

Table of Pesticide Uses and Potential Organic Alternatives

Facility/Location	Pest of Concern	Chemical Products	Product Overview		Pesticide Alternatives	These products are part of a tool-box of alternatives, depending on the target pest to be controlled.
Parks and Open Space						
<div>Open Space</div> <div>Veterans Parkway Joslyn/Scout House City Hall Complex Street Medians</div> <div>Parks</div> <div>8th Street Parkette Block 35 Park Bruce's Beach El Porto Parkette Larsson Parkette Live Oak Park Marine Ave Park Nelson Parkette Polliwog Park Sand Dune Park</div> <div>Fields</div> <div>Begg Field Dorsey Field Live Oak Field Marine Sports Complex Premiere Field School District Fields</div> <div>Target Areas</div> <div>Turf Planters Gardens Hillsides Medians Roadways Sidewalks/Walkways Driveways Parking Lots Other Hard Surfaces</div>	Weeds Gophers	Fusilade	Liquid spray application. Used to control grasses and grassy weeds in flower beds and ornamental planting areas.		Manual Weeding	A very effective way to remove weeds down to the root with no harmful side effects to people and pets. To completely control weeds, this method can get very expensive depending on the level of care desired. Difficult to control weeds over large areas such as parks and ball fields.
		Sedgehammer	Liquid spray application. Specifically targets nut weeds without killing turf.			
		Speedzone	Liquid spray application. Used to control broadleaf weeds in turf and planters; visible results in hours; used in spring time only.		Heat Applications	Boiling water, steam and torch guns are very effective at killing weeds. However, the broad nature of the applications limits where they can be utilized. They are best applied in the crevasses of hard surfaces where weeds are not desired, such as driveways, sidewalks and roadways.
		Kaput-D and Traps	Kaput D is a grain bait used in nearly all of the City’s sports fields to control gophers, although it has not been used anywhere in over one year. It can be toxic to pets and wildlife that eat it, or that eat gophers who have ingested the product. This product is a first-generation bait which is less likely to bio-accumulate in the food chain than second-generation baits. Once placed in a gopher hole, the hole is buried to prevent the product from coming into contact with people and pets. This product is used where fields cannot be secured from broad community access in lieu of traps, which have some potential to be triggered by people and pets.		Corn Gluten Meal	Controls some but not all types of weeds; effective in gardens and on turf if applied directly on soil rather than turf; the area must be mist sprayed with water directly after application and typically takes 2-3 applications for best results; not a good option for field tuft that needs to be over-seeded for turf density.
					Vinegar Mixtures	Requires very targeted application because vinegar mixtures kill everything they come into contact with. They can also adversely affect soil composition and kill earthworms, which are desirable for soil aeration.
					Herbicidal Soaps	Good for killing weeds in flower gardens, driveways, fence lines and on other hard surfaces. Not good for killing weeds on turf as it will also kill grasses. Most effective when used on weed seedlings. Herbicidal soaps only kill the portion of the plant that they comes in contact with, but not the roots.
					Matran, Burnout II and Weed Zap Herbicides	Organic products that provide non-selective weed and grass control. They are good for seedlings but do not adequately control mature weeds. These products also kill turf and landscaping. Exempt from EPA Registration.
					Avenger	A citrus based organic product that is very effective on weeds in concrete areas. Not a good option for gardens and grasses because it is non-selective.
					Skythe	A fatty-acid, contact herbicide safe for people and pet contact. Effective in controlling weeds in gardens, planted areas and grasses, but not particularly effective on mature plants.
					Suppress	Used by organic growers on food crops, small turf areas, gardens and around trees for non-selective weed control.
		Gopher Controls	Traps are completely non-toxic and can be very effective. However, large areas may be labor intensive depending on the number of gopher holes present, and it can be difficult to keep traps away from people and pets in open areas. Sonic gopher controls provide short term relief and may be good for small areas that are not used for sports. Kitty litter and rags soaked in pine oil poured into gopher holes only have limited success in eradicating gophers.			
Sewer System						
Sewers	Cockroaches	Insecta	Effective roach control for the City’s sewer system by infusing the active ingredient, Chlorpyrifos, into latex coating (paint) and lining the upper portion of sewer manholes. It is very toxic to birds and fish, and moderately toxic to humans. Because it is applied using paint, it does not wash away.		None	There is no other product on the market that can effectively control and kill roaches inside the sewer system without being washed away. The latex coating of this product binds to the sewer shaft for approximately two years, killing roaches that try to exit sewer lids. The active ingredient is triggered/released by the mucous of cockroaches. There are no other uses of this product and there is no human contact after its application.

Facility/Location	Pest of Concern	Chemical Products	Products Currently Used/Application		Pesticide Alternatives	These products are part of a tool-box of alternatives, depending on the target pest to be controlled.
City Buildings and Facilities						
<b>Park Facilities</b> Bathrooms Class Rooms Creative Arts Center Little Red House Manhattan Heights Marine Sports Complex Recreation Offices Snack Stands Sheds  <b>City Buildings</b> City Hall Complex City Hall Annex Fire Station 2 Joslyn Metlox Police/Fire Bldg. Public Works Yard Scout House Water Plant	Rats and Mice	First Strike Soft Bait	Contains the active ingredient Difethialone. Used to kill rats and mice. It is considered highly toxic, and is a second-generation poison that bio-accumulates in the food chain. The best organic alternative to this product is Terad3BLOX rat bait.		Traps Terad3BLOX Rat Bait	Traps are effective at controlling rats and mice in some facility locations, but can be difficult to retrieve in attics and other hard-to-reach places. Traps are also labor intensive to set and periodically check. The active ingredient in Terad2BLOX is Vitamin D3 in high concentration, a chemical which is produced in human skin upon exposure to UVB light. It comes in a solid form and is eaten by rats and mice, who have less tolerance for higher doses of Vitamin D3. Pets may be susceptible to exposure if ingesting the product. Indoor use in City facilities should not impact pets. Terad3BLOX Rat Bait can be used in box traps as an effective organic poison.
	Ants Cockroaches Flies Insects Spiders Silver Fish Termites Ticks Wasps	Advion Cockroach Gel Bait	Contains the active ingredient Indoxacarb, considered by EPA to be a “reduced risk pesticide.” For indoor use at City facilities, out of reach of the general community. This product is considered a very mild chemical that does not have significant effects on humans and pets who may come into contact with it. It is toxic to cockroaches, but not to other beneficial insects. It has no fumes and does not spread.		Bio-pesticides	There are a variety of bio-pesticides on the market that attack specific pests like ants, silverfish, roaches, etc. There too many organic option to list them all, but they are generally effective for indoor use and building perimeters, while safe for human and pet contact. Many of these products carry the Organic Materials Review Institute (ORMI) seal of approval. See also the list of EPA Minimum Risk Pesticides.
		Suspend SC D Fense Dust	Contains the active ingredient Deltamethrin. The U.S. EPA classifies deltamethrin as “Not Likely to Be a Human Carcinogen” by all routes of exposure. It is the synthetic version of Pyrethrin, a natural insecticide made from chrysanthemum flowers. Used to control a wide variety of insects.		Ecovia EC	A liquid botanical oil insecticide. It has broad-spectrum applications and kills a wide range of flying, crawling and sucking insects such as ants, cockroaches, spiders, fleas, bed bugs, flies, wasps, mosquitoes, ticks, brown marmorated stink bugs, kudzu bugs, white flies, aphids. It is human and pet safe and can be used indoors and outdoors.
		Exponent	This product has no insecticidal properties but rather is used to enhance the effectiveness of other products ingested by insects.		Essentria IC3 Essentria Granular	Broad spectrum insect control. This product kills a broad spectrum of flying and crawling insects. It is a National Organic Program compliant product that comes in both liquid and granular applications
		Wasp Freeze II	Effective against wasps but is a mild irritant to human.			
		Taurus SC	Contains the active ingredient Fipronil. It is used outdoors to control termites and a variety of other insects such as ants, silver fish and cockroaches. Toxicity levels and impacts vary from none to high depending on the species exposed.			
		Alpine WSG	Contains the active ingredient Dinotefuran, which the EPA has designated as a “Reduced Risk Alternative” for a broad spectrum of insects, including honey bees. It is used to kill a wide variety of insects.			
		Avert Dry Flowable Roach Bait and Vendetta Plus	These products contain the active ingredient Abamectin, which is primarily used to control cockroaches indoors and outside.			
		Bifen I/T	Contains the active ingredient Bifenthrin. Used to control a wide variety of insects, both indoors and outdoors. Moderately toxic to animals if ingested. It is a synthetic version of the pyrethrin family (chrysanthemum flowers).			
		Nyguard	Contains the active ingredient Pyridine. Used to control roaches, fleas, flies and other insects indoors and outside. It does not kill insects, but rather retards growth so they cannot reproduce.			