ingredient	0.31 lbs + 0.014 gals
I	L	**	M-pede Insecticide/Fungicide	potash soap 49%	53219-6-ZC	Nursery, specialty gardens, and Africanized Honey Bees.	8 gals
I	L	**	Niban Granular Bait	boric acid 5%	64405-2-AA	Outdoor restricted to planted areas, prefer containers; indoor must be in containers or inaccessible to humans	14.2 lbs
I	L	***	Orange Guard	d-limonene 5.8%	61887-1-AA	Contact insecticides should be minimized especially indoors.	0.04 gals
H	L*	**	Oust XP Herbicide by DuPont	sulfometuron-methyl	352-601-AA	For use only on airport operational areas subject to FAA requirements.	8.6 lbs
H	L*	**	Pendulum WDG Herbicide	pendimethalin 60%	241-340-AA	One year limit. SFIA landscape use only. Use weed cloth whenever possible. Limit to high priority areas, including new plantings in hazardous areas too dangerous for handweeding. Renovations require exemption. One-year exemption for experimental use on <i>Ehrharta</i> in arboretum	8.34 lbs
I	A	**	Prescription Treatment Brand Advance Liquid Ant Bait	borax 1.3%	56-72-AA-499(OLD) 499-491-AA(NEW)		2.6 lbs
I	A	**	Prescription Treatment Brand Avert Cockroach Bait Station, Formula	abamectin 0.05%	499-467-AA		

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I	A	**	Prescription Treatment Brand Avert Cockroach Gel Bait Formula 3	abamectin 0.05%	499-410-AA		0.02 gals
H	L*	*	ProTurf K-O-G Weed Control, Andersons Golf Products K-O-G Weed Control	dicamba 7%	538-112-AA-538(OLD) 9198-184-AA(NEW)	One year limit. Spot application on greens only when hand-weeding is not feasible. Only for <i>Soliva sessilis</i> and <i>Cotula mexicana</i> in golf greens. Require comparison with Vanquish, handweeded section of bowling greens.	369 lbs
F	L	*	Proturf Systemic Fungicide, Andersons Golf Products Systemic Fungicide,	thiophanate-methyl	538-88-ZB-538(OLD) 538- 88-AA-9198(NEW)	Greens, highest profile athletic fields.	113 lbs
I	L	**	PT Brand Wasp-Freeze Wasp and Hornet Killer Formula 1	phenothrin 12%, d-trans allethrin .129%, CO2	499-362-ZA-499	Use only when a concern for public safety.	9.4 gals
I	A	***	Roach Terminal	oxyprurinol 1%, xanthine 1%	1001-73-AA-1001		
F	L*	*	Rootone Rooting Hormone	Thiram	264-499-AA-71004	Nursery use only. Problem with mixing and storage due to talc. Consider Dip'n Grow as alternative.	0.5 lbs
F	A	/	RootShield Drench	<i>Trichoderma harzianum</i> rifai strain krl-ag2 1%	68539-4-ZB-68539		
H	L	**	Roundup Pro Herbicide	glyphosate	524-475-ZA-524	Spot application of areas inaccessible or too dangerous for hand methods, right of ways, utility access, fire prevention. Use for cracks in hardscape and edging only as last resort. OK for renovation but must put in place weed prevention measures.	63 gals
H	L	**	Roundup ProDry	glyphosate	524-505-AA-524	same limitations as Roundup Pro	204 lbs
I	L	**	Saf-T-Side	paraffinic oil	48813-1-AA	Trace of alkyl-phenol ethoxylates, avoid contact with surface waters. Try Spraytech first.	
F	A	/	Serenade	<i>Bacillus subtilis</i>	69592-4-AA		
M	A	***	Sluggo Slug and Snail Bait	iron phosphate	67702-3-AA		82 lbs
W	L	**	Sonar A.S.	fluridone	67690-4-AA	Emergent plants in ponds, lakes, drainage canals. Only as a last resort when other mgmt. practices are ineffective.	0.25 gals
A	A	***	Spraytech Oil	soybean oil	65328-50001-AA		
I	L	**	Terro Ant Killer II Liquid Ant Baits	sodium tetraborate	149-8-ZB-149		0.11 lbs + 1.6 gals
I	L	**	The Ecology Works Dust Mite and Flea Control	disodium octaborate tetrahydrate (DOT) (98%)	67419- 1-ZB	For flea and dust mite control when mechanical methods are impractical, in conjunction with prevention. Limit human exposure to dust.	
V	L	**	Top Gun All Weather Bait Block Rodenticide	bromethalin 0.01%	67517-66-56	Limited use to avoid rodent aversion to one specific bait. Use only in locked bait stations. High concern over secondary poisoning of birds.	32.2 lbs
H	L	**	Turfion Ester (post)	triclopyr	62719-258-AA-62719	Targeted treatment of turf; broadcast application requires exemption	12.1 gals
F	A	/	TurfShield	<i>Trichoderma</i> strain	68539-3-ZC		
I	A	**	Uncle Alberts Ant Bait	disodium Octaborate Tetrahydrate	73340-1-AA		0.18 gals
I	A	***	Victor Poison Free Flying Insect Killer	Mint Oil 4.0%, Sodium Lauryl Sulfate 0.1%, Inert Ingredients 95.9%, Water 93.4%, CO ² 2.5%	SKU 7094733	One-year trial period for wasps. Limit use indoors.	
V	L	*	Weatherblok Bait with Bitrex	brodifacoum	10182-339-AA-10182 (OLD)	Extreme concern over 2nd poisoning, see site specific limits	512 lbs
V	L	**	Wilco 'Gopher Getter' Type 2 Bait	chlorophacinone 0.005%	36029-50003-AA	Damage to: dams, levies, athletic fields, active recreation areas, structures, high cultural value or landmark areas. Public Health concerns.	2.8 lbs

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Z	A	***	Mosquito control - microbial					
			Vectolex G Biological Mosquito Larvicide	<i>Bacillus sphaericus</i>	275-77AA-275		37.5 lbs	
			Vectolex Wdg Biological Larvicide		73049-57-AA			
			Mosquito Dunks	<i>Bacillus thuringiensis</i>	6218-47-ZB-6218		8 lbs	
			Vectobac-G Biological Mosquito Larvicide		275-50-AA-275 (OLD), 73049- 10-AA (NEW)		110 lbs	
			Aquabac 200G		62637- 3-ZA			
			Vectobac 12as Biological Larvicide		73049- 38-AA			
Z	L	**	Mosquito control - IGRs					
			Not for use in estuarine environments, except for San Mateo Mosquito Abatement District applications at airport and Sharp Park.					
			Altosid Briquets by Zoecon	S-methoprene	2724-375-ZA-2724		9 lbs	
			Zoecon Altosid Xr-G		2724- 451-ZA			
			Zoecon Altosid Xr Extended Residual Briquets		2724- 421-ZA			
			Zoecon Altosid Pellets		2724- 448-ZA			
			Zoecon Altosid Liquid Larvicide Mosquito Growth Regulator		2724- 392-ZA			