



**DEPARTMENT OF THE ENVIRONMENT**  
**CITY AND COUNTY OF SAN FRANCISCO**  
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**Integrated Pest Management Program**  
**Reduced Risk Pesticide List**

January 2004

**Preamble**

The following list represents the pesticide products approved for use under San Francisco's Integrated Pest Management Ordinance (Adopted 10/96, Section 39.8(f), San Francisco Municipal 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 Adopted List 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 Adopted 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.

One important goal of an IPM program is to reduce the unnecessary use of chemical pesticides. In relation to this goal, the term, *targeted application*, refers to pesticides applied only to the pest and not to adjacent non-targets. Several products on the Adopted List, specifically pre-emergent herbicides, fungicides, and some post-emergent herbicides are used in broadcast applications where the product is spread over an entire area and not just onto the targeted pests. Although these products currently meet the reduced risk criteria, their use is of special concern in an IPM program. It is the goal of the IPM program to phase out the use of these products and departments who use them will be expected to track their use closely, develop alternative control strategies and justify the continuing need for these products at the end of the year.

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### **Site-Specific Rodenticide Plan For Control of Rats and Mice. 12/8/99**

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.

Landscaped area: area under cultivation

Natural area: within urban setting or wilderness, significant wildlife concern

Primary poisoning: non-target animal eats poison directly

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

#### **General Site Description**

#### **Rodenticide Use**

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

Trapping only.

Interior of non-enclosed structures  
(i.e. storage, stables, airport service areas)

Secure and anchored bait stations can be placed inside on a preventative basis. Single feeding OK especially when other sources of food are present and when have public health concerns (ex. Hanta)

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

Secure and anchored bait stations around perimeter, single feeding OK but use Brodifacoum as last resort. No broadcast baits or pellets. Use mouse sized pellets only, must be placed far into burrows.

Exterior of structures in natural areas

Multiple feeding baits secured within bait boxes or buried in burrows. No pellets. Single feeding bait used only as last resort in case of human health concern or structural integrity.

Inside of sewers or sewage treatment facilities

Baits must be secured either inside the sewer or inside a bait box. Any single feeding OK.

Landscape not adjacent to a natural area

Bait placed deep inside burrows, minimize use of pellets, mouse sized pellets only, must be buried deep in the burrow. Use Brodifacoum as last resort.

Natural area or landscape adjacent to a natural area

Baiting should be limited to sensitive sites (ex. campfire area) otherwise emphasis is on preventing infestation of structures. Multiple feeding baits that are secured inside bait boxes or burrows. No use of pellets or single feeding rodenticides.

<b>Pesticide Type</b> W=herbicide in water F=fungicide I= insecticide H=herbicide M=molluscicide V=vertebrate A=adjuvant P=plant hormone	<b>Use Category</b> A = allowed L= limited L* = special concern	<b>Hazard Tier</b> *=highest hazard, ***=lowest hazard, /=insufficient data	<b>Product Name</b>	<b>Active Ingredients</b>	<b>EPA Reg #</b>	<b>Use Limitations</b>	<b>Amount used in 2002</b>
I	L	*	20 Mule Team Tim-Bor Industrial	disodium octaborate	1624-39-ZC-1624	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.	977.5 lbs
F	L*	*	3336 WP	methyl thioallophanate	1001-63-AA-1001	For use in greenhouse situations only	4.8 lbs
I	L	**	Agnique MMF	isooctadecyl-hydroxyl	2302-14-AA-2302	Standing water, human health concerns.	277.4 lbs + 0.92 gals
I	L	**	Altosid Briquets by Zoecon	methoprene	2724-375-ZA-2724	PUC for contained sewage treatment facilities. For public health use. Not for use in estuarine environments.	
I	L	**	Altosid Pellets by Zoecon	methoprene	2724-488-ZA-2724	Not for use in estuarine environments	
F	L	/	AQ 10 Biofungicide	Ampelomyces	55638-16-AA-55638	Nurseries, roses, dahlias for powdery mildew. More information is needed an active ingredient.	
W	L	**	Aquamaster Herbicide (equivalent to Rodeo)	Glyphosate	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	acid yellow-23, acid blue 4	33068-1-AA-33068		16 gals

Pesticide Type	Use Category	Hazard Tier	Product Name	Active Ingredients	EPA Reg #	Use Limitations	Amount used in 2002
I	A	**	Avert Cockroach Bait Station	abamectin	499-467-AA-499		
I	A	**	Avert Cockroach Gel	abamectin	499-410-AA-499		0.03 gals
I	L	**	Avid 0.15 EC	avermectin	618-96-AA-618	Nursery use only.	0.30 gals
I	L	**	Azatin XL	Azadirachtin	70051-27-AA-59807	Nurseries and established plants for interiorscapes.	0.01 gals
H	A	***	Bio-Weed	corn gluten meal	1051098-30001-AA-1051098		
I	L	**	Borid	boric acid	9444-129-ZA-9444	limit human exposure to dust	
I	L	***	BotaniGard ES	Beauveria bassiana strain	65626-8-ZA-65626	Control of thrips on landscaped plants. Biological product but some concern over bee toxicity.	1.96 gals
I	A	***	Cinnamite	Cinnamaldehyde	58866-12-ZA-65626		0.03 gals
A	A	***	CMR Silicone Surfactant	polymethylsiloxane, nonionic	1050775-50025-AA-1050775		
I	L	*	Conserve SC	Spinosad	62719-291	For use as a last resort in greenhouses. If feasible, alternate with other products to avoid the development of resistance.	
V	L	*	Conrac All-Weather Blox	bromadiolone	12455-79-AA-12455	High concern over 2nd poisoning, see site specific limits.	46.81 lbs
P	A	***	Dip'n Grow	indole-3-butyric acid	64388-1-AA-64388		
V	L	**	Ditrac supersize blox	diphacinone	12455-14-ZA-12455	Concern over 2nd poisoning, see site specific limits.	1119 lbs
V	L	**	Eaton's All-Weather Bait Blocks Rodenticide with Apple Flavorizer	diphacinone 0.005%	56-41-ZA-56	Concern over 2nd poisoning, see site specific limits.	
H	L	/	EcoExempt HC	Eugenol (clove oil) 21.4%, 2-phenethyl propionate 21.4%	Exempt from EPA Reg.	Pending receipt of clove oil toxicity data, 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	kinoprene	2724-476-AA-2724	Nurseries, roses.	

Pesticide Type	Use Category	Hazard Tier	Product Name	Active Ingredients	EPA Reg #	Use Limitations	Amount used in 2002
H	L	**	Ezject Selective Injection Herbicide	glyphosate	524-435-AA-524	Tree stump injection especially where resprouting is likely, prefer mechanical methods when possible such as stump grinding	0.19 lbs + 0.002 gals
V	L	*	Final Blox	brodifacoum	12455-89-AA-12455	Extreme concern over 2nd poisoning, see site specific limits	
H	L	**	Garlon 4	triclopyr	62719-40-ZB-62719	Targeted treatment of invasive exotics in parks, natural areas, right of ways. OK for fuel reduction, pilot alternative strategies.	19.30 gals
I	L	/	GC-Mite	Cottonseed oil 40%, clove oil 20%, garlic extract 10%	Exempt from EPA Reg.	Pending receipt of clove oil toxicity data, limit use in enclosed areas.	
V	L	/	Generation Mini-blocks	diethialone	7173-206-AA-7173	Unknown effects on 2nd poisoning, single feed,	
I	A	/	Gentrol IGR Concentrate	hydroprene	2724-351-ZA-2724		
I	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.	
V	L	**	Gopher Getter type 2 Bait by Wilco	chlorophacinone	36029-50003-AA-36029	Damage to: dams, levies, athletic fields, active recreation areas, structures, high cultural value or landmark areas. Public Health concerns.	1.49 lbs
I	A	**	Gourmet Liquid Ant Bait	Disodium octaborate tetrahydrate (DOT) (2%)	73766-1-AA		
F	L*	*	Heritage Fungicide	azoxystrobin	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.	2.00 lbs

Pesticide Type	Use Category	Hazard Tier	Product Name	Active Ingredients	EPA Reg #	Use Limitations	Amount used in 2002
I	A	***	Hot Pepper Wax Insect Repellent	capsaicin .00014%	67238-1-AA-67238		
I	A	***	Javelin WG	<i>Bacillus thuringiensis</i>	70051-66-AA-70051		
V	L	**	JB Eaton Top Gun All-Weather Bait Block Rodenticide	bromethalin	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.	
F/I	A	**	JMS Stylet Oil	petroleum distillates	65564-1-AA-65564		4.06 gals
V	L	**	JT Eaton Answer for the Control of Pocket Gophers	diphacinone	56-57-AA-56	Damage to: dams, levies, athletic fields, active recreation areas, structures, high cultural value or landmark areas. Public Health concerns.	304 lbs
F	A	***	Kaligreen	potassium bicarbonate	70231-1-AA-70231		1.97 lbs
V	L	*	Maki Mini Blocks	bromadiolone	7173-202-AA-7173	High concern over 2nd poisoning, see site specific limits	28.38 lbs
V	L	*	Maki Paraffin Blocks	bromadiolone	7173-189-AA-7173	High concern over 2nd poisoning, see site specific limits	
I	L*	*	Marathon 1% Granular Greenhouse and Nursery	imidacloprid	3125-452-AA-59807	Nursery use for control of white fly, not for use in propagation beds.	19.75 lbs
H	L	/	Matran 2	clove Oil	Exempt from EPA Reg.	Pending receipt of clove oil toxicity data, do not use in enclosed areas.	
I	L	**	Maxforce FC Professional Insect Control Ant Bait Stations	fipronil	64248-10-ZA-64248	Minimize use through prevention, possible concern over active ingredient.	
I	L	**	MaxForce FC Professional Insect Control Ant Killer Gel	fipronil .001%	64248-21-ZA	Minimize use through prevention, possible concern over active ingredient.	

Pesticide Type	Use Category	Hazard Tier	Product Name	Active Ingredients	EPA Reg #	Use Limitations	Amount used in 2002
I	L	**	Maxforce FC Professional Insect Control Roach Bait Stations	fipronil	64248-11-ZA-64248	Minimize use through prevention, possible concern over active ingredient.	0.03 lbs
I	L	**	Maxforce IBF4 Carpenter Ant Bait	fipronil	64248-21-ZA-64248	Minimize use through prevention, possible concern over active ingredient	
I	L	**	Maxforce Roach Killer Bait Gel	fipronil	64248-14-AA-64248	Minimize use through prevention, possible concern over active ingredient	0.51 lbs + 0.03 gals
I	A	***	Mosquito Dunks	Bacillus Thuringiensis	6218-47-ZB-6218		1.22 lbs
I	L	**	M-pede Insecticide/Fungicide	potassium salts /fatty acids	53219-6-ZC-53219	Nursery, specialty gardens, and Africanized Honey Bees.	6.60 gals
I	L	**	Niban Granular Bait	orthoboric acid	64405-2-AA-64405	Outdoor restricted to planted areas, prefer containers; indoor must be in containers or inaccessible to humans	
I	L	***	Orange Guard	d-limonene	61887-1-AA-61887	Contact insecticides should be minimized especially indoors.	0.25 lbs + 0.03 gals
H	L	**	Oust XP Herbicide by DuPont	sulfometuron-methyl	352-601-AA-352	Rights of ways.	2.63 lbs
H	L*	**	Pendulum WDG Herbicide	pendimethalin	241-340-AA-241	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.	2.33 lbs
I	A	***	Pharorid	methoprene	2724-420-ZA-2724		
I	A	**	Prescription Treatment Brand Advance Liquid Ant Bait	Boric acid 1%	56- 72-AA- 499		

Pesticide Type	Use Category	Hazard Tier	Product Name	Active Ingredients	EPA Reg #	Use Limitations	Amount used in 2002
H	L*	*	Proturf New K-O-G Weed Control	dicamba	538-112-AA-538	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.	95.5 lbs
F	L	*	Proturf Systemic Fung.	thiophanate-methyl	538-88-ZB-538	Greens, highest profile athletic fields.	93 lbs
I	L*	*	PT Brand Ultra-Fine Oil	paraffinic oil	862-23-ZA-862	One year limit. Nursery and roses control of scale. Try Saf-T-Side and Spraytech oil as replacement.	
I	L	**	PT Brand Wasp-Freeze Wasp and Hornet Killer Formula 1	phenothrin, allethrin, CO2	499-362-ZA-499	Use only when a concern for public safety.	20.96 gals
I	A	***	Roach Terminal	oxypurinol, xanthine	1001-73-AA-1001		
F	A	/	Root Shield Drench	<i>Trichoderma harzianum</i>	68539-4-ZB-68539		
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.	0.125 lbs
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.	231.16 gals
H	L	**	Roundup ProDry	glyphosate	524-505-AA-524	same limitations as Roundup Pro	50 lbs + 0.53 gals
I	L	**	Saf-T-Side	paraffinic oil	48813-1-AA-48813	Trace of alkyl-phenol ethoxylates, avoid contact with surface waters.	
F	A	/	Serenade	Bacillus subtilis	69592-4-AA-69592		
M	A	***	Sluggo Slug and Snail Bait	iron phosphate	67702-3-AA-67702		
W	L	**	Sonar A.S.	fluridone	67690-4-AA-67690	Emergent plants in ponds, lakes, drainage canals. Only as a last resort when other mgmt. practices are ineffective.	



Pesticide Type	Use Category	Hazard Tier	Product Name	Active Ingredients	EPA Reg #	Use Limitations	Amount used in 2002
A	A	***	Spraytech Oil	soybean oil	65328-50001-AA-65328		5.75 gals
H	A	***	Suppressa	corn gluten meal	1051074-30001-AA-1051074		30 lbs
V	L	*	Talon-G Rodenticide Mini-Pellets (Contains Bitrex)	brodifacoum	10182-341-AA-10182	Extreme concern over primary and 2nd poisoning, see site specific limits.	15 lbs
I	L	**	Terro Ant Killer II Liquid Ant Baits	sodium tetraborate	149-8-ZB-149		2.46 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.	
H	L	**	Turflon Ester (post)	triclopyr	62719-258-AA-62719	Targeted treatment of turf; broadcast application requires exemption	1.81 gals
F	A	/	TurfShield	Trichoderma strain	68539-3-ZC-68539		568 lbs
I	A	**	Uncle Alberts Ant Bait	Disodium Octaborate Tetrahydrate	73340-1		
F/I	A	**	Valent Volck Supreme Spray	petroleum oil	59639-20-AA-59639		0.78 gals
I	A	***	Vectobac-G Biological Mosquito Larvicide	Bacillus Thuringiensis	275-50-AA-275		129 lbs
V	A	***	Vectolex G Biological Mosquito Larvicide	bacillus sphaericus	275-77AA-275		46.04 lbs
V	L	*	Weatherblok Bait with Bitrex	brodifacoum	10182-339-AA-10182	Extreme concern over 2nd poisoning, see site specific limits	663.83 lbs