



SF Environment

Our home. Our city. Our planet.

A Department of the City and County of San Francisco

2012 SF Reduced Risk Pesticide List & Compliance Checklist for City Properties

If you already read about the revised IPM Ordinance (page 1-7), skip to [SF Reduced Risk Pesticides on page 8](#).

Who should use this

City staff or contractors managing unwanted insects, rodents, birds, weeds, mold for buildings & landscapes:

- Owned by the City *even if in other counties*
- Leased from the City (*lease signed after 1996*), such as golf courses, vendors at SF Airport.

How to control pests for non-City properties (homes, organizations)

Visit SFApproved.org/420-Pest-Management for safer pest control:

- Techniques
- Contractors
- Contract Language
- Program Development Tools
- Complaints of Pests or Pesticides
- SF Licensing, Permits, Pesticide-Related Illnesses
- How to submit County Pesticide Application Reports

Do not use this SF Reduced-Risk Pesticide List because it:

- Does not include consumer products.
- Includes products that are not least-hazardous (Tier III).
- May not list products you need or may list more toxic products you do not need.

Checklist for City Properties

Save time. Use the Checklist below so you don't have to read the [SF IPM Ordinance](#) (revised 2011).

1. [Use general IPM methods](#) & your Dept. IPM (ask [your Dept. IPM Coordinator](#)).

- ✓ First use prevention and non-chemical control methods. Monitor for pests before treating.
- ✓ The IPM Ordinance is based on the Precautionary Principle. So **ask yourself, "is pesticide use necessary?"** For example, it's okay 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"> ✓ Leasees of City properties are encouraged to try these Safer Pest Control Techniques, Contractors, Contract Language ✓ City Depts. that do <u>not</u> hire City staff for structural pest control: call Pestec (415-587-6817), vendor of citywide contract (ends 12/31/11). Or use other safer pest control firms. ✓ City Depts. are responsible for pigeons on their own structures (i.e., if pigeons are on a power line, the power company is responsible). ✓ Check out strategies for managing specific pests, including SF IPM Program recommendations for Roof & Norway Rat Management.
Termites, Mold, Wood-Destroying Pests	Ask SFE, Chris.Geiger@sfgov.org , (415)355-3759.

PEST	WHAT TO DO
Public Health (Rats in Sewers, Mosquitoes In Catchment Basins)	Call Pestec , Citywide Pest Control Contractor, (415) 587-6817.
Landscapes & rights of way (medians)- Weeds, Gophers, Insect Plant Pests	<p>There is no Citywide contract for landscapes. City staff should:</p> <ol style="list-style-type: none"> 1. Get a written recommendation is required from a licensed agricultural Pest Control Advisor (PCA). If you hire a PCA that is not a City staff, email the written recommendation to Chris.Geiger@sfgov.org (415-355-3759). 2. Check out strategies for managing specific pests, including SF IPM Program recommendations for Gopher Management, Ground Cover for Weed Reduction. 3. Use Bay Friendly Landscaping Guidelines, which: <ul style="list-style-type: none"> ✓ 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 <p>City staff that hire contractors should include the following in contract specifications:</p> <ul style="list-style-type: none"> • This entire Pest Control Compliance Checklist for City Properties. • Language such as: Notwithstanding other sections in this contract, the Contractor will use pesticides (including insecticides, herbicides/weed-killers, fungicides, rodenticides) <i>only</i> as a method of last resort, and only after exploring all applicable non-chemical options. Only pesticide products listed on the San Francisco Reduced-Risk Pesticide List (SFApproved.org/pest-management) may be used on City properties (SF Environment Code, Chapter 3), and must be used in a manner consistent with limitations described on the RRPL and the US EPA label. • Bay-Friendly Maintenance Specifications

2. Include this sample lease language:

"Lessee, and any pest management contractors operating on the leased property, shall comply with all requirements of San Francisco's Integrated Pest Management Ordinance (Chapter 3, San Francisco Environment Code). These requirements include, but are not limited to: Restricting all pesticides used to those on the current SF Reduced Risk Pesticide List for pesticides, posting notifications of all pesticide applications three days before treatment, and leaving these postings for at least four days after treatment, reporting all pesticide applications to the San Francisco Department of the Environment's IPM Program Manager, and adopting an IPM approach to all pest control activities. For more information, see the City's IPM web site at SFApproved.org/pest-management.

3. As a last resort, use pesticides & do the following:

- a) If you apply pesticides, **attend SFE's Annual Pesticide Safety Trainings** (required by CA law). For **pesticide licensing**, see this [CA Dept. of Pesticide Regulation](#) page. Contractors (non-City staff) working on City properties are welcome on a space-available basis.

- b) Let your [your Dept. IPM Coordinator](#) know before you use pesticides.
- c) **Only use SF Reduced-Risk Pesticides** (page 8, updated annually). Do not use explosive devices.
Follow **Pesticide Restrictions for Red-Legged Frog Habitat** (page 6)
For How SF's Reduced-Risk Pesticide List Was Developed, visit: SFApproved.org/pest-management
- d) Your Dept. IPM Coordinator must **[request an exemption to use a pesticide that is:](#)**
 - i) Not a SF Reduced-Risk Pesticide (page 8) **-OR-**
 - ii) Is a SF Reduced-Risk Pesticide but your needs are different than what's in the *Use Limitations column*.
Allow at least 2 days for your request to be processed. SF Dept. of Environment (SFE) will only grant exemptions in cases of well-documented need for the pesticide and when all other alternatives have been tried or deemed impractical **-OR-** for trial use of new reduced risk products.

If SFE approves your exemption, justify your use of that pesticide at the annual public hearing.

Questions? Contact Chris.Geiger@sfgov.org and call 415-355-3759.

e) When to post this Pesticide Application Notice (revised 2010) (Chinese) (Spanish)	How to post
Least Hazardous (Tier III) pesticide (starting page 8)	Post this notice on the day of application.
More or Most Hazardous (Tier I & II) pesticide (starting page 8)	Post this notice at least 3 days before application and for at least 4 days after.
Enclosed area	Post this notice at every entry point of application
Open area	Post this notice in highly visible locations around the perimeter.
Rights-of-way (e.g., medians)	No posting required but follow this Checklist.
Bait	Post this notice permanently: <ul style="list-style-type: none"> • In each building or vehicle where baits are used - OR - • At the City Dept. main office or where the public gets info on the building or vehicle - OR - • In the obvious outside area of the bait application.
Emergencies: Pest outbreak that poses immediate threat to public health - OR - Compliance with worker safety requirements - OR - Significant economic damage if SF Reduced-Risk Pesticide was used (page 8)	Before using emergency pesticide, your IPM Coordinator must fill out a Pesticide Exemption Request . Post this notice at the time of application and for at least 4 days after.

- f) **If the public has pest control questions or complaints on City properties, ask them to:**
 - For complaints about the following, contact [SFDPH](#):
 - Mosquitoes: (415)252-3806
 - Rodents or overgrown vegetation: (415)252-3805
 - call 311 or staff on this site: tinyurl.com/SF-pest-control-PR-staff
 - For other concerns or violations of the SF IPM Program, [let SF Environment know](#).

g) Make sure your Dept. IPM Coordinator reports all pesticides used by staff or contractors.

[Enter data monthly to the online Pesticide Use Reporting System](#) (PURS) (tinyurl.com/pesticide-use-report). It goes to SF Dept. of Environment. You can print & send it to the County Agricultural Commissioner.

To get trained on PURS, contact Chris.Geiger@sfgov.org, 415-355-3759.

4. [Sign up for emails to:](#)

- Get updates on new products
- Be invited to trainings, or meetings to tell us pesticides that work.

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

- ✓ IPM TAC meetings are free and open to the public.
- ✓ Why attend?
 - Help set the City's IPM priorities
 - Suggest / removed products in the SF Reduced-Risk Pesticide List (*page 8 in this packet*)
 - Network with City pest control staff
 - Get trained in the latest IPM practices (*i.e., using compost teas, controlling ants*)
 - Enjoy free, organic food
 - Get Continuing Education Units.
- ✓ 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 property.
 - **Citywide Structural Pest Control Contractor** ([Pestec](#)) serving City Depts.

7. [Get pesticides picked up for safe disposal.](#)

Rodenticides: Site-Specific Limitations

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.

Only use rodenticides in the SF Reduced-Risk Pesticide List, not explosive devices.

To use other rodenticides, [apply for an exemption](#).

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 bromodialone & bromethalin active ingredients.

General Site Description	Allowed Use of Rodenticides in SF Pesticide List
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.

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>



2012 San Francisco Reduced-Risk Pesticide List for City-Owned Properties

SF Department of the Environment (SFE)

How to Use this List

The following list includes pesticide products approved for use under the SF 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. 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: SFAproved.org/420-Pest-Management.

City Dept. staff or contractors: Apply for exemption to use a pesticide that is:

- ✓ **Not** in the SF Reduced-Risk Pesticide List –OR–
- ✓ **In** the SF Reduced-Risk Pesticide List **but used different than described** in the *Pesticide Limitations column*.

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 Dept. 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. 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 *Most Limited Use* in the SF Reduced-Risk Pesticide List

For more info on *How SF's Reduced-Risk Pesticide List Was Developed*, visit: SFAproved.org/pest-control-for-city

DRAFT San Francisco 2012 Reduced-Risk Pesticide List

(Applicable to City-owned properties only)

Product Name	Type	EPA Reg. No.	Ingredients	Pesticide Hazard Tier	Use Limitation Type	Use Limitations (To use this pesticide for reasons not listed below, click to Request a Pesticide Exemption)	Changes made
PRODUCTS ADDED							
BestYet Cedarcide		exemptprod-009	Cedarwood oil, amorphous silica	Least hazardous (Tier III)	Least Limited		ADDED. Reported effective by city contractor.
BVA2 Mosquito Larvicide		70589-1	highly refined petroleum distillate (mineral oil)	Least hazardous (Tier III)	Least Limited		ADDED. Used by San Mateo Co. Mosquito Abatement District in areas around SF Int'l Airport
Eco Exempt Jet Wasp and Hornet Killer	Insecticide	exemptprod-007	2-phenethyl propionate 2%, rosemary oil 3%	Least hazardous (Tier III)	Least Limited	Preferred alternative to Wasp Freeze but may not act quickly enough during late summer, when yellowjackets are most aggressive. Consider digging up nest and baiting with honey in evening to attract raccoons.	ADDED. Substitute for Victor Wasp Freeze (discontinued)
EcoPCO DX Dust Insecticide	Insecticide	67425-16	Pyrethrins 0.4%, 2-Phenethyl Propionate 1%	More hazardous (Tier II)	More Limited	Only for use on rat mites, bedbugs and lice when nonchemical techniques prove ineffective	ADDED. Tool needed for use on bedbugs.
Fosphite Fungicide	Algaecide	68573-2	Potassium phoshate	Least hazardous (Tier III)	More Limited	Only for use on golf courses.	ADDED by request of Harding Park. Need alternative modes of action for turf pathogens.
Organocide	Insecticide	exemptprod-010	sesame oil 5%	Least hazardous (Tier III)	Least Limited		ADDED as general purpose insecticide
Pentrabark	Adjuvant	83416-50001, 71962-50001 [INACTIVE]	Polyalkyleneoxide modified heptamethyltrisiloxane	Least hazardous (Tier III)	More Limited	For use with Agrifos only	ADDED. This adjuvant is required for use of Agrifos in Sudden Oak Death treatments.
Trimmit 2SC Plant Growth Regulator for Turfgrass	Growth regulator	100-1014	paclobutrazol 22.3%	Most hazardous (Tier I)	More Limited	For use only on golf courses in preparation for tournament play	ADDED. Repeated exemptions have been granted to prepare for Harding Park golf tournaments.
PRODUCTS REMOVED							
Earth-Tone Horticultural Oil (equivalent to Concern For The Earth, For the Earth Pesticidal Spray Oil Dormant And Growing Season Insect Spray)	Insecticide	67702-4	canola oil 96%	Least hazardous (Tier III)	More Limited		Deleted - costly and has not been used.
Garlon 4	Herbicide	62719-40	triclopyr, butoxyethyl ester 61.6%;	Most hazardous (Tier I)	Most Limited: justify use at public hearing	Use only for targeted treatments of high profile or highly invasive exotics via dabbing or injection. May use for targeted spraying only when dabbing or injection are not feasible, and only with use of a respirator.	Deleted - no longer available - replaced by Garlon 4 Ultra
Marathon II Granular Greenhouse & Nursery Insecticide	Insecticide	432-1369	imidacloprid 21.4%	Most hazardous (Tier I)	Most Limited: justify use at public hearing	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, in cases where biological control and IGRs have proven ineffective.	Deleted - has not been used in past several years.
Prescription Treatment Brand Avert Cockroach Bait Station, Formula I	Insecticide	499-467	abamectin 0.05%	Most hazardous (Tier I)	More Limited	Phase out - use existing supplies. Tier I status is due to reproductive toxicity but exposure scenarios suggest minimal risk	No longer being used.
RootShield Granules, (TurfShield Granules listed as INACTIVE)	Fungicide	68539-3	Trichoderma harzianum Rifai Strain Kri-Ag2 (3977) 1.15%	Least hazardous (Tier III)	Least Limited		Deleted - no longer used
Saf-T-Side	Insecticide	48813-1	paraffinic oil 80%	More hazardous (Tier II)	More Limited	Use up existing stock only. Try Spraytech first.	Deleted - no longer used

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Product Name	Type	EPA Reg. No.	Ingredients	Pesticide Hazard Tier	Use Limitation Type	Use Limitations (To use this pesticide for reasons not listed below, click to Request a Pesticide Exemption)	Changes made
Victor Poison Free Wasp & Hornet Killer	Insecticide	Exempt	Mint Oil 8.0%, Sodium Lauryl Sulfate 1.0%, Inert Ingredients 91.0%, Water 88.5%, CO ² 2.5%	Least hazardous (Tier III)	Least Limited	Try this instead of PT Brand Wasp Freeze	Deleted - no longer used. Substituted Eco-Exempt Wasp Killer.
PRODUCTS CHANGED							
20 Mule Team Tim-Bor Industrial	Insecticide	1624-39	disodium octaborate, tetrahydrate 98%	More hazardous (Tier II)	More Limited	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. Most hazardous (Tier I) status is due to male reproductive hazards, but exposure scenarios suggest minimal risk	Moved from Tier I to Tier II: Borates are not listed on Prop 65 list per se, which is the requirement for Tier I listing. They are "candidates for listing" under the authoritative bodies provision, based on high-dose US EPA studies showing some reproductive and developmental toxicity. Removed language "Most hazardous (Tier I) status is due to male reproductive hazards, but exposure scenarios suggest minimal risk"
Agri-Fos Systemic Fungicide	Fungicide	71962-1	potassium phosphite 45.8%	Least hazardous (Tier III)	Least Limited	For use on high-value oaks (<i>Quercus</i> spp.) susceptible to Sudden Oak Death, or in experiments with Sudden Oak Death control. When labelling permits, use on an experimental basis for Anthracnose control on sycamores.	Added language: "or in experiments with Sudden Oak Death control" due to ongoing experiments with bay laurel removals and tan oaks. Also added: "When labelling permits, use on an experimental basis for Anthracnose control on sycamores. "
Aquamaster Herbicide	Herbicide	524-343	glyphosate, isopropylamine salt 53.8%	More hazardous (Tier II)	More Limited	Terrestrial uses: 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. Aquatic uses: 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 prohibition on use within buffer zone (generally 60 feet) around water bodies in red-legged frog habitat.	Added language for terrestrial uses "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." Removed old language "NOTE: Equivalent to "Rodeo Emerged Aquatic Weed and Brush Herbicide," an older product. Rodeo in storage may be used under the same limitations. "
Contrac All-Weather Blox	Rodenticide	12455-79	bromadiolone 0.005%	Most hazardous (Tier I)	Most Limited: justify use at public hearing	HIGH PRIORITY FOR REMOVAL. USE UP EXISTING STOCKS. For use only in City-owned sewer lines, San Francisco International Airport Terminal Areas, or for commercial lessees on city properties that are not adjacent to natural areas. In commercial establishments, use of product shall be a last resort after other, less-toxic measures have been implemented, including sanitation and trapping, and only where a significant public health hazard is recognized. In all cases, monitoring shall be used whenever feasible to minimize rodenticide use.	Added language: "HIGH PRIORITY FOR REMOVAL. USE UP EXISTING STOCKS."
Dipel Pro DF Biological Insecticide Dry Flowable	Insecticide	73049-39	Bacillus thuringiensis, Subsp. Kurstaki, Strain Abts-351	Least hazardous (Tier III)	Least Limited		Corrected product name

Red text = added

~~Strikethrough~~ = deleted

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(Applicable to City-owned properties only)

Product Name	Type	EPA Reg. No.	Ingredients	Pesticide Hazard Tier	Use Limitation Type	Use Limitations (To use this pesticide for reasons not listed below, click to Request a Pesticide Exemption)	Changes made
EcoExempt G	Insecticide	exemptprod-008	eugenol (clove oil) 2.9%, thyme oil 0.6%, plant oils and other ingredients 96.5%	Least hazardous (Tier III)	Least Limited	Do not use in enclosed areas.	Product is exempt from EPA registration, so added exempt product code instead of EPA number for tracking purposes.
Garlon 4 Ultra	Herbicide	62719-527	triclopyr, butoxyethyl ester 60.45%	Most hazardous (Tier I)	Most Limited: justify use at public hearing	Use only for targeted treatments of high profile or highly invasive exotics via dabbing or injection. May use for targeted spraying only when dabbing or injection are not feasible. and only with use of a respirator. Follow label requirements regarding exposure to mist. HIGH PRIORITY TO FIND ALTERNATIVE	Deleted "and only with use of a respirator." Added "Follow label requirements regarding exposure to mist." The respirator requirement was added for the older product, Garlon 4, which used a petroleum-based adjuvant and had a strong smell. In general, SFE does not attempt to regulate personal protective equipment for products.
Niban Granular Bait (equivalent to Terro Multipurpose Ant Insect Bait)	Insecticide	64405-2-AA	boric acid 5%	More hazardous (Tier II)	Least Limited	Outdoor restricted to planted areas, prefer containers; indoor must be in containers or inaccessible to humans. Tier I status is due to reproductive toxicity but exposure scenarios suggest minimal risk	Moved from Tier I to Tier II: Borates are not listed on Prop 65 list per se, which is the requirement for Tier I listing. They are "candidates for listing" under the authoritative bodies provision, based on high-dose US EPA studies showing some reproductive and developmental toxicity. Removed language "Most hazardous (Tier I) status is due to male reproductive hazards, but exposure scenarios suggest minimal risk" Correct word "ant" to "insect" in product name.
Nufarm Polaris Herbicide	Herbicide	228-534	imazapyr, isopropylamine salt, 28%	More hazardous (Tier II)	More Limited	Preferred alternative to triclopyr for use on invasive weeds in natural areas, such as broom, Cotoneaster, or Arundo grass	Added "herbicide" to product name
OhYeah!	Insecticide	exemptprod-002	sodium lauryl sulfate	Least hazardous (Tier III)	Least Limited		Product is exempt from EPA registration, so added exempt product code instead of EPA number for tracking purposes.
Orange Guard	Insecticide	61887-1	d-limonene 5.8%	Most hazardous (Tier I) Least hazardous (Tier III)	More Limited	Soap spray is preferred for removing ant trails. Minimize use in enclosed areas due to scent. Wear protective equipment. Potential aquatic hazard - do not apply directly to water.	Made correction to clerical error. Was incorrectly listed as Tier I. Airport is only user - for ant trails. They will try soap sprays instead.

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Product Name	Type	EPA Reg. No.	Ingredients	Pesticide Hazard Tier	Use Limitation Type	Use Limitations (To use this pesticide for reasons not listed below, click to Request a Pesticide Exemption)	Changes made
Prescription Treatment Brand 381B Advance Liquid Ant Bait	Insecticide	499-491	borax - Sodium Tetraborate Decahydrate 1.3%	More hazardous (Tier II)	Least Limited	<i>Tier I status is due to reproductive toxicity but exposure scenarios suggest minimal risk</i>	Moved from Tier I to Tier II: Borates are not listed on Prop 65 list per se, which is the requirement for Tier I listing. They are "candidates for listing" under the authoritative bodies provision, based on high-dose US EPA studies showing some reproductive and developmental toxicity. Removed language "Most hazardous (Tier I) status is due to male reproductive hazards, but exposure scenarios suggest minimal risk" Corrected active ingredient name from "borax" to "Sodium Tetraborate Decahydrate".
Prescription Treatment Brand Wasp-Freeze Wasp and Hornet Killer Formula 1	Insecticide	499-362	phenothrin 12%, d-trans allethrin .129%, CO2	More hazardous (Tier II)	More Limited	Use only when a concern for public safety, and in situations where use of EcoExempt product is inadequate or unsafe.	Added language "and in situations where use of EcoExempt product is inadequate or unsafe."
Roundup Pro Herbicide	Herbicide	524-475	glyphosate, isopropylamine salt 41%	More hazardous (Tier II)	More Limited	USE UP EXISTING STOCK - FOR REMOVAL IN 2013. 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.	Added language "-FOR REMOVAL IN 2013." No longer sold - some remaining stocks. Aquamaster + Competitor is preferred alternative.
Roundup Promax Herbicide	Herbicide	524-579	48.7% of glyphosate, isopropylamine salt	More hazardous (Tier II)	More Limited	Use of Aquamaster + Competitor is preferred except in situations where rainfastness is needed. 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.	Added language "Use of Aquamaster + Competitor is preferred except in situations where rainfastness is needed."
Sonar A.S.	Herbicide	67690-4	fluridone 41.7%	Least hazardous (Tier III)	More Limited	USE UP EXISTING STOCK - PLANNED FOR REMOVAL. Emergent plants in ponds, lakes, drainage canals. Only as a last resort when other mgmt. practices are ineffective.	Added language "USE UP EXISTING STOCK - PLANNED FOR REMOVAL."
Terro Ant Killer II, Terro Ant Killer II Liquid Ant Baits, Terro-PCO Liquid Ant Bait	Insecticide	149-8	sodium tetraborate decahydrate 5.4%	More hazardous (Tier II)	Least Limited	<i>Tier I status is due to reproductive toxicity but exposure scenarios suggest minimal risk</i>	Moved from Tier I to Tier II: Borates are not listed on Prop 65 list per se, which is the requirement for Tier I listing. They are "candidates for listing" under the authoritative bodies provision, based on high-dose US EPA studies showing some reproductive and developmental toxicity. Removed language "Most hazardous (Tier I) status is due to male reproductive hazards, but exposure scenarios suggest minimal risk" Added "Liquid Ant Bait" to product name.
Zoecon Altosid XR-G, Zoecon Altosid Pro-G Insect Growth Regulator	Mosquito control - IGRs	2724-451	S-Methoprene (5026) 1.5%	More hazardous (Tier II)	More Limited	Use for tanks with limited access, or other areas where frequent treatments are infeasible. For City catchment basins, microbial products are preferred. Not for use in estuarine environments except under control of San Mateo Mosquito Abatement District.	Added alternative product name

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Product Name	Type	EPA Reg. No.	Ingredients	Pesticide Hazard Tier	Use Limitation Type	Use Limitations (To use this pesticide for reasons not listed below, click to Request a Pesticide Exemption)	Changes made
UNCHANGED							
3336 WP Turf & Ornamental Fungicide (Cleary's)	Fungicide	1001-63	thiophanate-methyl 50%	Most hazardous (Tier I)	Most Limited: justify use at public hearing	For use on golf courses only. HIGH PRIORITY TO FIND ALTERNATIVE	Kept from previous year - waiting for completion of revised Harding Park IPM Plan
Advion Ant Bait Arena (Dupont)	Insecticide	352-664	Indoxacarb 0.1%	Least hazardous (Tier III)	Least Limited		
Advion Ant Gel (Dupont)	Insecticide	352-746	Indoxacarb 0.05%	Least hazardous (Tier III)	Least Limited		
Advion Cockroach Bait Arena (Dupont)	Insecticide	352-668	Indoxacarb 0.5%	Least hazardous (Tier III)	Least Limited		
Advion Cockroach Gel Bait (Dupont)	Insecticide	352-652	Indoxacarb 0.6%	Least hazardous (Tier III)	Least Limited		
Agnique MMF-G	Mosquito control - other	53263-30	poly(oxy-1,2-ethanediyl),alpha-isodecyl-omega-hydroxy phosphate	More hazardous (Tier II)	More Limited	Use for late instar mosquito larvae and pupae, in combination with microbial products.	
Andersons Golf Products Systemic Fungicide (equivalent to Proturf Systemic Fungicide)	Fungicide	538-88 (or 9198-187)	thiophanate-methyl 2.3%	Most hazardous (Tier I)	Most Limited: justify use at public hearing	Greens, highest profile athletic fields. HIGH PRIORITY TO FIND ALTERNATIVE	Kept from previous year - waiting for completion of revised Harding Park IPM Plan
Avid 0.15EC Miticide/Insecticide	Insecticide	100-896	abamectin 2%	Most hazardous (Tier I)	Most Limited: justify use at public hearing	For nursery and greenhouse use only. HIGH PRIORITY TO FIND REPLACEMENT.	
Azatin XL	Insecticide	70051-27	azadirachtin 3%	More hazardous (Tier II)	More Limited	Nurseries and established plants for interiorscapes. Do not apply on flowering plants when bees are active.	
Azatrol EC Insecticide	Insecticide	2217-836	Azadirachtin (2328) 1.2%	More hazardous (Tier II)	More Limited	Nurseries and established plants for interiorscapes. Do not apply on flowering plants when bees are active.	
BotaniGard ES	Insecticide	65626-8 [INACTIVE], 82074-1 [ACTIVE]	Beauveria bassiana strain GHA 11.3%	Least hazardous (Tier III)	Least Limited	Control of thrips on landscaped plants. Do not apply on flowering plants when bees are active.	
CMR Silicone Surfactant	Adjuvant	1050775-50025 [INACTIVE]	polymethyl-siloxane, nonionic	Least hazardous (Tier III)	More Limited		
Competitor	Adjuvant	2935-50173	ethyl oleate	Least hazardous (Tier III)	Least Limited		
Conserve SC Turf and Ornamental	Insecticide	62719-291	spinosad 11.6%	Least hazardous (Tier III)	Least Limited	For use as a last resort in greenhouses. If feasible, alternate with other products to avoid the development of resistance.	
Enstar II Insect Growth Regulator (Enstar 5E)	Insecticide	2724-476	S-kinoprene 64.1%	Least hazardous (Tier III)	Least Limited	Nurseries, roses.	
Gentrol Point Source Roach Control Device	Insecticide	2724-469	Hydroprene 96%	Least hazardous (Tier III)	Least Limited		
Greenmatch EX	Herbicide	exemptprod-011	lemongrass oil 50%, other ingredients (corn oil, glycerol esters,	Least hazardous (Tier III)	More Limited	Not for use in enclosed areas. Observe label precautions on PPE	Added exempt product identification number

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Product Name	Type	EPA Reg. No.	Ingredients	Pesticide Hazard Tier	Use Limitation Type	Use Limitations (To use this pesticide for reasons not listed below, click to Request a Pesticide Exemption)	Changes made
Habitat	Herbicide	241-426	imazapyr, isopropylamine salt, 28%	More hazardous (Tier II)	More Limited	Preferred alternative to triclopyr for use on invasive weeds in natural areas, such as broom, <i>Cotoneaster</i> , or <i>Arundo</i> grass	
Heritage Fungicide	Fungicide	100-1093	azoxystrobin 50%	Most hazardous (Tier I)	Most Limited: justify use at public hearing	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.	Kept from previous year - waiting for completion of revised Harding Park IPM Plan
Javelin WG Biological Insecticide	Insecticide	70051-66	<i>Bacillus thuringiensis</i> (berliner), subsp. kurstaki, strain sa-11 7.5%	Least hazardous (Tier III)	Least Limited		
JMS Stylet Oil or JMS Organic Stylet Oil	Insecticide	65564- 1	petroleum distillates, refined 97.1%	More hazardous (Tier II)	Least Limited		
JT Eaton Bait Block Rodenticide with Peanut Butter Flavorizer	Rodenticide	56-42	diphacinone 0.005%	More hazardous (Tier II)	More Limited	See Site-Specific Limitations in last page. For rat control only in situations with high public health concerns, where trapping is infeasible. In all cases, monitoring shall be used whenever feasible to minimize rodenticide use. HIGH PRIORITY TO FIND ALTERNATIVE.	
Kaligreen	Fungicide	70231-1 (INACTIVE) 11581-2 (ACTIVE)	potassium bicarbonate 82%	Least hazardous (Tier III)	Least Limited	Watch for phytotoxicity.	
Marathon 1% Granular Greenhouse & Nursery Insecticide	Insecticide	3125-452-AA (INACTIVE) 432-1329 (ACTIVE)	imidacloprid 1%	Most hazardous (Tier I)	Most Limited: justify use at public hearing	Nursery use for control of white fly, not for use in propagation beds. Only effective on quick-growing plants. HIGH PRIORITY TO FIND ALTERNATIVE	
Maxforce FC Professional Insect Control Ant Bait Stations	Insecticide	432-1256	fipronil 0.01%	More hazardous (Tier II)	Least Limited		
Maxforce FC Professional Insect Control Roach Bait Stations	Insecticide	432-1257	fipronil 0.05%	More hazardous (Tier II)	Least Limited		
Maxforce FC Professional Insect Control Roach Killer Bait Gel	Insecticide	432-1259	fipronil 0.01%	More hazardous (Tier II)	More Limited	Apply only in cracks, crevices and areas inaccessible to casual skin contact.	
Milestone	Herbicide	62719-519	Aminopyralid, triisopropanolamine salt (5928) 40.6%	Most hazardous (Tier I)	Most Limited: justify use at public hearing	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.	
Mosquito control - microbial	Mosquito control - microbial			Least hazardous (Tier III)	Least Limited	Any microbial mosquito larvicide with active ingredients <i>Bacillus thuringiensis</i> (Berliner or Israelensis) or <i>Bacillus sphaericus</i> is categorized as "Least limited."	
M-pede Insecticide/Fungicide	Insecticide	62719-515	potash soap 49%	Least hazardous (Tier III)	More Limited	Nursery, specialty gardens, and Africanized Honey Bees.	
Oust XP Herbicide (DuPont)	Herbicide	352-601	sulfometuron-methyl 75%	Most hazardous (Tier I)	Most Limited: justify use at public hearing	For use only on airport operational areas subject to FAA requirements. HIGH PRIORITY TO FIND ALTERNATIVE	
Prescription Treatment Brand Avert Cockroach Gel Bait Formula 3	Insecticide	499-410	abamectin 0.05%	Most hazardous (Tier I)	More Limited	Phase out - use existing supplies. Tier I status is due to reproductive toxicity but exposure scenarios suggest minimal risk	
Safer Brand Ant & Crawling Insect Killer	Insecticide	59913-1	Diatomaceous earth 77.69%	Least hazardous (Tier III)	Least Limited		

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Product Name	Type	EPA Reg. No.	Ingredients	Pesticide Hazard Tier	Use Limitation Type	Use Limitations (To use this pesticide for reasons not listed below, click to Request a Pesticide Exemption)	Changes made
Sapphire	Herbicide	62719-547	Penoxsulam	More hazardous (Tier II)	More Limited	Only use on City-owned golf courses in preparation for major golf tournaments.	
Sluggo Slug and Snail Bait	Molluscicide	67702-3	Phosphoric acid, iron(3+) salt (1:1) 1%	Least hazardous (Tier III)	Least Limited		
Spraytech Oil	Insecticide	65328-50001	soybean oil	Least hazardous (Tier III)	Least Limited	Consider using this instead of JMS Stylet Oil for aphids and other insects.	
Top Gun All Weather Bait Block Rodenticide	Rodenticide	67517-66	bromethalin 0.01%	More hazardous (Tier II)	Most Limited: justify use at public hearing	For use only in City-owned sewer lines, San Francisco International Airport Terminal Areas, or for commercial lessees on city properties that are not adjacent to natural areas. In commercial establishments, use of product shall be a last resort after other, less-toxic measures have been implemented, including sanitation and trapping, and only where a significant public health hazard is recognized. In all cases, monitoring shall be used whenever feasible to minimize rodenticide use.	
Turflon Ester	Herbicide	62719-258	triclopyr, butoxyethyl ester 61.6%	Most hazardous (Tier I)	Most Limited: justify use at public hearing	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 - Lake Merced, Golden Gate Park.	
Zoecon Altosid Briquets	Mosquito control - IGRs	2724-375	S-Methoprene (5026) 8.62%	Most hazardous (Tier I)	More Limited	Use for tanks with limited access, or other areas where frequent treatments are infeasible. For City catchment basins, microbial products are preferred. Not for use in estuarine environments except under control of San Mateo Mosquito Abatement District.	
Zoecon Altosid Liquid Larvicide Mosquito Growth Regulator	Mosquito control - IGRs	2724-392	S-Methoprene (5026) 5%	More hazardous (Tier II)	More Limited	Use for tanks with limited access, or other areas where frequent treatments are infeasible. For City catchment basins, microbial products are preferred. Not for use in estuarine environments except under control of San Mateo Mosquito Abatement District.	
Zoecon Altosid Pellets, Zoecon Altosid Pellets WSP	Mosquito control - IGRs	2724-448	S-Methoprene (5026) 4.25%	More hazardous (Tier II)	More Limited	Use for tanks with limited access, or other areas where frequent treatments are infeasible. For City catchment basins, microbial products are preferred. Not for use in estuarine environments except under control of San Mateo Mosquito Abatement District.	
Zoecon Altosid XR Extended Residual Briquets	Mosquito control - IGRs	2724-421	S-Methoprene (5026) 2.1%	More hazardous (Tier II)	More Limited	Use for tanks with limited access, or other areas where frequent treatments are infeasible. For City catchment basins, microbial products are preferred. Not for use in estuarine environments except under control of San Mateo Mosquito Abatement District.	
Zoecon Gentrol IGR Concentrate	Insecticide	2724-351	hydroprene 9%	Least hazardous (Tier III)	Least Limited		

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