

SPECIAL CIRCUMSTANCE MATERIALS LIST

This list should serve as a reference document for material selection, and to demonstrate hazard screening protocol. It is not comprehensive of all materials, nor should it be adopted in whole. Sources should be viewed periodically for updates

San Francisco Tier 1; Tier 2 Limited Use of Special Concern

Source and Explanation of Protocol:

<http://temp.sfgov.org/sfenvironment/aboutus/innovative/ipm/>

Pesticide Type	Use Category	Hazard Tier	Product Name	Active Ingredients	Use Limitations
	A = allowed L= limited L* = special concern	1 = Highest 2 = Moderate 3 = Lowest 4 = Data gaps			
Fungicide	L*	Tier 1	3336 WP	methyl thioallophanate	For use in greenhouse situations only
Insecticide	L	Tier 1	20 Mule Team Tim-Bor Industrial	disodium octaborate	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.
Insecticide	L	Tier 1	Conserve SC	Spinosad	For use as a last resort in greenhouses. If feasible, alternate with other products to avoid the development of resistance.
Vertebrate	L	Tier 1	Contrac All-Weather Blox	bromadiolone	High concern over 2nd poisoning, see site specific limits.
Vertebrate	L	Tier 1	Final Blox	brodifacoum	Extreme concern over 2nd poisoning, see site specific limits
Fungicide	L*	Tier 1	Heritage Fungicide	azoxystrobin	Consider/emphasize use of compost tea for preventative. To be used only as a spot treatment on greens, highest profile athletic fields. Improve aeration and monitoring programs.
Vertebrate	L	Tier 1	Maki Mini Blocks	bromadiolone	High concern over 2nd poisoning, see site specific limits

SPECIAL CIRCUMSTANCE MATERIALS LIST

Vertebrate	L	Tier 1	Maki Paraffin Blocks	bromadiolone	High concern over 2nd poisoning, see site specific limits
Insecticide	L*	Tier 1	Marathon 1% Granular Greenhouse and Nursery	imidacloprid	Nursery use for control of white fly, not for use in propagation beds.
Herbicide	L*	Tier 2	Pendulum WDG Herbicide	pendimethalin	One year limit. SFIA landscape use only. Use weed cloth whenever possible. Limit to high priority areas, including new plantings in hazardous areas too dangerous for handweeding. Renovations require exemption.
Herbicide	L*	Tier 1	Proturf New K-O-G Weed Control	dicamba	One year limit. Spot application on greens only when hand-weeding is not feasible. Only for <i>Soliva sessilis</i> and <i>Cotula mexicana</i> in golf greens.
Fungicide	L	Tier 1	Proturf Systemic Fung.	thiophanate-methyl	Greens, highest profile athletic fields.
Insecticide	L*	Tier 1	PT Brand Ultra-Fine Oil	paraffinic oil	One year limit. Nursery and roses control of scale. Try Saf-T-Side and Spraytech oil as replacement.
Fungicide	L*	Tier 1	Rootone Rooting Hormone	Thiram	Nursery use only. Problem with mixing and storage due to talc. Consider Dip'n Grow as alternative.
Vertebrate	L	Tier 1	Talon-G Rodenticide Mini-Pellets (Contains Bitrex)	brodifacoum	Extreme concern over primary and 2nd poisoning, see site specific limits.
Vertebrate	L	Tier 1	Weatherblok Bait with Bitrex	brodifacoum	Extreme concern over 2nd poisoning, see site specific limits

SPECIAL CIRCUMSTANCE MATERIALS LIST

Seattle Tier 1

Source and Explanation of Protocol: <http://www.ci.seattle.wa.us/environment/pesticides.htm>

					Notes
Fungicide		Tier 1	Alamo	propiconazole	persistent
Herbicide		Tier 1	Amitrol-T	amitrole	Carc: EPA 2B, CA, NTP
Insecticide		Tier 1	Ant, Flea & Spider (L/M)	chlorpyrifos; allethrin	off-target toxicity; chlorpyrifos to be cancelled for this use
Fungicide		Tier 1	Arbotect 20-S	thiabendazole	persistent
Other		Tier 1	A-REST	ancymidol	persistence, mobility; possible exception if can be demonstrated that no soil contact occurs
Herbicide		Tier 1	Arsenal	imazapyr	highly mobile
Insecticide		Tier 1	Attain PT 1800	bifenthrin	corrosive; greenhouse use only
Insecticide		Tier 1	Avid	ivermectin	bee toxicity
Herbicide		Tier 1	Banner MAXX	propiconazole	persistent
Fungicide		Tier 1	Banrot	etridiazole; thiophanate	corrosive; probable carcinogen
Herbicide		Tier 1	Banvel	dicamba	very highly mobile
Fungicide		Tier 1	Bayleton	triadimafon	*groundwater advisory
Fungicide		Tier 1	Benlate 50DF WP	benomyl	reproductive, endocrine
Herbicide		Tier 1	Blackerry & Brush Block	citric acid, acetic acid	*exempt from registration. MSDS indicates product corrosive. Fate data for acetic acid
Insecticide		Tier 1	Blast Em Wasp & Hornet	propoxur; pyrethrins	prob carcinogen; high mobility
Other		Tier 1	B-Nine	daminozide	probable carcinogen
Other		Tier 1	Bug-Geta Pellets	metaldehyde	fatal to dogs; restrict to bait station
Herbicide		Tier 1	BurnOut	acetic acid	corrosive
Herbicide		Tier 1	Casoron 2%	dichlobenil	*persistent, mobile metabolite
Herbicide		Tier 1	Casoron 4G	dichlobenil	*persistent, mobile metabolite
Fungicide		Tier 1	Chipco 26019	iprodione	likely carcinogen
Fungicide		Tier 1	Chipco 26019 WP	iprodione	likely carcinogen
Insecticide		Tier 1	Claire Golden Jet Bee, Wasp & Hornet Killer	malathion, DDVP, pyrethrins	Prop 65 carcinogen; *EXTOXNET indicates high leaching for dichlorvos
Fungicide		Tier 1	Clearys 3336F	thiophanate methyl	male/female reproductive toxicity

SPECIAL CIRCUMSTANCE MATERIALS LIST

Insecticide		Tier 1	Combat Roach Control	hydramethylnon	Bait station limits human and eco-exposure, so may move to Tier II; still need label
Fungicide		Tier 1	Compass	trifloxystrobin	*groundwater advisory (metabolites)
Herbicide		Tier 1	Confront	clopyralid; triclopyr	groundwater advisory
Fungicide		Tier 1	Consan	quat ammon chlorides	corrosive
Insecticide		Tier 1	Conserve SC	spinosad	off-target toxicity
Herbicide		Tier 1	Crossbow	triclopyr; 2,4-D	probable endocrine disruptor
Herbicide		Tier 1	Curtail M	MCPA; clopyralid	very highly mobile
Insecticide		Tier 1	Cygon	dimethoate	P waste
Insecticide		Tier 1	Cygon Garden Spray	dimethoate	P waste
Fungicide		Tier 1	Daconil 2787	chlorothalonil	likely carcinogen
Fungicide		Tier 1	Dacthal W-75	chlorothalonil	likely carcinogen
Other		Tier 1	Deadline Bullets	metaldehyde	fatal to dogs; restrict to bait station
Insecticide		Tier 1	Decathlon	cyfluthrin	off-target toxicity
Herbicide		Tier 1	Demoss	soap	corrosive
Insecticide		Tier 1	Diazinon AG500	diazinon	off-target toxicity; not for use on golf courses
Insecticide		Tier 1	Diazinon Plus	diazinon	off-target toxicity; not for use on golf courses
Herbicide		Tier 1	Direx 4L	diuron	known/likely carcinogen
Fungicide		Tier 1	Dithane T/O	mancozeb	probable carcinogen, probable endocrine
Fungicide		Tier 1	Dithane Z-78 WP	zineb	probable endocrine
Herbicide		Tier 1	Drive 75DF	quinclorac	restricted use
Insecticide		Tier 1	Drop Dead (Bioram?)	permethrin, allethrin	off-target toxicity
Insecticide		Tier 1	DuraGuard	chlorpyrifos	chlorpyrifos to be cancelled for this use
Insecticide		Tier 1	Duraplex	chlorpyrifos; cyfluthrin	chlorpyrifos to be cancelled for this use
Insecticide		Tier 1	Dursban 2.3G	chlorpyrifos	off-target toxicity; chlorpyrifos to be cancelled except for golf courses
Insecticide		Tier 1	Dursban 50WP	chlorpyrifos	off-target toxicity; chlorpyrifos to be cancelled except for golf courses
Insecticide		Tier 1	Dursban Pro	chlorpyrifos	off-target toxicity; chlorpyrifos to be cancelled except for golf courses

SPECIAL CIRCUMSTANCE MATERIALS LIST

Fungicide		Tier 1	Engage 10G or 75W	pentachloronitrobenzene	can be persistent in some soils; HCB metabolite is prob carcinogen, highly persistent
Herbicide		Tier 1	Envy 2,4-D	2,4-D	corrosive; probable endocrine disruptor
Herbicide		Tier 1	Escort	metsulfuron methyl	highly mobile
Fungicide		Tier 1	Exotherm Termil	chlorothalonil	likely carcinogen
Herbicide		Tier 1	Feed & Weed w/Trimec	2,4-D; MCP; dicamba	prob endocrine; very highly mobile
Herbicide		Tier 1	Finale	glufosinate ammonium	groundwater advisory
Fungicide		Tier 1	Fore Flowable	mancozeb	probable carcinogen, probable endocrine
Fungicide		Tier 1	Fore SPS	mancozeb	probable carcinogen, probable endocrine
Fungicide		Tier 1	Funginex	triforine	corrosive; reproductive toxicant
Herbicide		Tier 1	Fusilade	fluazifop-p butyl	developmental toxicity
Herbicide		Tier 1	Garlon 3A	triclopyr	highly mobile
Fungicide		Tier 1	Green-Shield	quaternary amm. chlorides	corrosive
Fungicide		Tier 1	Heritage	azoxystrobin	*groundwater advisory (metabolites)
Herbicide		Tier 1	Hyvar XL	bromacil	highly mobile
Other		Tier 1	Kaput	warfarin	teratogen
Fungicide		Tier 1	Karathane WD	dinocap	repro/developmental toxicant
Herbicide		Tier 1	Karmex	diuron	Known/Likely carcinogen
Insecticide		Tier 1	Kelthane	dicofol	known endocrine disruptor
Herbicide		Tier 1	Kerb	pronamide	Restricted because of carcinogen
Herbicide		Tier 1	Knock-Out (current form)	diquat dibromide	Persistent
Insecticide		Tier 1	Knox Out PT1500	diazinon	off-target toxicity
Fungicide		Tier 1	Kocide 101	copper hydroxide	corrosive
Herbicide		Tier 1	Krovar	bromacil; diuron	Known/Likely carc; highly mobile
Herbicide		Tier 1	Lontrel	clopyralid	groundwater advisory
Herbicide		Tier 1	Low Vol D	2,4-D	Restr use; prob endocrine disruptor
Insecticide		Tier 1	Mach 2	halofenozide	groundwater advisory on label
Insecticide		Tier 1	Malathion 5E	malathion	bee toxicity
Herbicide		Tier 1	Manage	halosulfuron methyl	groundwater advisory

SPECIAL CIRCUMSTANCE MATERIALS LIST

Insecticide		Tier 1	Marathon 1G	imidacloprid	exception to aquatic hazard for indoor (greenhouse) use
Insecticide		Tier 1	Mavrik Aquaflow	tau-fluvalinate	repro/devo toxicant; aquatic tox
Insecticide		Tier 1	Meter Mist Insect Killer	pyrethrins, PBO, MGK 264	metered dispenser approach may conflict with IPM decisionmaking
Fungicide		Tier 1	Microcop	basic copper sulfate	bioaccum???
Herbicide		Tier 1	Monobor chlorate	sodium tetraborate; sodium chlorate	corrosive; persistent; highly mobile
Herbicide		Tier 1	Moss-Out	ferric sulfate, anhydrous	corrosive; no data on environmental fate, but leaching is unlikely according to EPA
Herbicide		Tier 1	Nature's Glory (Conc)	acetic acid	corrosive to eyes
Herbicide		Tier 1	Norosac 4G	dichlobenil	persistent, mobile metabolite
Fungicide		Tier 1	Nulife w/ Fore	mancozeb	probable carcinogen, probable endocrine
Herbicide		Tier 1	Ornamec	fluazifop-p butyl	developmental toxicity
Insecticide		Tier 1	Orthene	acephate	off-target toxicity
Insecticide		Tier 1	Orthene 75S	acephate	bee toxicity
Insecticide		Tier 1	Orthene Turf, Tree	acephate	bee toxicity
Insecticide		Tier 1	Orthenex	acephate; triforine; fenbutatin oxide	corrosive; highly toxic to bees; contains an organotin compound
Fungicide		Tier 1	Ortho Daconil	chlorothalonil	likely carcinogen
Herbicide		Tier 1	Ortho Diquat	diquat dibromide	persistent
Insecticide		Tier 1	Ortho Home Pest Control	chlorpyrifos	bee toxicity
Insecticide		Tier 1	Ortho Hornet & Wasp	propoxur	probable carcinogen; highly mobile
Insecticide		Tier 1	Ortho Hornet & Wasp2	diazinon; pyrethrins	off-target toxicity
Insecticide		Tier 1	Ortho Methoxycor	methoxycor	known endocrine disruptor; persistent
Insecticide		Tier 1	Ortho Rose & Flower	pyrethrins	
Insecticide		Tier 1	Ortho Sevin Garden Dust	carbaryl	off-target toxicity
Insecticide		Tier 1	Ortho Systemic Rose & Flower	disulfoton	insecticide/fert mixture
Insecticide		Tier 1	Ortho-Klor Indoor/Outdoor	chlorpyrifos	bee toxicity
Insecticide		Tier 1	Oxamyl	oxamyl	restricted due to toxicity; groundwater advisory

SPECIAL CIRCUMSTANCE MATERIALS LIST

Fungicide		Tier 1	Parflo	pentachloronitrobenzene	can be persistent in some soils; HCB metabolite is prob carcinogen, highly persistent
Herbicide		Tier 1	Pendulum 3.3EC	pendimethalin	inert ingredient (1,2-dichloroethane) is probable carcinogen
Herbicide		Tier 1	Pendulum WDG	pendimethalin	
Herbicide		Tier 1	Pennant	metolochlor	highly mobile, with soil half-life near persistent range (90 d)
Fungicide		Tier 1	Penstar Flo	pentachloronitrobenzene	can be persistent in some soils; HCB metabolite is prob carcinogen, highly persistent
Insecticide		Tier 1	Pentac Aquaflo	dienochlor	persistent
Fungicide		Tier 1	Phyton-27	copper sulfate	corrosive
Insecticide		Tier 1	Pointer	imidaclopyrid	off-target toxicity (may be mitigated by application method)
Fungicide		Tier 1	Polysul Dormant Spray	calcium polysulfide	corrosive
Herbicide		Tier 1	Power Zone	MCPA, MCPP, dicamba, carfentrazone-ethyl	highly mobile
Insecticide		Tier 1	Preclude PT2100	fenoxycarb	probable carcinogen
Herbicide		Tier 1	Princep Caliber 90	simazine	highly mobile; groundwater advisory
Insecticide		Tier 1	Prolink Bee & Wasp Killer		appears to be subregistration of Claire Golden Jet (see above)
Insecticide		Tier 1	Proxol 80SP	trichlorfon	aquatic toxicity
Insecticide		Tier 1	PT 1600 X-clude	pyrethrins	likely carcinogen
Insecticide		Tier 1	Pyreth-It PT 1100	pyrethrins	
Insecticide		Tier 1	Raid Ant & Roach	permethrin; pyrethrins	indoor use product
Insecticide		Tier 1	Resmethrin PT 1200	resmethrin	developmental toxicity
Herbicide		Tier 1	Reward LS	diquat dibromide	persistent
Fungicide		Tier 1	Ridomil 2E	metalaxyl	highly mobile
Herbicide		Tier 1	Ronstar G	oxadiazon	CA reproductive list
Herbicide		Tier 1	RootX	dichlobenil	persistent, mobile metabolite

SPECIAL CIRCUMSTANCE MATERIALS LIST

Fungicide		Tier 1	Rubigan AS	fenarimol	persistent, mobile
Fungicide		Tier 1	Rubigan EC	fenarimol	persistent, mobile
Insecticide		Tier 1	Safer Home Patrol	permethrin	aquatic toxicity (exception if used indoors)
Insecticide		Tier 1	Scimitar WP	lamda-cyhalothrin	aquatic toxicity
Fungicide		Tier 1	Scotts 14-3-3 FFII	pentachloronitrobenzene	can be persistent in some soils; HCB metabolite is prob carcinogen, highly persistent
Fungicide		Tier 1	Scotts 23-3-5 + Fung 8	thiophanate; iprodione	Likely carcin; * toxic catfish
Herbicide		Tier 1	Scotts 30-5-5 w Confront	triclopyr; clopyralid	Highly mobile
Herbicide		Tier 1	Scotts 32-4-3 w Dicot	2,4-D; MCPP; dicamba	Highly mobile
Herbicide		Tier 1	Scotts Fluid Broadleaf	2,4-DP; 2,4-D	corrosive; prob endocrine disruptor
Fungicide		Tier 1	Scotts Fluid Fung	thiophanate; iprodione	Likely carcin; * toxic catfish
Fungicide		Tier 1	Scotts Fungicide 8	thiophanate; iprodione	Likely carcin; * toxic catfish
Fungicide		Tier 1	Scotts Fungicide 9	chloroneb; thiophanate	persistent (chloroneb)
Fungicide		Tier 1	Scotts Fungicide X	iprodione	Likely carcinogen
Other		Tier 1	Slug and Snail Line	metaldehyde	fatal to dogs; restrict to bait station
Herbicide		Tier 1	Snapshot	trifluralin; isoxaben	prob endocrine; bioconcentration (trifluralin); Ecology PBT
Herbicide		Tier 1	Speed Zone	carfentrazone, 2,4-D, mecoprop acid, dicamba acid	
Insecticide		Tier 1	Spray-Nox II	pyrethrins	
Fungicide		Tier 1	Subdue 2E	metalaxyl	highly mobile
Insecticide		Tier 1	Talstar GC flowable	bifenthrin	off-target toxicity
Insecticide		Tier 1	Talstar GC granular	bifenthrin	off-target toxicity
Insecticide		Tier 1	Talstar Lawn & Tree	bifenthrin	off-target toxicity
Insecticide		Tier 1	Tame 2.4EC	fenpropathrin	off-target toxicity
Insecticide		Tier 1	Tempo 20 WP	cyfluthrin	restricted use, not for use on golf courses, off-target toxicity

SPECIAL CIRCUMSTANCE MATERIALS LIST

Fungicide		Tier 1	Terraclor 75 WP	pentachloronitrobenzene	can be persistent in some soils; HCB metabolite is prob carcinogen, highly persistent
Insecticide		Tier 1	Thiodan 50WP	endosulfan	restricted, Category I pesticide
Herbicide		Tier 1	Topsite	imazapyr; diuron	Known/Likely carcinogen; highly mobile
Herbicide		Tier 1	Tordon 10K	picloram	groundwater advisory
Herbicide		Tier 1	Transline	clorpyralid	very highly mobile
Herbicide		Tier 1	Treflan 5-G	trifluralin	prob endocrine; bioconcentration (trifluralin); Ecology PBT
Herbicide		Tier 1	Treflan EC	trifluralin	prob endocrine; bioconcentration (trifluralin); Ecology PBT
Herbicide		Tier 1	Trimec	2,4-D; MCP; dicamba	prob endocrine; very highly mobile
Herbicide		Tier 1	Trimec 937	2,4-D; 2,4-DP; dicamba	prob endocrine; very highly mobile
Herbicide		Tier 1	Trimec Bentgrass Form.	2,4-D; MCP; dicamba	prob endocrine; very highly mobile
Fungicide		Tier 1	Truban 30% WP	etridiazole	persistent, probable carcinogen
Fungicide		Tier 1	Turfcide 4F	PCNB	can be persistent in some soils; HCB metabolite is prob carcinogen, highly persistent
Herbicide		Tier 1	Vanquish	dicamba	very highly mobile
Insecticide		Tier 1	Wasp-Freeze	allethrin; phenothrin	fish toxicity may be mitigated by use patterns
Herbicide		Tier 1	Weed B Gon	2,4-D; MCP	prob endocrine; very highly mobile, corrosive
Herbicide		Tier 1	Weedar 64	2,4-D	corrosive; probable endocrine disruptor
Insecticide		Tier 1	ZEP Tox II Wasp	propoxur; pyrethrins	label warnings not legible, but should have aquatic tox warning
Insecticide		Tier 1	Zeposector 2	resmethrin	no label warning for aqu tox but active ingred is highly toxic to fish
Fungicide		Tier 1	ZeroTol	hydrogen dioxide	corrosive; highly toxic to bees by direct treatment only
Fungicide		Tier 1	Ziram	ziram	corrosive; WA P waste