



# DRAFT

## 2007 San Francisco Reduced-Risk Pesticide List for City Operations

*San Francisco Department of the Environment*  
May 9, 2007

### 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](http://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.

# Site-Specific Rodenticide Plan For Control of Rats and Mice

Modified 3/20/07

Due to the concern over primary and secondary poisoning the type of rodenticide and the manner in which it is applied will be determined by the general site characteristics. Rodenticide use not permitted in this document may only be performed after receiving a waiver from the Dept. of the Environment.

Landscaped area: area under cultivation

Natural area: parklands (including any lightly managed grasslands, scrub or woodlands) with significant wildlife concern

Primary poisoning: Non-target animal eats poison directly

Secondary poisoning: Non-target animal eats poisoned target animal as prey

Single-feed baits: Baits with brodifacoum, bromodialone, diethialone, cholcalciferol, or bromethalin active ingredients.

## **General Site Description**

Inside of sewers or sewage treatment facilities

Commercial enterprises (such as restaurants) on leased City lands

Interior of structures with occupants (i.e. office space, recreation sites)

Interior of non-enclosed structures (i.e. storage, stables, airport service areas) – not adjacent to natural areas.

Exterior of structures in urbanized areas (i.e. perimeter of offices)

Exterior of structures in natural areas

Landscape not adjacent to a natural area

Natural area or landscape adjacent to a natural area

## **Rodenticide Use**

Baits must be secured either inside the sewer or inside a bait box. Single feeding baits acceptable. Monitoring with non-toxic baits encouraged.

Trapping only; single-feed rodenticides allowed as a last resort only for public health & safety considerations.

Trapping only.

Trapping preferred. Secure and anchored bait stations can be placed inside on a preventative basis. No single-feed baits.

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Multiple feeding baits may be used only as last resort in case of human health concern or structural integrity. Baits must be secured within bait boxes or buried in burrows. No pellets or single-feed rodenticides.

Bait placed deep inside burrows, minimize use of pellets, mouse sized pellets only, must be buried deep in the burrow. No single-feed baits.

Multiple feeding baits may be used only as last resort in case of human health concern or structural integrity. Baiting should be limited to sensitive sites such as campfire areas, or on preventing infestation of structures. Baits must be secured inside bait boxes or burrows. No use of pellets or single feeding rodenticides.

## 2007 Reduced-Risk Pesticide List -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.  
**NOTE:** Mosquito control products are listed separately at the bottom of the list

Pesticide Type	Use Categ	Hazard Tier	Product Name	Active Ingredients	EPA Reg #	Uses / Limitations	Amnt Used in 2005
F	L*	*	3336 WP Turf	methyl thioallophanate 50%	1001-63-AA	For use on golf courses only.	0.06 lbs
F	A	***	Agri-Fos Systemic Fungicide	potassium phosphite 45.8%	71962- 1-AA	For use on high-value oaks ( <i>Quercus</i> spp.) susceptible to Sudden Oak Death	0
			Altosid Briquets by Zoecon	S-methoprene	2724-375-ZA-2724		1 lbs
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.	2.6 gals
W	A	***	Aquashade	tartrazine 2.39% acid blue 9, diammonium salt 23.63%	33068-1-AA	To shade out aquatic weeds	9 gals
I	L	**	Avid 0.15EC Miticide/Insecticide	abamectin 2%	618-96-AA(OLD) 100- 896-ZA(NEW)	Nursery use only.	0.04 gals
I	L	**	Azatin XL Biological Insecticide	azadirachtin 3%	70051-27-AA-59807	Nurseries and established plants for interiorscapes.	0
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.	0
A	L	***	CMR Silicone Surfactant	polymethylsiloxane, nonionic	1050775-50025-AA	Use other alternatives pending new review of siloxanes	0
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	For use only in sewers, or for commercial establishments 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. In sewers, monitoring shall be used whenever feasible to minimize rodenticide use. See site specific limits	0
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
V	L*	*	Conrac All-Weather Blox	bromadiolone 0.005%	12455-79-AA	For use only in sewers, or for commercial establishments 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. In sewers, monitoring shall be used whenever feasible to minimize rodenticide use. See site specific limits	120 lbs

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P	A	***	Dip'n Grow	indole-3-butyric acid 1%; NAA 0.5%	64388-1-AA	Rooting hormone	0
V	L	**	Ditrac supersize blox	diphacinone 0.005%	12455-14-ZA	Concern over 2nd poisoning, see site specific limits.	6 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.	0
I	L	***	Enstar II Insect Growth Regulator	S-kinoprene 64.1%	55947-82-ZA-55947	Nurseries, roses.	0.03 gals
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	0.0063 lbs
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.	2.8 gals
V	L*	*	Generation Mini-blocks	difethialone 0.0025%	7173- 218-AA	For use only in sewers, or for commercial establishments 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. In sewers, monitoring shall be used whenever feasible to minimize rodenticide use. See site specific limits	459 lbs
I	A	***	Genrol IGR Concentrate	hydroprene 9%	2724-351-ZA(OLD)		0.12 gals
F	L*	*	Heritage Fungicide	azoxystrobin 50%	10182-408-AA-10182	Consider/emphasize use of compost tea for preventative; improve aeration and monitoring programs. To be used only as a spot treatment on high profile sports greens.	2.1 lbs
I	A	***	Hot Pepper Wax Insect Repellent	capsicum oleoresin 0.00001%	67238-1-AA		0
I	A	***	Javelin WG	<i>Bacillus thuringiensis</i> (berliner), subsp. kurstaki, strain sa-11 7.5%	70051-66-AA(OLD) 70051-66-AZ(NEW)		3.06 lbs
F/I	A	**	JMS Stylet Oil	petroleum distillates, refined 97.1%	65564-1-AA	Use up existing stock only for Rec&Park and SFIA.	2.7 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.	90 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.	69 lbs
F	A	***	Kaligreen	potassium bicarbonate 82%	70231-1-AA		0

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V	L*	*	Maki Mini Blocks	bromadiolone .005%	7173-202-AA	For use only in sewers, or for commercial establishments 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. In sewers, monitoring shall be used whenever feasible to minimize rodenticide use. See site specific limits	261 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. Only effective on quick-growing plants.	1.8 lbs
I	L*	*	Marathon II Granular Greenhouse & Nursery	imidacloprid 21.4%	432-1369-AA- 59807	Nursery use only for control of mealybug, scale, and other insects. Only for use on fast-growing specimen plants for which Marathon 1% does not work.	0.07 gals
H	L	/	Matran 2	clove Oil	Exempt from EPA Reg.	Do not use in enclosed areas.	0
I	L	**	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.	0.6 lbs
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.	0.02 lbs
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	0.018 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	0.5 lbs + 0.008 gals
			Mosquito Dunks	<i>Bacillus thuringiensis</i>	6218-47-ZB-6218		5.2 lbs
I	L	**	M-pede Insecticide/Fungicide	potash soap 49%	53219-6-ZC	Nursery, specialty gardens, and Africanized Honey Bees.	2.5 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	0
I	A	***	NIC325	limestone dust 95.5%, corn gluten meal 0.5%	EPA Exempt	For use as a desiccating dust in the prevention and treatment of bedbugs and other insects.	0
I	A	***	OhYeah!	sodium lauryl sulfate	Exempt from EPA Reg.		NEW
I	L	***	Orange Guard	d-limonene 5.8%	61887-1-AA	Contact insecticides should be minimized especially indoors.	0.03 gals
H	L*	**	Oust XP Herbicide by DuPont	sulfometuron-methyl	352-601-AA	For use only on airport operational areas subject to FAA requirements.	5.2 lbs
I	A	**	Prescription Treatment Brand Advance Liquid Ant Bait	borax 1.3%	56-72-AA-499(OLD) 499-491-AA(NEW)		0
I	A	**	Prescription Treatment Brand Avert Cockroach Bait Station, Formula	abamectin 0.05%	499-467-AA		0
I	A	**	Prescription Treatment Brand Avert Cockroach Gel Bait Formula 3	abamectin 0.05%	499-410-AA		0

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H	L*	*	ProTurf K-O-G Weed Control, Andersons Golf Products K-O-G Weed Control	dicamba 0.7%	538-112-AA-538(OLD) 9198-184-AA(NEW)	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.	256 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.	47 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. Consider Victor Poison Free Wasp & Hornet Killer as a first resort.	7.4 gals
I	A	***	Roach Terminal	oxypurinol 1%, xanthine 1%	1001-73-AA-1001	Consider using this first before trying other roach products.	0
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
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.	61 gals
H	L	**	Roundup ProDry	glyphosate	524-505-AA-524	same limitations as Roundup Pro	209 lbs
I	L	**	Saf-T-Side	paraffinic oil	48813-1-AA	Use up existing stock only. Try Spraytech first.	0
M	A	***	Sluggo Slug and Snail Bait	iron phosphate	67702-3-AA		48 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	Consider using this instead of JMS Stylet Oil for aphids and other insects.	6.8 gals
I	L	**	Terro Ant Killer II Liquid Ant Baits	sodium tetraborate	149-8-ZB-149		10.8 lbs + 0.8 gals
I	L	*	Tim-bor Industrial	disodium octaborate 98%	1624-39-ZC	For control and prevention of termites, wood-destroying beetles, and carpenter ants. Recommendation of Branch III pest control operator required for termites and beetles; recommendation of Branch II pest control operator required for carpenter ants.	0
V	L*	**	Top Gun All Weather Bait Block Rodenticide	bromethalin 0.01%	67517-66-56	For use only in sewers, or for commercial establishments 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. In sewers, monitoring shall be used whenever feasible to minimize rodenticide use. See site specific limits	1.7 lbs
H	L	**	Turfion Ester	triclopyr	62719-258-AA-62719	Targeted treatment of turf; broadcast application requires exemption	13 gals
F	A	/	TurfShield	<i>Trichoderma</i> strain	68539-3-ZC	Only in greenhouses as microbial fungicide.	120 lbs
I	A	**	Uncle Alberts Ant Bait	disodium Octaborate Tetrahydrate	73340-1-AA		0.02 gals

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			Vectolex G Biological Mosquito Larvicide	<i>Bacillus sphaericus</i>	275-77-AA-275		34 lbs
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 <sup>2</sup> 2.5%	UPC #0072868136030	Limit use indoors.	0
I	A	***	Victor Poison Free Wasp & Hornet Killer	Mint Oil 8.0%, Sodium Lauryl Sulfate 1.0%, Inert Ingredients 91.0%, Water 88.5%, CO <sup>2</sup> 2.5%	UPC #0072868136047	Try this instead of PT Brand Wasp Freeze	0
Z	A	***	<b>Mosquito control - microbial</b>				
			Aquabac 200G		62637- 3-ZA		58 lbs
			Vectobac 12as Biological Larvicide		73049- 38-AA		0
			Vectobac-G Biological Mosquito Larvicide		275-50-AA-275 (OLD), 73049- 10-AA (NEW)		45 lbs
			Vectolex Wdg Biological Larvicide		73049-57-AA		0
Z	L	**	<b>Mosquito control - IGRs</b>			Not for use in estuarine environments, except for San Mateo Mosquito Abatement District applications at airport and Sharp Park.	
			Zoecon Altosid Liquid Larvicide Mosquito Growth Regulator		2724- 392-ZA		0
			Zoecon Altosid Pellets		2724- 448-ZA		594 lbs
			Zoecon Altosid Xr Extended Residual Briquets		2724- 421-ZA		0
			Zoecon Altosid Xr-G		2724- 451-ZA		0
			<b>Mosquito control - Other</b>				
Z	L	**	Agnique MMF	poly(oxy-1,2-ethanediyl),alpha-isodecyl-omega-hydroxy-phosphate 99.99%	2302-14-AA-2302	Mosquito larvicide for standing water, human health concerns, especially where spreading a distance along the surface is not critical	12.2 gals
Z	L	**	Golden Bear Mosquito Larvicide GB-1111	Aliphatic Petroleum Hydrocarbon	8329- 72-AA	Apply as a mosquito larvicide 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.	168 gals