



SF Environment

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A Department of the City and County of San Francisco

Checklist for City-Owned Properties

SF Reduced Risk Pesticide List & Summary of the SF Integrated Pest Management Ordinance

Save time & paper: View this online at SFEnvironment.org/IPMChecklist to click webpages underlined below, and see the most updated list.

If you have already read page 1-3, [click here to go straight to the SF Reduced Risk Pesticide List](#) (starting on page 4)

San Francisco's Integrated Pest Management (IPM) Ordinance was passed in 1996, and has been widely emulated by other public agencies. In 2006, SF's IPM Program received the National Integrated Pest Management (IPM) Achievement Award for being "a model for government agencies nationwide."

The US Green Building Council uses SF's pesticide hazard ratings in their LEED-EB Operations & Maintenance reference manual.

Who Must Comply with the IPM Ordinance?

- ✓ **Anyone** (City employees, landscape or structural pest control contractors) **who manages pests** (unwanted organisms such as insects, rodents, birds, or weeds) **for properties owned by or leased from the City** (i.e., offices, hospitals, jails, lands owned by SF Gov't but situated in other counties).
- ✓ **Tenants of City-owned property** (i.e., private golf courses on City property, vendors at SF Airport).

Properties **not** owned by the City (i.e., properties leased by City Departments from private companies) are *not* covered by the Ordinance, but are encouraged to implement IPM through these resources: [Find Qualified IPM Contractors for Buildings](#) or [Landscapes](#) and [How to Manage Insects, Weeds, & Other Pests](#).

Checklist for City-Owned Properties

1. [Read the SF IPM Ordinance.](#) As appropriate, check your department's IPM Plan.
2. [Use IPM methods for pest management.](#)

Emphasize prevention and non-chemical control methods, monitoring for pests before treating, and using least-hazardous chemical pesticides only as a last resort. The IPM Ordinance is based on the Precautionary Principle, and so it is important to **ask yourself, "is pesticide use necessary?"** For example, it is acceptable to have daisies in a park but not on a golf course.

PEST	WHAT TO DO
Ants, Cockroaches, Rodents, Pigeons, or Other Pests – Within 10 Feet Of Building	<ul style="list-style-type: none"> ✓ City Depts. that do <u>not</u> hire City employees for structural pest control should call Pestec, the Citywide Structural Pest Control Contractor from 2/1/2008 to 12/31/2010 at (415)587-6817. ✓ City Depts. are responsible for pigeons on their own structures (i.e., if pigeons are on a power line, the power company is responsible). ✓ Learn SF IPM Program recommendations for Roof & Norway Rat Management.
Termites, Mold, Wood-Destroying Pests	Ask SFE, Chris.Geiger@sfgov.org , (415)355-3759.
Public Health Pest Control (Rats in Sewers, Mosquitoes In Catchment Basins)	Call Pestec , Citywide Pest Control Contractor, (415) 587-6817.

PEST

WHAT TO DO

Landscape (**Weeds, Gophers, Insect Plant Pests**)

There is no Citywide contract for landscapes.

City Dept. staff should use [Bay Friendly Landscaping Guidelines](#), which:

- ✓ Are suited to our local climate, soils and topography
- ✓ Reduce waste & help meet recycling goals
- ✓ Reduce water use on landscapes by 50% or more
- ✓ Prevent or reduce storm water pollution to our local creeks and bay
- ✓ Lower maintenance associated with mowing and shearing
- ✓ Reduce greenhouse gas emissions

City Depts. that hire landscape pest control contractors should:

1. Include this Checklist in contract specifications when going out to bid, and email it to contractors.
2. Use [Bay-Friendly Maintenance Specifications](#)

Learn SF IPM Program recommendations for [Gopher Management](#), [Ground Cover for Weed Reduction](#)

3. Read this [Factsheet on Pesticide Restrictions in Red-Legged Frog Habitat](#) (last page in this packet)

4. If pesticides must be used on City-owned properties, take the following steps:

- a) If you are applying pesticides, **[attend SFE’s Annual Pesticide Safety Trainings](#)**, a training required by CA law. For details on pesticide licensing, visit the [CA Department of Pesticide Regulation \(DPR\) Licensing and Certification Program](#). Contractors (non-City employees) working on City properties are welcome on a space-available basis.
- b) **For landscape pest control, a written recommendation is required from a licensed agricultural Pest Control Advisor (PCA)**. If you hire a PCA that is not a city employee, email the written recommendation to Chris.Geiger@sfgov.org (415-355-3759).
- c) **Use only products listed in the SF Approved Reduced-Risk Pesticide List (page 4 in this packet)** on City properties.
- d) **Post this [Pesticide Posting and Public Awareness Notice \(Chinese\)](#) ([Spanish](#)):**
 - i) **At least 3 days before** application of the pesticide and remain posted **at least 4 days after**.
 - ii) If applied in an enclosed area, at every entry point where the pesticide is applied.
 - iii) If applied in an open area, post in highly visible locations around the perimeter.
 - iv) For pesticides used in rights-of-way, baits, or emergencies, see [IPM Ordinance Sec. 304](#).
- e) **Submit Pesticide Use Reports to SF Dept. of Environment every Aug. 1** (for pesticides used between Jan. 1-June 30) and **Feb. 1** (for pesticides used between July 1-Dec.31). This report is different from the report you are required to send to the County Agricultural Commissioner.
 - ✓ Make sure your designated IPM Coordinator reports *all pesticide uses, even pesticides used by contractors*. For information on the City’s reporting system, contact Chris.Geiger@sfgov.org, 415-355-3759.

5. **Sign up for emails of new SF Approved IPM products, trainings, & events!**

6. **Attend monthly SF IPM Technical Advisory Committee (TAC) meetings:**

✓ **Why attend?**

- Have the opportunity to help set the City's IPM priorities
- Provide input on products to include in the SF Approved Reduced-Risk Pesticide List (*page 4 in this packet*)
- Get trained in the latest IPM practices (*i.e., using compost teas, controlling ants*)

✓ **Who must attend:**

- **IPM Coordinators from these SF City Depts.:** Public Health, Metropolitan Transportation Agency, Port, Recreation & Parks, Public Utilities Commission, Public Works, SF International Airport. IPM Coordinators should share information from TAC meetings with anyone managing pests on their properties, including site managers, maintenance staff, and tenants leasing city-owned property.
 - **Citywide Structural Pest Control Contractor** ([Pestec](#)) serving City Depts.
- ✓ **IPM TAC meetings are free and open to the public.** City pest control staff are particularly encouraged to join us.



2009 San Francisco Reduced-Risk Pesticide List for City-Owned Properties

San Francisco Department of the Environment

How to Use this List

The following list includes pesticide products approved for use under San Francisco's Integrated Pest Management (IPM) Ordinance (Adopted 10/96, Chapter 3, SF Environmental Code).

This pesticide list should not be used in place of an IPM program. In other words, pesticides should be the last resort, when all other tactics have failed (i.e., sanitation improvements, pest prevention, non-chemical management measures).

This list is for institutions, not for homes. Many pesticides on the list were added for specialized purposes not found in residential settings. To find out how homeowners can use few or no pesticides to manage common pest problems, visit: SFEnvironment.org/IPM.

Exemption Process if City Dept. staff or contractors would like to use a pesticide that is:

- ✓ Not in the SF Approved Reduced-Risk Pesticide List –OR–
- ✓ For a use that is not in the *Limitations column* of the SF Approved Reduced-Risk Pesticide List –OR–
- ✓ Not allowed in the next page called *Rodenticides Allowed (Site-Specific) For Control of Rats and Mice*

The IPM Coordinator for your City Dept. must:

1. **Fill out this [Pesticide Exemption Request](#).** Allow at least 2 days for your request to be processed. SF Department of Environment will only grant exemptions in cases of:
 - a. Well-documented need for the pesticide and when all other alternatives have been tried or deemed impractical –OR–
 - b. For trial use of new reduced risk products
 - c. If you have more questions, contact Chris.Geiger@sfgov.org and call 415-355-3759.
2. **Justify your use of a pesticide at an annual public hearing**, if you used a pesticide:
 - a. That SF Dept. of Environment approved for exemption
 - b. That is higher risk and **listed as "L* = special concern" in the green Use Category column** of the SF Approved Reduced-Risk Pesticide List

For more information on *How San Francisco's Reduced-Risk Pesticide List Was Developed*, visit this website:
SFEnvironment.org/IPMChecklist

Rodenticides Allowed (Site-Specific) For Control of Rats and Mice

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 allowed in this document may only be performed after [applying for an exemption](#) from SF Dept. of Environment (Chris.Geiger@sfgov.org, 415-355-3759).

DEFINITIONS:

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	Allowed Rodenticide Use
Inside of sewers or sewage treatment facilities	Baits must be secured either inside the sewer or inside a bait box. Single feeding baits acceptable. Monitoring with non-toxic baits encouraged.
Commercial enterprises (such as restaurants) on leased City lands	Trapping only; single-feed rodenticides allowed as a last resort only for public health & safety considerations.
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) – not adjacent to natural areas.	Trapping preferred. Secure and anchored bait stations can be placed inside on a preventative basis. <i>No single-feed baits.</i>
Exterior of structures in urbanized areas (i.e. perimeter of offices)	Trapping preferred. Secure and anchored bait stations can be placed inside on a preventative basis. No single-feed baits.
Exterior of structures in natural areas	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. <i>No pellets or single-feed rodenticides.</i>
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. No single-feed baits.
Natural area or landscape adjacent to a natural area	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.



City & County of San Francisco
2009 List of 75 SF Approved Reduced-Risk Pesticides
SORTED BY PRODUCT NAME



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

Hazard Tier: I = highest hazard, III = lowest hazard

EPA Reg #: US EPA registraton number, from Dept. of Pesticide Regulation databases. INACTIVE = inactive registration, which means the product will no longer be sold.

NOTE: The first two groups of EPA registration numbers (XXXX-XXX) identify the product ingredients. Any registered product names with these two groups of numbers are considered to be listed products.

NOTE: Mosquito control products are listed separately at the bottom of the list

Product Name	Ingredients	EPA Reg #	Pesticide Type	Use Category	Hazard Tier	Limitations / Notes	Difference from 2008 List
20 Mule Team Tim-Bor Industrial	disodium octaborate, tetrahydrate 98%	1624-39	I = insecticide	L = limited use	I - highest hazard	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. Tier I status is due to male reproductive hazards, but exposure scenarios suggest minimal risk	CHANGED the following: 1) Added italicized language. 2) Hazard tier changed from II to I due to repro toxicity.
3336 WP Turf & Ornamental Fungicide	thiophanate-methyl 50%	1001-63-AA	F = fungicide	L* = limited use, special concern	I - highest hazard	For use on golf courses only. HIGH PRIORITY TO FIND ALTERNATIVE	
Advion Ant Bait Arena (Dupont)	Indoxacarb 0.1%	352-664	I= insecticide	A = Allowed	III - lowest hazard		ADDED to 2009 list. Reason: New active ingredient with minimum risk.
Advion Ant Gel (Dupont)	Indoxacarb 0.05%	352-746	I= insecticide	A = Allowed	III - lowest hazard		ADDED to 2009 list. Reason: New active ingredient with minimum risk.
Advion Cockroach Bait Arena (Dupont)	Indoxacarb 0.5%	352-668	I= insecticide	A = Allowed	III - lowest hazard		ADDED to 2009 list. Reason: New active ingredient with minimum risk.
Advion Cockroach Gel Bait (Dupont)	Indoxacarb 0.6%	352-652	I= insecticide	A = Allowed	III - lowest hazard		ADDED to 2009 list. Reason: New active ingredient with minimum risk.

Product Name	Ingredients	EPA Reg #	Pesticide Type	Use Category	Hazard Tier	Limitations / Notes	Difference from 2008 List
Agri-Fos Systemic Fungicide	potassium phosphite 45.8%	71962- 1	F = fungicide	A = Allowed	III - lowest hazard	For use on high-value oaks (<i>Quercus</i> spp.) susceptible to Sudden Oak Death	
Andersons Golf Products K-O-G Weed Control (equivalent to ProTurf K-O-G Weed Control)	dicamba 0.7%	538-112-AA-538 (INACTIVE); 9198-184-AA (ACTIVE)	H = herbicide	L* = limited use, special concern	I - highest hazard	Spot application only for for <i>Soliva sessilis</i> and <i>Cotula mexicana</i> in golf greens when hand-weeding is not feasible. Not for use in Sharp Park or area or endangered species areas. HIGH PRIORITY TO FIND ALTERNATIVE.	CHANGED the following: ADDED language on: spot application is on golf greens only; not for use in Sharp Park or area or endangered species areas. REMOVED language on requiring comparison with Vanquish, handweeded section of bowling greens.
Andersons Golf Products Systemic Fungicide (equivalent to Proturf Systemic Fungicide)	thiophanate-methyl 2.3%	538-88	F = fungicide	L* = limited use, special concern	I - highest hazard	Greens, highest profile athletic fields. HIGH PRIORITY TO FIND ALTERNATIVE	
Aquamaster Herbicide (equivalent to Rodeo)	glyphosate, isopropylamine salt 53.8%	524-343	W = herbicide in water	L = limited use	II	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. Note prohibition on use within buffer zone (generally 60 feet) around water bodies in red-legged frog habitat.	CHANGED the following: Added language on endangered species restrictions (from US EPA stipulated injunction)

Product Name	Ingredients	EPA Reg #	Pesticide Type	Use Category	Hazard Tier	Limitations / Notes	Difference from 2008 List
Avid 0.15EC Miticide/Insecticide	abamectin 2%	618-96-AA(INACTIVE) 100-896(ACTIVE)	I = insecticide	L* = limited use, special concern	I - highest hazard	Nursery use only.	CHANGED the following: Hazard tier changed from II to I due to repro toxicity.
Azatin XL	azadirachtin 3%	70051-27	I = insecticide	L = limited use	III - lowest hazard	Nurseries and established plants for interiorscapes.	
Azatrol EC Insecticide	Azadirachtin (2328) 1.2%	2217-836	I = insecticide	A = Allowed	III - lowest hazard		
BotaniGard ES	<i>Beauveria bassiana</i> strain GHA 11.3%	65626-8 [INACTIVE]	I = insecticide	L = limited use	III - lowest hazard	Control of thrips on landscaped plants. Biological product but some concern over bee toxicity.	
CMR Silicone Surfactant	polymethyl-siloxane, nonionic	1050775-50025-AA (inactive) now exempt	A=adjuvant	L = limited use	III - lowest hazard	Use other alternatives pending new review of siloxanes	
Conserve SC Turf and Ornamental	spinosad 11.6%	62719-291	I = insecticide	L = limited use	I - highest hazard	For use as a last resort in greenhouses. If feasible, alternate with other products to avoid the development of resistance.	
Contrac All-Weather Blox	bromadiolone 0.005%	12455-79-AA	V=vertebrate control	L* = limited use, special concern	I - highest hazard	For use only in City-owned sewer lines or for commercial leasees on city property 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.	
Dipel Pro DF	<i>Bacillus thuringiensis</i> , Subsp. Kurstaki, Strain Abts-351 (5829) 54%	73049- 39	I = insecticide	A = Allowed	III - lowest hazard		

Product Name	Ingredients	EPA Reg #	Pesticide Type	Use Category	Hazard Tier	Limitations / Notes	Difference from 2008 List
Earth-Tone Horticultural Oil (equivalent to Concern For The Earth, For the Earth Pesticidal Spray Oil Dormant And Growing Season Insect Spray)	canola oil 96%	67702- 4	I = insecticide	A = Allowed	III - lowest hazard		
EcoExempt G	eugenol (clove oil) 2.9%, thyme oil 0.6%, plant oils and other ingredients 96.5%	Exempt from EPA Reg.	I = insecticide	A = Allowed	III - lowest hazard	Do not use in enclosed areas.	
EcoExempt HC	eugenol (clove oil) 21.4%; 2-phenethyl propionate 21.4%	Exempt from EPA Reg.	H = herbicide	L = limited use	III - lowest hazard	Do not use in enclosed areas.	
Enstar II Insect Growth Regulator (Enstar 5E)	S-kinoprene 64.1%	55947-82-ZA-55947 (INACTIVE) 2724-476 (ACTIVE)	I = insecticide	L = limited use	III - lowest hazard	Nurseries, roses.	
EZject Selective Injection Herbicide	glyphosate, isopropylamine salt 83.5%	524-435-AA-524(INACTIVE) 83220-1 (ACTIVE)	H = herbicide	L = limited use	II	Tree stump injection especially where resprouting is likely, prefer mechanical methods when possible such as stump grinding	
Garlon 4	triclopyr, butoxyethyl ester 61.6%; nonpetroleum-based methylated seed oils	62719-40	H = herbicide	L* = limited use, special concern	I - highest hazard	Use only for targeted treatments of invasive exotics via dabbing or injection. HIGH PRIORITY TO FIND ALTERNATIVE	CHANGED the following: Was L, now L*
Garlon 4 Ultra	triclopyr, butoxyethyl ester 60.45%	62719-527	H=herbicide	L* = limited use, special concern	I - highest hazard	Use only for targeted treatments of invasive exotics via dabbing or injection. HIGH PRIORITY TO FIND ALTERNATIVE.	ADDED to 2009 list. Reason: New formulation of Garlon 4. Inerts (methylated seed oils) are at least as safe or safer than current product.

Product Name	Ingredients	EPA Reg #	Pesticide Type	Use Category	Hazard Tier	Limitations / Notes	Difference from 2008 List
Gentrol Point Source Roach Control Device	Hydoprene 96%	2724- 469	I= insecticide	A = Allowed	III - lowest hazard		ADDED to 2009 list. Reason: Synergistic effects with baits make this a desirable tool.
Heritage Fungicide	azoxystrobin 50%	100- 1093-AA	F = fungicide	L* = limited use, special concern	I - highest hazard	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.	
Javelin WG	<i>Bacillus thuringiensis</i> (berliner), subsp. kurstaki, strain sa-11 7.5%	70051-66	I = insecticide	A = Allowed	III - lowest hazard		
JMS Stylet Oil	petroleum distillates, refined 97.1%	65564- 1	I = insecticide, F = fungicide	A = Allowed	II	Use up existing stock only for Rec&Park and SFIA.	
JT Eaton Answer for the Control of Pocket Gophers	diphacinone 0.005%	56-57	V = vertebrate control	L = limited use	II	Damage to: dams, levies, athletic fields, active recreation areas, structures, high cultural value or landmark areas. Public Health concerns. HIGH PRIORITY TO FIND ALTERNATIVE	
JT Eaton Bait Block Rodenticide with Molasses/Peanut Butter Flavorizer	diphacinone 0.005%	56-42	V = vertebrate control	L = limited use	II	Damage to: dams, levies, athletic fields, active recreation areas, structures, high cultural value or landmark areas. Public Health concerns. HIGH PRIORITY TO FIND ALTERNATIVE	
JT Eaton's Bait Blocks Rodenticide with Apple Flavorizer	diphacinone 0.005%	56-41 [INACTIVE]	V = vertebrate control	L = limited use	II	Concern over 2nd poisoning, see site specific limits. HIGH PRIORITY TO FIND ALTERNATIVE	
Kaligreen	potassium bicarbonate 82%	70231-1-AA (INACTIVE) 11581-2 (ACTIVE)	F = fungicide	A = Allowed	III - lowest hazard	Watch for phytotoxicity.	

Product Name	Ingredients	EPA Reg #	Pesticide Type	Use Category	Hazard Tier	Limitations / Notes	Difference from 2008 List
Marathon 1% Granular Greenhouse & Nursery	imidacloprid 1%	3125-452-AA (INACTIVE) 59807-7 (ACTIVE)	I = insecticide	L* = limited use, special concern	I - highest hazard	Nursery use for control of white fly, not for use in propagation beds. Only effective on quick-growing plants. HIGH PRIORITY TO FIND ALTERNATIVE	
Marathon II Granular Greenhouse & Nursery	imidacloprid 21.4%	432-1369	I = insecticide	L* = limited use, special concern	I - highest hazard	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.	
Maxforce FC Professional Insect Control Ant Bait Stations	fipronil 0.01%	64248-10-ZA-64248(INACTIVE); 432-1256(ACTIVE)	I = insecticide	A = Allowed	II		CHANGED the following: Use Category is now Allowed (was Limited Use).
Maxforce FC Professional Insect Control Roach Bait Stations	fipronil 0.05%	64248-11 (INACTIVE); 432-1257 (ACTIVE)	I = insecticide	A = Allowed	II		CHANGED the following: Use Category is now Allowed (was Limited Use).
Maxforce FC Professional Insect Control Roach Killer Bait Gel	fipronil 0.01%	64248-14 (INACTIVE); 432-1259 (ACTIVE)	I = insecticide	A = Allowed	II		CHANGED the following: Use Category is now Allowed (was Limited Use).
Milestone	Aminopyralid, triisopropylamine salt (5928) 40.6%	62719- 519	H = herbicide	L* = limited use, special concern	I - highest hazard	For invasive species in natural areas where other alternatives are ineffective, especially for invasive legumes and composites such as yellow star thistle and purple star thistle. Listed as Tier I due to persistence but toxicity & potential exposure are very low.	CHANGED the following: Changed Use Category from L* to L due to low toxicity, low potential for exposure.

Product Name	Ingredients	EPA Reg #	Pesticide Type	Use Category	Hazard Tier	Limitations / Notes	Difference from 2008 List
M-pede Insecticide/Fungicide	potash soap 49%	53219-6-ZC (INACTIVE) ; 62719-515 (ACTIVE)	I = insecticide	L = limited use	III - lowest hazard	Nursery, specialty gardens, and Africanized Honey Bees.	
Niban Granular Bait (equivalent to Terro Multipurpose Ant Bait)	boric acid 5%	64405- 2	I = insecticide	L = limited use	I - highest hazard	Outdoor restricted to planted areas, prefer containers; indoor must be in containers or inaccessible to humans. <i>Tier I status is due to reproductive toxicity but exposure scenarios suggest minimal risk</i>	CHANGED the following: 1) Added italicized language in Limitations column. 2) Hazard tier changed from II to I due to reproductive toxicity.
OhYeah!	sodium lauryl sulfate	Exempt from EPA Reg.	I = insecticide	A = Allowed	III - lowest hazard		
Orange Guard	d-limonene 5.8%	61887-1	I = insecticide	L = limited use	III - lowest hazard	Minimize use in enclosed areas due to scent. Wear protective equipment. Potential aquatic hazard - do not apply directly to water.	CHANGED the following: Added the language in the Limitations Column on wearing protective equipment because this products is a skin sensitizer.
Organic JMS Stylet Oil	Aliphatic petroleum solvent 97.1%	65564- 1	I = insecticide, F = fungicide	A = Allowed	II	Use up existing stock only for Rec&Park and SFIA.	
Oust XP Herbicide (DuPont)	sulfometuron-methyl 75%	352-601-AA	H = herbicide	L* = limited use, special concern	I - highest hazard	For use only on airport operational areas subject to FAA requirements. HIGH PRIORITY TO FIND ALTERNATIVE	
Prescription Treatment Brand Advance Liquid Ant Bait	borax 1.3%	56-72-AA-499 (INACTIVE) ; 499-491 (ACTIVE)	I = insecticide	A = Allowed	I - highest hazard	<i>Tier I status is due to reproductive toxicity but exposure scenarios suggest minimal risk</i>	CHANGED the following: 1) Added italicized language. 2) Hazard tier changed from II to I due to repro toxicity.
Prescription Treatment Brand Avert Cockroach Bait Station	abamectin 0.05%	499-467-AA	I = insecticide	A = Allowed	I - highest hazard	Phase out - use existing supplies. <i>Tier I status is due to reproductive toxicity but exposure scenarios suggest minimal risk</i>	CHANGED the following: Added italicized language. Hazard tier changed from II to I due to repro toxicity. Minimum risk but safer alternatives exist.

Product Name	Ingredients	EPA Reg #	Pesticide Type	Use Category	Hazard Tier	Limitations / Notes	Difference from 2008 List
Prescription Treatment Brand Avert Cockroach Gel Bait Formula 3	abamectin 0.05%	499-410-AA	I = insecticide	A = Allowed	I - highest hazard	Phase out - use existing supplies. Tier I status is due to reproductive toxicity but exposure scenarios suggest minimal risk	CHANGED the following: Added italicized language. Hazard tier changed from II to I due to repro toxicity. Minimum risk but safer alternatives exist.
Prescription Treatment Brand Wasp-Freeze Wasp and Hornet Killer Formula 1	phenothrin 12%, d-trans allethrin .129%, CO2	499-362	I = insecticide	L = limited use	II	Use only when a concern for public safety. Consider Victor Poison Free Wasp & Hornet Killer as a first resort.	
Roach Terminal	oxypurinol 1%, xanthine 1%	1001-73 (INACTIVE)	I = insecticide	A = Allowed	III - lowest hazard	Consider using this first before trying other roach products.	
Rootone F Brand Rooting Hormone	Thiram 4.04%, NAD .2%	264-499	F = fungicide	L* = limited use, special concern	I - highest hazard	Nursery use only. Problem with mixing and storage due to talc. Consider Dip'n Grow as alternative.	
RootShield Granules, TurfShield Granules	<i>Trichoderma harzianum</i> Rifai Strain Krl-Ag2 (3977) 1.15%	68539-3	F = fungicide	A = Allowed	III - lowest hazard		
Roundup Pro Herbicide	glyphosate, isopropylamine salt 41%	524-475	H = herbicide	L = limited use	II	Spot application of areas inaccessible or too dangerous for hand methods, right of ways, utility access, or fire prevention. Use for cracks in hardscape, decomposed granite and edging only as last resort. OK for renovations but must put in place weed prevention measures. Note prohibition on use within buffer zone (generally 60 feet) around water bodies in red-legged frog habitat.	CHANGED the following: Added language on endangered species restrictions (from US EPA stipulated injunction)

Product Name	Ingredients	EPA Reg #	Pesticide Type	Use Category	Hazard Tier	Limitations / Notes	Difference from 2008 List
Roundup ProDry Herbicide	glyphosate, ammonium salt 71.4%	524-505	H = herbicide	L = limited use	II	Same limitations as Roundup Ultra	CHANGED the following: Added language on endangered species restrictions (from US EPA stipulated injunction)
Safer Brand Ant & Crawling Insect Killer	Diatomaceous earth 77.69%	59913-1	I= insecticide	A = Allowed	III - lowest hazard	Use only for structural pest control with a respirator while controlling crawling insects (i.e., ants, bed bugs, silverfish).	ADDED to 2009 list. Reason: needed for bedbugs and other structural pests.
Saf-T-Side	paraffinic oil 80%	48813-1	I = insecticide	L = limited use	II	Use up existing stock only. Try Spraytech first.	
Sluggo Slug and Snail Bait	Phosphoric acid, iron(3+) salt (1:1) 1%	67702- 3	M=molluscicide	A = Allowed	III - lowest hazard		
Sonar A.S.	fluridone 41.7%	67690-4	W = herbicide in water	L = limited use	III - lowest hazard	Emergent plants in ponds, lakes, drainage canals. Only as a last resort when other mgmt. practices are ineffective.	
Spraytech Oil	soybean oil	65328-50001-AA	A=adjuvant	A = Allowed	III - lowest hazard	Consider using this instead of JMS Stylet Oil for aphids and other insects.	
Terro Ant Killer II, Terro Ant Killer II Liquid Ant Baits, Terro-PCO	sodium tetraborate decahydrate 5.4%	149-8	I = insecticide	A = Allowed	I - highest hazard	<i>Tier I status is due to reproductive toxicity but exposure scenarios suggest minimal risk</i>	CHANGED the following: 1) Added italicized language. 2) Hazard tier changed from II to I due to repro toxicity.

Product Name	Ingredients	EPA Reg #	Pesticide Type	Use Category	Hazard Tier	Limitations / Notes	Difference from 2008 List
Top Gun All Weather Bait Block Rodenticide	bromethalin 0.01%	67517- 66	V=vertebrate control	L* = limited use, special concern	II	For use only in City-owned sewer lines or for commercial leases on city property 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.	
Turflon Ester	triclopyr, butoxyethyl ester 61.6%	62719-258	H = herbicide	L* = limited use, special concern	I - highest hazard	Targeted treatment of turf; broadcast application requires exemption. HIGH PRIORITY TO FIND ALTERNATIVE. Note prohibition on use within buffer zone (generally 60 feet) around water bodies in red-legged frog habitat.	CHANGED the following: Changed tier to L* from L due to new data on reproductive toxicity. Added language on endangered species restrictions (from US EPA stipulated injunction)
TurfShield (was called) T-22G BIOLOGICAL PLANT PROTECTANT GRANULES (now called)	<i>Trichoderma harzianum</i> Rifai Strain Krl-Ag2 (3977) 1.15%	68539-3	F = fungicide	A = Allowed	III - lowest hazard		
Victor Poison Free Flying Insect Killer	Mint Oil 4.0%, Sodium Lauryl Sulfate 0.1%, Inert Ingredients 95.9%, Water 93.4%, CO ₂	exempt from EPA Reg.	I = insecticide	A = Allowed	III - lowest hazard	Limit use indoors.	
Victor Poison Free Wasp & Hornet Killer	Mint Oil 8.0%, Sodium Lauryl Sulfate 1.0%, Inert Ingredients 91.0% Water	exempt from EPA Reg. UPC #00728681 36047	I = insecticide	A = Allowed	III - lowest hazard	Try this instead of PT Brand Wasp Freeze	
Zoecon Gentrol IGR Concentrate	hydroprene 9%	2724-351	I = insecticide	A = Allowed	III - lowest hazard		
Mosquito control - microbial							
Mosquito control - microbial			Z=public health/ mosquitoes	A = Allowed	III - lowest hazard	Any microbial mosquito larvicide with active ingredients <u>Bacillus thuringiensis</u> (Berliner or Israelensis) or <u>Bacillus sphaericus</u> is categorized as "A" - allowed.	

Product Name	Ingredients	EPA Reg #	Pesticide Type	Use Category	Hazard Tier	Limitations / Notes	Difference from 2008 List
Mosquito control - Insect Growth Regulators							
Altosid Briquets by Zoecon (was called) ALTOSID BRIQUETS (now called)	S-Methoprene (5026) 8.62%	2724-375	Z=public health/ mosquitoes	L = limited use	I - highest hazard	Not for use in estuarine environments, except for San Mateo Mosquito Abatement District applications at airport and Sharp Park. For City catchment basins, microbial products are preferred when feasible.	CHANGED the following info: Any microbial mosquito larvicide with active ingredients <i>Bacillus thuringiensis</i> (Berliner) or <i>Bacillus sphaericus</i> is categorized as "A" allowed. Due to number of microbial larvicides used by vector control agencies, and the low risk involved, it makes more sense to simply define the active ingredient for this class of pesticides.
Zoecon Altosid Liquid Larvicide Mosquito Growth Regulator (was called) ALTOSID	S-Methoprene (5026) 5%	2724- 392	Z=public health/ mosquitoes	L = limited use	I - highest hazard		
Zoecon Altosid Pellets (was called) ZOECON RF-330 ALTOSID PELLETS (now called)	S-Methoprene (5026) 4.25%	2724- 448	Z=public health/ mosquitoes	L = limited use	I - highest hazard		
Zoecon Altosid XR Extended Residual Briquets (was called) ZOECON RF-292 BRIQUET (now called)	S-Methoprene (5026) 2.1%	2724- 421	Z=public health/ mosquitoes	L = limited use	I - highest hazard		
Zoecon Altosid XR-G (was called) ZOECON 9010 GR (now called)	S-Methoprene (5026) 1.5%	2724- 451- ZA	Z=public health/ mosquitoes	L = limited use	I - highest hazard		
Mosquito control - Other							
Agnique MMF (was called) AGNIQUE MMF GR MOSQUITO LARVICIDE & PUPICIDE (now called)	poly(oxy-1,2-ethanediyl), alpha-isodecyl-omega-hydroxy-phosphate 32%	2302-14-AA (INACTIVE) ; 53263- 30 (ACTIVE)	Z=public health/ mosquitoes	L = limited use	I	Mosquito larvicide for standing water, human health concerns, especially where spreading a distance along the surface is not	
Golden Bear Mosquito Larvicide GB-1111 (was called) MOSQUITO LARVICIDE GB-1111 (now called)	Aliphatic Petroleum Hydrocarbon 98.7%	8329- 72	Z=public health/ mosquitoes	L = limited use	I	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 CA Dept. of Health Services.	

San Francisco Department of the Environment Factsheet
**California Red-Legged Frog (CRLF), *Rana aurora draytonii*,
Stipulated-Injunction Regarding Pesticide Use in Critical Habitat**

Reference US-EPA website: <http://www.epa.gov/espp/litstatus/redleg-frog/rif.htm>

Updated 1/1/09

Legal Action & the Stipulated Injunction

On April 2, 2002 the Center for Biological Diversity filed a lawsuit against the EPA for violating the Endangered Species Act by failing to ensure that EPA's registration of 66 pesticides do not adversely affect the California red-legged frog (a threatened species native to California).



California Red-Legged Frog, *Rana aurora draytonii*, note the characteristic red skin fold (arrow) running from the eyes to the tail. Photo courtesy of www.californiaherps.com

To resolve the case, on October 20, 2006 the Courts issued a Stipulated Injunction. It requires EPA to determine the effects of 66 pesticide AIs (Active Ingredients) on the California Red-Legged Frog (CRLF) and to amend the labels and use restrictions based on their findings. The US-EPA has 36 months to evaluate all 66 of the AIs.

In the interim, restrictions are in place on the use of products containing the 66 AIs.

The injunction can be viewed at:

<http://www.epa.gov/espp/litstatus/stipulated-injunction.pdf>

Affected Areas:

This ruling affects areas in 32 California Counties, including San Francisco, San Mateo, Santa Clara, Alameda, Contra Costa, and counties containing SF rights-of-way up to Hetch-Hetchy Reservoir. Detailed county maps can be found on-line at:

<http://www.epa.gov/espp/litstatus/redleg-frog/steps-info.htm> (Click on the County of interest)

How Does This Affect You?

If you plan to use one of the 66 AIs listed at the end of this factsheet, visit the map link above to see if your site is located in either critical or non-critical habitat. If it is, here is a summary of how your applications are affected (restrictions are the same for critical and non-critical habitat).

- All still or slow-moving fresh-waterbodies in affected areas – natural and man-made, permanent and temporary – are considered habitat and are subject to the restrictions.
- Ground Applications: Do not apply products with listed AIs in the water, in the 200-foot upland habitat surrounding the water, or in the 60-foot buffer zone around the upland habitat. That amounts to a **260-foot zone around any water body in affected areas**. Aerial applications: observe a 200-ft buffer around the 200-ft upland habitat area.
- Upland habitat includes all areas within 200 feet of the mean high water mark where the frog can find shelter, refuge from predators, or rest, and includes rocks, organic debris, small mammal burrows, moist leaf litter or manmade features.
- Your application is subject to a **reduced buffer zone of only 60 feet** (200 foot upland habitat zone does not apply) for the following uses: Localized spot treatments using handheld devices on rights-of-way, roadsides, **pastures, lawns, or forests**; spot treatments of wasp and hornet nests; individual tree removal using cut stump applications; basal bark application to individual plants; use of pesticides in bait stations.

Products Affected for San Francisco Staff:

Pesticides in the injunction that are on the SF Reduced Risk Pesticide List are those containing glyphosate (Roundup & Rodeo®), imazapyr (Habitat®) and triclopyr (Turflon Ester® & Garlon 4®). Methoprene (Zoecon Altosid products) is no longer covered by this injunction; the USEPA has determined that it has no effect on red-legged frog populations. The Reduced-Risk Pesticide List limits pesticide use only on properties of the City & County of San Francisco.

Exceptions:

This injunction does not apply to public-entity-administered vector control programs.

It does not apply to the control of state-designated invasive species or noxious weeds if:

- You are applying for a public entity program
- Application is at least 15 feet from waterbodies described above
- Application is limited to localized spot treatments with a hand-held device
- No precipitation is forecast within 24 hours
- You are a certified applicator or under the direct supervision of a certified applicator

View USDA's Calif. invasive & noxious plant list:

<http://plants.usda.gov/java/noxious?rptType=State&statefips=06TH>

View CDFA's weed list:

http://www.cdfa.ca.gov/phpps/ipc/noxweedinfo/noxweedinfo_hp.htmTH

The injunction also does not apply to indoor applications, tree injection applications, home-owner applications to potted plants, flea & tick collars for dogs and cats, where use is approved under the Endangered Species Act.

Biology of the California Red-Legged Frog

The CRLF is the largest native frog in California. It is highly aquatic and is usually found in streams, ponds, coastal drainages and their adjacent habitat. The frog will make use of cool moist burrows, leaf litter, and other land retreats to keep cool and to avoid dehydration, especially in the summer. In cooler inland areas burrows are used for hibernation.

CRLF can reach over 5 inches long and is brown to reddish-brown above with irregular black spots (sometimes with light centers). Prominent skin folds along both sides run from the eyes to the tail. The undersides of their legs, and sometimes the abdomen, are red in adults (red color may not be well developed in juveniles). CRLF is distinguished from the bullfrog by its lack of green color, characteristic of the bullfrog.

The CRLF is active in coastal areas all year. During their tadpole stage they eat algae. Adults typically eat land invertebrates (insects, etc.) but larger frogs will prey on the Pacific tree frog (*Hyla regilla*) and on California mice (*Peromyscus californicus*). Feeding occurs largely along the shoreline and on the water surface.

Breeding occurs November through March, varying throughout their range. Egg-laying usually occurs in late winter or early spring, often following a heavy rain. The female deposits her 2,000- to 5,000-egg masses on newly emerged aquatic

vegetation near the surface of the water. Eggs hatch in 6 to 14 days. The tadpoles undergo metamorphosis at 3 ½ to 7 months after hatching and reach sexual maturity at 3 to 4 years old. The frogs generally live from 8 to 10 years.

Pesticides Banned in Habitat Areas-Full List

The 66 pesticides cited in the injunction are:

2,4-D (broadleaf herbicide), Acephate (Orthene®), Alachlor, Aldicarb, Atrazine, Azinphos-methyl, Bensulide, Bromacil, Captan, Carbaryl (Sevin®), Chloropicrin, Chlorothalonil (Daconil®), Chlorpyrifos (Dursban®), CDPA, DEF, Diazinon, Dicofol, Diflubenzuron, Dimethoate, Disulfoton, Diuron, Endosulfan, EPTC, Esfenvalerate, Fenamiphos,



CRLF egg masses in Alameda County.

Photo courtesy of www.californiaherps.com

Glyphosate (Roundup®, Rodeo®), Hexazinone, Imazapyr, Iprodione, Linuron, Malathion, Mancozeb, Maneb, Metam Sodium, Methamidophos, Methidathion, Methomyl, Methoprene, Methyl Parathion, Metolachlor, Molinate, Myclobutanil, Naled, Norflurazon, Oryzalin (Surflan®), Oxamyl, Oxydemeton-methyl, Oxyfluorfen, Paraquat dichloride, Pendimethalin, Permethrin, Phorate, Phosmet, Prometryn, Pronamide, Propanil, Propargite, Rotenone, Simazine, Strychnine, Telone, Thiobencarb, Triclopyr (Garlon 4®, Turflon Ester®), Trifluralin (Treflan®), Vinclozolin, and Ziram.

NOTE: Some of these active ingredients (notably methoprene) have since been determined to have “no effect” on frog populations, and pending consultation with the USFWS are expected to be no longer subject to the injunction’s restrictions. See the “effects determinations” for details:

<http://www.epa.gov/espp/litstatus/effects/redleg-frog/index.html>