

ATTACHMENT A. Pesticide Exemption Requests for San Francisco City Properties (2015)
(red = denied exemptions)

Exemption #	1	2	3
Last	Thomas	Thomas	Pruitt
SF City Dept.	Public Utilities Commission (Water)	Public Utilities Commission (Water)	Recreation & Park Dept.
Start Date	2015-01-19	2015-01-19	2015-04-14
Product Name	Bonide Liquid Copper Fungicide Concentrate	Ortho Volck Oil Spray Dormant Season Insect Killer Concentrate	Merit 75 WSP
Active Ingredients	Copper Octonoate	Petroleum Oil	Imidacloprid
EPA Reg #	67702-2-4	239-16A	432-1318
Picide Type	fungicide	insecticide	insecticide
Detailed Location for Pesticide Use		<ul style="list-style-type: none"> Santa Rosa plum tree and other fruit trees in landscape of Millbrae Yard and Cypress Work Center 	Harding Park Putting Greens
Pest	Rust, fire blight, other fungal and bacterial diseases	Green peach aphid, insect pests of fruit trees	European Crane Fly
Justification for Use	Fruit trees are subject to a number of fungal and bacterial diseases, including Erwinia amylovora, Puccinia pruni, Monilinia spp. and Venturia species, among others. Some of these diseases can cause cankers, branch die-back and tree death, in addition to affecting the quality of the fruit. A dormant-season of copper fungicides helps prevent many of these diseases.	<ul style="list-style-type: none"> Fruit trees are subject to a number of insect and mite problems, that can cause deformed and damaged foliage, dieback of branches and tree stress. A dormant-season of horticultural oil can help control these problems by smothering over-wintering insects and insect eggs. 	The existing European crane fly population on Harding are threatening the health and playing surface conditions of the greens. Superior putting surfaces are expected since Harding Park will be hosting a PGA golf tournament at the end of the month.
Explanation of Efforts to Find Alternatives	Alternatives to application of a fungicide include sanitation (removal and disposal of diseased foliage and fruit), pruning off of diseased branches and other cultural practices that promote greater health and vigor of the tree. All of these cultural practices will be used in conjunction with the application of copper fungicide.	Alternatives to application of a fungicide include sanitation (removal and disposal of infested foliage and fruit) and cultural practices. Avoiding the over-application of nitrogen fertilizer can reduce the severity of aphid infestations, and good water management and avoidance of stress can reduce the infestation of scale. These cultural practices will be used in conjunction with the application of a dormant oil spray.	We have used several cultural techniques to prevent this insect from thriving on the putting greens. Some examples include: increasing surface drainage with sand topdressing, de-thatching with verti-slicing, maintaining proper fertility, and monitoring moisture levels.
Strategy to Prevent Future Exemptions	If chemical disease control and sanitation are effective in reducing the amount of disease inoculum and if cultural practices increase the tree's resistance to disease, future applications of copper fungicide may be unnecessary.	If the application of dormant spray in combination with sanitation and good cultural practices result in levels of pest infestation below the action threshold, future applications of dormant oil spray may be unnecessary.	Closer monitoring, continued cultural techniques and well timed biological insecticide applications will prevent future exemption requests
Status of Exemption	APPROVED- Regular Exemption	APPROVED- Regular Exemption	DENIED- Regular Exemption
Hazard Tier	More hazardous (Tier II)	More hazardous (Tier II)	Most hazardous (Tier I)

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Exemption #	4	5	6
Last	Shatara	montana	Naughton
SF City Dept.	Public Health	Public Utilities Commission (Water)	Environment, Department of the
Start Date	2015-04-20	2015-05-01	2015-05-01
Product Name	Terad 3	Rodent Bait Diphacinone	Bora-Care
Active Ingredients	Cholecalciferol	Diphacinone	Disodium Octaborate Tetrahydrate
EPA Reg #	12455-106	SLN NO. Ca 890020	64405-1
Picide Type	rodenticide	rodenticide	insecticide
Detailed Location for Pesticide Use	Property encompassed by Market St, Hayes St, & Polk St. in San Francisco	San Antonio Watershed Un-named stock pond dam face on north side of the Stone Cabin Road, Parcel SA-1 Livestock confinement/processing facility at the McDonald Cabin, Parcel SA-1 Calaveras Watershed Binder Pond Dam face and spillway on Oak Ridge Road	Upper Crystal Springs Cottage
Pest	Mice	Ground squirrels	Termites
Justification for Use	Major mouse infestation. Mice are observed running in office spaces and common areas during daytime. Mice have been found breeding in office spaces with nests and offspring. Mouse activity was noted in the first and second floor areas of this building for several years. Mouse burrows have been observed in soil around the building.	Ground squirrels causing damage to stockponds lending to possible failure, activity in and around corrals possible injury to cattle, dam face integrity control and limited roadside undermining. All instances need to be addressed to prevent ongoing damage and protect resources.	To remove termites
Explanation of Efforts to Find Alternatives	Alternatives that are being used are snap traps and adhesive traps. Pest exclusion is underway, however, this is an established infestation within the building.	Alternatives have been sought and reviewed. Two threatened and one special concern species limit the products and treatments allowed as to not cause harm or injury to the species on our properties. Baiting on a limited targeted basis to gain control with ongoing monitoring will be the most effective control measures at this time.	No other product safe for use in the watershed
Strategy to Prevent Future Exemptions	A survey of this building has already been made to evaluate entry points and conditions that could promote the infestation. Rodent exclusion efforts are underway. Messages have been sent reminding office employees to declutter desks and keep foods in rodent proof containers.	After gathering the information from the raptor purchase program, efficacy will be determined to see if desirable control can be achieved using this method. ***Pilot program data does not support using perches for control*** Trapping will be explored although with limited personell and time involved may not be feasible. *** Trapping has been ruled out as nontarget species may be taken***	Have building treated ever two years
Status of Exemption	APPROVED- Trial Exemption	APPROVED- Regular Exemption	APPROVED- Regular Exemption
Hazard Tier	More hazardous (Tier II)	Most hazardous (Tier I)	Most hazardous (Tier I)

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Exemption #	7	8	9
Last	Naughton	Agurto	Agurto
SF City Dept.	Environment, Department of the	Asian Art Museum	Housing Authority
Start Date	2015-05-01	2015-05-04	2015-05-15
Product Name	xt-2000	Intice granual bait	Ditrac Tracking Powder
Active Ingredients	d-Limonene	Orthoboric acid	Diphacinone
EPA Reg #	71-986-2	73079-2	12455-56
Picide Type	insecticide	insecticide	rodenticide
Detailed Location for Pesticide Use	Upper Crystal Springs Cottage SFPUC Peninsula and Alameda Watersheds	Gallery spaces under baseboards and in cracks and crevices	Westside Courts SFHA - In rat burrows under building and leading into building.
Pest	Termites	Silverfish	Norway Rats
Justification for Use	Feeding on wood within buildings by dry wood termites compromises the strenght of the wood and structural integrity of the building. This creates potential haxards for people dwelling in the cottages. Application of d-limolene (xt-2000) to infested wood will kill drywood termites	The silverfish pose a damage risk to museum exhibits/artifacts.	There is a large population of rats living under the buildings and around the buildings. Exterior rodent burrows lead into the building. Extensive rodent proofing has been completed, though much of the work was destroyed after the fact. The property has attempted to block rats from the garbage rooms however the work has proven insufficient.
Explanation of Efforts to Find Alternatives	Non-chemical alternatives to application of xt-2000 include heat, microwave treatment, high voltage electricity and wood replacement.The disadvantage of using heat is that the leathal temperature must be achieved in the core of all infested wood and that heat sinks may affect efficacy. The disadvantage of using electriciy is that detection accuracy is critical for control and that efficacy may be reduced by the interfering actions of commom building materials.The disadvantage of wood replacement is that ita effecivness is highly dependent on detection accuracy and, if the infested wood is load bearing either an architect, engineer, will be needed.	They have tried reducing humidity in the area.	Rat trapping was carried out under the building, outside, and in the garbage rooms for an extended period of time. The property is using rodenticide bait boxes in their efforts to control rats however upon inspection the boxes are not active.
Strategy to Prevent Future Exemptions	The need for future exemptions can be reduced by using preventive measures for drywood termites, Non chemical preventative measures include installation of barriers, such as screens and paint. Chemical preventive measures include treatment of un infested wood with Bora-Care (disodium octaborate) and replacement of existing damaged wood with pressure treated wood or wood treated with Bora-Care	Adding this product to the list.	If this product works we will ask that it be added to the list as a last resort option for burrows located inside a property or leading into a property.
Status of Exemption	APPROVED- Regular Exemption	APPROVED- Trial Exemption	EXEMPTION NOT REQUIRED
Hazard Tier	Least hazardous (Tier III)	More hazardous (Tier II)	More hazardous (Tier II)

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Exemption #	10	11	12
Last	Agurto	Thomas	Pruitt
SF City Dept.	I	Public Utilities Commission (Water)	Recreation & Park Dept.
Start Date	2015-05-15	2015-05-18	2015-05-21
Product Name	Ditrac Tracking Powder	Bonide Sucker Punch	Lontrel
Active Ingredients	Diphacinone	NAA (Ethyl 1-Naphthaleneacetate)	clopyralid
EPA Reg #	12455-56	5481-460-4	62719-305
Picide Type	rodenticide	plant growth regulator	herbicide
Detailed Location for Pesticide Use	In burrows in and leading into the recycling center	United States	Lincoln Golf Course
Pest	Norway Rats	Eucalyptus and acacia stump sprouts	Cotula (broadleaf weed)
Justification for Use	The recycling center provides optimal resources for Norway rats with very limited options for exclusion. Rats can find food, water, nesting material and harborage and breed prolifically in this environment.	When only some of the stems of eucalyptus and acacia of a multi-trunk tree are cut, the response of the tree is to produce a vigorous re-growth of stump sprouts and suckers. The usual treatment of stumps is to paint the cut surface with a translocating herbicide, such as glyphosate or triclopyr. However this treatment kills the root system of the tree, killing the standing live stems of the tree. These present a hazard if they subsequently fall over. NAA is a synthetic plant hormone that suppresses re-growth of suckers without killing the roots.	The putting greens at Lincoln Golf Course are heavily infested with Cotula, a broad-leaf weed. This weed has significantly degraded the putting surfaces, directly impacting play and the general maintenance practices. This herbicide will be used in an effort to avoid re-sodding the greens.
Explanation of Efforts to Find Alternatives	Pestec has maintained a weekly night trapping program at this location for over two years. The population has not declined though the damage has been reduced through targeted trapping.	An alternative to chemical control of stump sprouts is to cover the stump with black plastic to exclude light. However, if this heats the soil, it may damage or kill the root system of the tree.	Standard cultural practices such as hand-weeding are no longer effective due to the extent of the infestation. High rates of iron have only slowed the encroachment at best.
Strategy to Prevent Future Exemptions	If this product works we will ask that it be added to the reduced-risk pesticide list.	In the future, when tree stems need to be cut because they are intruding into a right of way, all of the stems of a multi-trunk tree should be cut. Then the entire stump and its root system can be killed by treating the cut stump with an herbicide.	The use of this herbicide is to achieve a more culturally manageable putting green. It is not intended for regular use. Over-seeding, proper irrigation, proper fertilizing, topdressing, hand-weeding and other cultural practices will be more effective once the Cotula populations are significantly decreased.
Status of Exemption	APPROVED- Regular Exemption	EXEMPTION NOT REQUIRED	APPROVED- Regular Exemption
Hazard Tier	More hazardous (Tier II)		More hazardous (Tier II)

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Exemption #	13	14	15
Last	Agurto Jr	Woolen	Woolen
SF City Dept.	Environment, Department of the	Recreation & Park Dept.	Recreation & Park Dept.
Start Date	2015-07-02	2015-07-19	2015-07-26
Product Name	TAP Pest Control Insulation	Sapphire	Fosphite
Active Ingredients	Orthoboric Acid	penoxsulam	Dipotassium salts of phosphoric acid
EPA Reg #	72787-1-83896	62719-547	69573-2
Pcide Type	insecticide	herbicide	fungicide
Detailed Location for Pesticide Use		Targeted Application On Marina Green	Kezar Stadium
Pest	Cockroaches	Persistent invasive weed in turf	Fungus Brown Spot
Justification for Use	In multi-family housing, cockroaches harbor in wall voids where they can hide and these voids act as pathways from unit to unit. This then leads to high infestation levels throughout buildings. Baiting programs to alleviate these infestations end up being very costly. By using TAC Insulation as a barrier for pest prevention, these large infestations can be avoided.	Marina Greens are infested with persistent broadleaf weeds. Removal and replacement of turf proved beneficial in the short term. However, do to the invasive nature of Arctotheca and other broadleaf weeds at this site it is difficult to control them manually. Sapphire is a selective herbicide that can help us manage the invasive weeds.	High Value Turf. Approximately 40% of field infected. Due to high use and drought stress the turf is vulnerable to fungus and disease attack.
Explanation of Efforts to Find Alternatives	We use baiting programs and HEPA vacuums as alternatives to this product for cockroach control. These control methods are successful, however, when cockroaches get into wall voids these methods can make gaining control more complex. The more time it takes to gain control of infestations, the higher the costs of treatment.	Remove and replaced large areas of turf grass, nutrient management, hand removal, spot treatments of herbicides,	The field is used daily for recreation activities. Aeration and fertilization have been tried along with an application of Bio Fungicide Actinovate.
Strategy to Prevent Future Exemptions	The strategy to prevent future exemptions will be the use of the TAC insulation. By using this product, we can prevent widespread infestations and continue to use reduced-risk control methods for cockroaches such as baiting and the use of HEPA vacuums.	Documented monitoring and manual control efforts, with local treatments of smaller areas before weeds get established. Manual control may include using a sod cutter to remove and replace areas as they may become infected.	This field is heavily used and during the driest months of the year, staff has spent over 1,000 hours hand weeding, aerating, hand watering, and other cultural means. This effort will continue as well has soil health monitoring. However under these use conditions turf grass will stress and a least toxic fungicide may need to be applied.
Status of Exemption	EXEMPTION NOT REQUIRED	APPROVED- Regular Exemption	APPROVED- Regular Exemption
Hazard Tier		More hazardous (Tier II)	Least hazardous (Tier III)

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Exemption #	16	17	18
Last	Montana	Montana	cline
SF City Dept.	Public Utilities Commission (Water)	Public Utilities Commission (Water)	Asian Art Museum
Start Date	2015-08-01	2015-08-01	2015-08-26
Product Name	Fusilade DX Herbicide	Fusilade	Captain Jack's Deadbug Brew
Active Ingredients	Fluazifop-P-butyl	Flauzifop-p-butyl	Spinosad
EPA Reg #	100-1070	100-1071	4-471
Picide Type	herbicide	herbicide	insecticide
Detailed Location for Pesticide Use	Sheepcamp Restoration Site	Sheepcamp Restoration Site	ornamental walled garden
Pest	Bermuda grass	Bermudagrass	thrips
Justification for Use	Needed to help eradicate bermudagrass within new plantings, seasonal drainage and beyond. Varied topography and size of infestation prevents other methods from being used with success.	Needed to eradicate bermudagrass within new plantings, seasonal drainage and beyond. Varied topography and size of infestation prevents other methods from being used with success.	garden is infested, with most trees overrun with them. This is an ornamental garden, and drastic pruning measures are not desirable.
Explanation of Efforts to Find Alternatives	Other methods being monitored for best control at three site locations...ongoing. Handpulling Scraping Solarization	Other methods being evaluated for best control at three site locations...ongoing Handpulling Scraping Solarization	Landscaping contractor has proposed alternatives, but this is less toxic than those.
Strategy to Prevent Future Exemptions	Departmental SOP for site entry and exit to be developed to prevent movement and reintroduction at City owned properties.	Department SOP for site entry and exit to be developed to prevent movement and reintroductionof weed seed at city owned properties	Work with landscaping contractor to identify infestations sooner.
Status of Exemption	DENIED- Regular Exemption	DENIED- Regular Exemption	APPROVED- Regular Exemption
Hazard Tier		Most hazardous (Tier I)	More hazardous (Tier II)

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Exemption #	19	20	21
Last	Felton	Pruitt	Agurto
SF City Dept.	Port Of San Francisco	Recreation & Park Dept.	Real Estate Division
Start Date	2015-08-26	2015-09-28	2015-11-16
Product Name	SHOCKWAVE Fogging Concentrate	Lontrel	ZP Rodent Bait AG
Active Ingredients	Pyrethrins, PBO, MKG 264, Esfenvalerate, Pyriproxifen	clopyralid	Zinc Phosphide
EPA Reg #	1021-1810	62719-305	12455- 17
Picide Type	insecticide	herbicide	rodenticide
Detailed Location for Pesticide Use	Interior of abandoned 4 story building, unoccupied	Golden Gate Park Golf Course	In Burrows in planter boxes within 100 feet of the building (typically within 10 feet)
Pest	Flea	Cotula (broadleaf weed)	Norway Rats
Justification for Use	Building 104 has a massive flea infestation causing work crews to wear Tyvek suits to prevent bites during renovation. Tenant has spent substantial time locating animal entry points and covering them and contacting with an IPM provider. Due to the size of the building, traditional IPM methods have not worked well. SHOCKWAVE fogger is effective at eliminating fleas as all stages of the life cycle and will penetrate the hard to reach places. The pest contractor expects 2 or 3 applications will be needed to eradicate the fleas. There is no public access to this building.	The putting greens at Golden Gate Park Golf Course are heavily infested with Cotula spp. This weed has significantly degraded the putting surfaces, directly impacting play and the general maintenance practices. This herbicide will be used in an effort to avoid re-sodding the greens.	Rats burrowing at the exterior of the building pose a health hazard from ecto-parasites and raises the pressure on rodents inside the building.
Explanation of Efforts to Find Alternatives	Tenant hired Pestec to develop and implement an IPM strategy. They worked extensively on excluding animals and they applied cedar oil on several occasions without success. The building is too big with inaccessible spaces where fleas/larvae live .	Standard cultural practices such as hand-weeding, grass over-seeding and nutrient modifications are no longer effective due to the extent of the infestation.	We have been providing periodic night trapping and baiting with bait boxes with diphacinone active ingredient. We have not been able to eradicate rat populations living in the burrows.
Strategy to Prevent Future Exemptions	Once the fleas have been eradicated, there will be continued monitoring of animal entry points. This building will be under renovation and reoccupied so it will no longer be an attractive dwelling for animals.	The use of this herbicide is to achieve a more culturally manageable putting green. It is not intended for regular use. Over-seeding, proper irrigation, proper fertilizing, topdressing, hand-weeding and other cultural practices will be more effective once the Cotula populations are significantly decreased.	Future landscapes should be installed with rodent preventions in place to decrease potential harborage. If this product proves effective we will ask that it be added to the list for treatment of burrows.
Status of Exemption	APPROVED- Regular Exemption	APPROVED- Regular Exemption	DENIED- Trial Use Exemption
Hazard Tier	More hazardous (Tier II)	More hazardous (Tier II)	Most hazardous (Tier I)

ATTACHMENT A. Pesticide Exemption Requests for San Francisco City Properties (2015)
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Exemption #	22
Last	Agurto
SF City Dept.	Real Estate Division
Start Date	2015-11-16
Product Name	Terad3 Blocks
Active Ingredients	Cholecalciferol
EPA Reg #	12455-106
Pcide Type	rodenticide
Detailed Location for Pesticide Use	Exterior of the building in planter boxes, Mission Street & 5th street sides
Pest	Norway Rats
Justification for Use	Rat pressures in this area are too high to rely on trapping alone.
Explanation of Efforts to Find Alternatives	We have done periodic night trapping and have rodent management stations installed now. We have been using Distrac rodenticide dust for burrows however the burrowing population has not been eradicated through repeated treatments.
Strategy to Prevent Future Exemptions	If this product is effective we will ask that it be added to the list as an alternative to Dipahcinone blocks for bait stations.
Status of Exemption	APPROVED- Trial Exemption
Hazard Tier	More hazardous (Tier II)