



# **Pesticide Use by New York City Agencies in 2018**

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May, 2018

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## EXECUTIVE SUMMARY

Local Law 54 of 2007 requires the New York City Department of Health and Mental Hygiene (DOHMH) to summarize pesticide use by City agencies annually. New York City agencies account for a small fraction of pesticides used in the city. New York State receives pesticide use data from all commercial applicators. New York City agencies' use in 2013 (the last year for which New York State data has been processed) accounted for an estimated 3% of the total volume of liquid pesticides, and 19% of the total pounds of solid pesticides applied within the five boroughs of New York City.

In 2018, 36 municipal agencies reported their pesticide use to DOHMH. This report summarizes pesticides applied by or on behalf of agencies on city-owned or -leased property.

Key findings include:

- Pesticides were applied 284,248 times by New York City agencies in 2018. Agencies used 7,228 gallons of liquid and 156,540 pounds of solid pesticide products (Table 1).
- As in previous years, roaches were the most commonly targeted pests in 2018, with rats, mice, bed bugs and mosquitos making up the top 5 targets (by total number of applications in descending order) (Table 3).
- Most liquid pesticide products (51% by volume) used by City Agencies were fungicides, while most solid products (41% by weight) were insecticides (Table 1). Excluding DOHMH mosquito larviciding that was conducted to prevent spread of West Nile Virus and other mosquito-borne diseases, most solid pesticides products (63% by weight) were rodenticides.
- Insecticides
  - Insecticides were the most frequently applied type of pesticide, accounting for 67% of all applications (Table 1).
  - The volume of all liquid insecticides decreased 10% in 2018, compared with 2017 (Figure 2). This decline was due to a reduction in the number and volume of pyrethroids applications targeting roaches and bedbugs mostly from declines in use at NYCHA (Figure 6).
  - Liquid pyrethroid products targeting cockroaches decreased 11% from 2017 to 2018, reversing increases since 2015. Treatments targeting bedbugs also decreased slightly (Figure 6).
  - The use of solid mosquito larvicide by weight increased by 5% compared with 2017 after a steep increase in 2016 in response to Zika virus. Based on extensive mosquito surveillance in 2016 and 2017, the Health Department does not expect local Zika transmission.

- “Best Management Practices” (BMP) insecticide products (Appendix 3) include gel and bait insecticides with little potential for human exposure. They accounted for 36% of insecticide applications in 2018. BMP applications to treat cockroaches declined slightly in 2018 after more than doubling in 2017 (Figure 4).
- Herbicides
  - Liquid herbicide product use continued to decline in 2018 (Figure 2). Volume declined 22%, mostly due to reduced use of glyphosate products (Figure 3).
  - The use of solid herbicide products in 2018 was similar to 2017, due to continued use of outdoor granular turf formulations, mainly on golf courses and large institutional lawns.
  - The Parks Department no longer applies pre-emergent herbicides near roadways and along walkways and perimeters of city parks.
- Rodenticides
  - Use of solid rodenticide products increased 23% by weight 6% in the number of applications citywide compared with 2017. The DOHMH continue high levels of use for neighborhood rat ‘indexing’ and control (Figure 1).

# Pesticide Use by New York City Agencies in 2018

## I. BACKGROUND

When Local Law 37 was enacted on May 9, 2005, New York City became the largest municipality in the nation to regulate the use of pesticides on City-owned and -leased property. Local Law 37 established new requirements for pesticide use on property owned or leased by the City, including the prohibition of certain products, posting of warning notices prior to pesticide use, and the requirement that agencies report their pesticide use annually. With the enactment of Local Law 37, prohibitions from use were phased in for certain pesticides used by agencies or their contractors on City-owned and -leased properties. By November 2005, EPA Toxicity Category 1 (signal word “danger”) was prohibited. By May 2006, use of pesticides classified by the EPA as of July 19, 2004, as possible, probable or known human carcinogens was prohibited. Finally, by November 2006, use of pesticides classified by the State of California’s Office of Environmental Health Hazard Assessment as of March 4, 2005, as developmental toxicants was prohibited.

Local Law 37 exempted from prohibition several uses and products that posed little or no risk of human exposure, including rodenticides placed in tamper-proof containers or applied directly into rat burrows or inaccessible areas, containerized insect baits, and certain other types of insecticides, such as boric acid, silica, and diatomaceous earth. The New York City Department of Health and Mental Hygiene (DOHMH), under Local Law 37 authorization, further waived from prohibition the use of all insecticide gels containing the ingredients fipronil and hydramethylnon due to their effectiveness and low potential for human exposure. In addition, Local Law 37 empowered DOHMH to consider and grant requests for waivers from prohibition on a case-by-case basis. DOHMH maintains a webpage on Local Law 37 at <http://nyc.gov/health/ll37> that includes a list of all waivers granted to agencies.

In October 2007, New York City enacted Local Law 54, which requires City agencies to report their pesticide use to DOHMH, and DOHMH to issue a summary report to the City Council and the Mayor. This is the eleventh annual summary report and fulfills these requirements. City agencies have made significant improvements since the enactment of Local Law 37 to the quality and delivery of pesticide use data. In 2006, only three agencies provided data in an electronic format that enabled summarization. In 2018, thirty-six agencies reported electronic data.

## II. SOURCES OF PESTICIDE USE DATA

New York City agencies are required to report to DOHMH their pesticide use by February 1 for the preceding calendar year. This report summarizes data received by the DOHMH for pesticides applied during calendar year 2018.

Source data for each pesticide application includes the product name, Environmental Protection Agency (EPA) registration number, the quantity used (expressed as either weight or volume), the method of application, the target pest, and the date and location the product was applied, and what agency or contractor applied it. DOHMH utilizes the EPA's pesticide

information system to link these data - by registration number - to determine a product's pesticide type and class, toxicity score, and its active ingredients. In addition, DOHMH links these data to the EPA Office of Pesticide Programs' List of Chemicals Evaluated for Carcinogenic Potential and the State of California's List of Chemicals Known to the State to Cause Cancer or Reproductive Toxicity, both available for download at <http://nyc.gov/health/l137>.

### III. METHODS AND LIMITATIONS

Data in a variety of electronic formats were imported into a single database, where they were checked for quality, accuracy and validity. Weight and volumetric units were standardized to pounds and gallons, respectively. Products sold in solid form will primarily be reported by weight and liquids primarily by volume. Each record of data was assigned an agency identifier corresponding to the source agency. Data were analyzed using Microsoft SQL, Excel and Access. We analyzed data by pesticide type and chemical class, and report total numbers, pounds and gallons of applications for New York City, and by agency on whose behalf the pesticides were applied.

All reporting New York City agencies and their contractors provided data to DOHMH in electronic format. DOHMH launched and hosts an electronic reporting tool, the New York City Pesticide Use Reporting System (NYCPURS) that all agencies, contractors and licensed pest control applicators can register to use and allows for the importation of data maintained by other electronic systems.

Where DOHMH was able to evaluate the completeness of these records, summary statistics are reported by agency, below. It is still not possible to fully determine whether each agency was able to report each pesticide application. Many agencies depend upon contractors to maintain records of pesticides applied and may not be certain that all contractors have fully complied with Local Law 37 reporting requirements. There are some limitations in the data:

- Staff and contractor turnover has led to difficulty maintaining dependable and timely reporting at some agencies.
- Year-to-year variations in agency pesticide use can be due to a number of factors, including but not limited to changes in practice, budgets and the incidence of actual pest problems.

Despite the above-mentioned limitations, the data being captured continue to improve over previous years as more agencies and their contractors are using NYCPURS. Reporting errors, especially in reporting the incorrect units, were further reduced in 2018 due to continued increased use of the NYCPURS system with input standardization and consistent formatting.

In 2018, 98% of records were either imported or directly entered into the NYCPURS system. We expect to see further improvements in the data over the next year as more agencies fully adopt electronic recordkeeping, migrating existing electronic or paper systems to the NYCPURS system developed by DOHMH for electronic recordkeeping. Additional information about NYCPURS is available at <http://nyc.gov/health/l137>.

## **IV. PESTICIDE USE FINDINGS**

### **A. TYPES OF PESTICIDES USED BY AGENCIES**

Four main types of pesticides were applied by agencies: rodenticides (products used to kill rodents); insecticides (to kill insects); herbicides (to kill plants); and fungicides (to kill molds and other fungi).

#### **Rodenticides**

Most rodenticides act as anticoagulants and all are acutely toxic if ingested in sufficient dosages. Common rodenticide active ingredients are bromodiolone, diphacinone, brodifacoum, zinc phosphide and warfarin. In 2018, DOHMH, Parks, and NYCHA began using dry ice (frozen CO<sub>2</sub>) as an alternative rodenticide in sensitive outdoor locations such as city parks. DOHMH worked with federal and state regulators over the past several years to receive approval for this new rodent control method, which has no risk of secondary poisoning to predatory animals. Some other common rodenticide products used by agencies in 2018 were: Contrac All-Weather Blox®, Contrac Rodenticide®, Weatherblok Bait with Bitrex® and Difethialone Paste Place Packs®.

In 2018, a total of 64,128 pounds of rodenticides were applied by City agencies, accounting for 41% by weight of all pesticides applied, and 63% by weight when excluding mosquito larvicides, which comprise a significant proportion of insecticides by weight (Table 1).

#### **Insecticides**

A total of 2,683 gallons and 64,844 pounds of insecticides were applied by New York City agencies in 2018, accounting for 37% by volume, and 41% by weight of the total applications. Biological insecticides applied to target mosquito larvae account for 85% of insecticides by weight (Table 1). When those products are excluded, 10,044 pounds of insecticides by weight were applied, making up 10% of solid pesticides applied. Insecticides used by NYC agencies in 2018 fell largely into three classes of products: conventional pyrethrins and pyrethroids, organophosphates and carbamates, and “Best Management Practices” (BMP) products, which either use active ingredients with very low toxicity or involve formulation or application methods that minimize potential exposure and environmental spread.

#### ***Pyrethrins, Pyrethroids, and Synergists***

Pyrethrins and pyrethroids are less acutely toxic than the organophosphate and carbamate pesticides they have largely replaced. Accidental poisonings from professional applications are very rare, though personal use of aerosol and fogging product formulations have been associated with acute exposures, poisonings and fires. Some pyrethroids may be respiratory allergens for sensitized people, including asthmatics. Though these chemicals have lower acute toxicity, there is some emerging concern over the chronic neurotoxicity of pyrethrins, pyrethroids, and their synergists. EPA has classified pyrethrins, their synergists, and several pyrethroids as suspected human carcinogens. Pyrethrins and pyrethroids break down relatively quickly when used outdoors, but persist longer when applied indoors.

Common pyrethroid active ingredients are cypermethrin, cyfluthrin, cyhalothrin, esfenvalerate, and deltamethrin. Pyrethrin and pyrethroid products used by agencies in 2018 include Whitmere Optem ME PT 600®, Steri-Fab®, Demand CS Insecticide®, Temprid SC Insecticide®, Suspend SC Insecticide® and Tempo SC Insecticide®.

Together, pyrethrins and pyrethroids accounted in 2018 for 56% of total liquid insecticides applied by volume and 9% of solid insecticides by weight – 58% by weight when excluding mosquito larvicides. These products made up 61% of the total number of insecticide applications. There was an 8.5% decrease in pyrethroids applied by volume in 2018, largely due to decreased applications by NYCHA targeting roaches and bedbugs.

### ***Organophosphates and Carbamates***

Organophosphate and carbamate insecticides both function by inhibiting the neurotransmitter cholinesterase. Until EPA banned their use for most indoor applications in 1999 and 2000, organophosphates were the most heavily used class of insecticides. EPA also allowed the registrations for several carbamates to lapse.

The main organophosphate active ingredients used in 2018 were outdoor applications of chlorpyrifos, acephate, and trichlorfon on some golf courses, which are exempt from use prohibitions. The only carbamate active ingredients applied in 2018 were carbaryl and methomyl. Organophosphate and carbamate products applied by agencies in 2018 include Orthene PCO Formula II®, Chlorpyrifos 4E AG®, Dylox 420 SL Turf and Ornamental Insecticide®, Sevin SL Carbaryl Insecticide®, and Golden Malrin RF-128 Fly Killer®.

These products remain a very small percentage of the insecticides used by city agencies, making up well below <1% of the total number of insecticide applications. Reports submitted by agencies showed that in 2018, the use of organophosphates and carbamates accounted for only 5% of total liquid insecticides applied by agencies by volume – a small increase from 2017 levels – and <1% of total solids by weight, 3% by weight excluding mosquito larvicides.

### ***“Best Management Practices” Insecticides***

Several highly effective insecticide products with little or no potential risk for human exposure have been introduced into the market. These products include biological pesticides for mosquito control, and gels and baits for cockroach and other insect control. These products are the preferred insecticides used by agencies as part of their integrated pest management programs and are referred to as “Best Management Practices” Insecticides (BMP). A complete list of these products is listed in Appendix 3.

Common active ingredients for these products include boric acid, silica gel, diatomaceous earth, the bacteria *Bacillus sphaericus* and *Bacillus thuringiensis*, hydramethylnon, fipronil, avermectin, and indoxacarb. Some of the products used by agencies for this reporting year were Maxforce Roach Bait F.05®, Redzone Bait®, Vectomax FG®, Summit B.T.I. Briquets®, Vendetta Plus Cockroach Gel Bait®, and DuPont Advion Cockroach Gel Bait®.



In 2018, 28% of the total insecticides applied by volume, and 90% by weight, were insecticidal dusts, gels and baits, or biological larvicides. Excluding mosquito larvicides, the totals equal 38% of solid insecticide products by weight. These products made up 36% of the total number of insecticide applications, a 5% decrease in the number of applications compared with 2017.

## **Herbicides**

New York City agencies used herbicides in 2018 primarily for vegetation control in parks and for the maintenance of highways and street medians. The active ingredients most commonly used were glyphosate, dinitroanilines, chlorophenoxyacetic acids and ureas. Herbicides were a major contributor of pesticide use by agencies.

A total of 780 gallons and 20,410 pounds were applied in 2018, accounting for 11% of total volume and 13% of total weight –when excluding mosquito larviciding, 20% of all pesticides reported by weight. (Table 1)

### ***Glyphosate***

Some of the most heavily used liquid herbicides were glyphosates, best known as Roundup® products. Glyphosate is a broad-spectrum, non-selective systemic herbicide that can be used throughout the growing season. In early 2015, the International Agency for Research on Cancer (IARC), a branch of the World Health Organization (WHO), changed the classification for glyphosate to a “probable human carcinogen.” However, a risk assessment by the European Food Safety Authority (EFSA) determined that glyphosate is “unlikely to pose a carcinogenic hazard to humans.”<sup>1</sup> Glyphosate shows little acute toxicity, but there has been growing concern that chronic exposure may increase risk of certain cancers. There is also some evidence that heavy use of the chemical in warm climates with soil high in certain toxic metals could present significant risk for developing severe kidney damage in agricultural workers. Currently no regulatory determination has been made by the federal EPA or NY State that would change the prohibition status of these herbicide products under Local Law 37. However, DOHMH encourages the pursuit of alternative weed control methods that would reduce the need for these herbicides. Glyphosate use had increased as agencies phased out the use of other herbicides prohibited under Local Law 37, but began to decline in 2013. In 2018, 41% of liquid herbicide use (by volume) contained glyphosate compared to more than half the herbicide applications in 2016 (Figure 3).

### ***Dinitroaniline***

Dinitroaniline-based herbicides, which are often combined with fertilizers, are used early in the growing season as pre-emergents. They are of low acute toxicity to people, but several dinitroanilines are classified by EPA as suspected human carcinogens. Dinitroaniline herbicides break down slowly. Common dinitroaniline active ingredients are pendimethalin, trifluralin,

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1. <sup>1</sup> European Food Safety Authority. Conclusion on the peer review of the pesticide risk assessment of the active substance glyphosate. *Efsa J* 2015;13:4302.

benefin, benfluralin and prodiamine. Agencies used only one dinitroaniline product in 2018 called Barricade 4FL®. In 2013, the Parks Department chose to no longer use pendimethalin-containing herbicides, after requesting a waiver in previous years to use this herbicide.

### ***Chlorophenoxyacetic/Benzoic Acids***

The chlorophenoxyacetic acid herbicides are a family of related chemicals that are often combined in products. EPA classifies one member of this class of pesticides - mecoprop-p – as a suspected carcinogen. Common chlorophenoxyacetic acid active ingredients are 2,4-D, MCPP, mecoprop-p, dicamba and MCPA. Common chlorophenoxyacetic acid products used by agencies in 2018 were Riverdale Vanquish Herbicide® and Lesco Three-Way Selective Herbicide®. In 2018, the only uses of these products were applications along city highways by the DOT and a small number of applications on the city’s golf courses and botanic gardens.

### ***Ureas***

Like dinitroaniline herbicides, urea herbicides are of low acute toxicity, but some may pose some chronic risks. Classification as a possible human carcinogen varies within the group. Diuron, a urea herbicide among the twenty most heavily used herbicides reported by commercial applicators in the private market in the City in 2013 (most recent data available), is classified by the EPA as a likely human carcinogen. Sulfonylureas are of low acute toxicity and have been so classified. All urea herbicides are highly persistent. None of the ureas used by NYC agencies in 2018 is classified by the EPA as a human carcinogen. Common urea active ingredients are sulfometuron methyl, metsulfuron-methyl and halosulfuron-methyl. Common urea products used by NYC agencies in 2018 were Sedgehammer®, Dupont Viewpoint Herbicide® and Nufarm Prosedge Selective Herbicide®. In 2018, the only uses of these products were applications along city highways by the DOT and a small number of applications on the city’s golf courses and botanic gardens.

## **Fungicides**

Many of the commonly applied fungicides are classified by EPA as suspected carcinogens. The potential for exposure can exist throughout the growing season, because many of these fungicides are also persistent, with half-lives measured in months and years. Degradation does not necessarily reduce the hazard, because some fungicides also have highly toxic breakdown products. Fungicides were most commonly applied by NYC on golf courses, and these applications are exempt from Local Law 37 prohibitions.

The active ingredients of fungicides commonly used in NYC in 2018 were chlorothalonil, thiophanate-methyl, propiconazole, azoxystrobin, iprodione and triadimefon. Common fungicide products applied in 2018 include Daconil Action®, Heritage Fungicide®, Bayleton Flo Turf and Ornamental Fungicide® and Lesco Manicrue 6FL®.

Fungicides represented less than 1% of the total number of pesticide applications in 2018, but they made up 51% of total volume of liquid pesticides applied, 5% of total weight of solid products, and 7% of weight, after excluding mosquito larvicides (Table 1). Though the total volume of liquid fungicides reported has only increased slightly since 2012, they are now the most

heavily used type of pesticide reported by volume. Much of this increase could be due to a shift to a liquid formulation from a solid product (Figure 1 & 2).

## B. SUMMARY OF CITYWIDE PESTICIDE USE

Pesticide use can be measured and compared in a number of ways. Throughout the remainder of this report, we describe frequency of applications and quantity applied. Quantities for liquid applications are usually measured as volume in gallons. Quantities for solid applications are typically measured as weight in pounds. However, we included pesticides applied in totals by weight and volume based on the unit reported by City agencies or their contractors. In other words, if a pesticide typically reported in gallons was reported in pounds, it was included in the weight totals. Pesticides were applied a total of 284,248 times by New York City agencies in 2018, 7% less than in 2017, with a 16% decline in the number of pyrethroid applications targeting roaches and bedbugs, primarily at NYCHA. The pesticides applied most frequently by New York City agencies were insecticides. Insecticides were the most heavily used solid products (41% by weight), and fungicides were the most heavily used liquid (51% by volume). In 2018, 85% of the insecticides reported by weight were bacterial or insect growth regulator products designed to kill or halt the development of mosquito larvae in stagnant waters away from human contact. Excluding these products used as part of DOHMH mosquito-borne disease control programs, 10% of total solid pesticides by weight were insecticides and 63% were rodenticide. The majority of rodenticide applied by the City is placed directly into rat burrows and poses little risk of exposure to the public. Table 1 summarizes these findings of applications by pesticide type.

**Table 1. Total Applications Reported Applied by NYC Agencies in 2018, by Pesticide Type**

Pesticide Type	Volume		Weight			Times Applied	
	Gallons	% of Total	Pounds	% of Total	% wo larvacide	Number	% of Total
Rodenticide	0.79	0.0%	64,128.40	41.0%	63.0%	90,027	31.7%
Insecticide	2,683.45	37.1%	64,844.26	41.4%	9.9%	190,632	67.1%
Herbicide	780.24	10.8%	20,410.02	13.0%	20.1%	2,314	0.8%
Fungicide	3,650.60	50.5%	7,153.91	4.6%	7.0%	1,178	0.4%
Other	113.00	1.6%	3.09	0.0%	0.0%	97	0.0%
	<b>7,228</b>		<b>156,539.67</b>			<b>284,248</b>	

Table 2 lists the ten most frequently used products for each pesticide type on New York City owned or leased property in 2018. For each, we list the total volume, weight and number of applications, as well as the active ingredient(s), the EPA toxicity category, whether the product is considered a known, possible or suspect carcinogen by EPA, and whether the product is listed by the State of California as a reproductive or developmental hazard. For this and subsequent product tables, the toxicity category refers to the EPA’s assigned label warning to indicate the degree of acute toxicity from oral, dermal and inhalation exposures on a scale from 1 to 4. Toxicity Category 1 indicates pesticides considered highly toxic and whose labels require the signal word, “Danger”. Toxicity Category 2 products are considered moderately toxic and product labels carry the word “Warning”. Toxicity Category 3 products are considered to be slightly toxic, while Toxicity 4 products are considered relatively non-toxic, and both carry the signal word “Caution.” A complete list of products used by New York City by pesticide type is included in Appendix 1.

**Table 2. Ten Most Frequently Applied Pesticide Products by NYC Agencies in 2018 by Type**

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.01	13,184.98	38,218	Difethialone	3	NO	NO
12455-69	CONTRAC RODENTICIDE	0.00	16,174.47	16,913	Bromadiolone	3	NO	NO
12455-90	FINAL RODENTICIDE	0.00	7,970.77	11,811	Brodifacoum	3	NO	NO
7173-297	BROMADIOLONE PASTE 0901	0.00	1,368.59	3,854	Bromadiolone	3	NO	NO
12455-133	CONTRAC WITH LUMITRACK	0.00	1,146.69	3,801	Bromadiolone	3	NO	NO
12455-86	CONTRAC RODENTICIDE PLACE PAC	0.00	3,245.10	3,451	Bromadiolone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.46	2,286.13	3,381	Bromadiolone	3	NO	NO
82744-2-56	JT EATON NECTUS SOFT BAIT 2G SECOND GENERATION RODENTICIDE	0.00	246.12	1,505	Bromadiolone	3	NO	NO
12455-148	Rat Ice	0.00	14,631.50	1,487	Carbon dioxide	2	NO	NO
100-1055	WEATHERBLOK BAIT WITH BITREX	0.00	653.67	1,478	Brodifacoum	3	NO	NO
<b>Insecticides</b>								
432-1483	TEMPRID SC INSECTICIDE	185.69	0.00	52,164	Cyfluthrin, beta; Imidacloprid	3	NO	NO
432-763	SUSPEND SC INSECTICIDE	397.62	73.16	49,390	Deltamethrin	3	NO	NO
432-1257	MAXFORCE ROACH BAIT F.05	12.60	528.66	13,809	Fipronil	3	YES	NO
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	483.67	12,241	Indoxacarb	3	NO	NO
432-1460	MAXFORCE FC ROACH KILLER BAIT GEL F.05	0.02	382.56	10,322	Fipronil	3	YES	NO
432-1259	PRODUCT: RBF5	0.00	463.69	9,123	Fipronil	3	YES	NO
499-304	WHITMIRE OPTEM ME PT 600	40.84	5.88	5,241	Cyfluthrin	3	NO	NO
73049-429	VECTOMAX FG	0.00	38,822.49	5,209	Bacillus sphaericus; Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
397-13	STERI-FAB	573.33	828.06	4,890	Phenothrin; Isopropyl alcohol; Alkyl (60%C14, 25%C12, 15%C16) dimethylbenzyl ammonium chloride; Didecyl dimethyl ammonium chloride	2	NO	NO
1021-2593	VENDETTA PLUS COCKROACH GEL BAIT	0.00	133.81	3,849	Avermectin; Pyriproxyfen	3	NO	NO
<b>Herbicides</b>								
524-579	ROUNDUP PROMAX	137.74	0.00	439	Glyphosate, potassium salt	3	NO	NO
62719-556	ACCORD XRT II	48.37	0.00	420	Glyphosate, dimethylammonium salt	3	NO	NO
228-397	RIVERDALE VANQUISH HERBICIDE	22.79	0.00	244	Dicamba, diglycolamine salt	3	NO	NO
62719-176	PATHFINDER II	98.42	0.00	236	Triclopyr, butoxyethyl ester	3	NO	NO
432-1580	DUPONT VIEWPOINT HERBICIDE	0.00	23.06	221	Aminocyclopyrachlor; Imazapyr; Metsulfuron-methyl	3	NO	NO
62719-324	GLYPRO	35.64	0.00	129	Glyphosate, isopropylamine salt	3	NO	NO
62719-527	GARLON 4 ULTRA	12.02	0.00	112	Triclopyr	2	NO	NO
100-937	PRIMO MAXX	27.73	0.00	83	Trinexapac-ethyl	3	NO	NO
62719-542	DIMENSION 2EW	48.99	4,900.00	65	Dithiopyr	2	NO	NO
524-529	ROUNDUP PRO CONCENTRATE	36.54	0.00	45	Glyphosate, isopropylamine salt	3	NO	NO
<b>Fungicides</b>								
53883-353	QUALI-PRO T-NEX	114.20	0.00	110	Trinexapac-ethyl	3	NO	NO
100-1364	DACONIL ACTION	427.49	0.00	63	Acibenzolar-S-methyl; Chlorothalonil	2	YES	NO
71065-3	COMPANION LIQUID BIOLOGICAL FUNGICIDE	327.20	0.00	54	Bacillus subtilis GBO3	3	NO	NO
432-942	BANOL TURF AND ORNAMENTAL FUNGICIDE	106.18	0.00	47	Propamocarb hydrochloride	3	NO	NO
100-1093	HERITAGE FUNGICIDE	0.00	109.64	47	Azoxystrobin	3	NO	NO
60063-7-10404	LESCO MANICRUE 6FL	305.41	0.00	37	Chlorothalonil	2	YES	NO
432-1445	BAYLETON FLO TURF AND ORNAMENTAL FUNGICIDE	38.86	0.00	32	Triadimefon	3	YES	YES

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
432-1541	12ESP705 FUNGICIDE	0.00	1,307.00	29	Fosetyl-Al	3	NO	NO
53883-323-86064	ARMOR TECH TMI 2020XL	63.50	0.00	28	Thiophanate-methyl; Iprodione	3	YES	YES
7969-349	Xzemplar Fungicide	16.60	0.00	28	Fluxapyroxad	3	NO	NO
<b>Other</b>								
52483-1	HYPOCHLORITE SOLUTION	80.25	0.00	50	Sodium hypochlorite	1	NO	NO
14802-8-74466	MICROBE LIFE ALGAWAY 5.4 ALGAEICIDE FOR PONDS	3.00	0.00	12	Poly(oxyethylene) (dimethylimino) ethylene (dimethylimino) ethylene dichloride	3	NO	NO
2693-193	OPTIMA-BLUE	8.25	0.00	7	Copper oxide (ous)	2	NO	NO
59807-4	HORMODIN 1	0.00	0.31	7	IBA	3	NO	NO
60061-71	PETTIT MARINE PAINT PREMIUM SINGLE SEASON ABLATIVE	10.00	0.00	5	Copper oxide (ous)	2	NO	NO
63838-5	BROMMAX 7.1	6.50	0.00	5	Sodium bromide; Sodium hypochlorite	1	NO	NO
73049-15	PROGIBB 4% PLANT GROWTH REGULATOR SOLUTION	0.00	0.00	3	Gibberellins	2	NO	NO
2693-172	AQUARIUS ANTIFOULING BOTTOM PAINT 568 NAVY BLUE	3.00	0.00	2	Copper oxide (ous)	2	NO	NO
60061-137	PETTIT HYDROCOAT ECO COPPER FREE MULTI-SEASON ABLATIVE	2.00	0.00	2	1H-Pyrrole-3-carbonitrile,4-bromo-2-(4-chlorophenyl)-5-(trifluoromethyl)-; Zinc 2-pyridinethiol-1-oxide	2	NO	NO
71096-7-239	ORTHO BUG-GETA SNAIL & SLUG KILLER 1	0.00	0.91	2	Metaldehyde	3	NO	NO

## C. CHANGES IN PESTICIDE USE

A complete listing of application amounts by target pest is listed in Table 3.

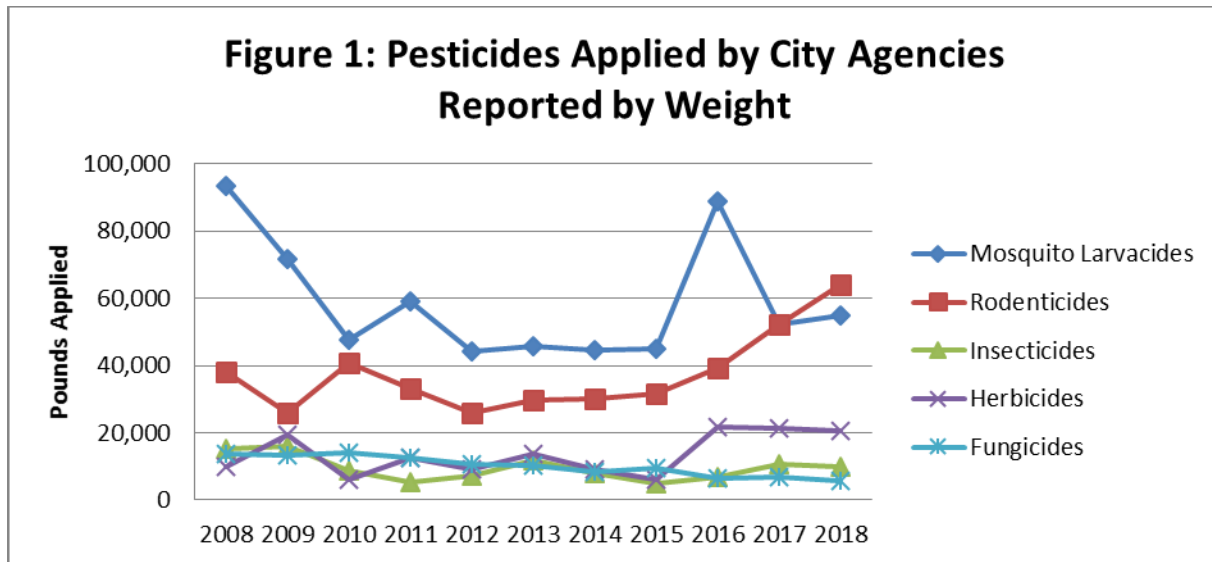
**Table 3: Complete listing of pesticide applications by New York City Agencies by Target Pest, 2018**

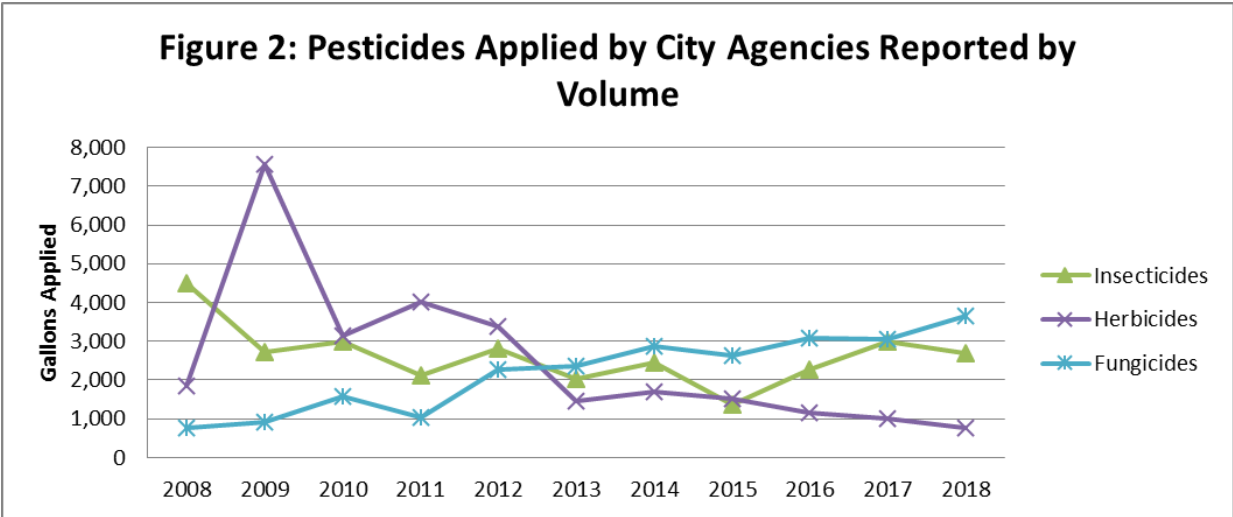
Target Pest	Volume in Gallons	Weight in Pounds	Total Applications	% of Total Applications
Roaches	1,180	3,646	165,530	58%
Rats	0	55,914	61,799	22%
Mice	1	8,121	28,214	10%
Bedbugs	483	747	10,320	4%
Mosquitoes	5	59,645	5,694	2%

Target Pest	Volume in Gallons	Weight in Pounds	Total Applications	% of Total Applications
Ants	64	177	3,263	1%
Flying insects	517	136	2,996	1%
Weeds, vines, or grasses	780	20,410	2,314	1%
Other Crawling Insects	294	410	2,095	1%
Fungal Disease or Infestation	3,651	7,154	1,178	0%
Other Pests	253	180	845	0%
<b>Totals:</b>	<b>7,228</b>	<b>156,540</b>	<b>284,248</b>	

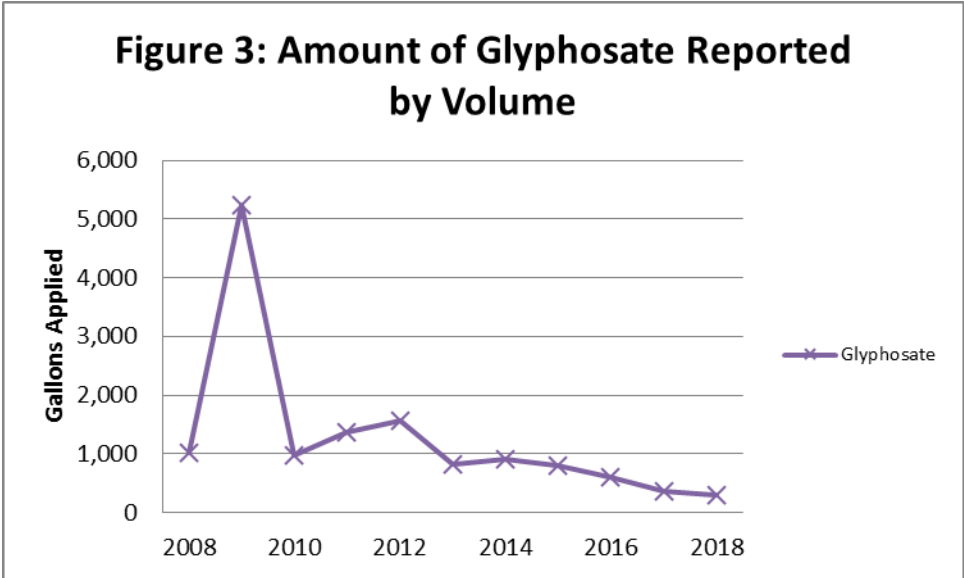
The level of completeness of city agency pesticide reporting has improved dramatically over the past ten years, making analysis of trends in pesticide use possible since 2008. Figures 1 and 2 show trends from 2008 through 2018 in use of pesticides by city agencies by type of pesticide, with solid and liquid products reported by weight and volume, respectively.

In Figure 1, DOHMH mosquito control program larvicides are charted separately from other insecticides, because they represent a large proportion of city insecticide use and their year-to-year use varies more with weather than other insecticides. There was a consistent decline in larvicide use until an increase in 2016 due to the broader larvicide application plan in response to the threat of Zika virus. Larvicide use has now returned to a level similar to previous years (Figure 1). Use of solid rodenticide products showed a considerable increase (23% by weight) from 2017 to 2018, and there was an overall 9% increase in use of all pesticides reported by weight. The increased amount of solid herbicide applied in 2016, 2017 and 2018 is due to the use of outdoor granular turf formulations that include fertilizer, mainly on golf courses and large institutional lawns (Figure 1).





Rodenticides and mosquito larvicides are not included in Figure 2 as those products are almost exclusively solid formulations reported by weight. In 2018, liquid herbicide use decreased 22% by volume (Figure 2) from 2017 due to a 17% decrease in gallons of glyphosate applied (Figure 3). Overall, there has been a 58% decline in liquid herbicide levels applied since 2008. The high volume of herbicide (mostly glyphosate) used in 2009 was due in part to large discreet projects by the Parks Department to control invasive species in remote, often wooded, parkland.



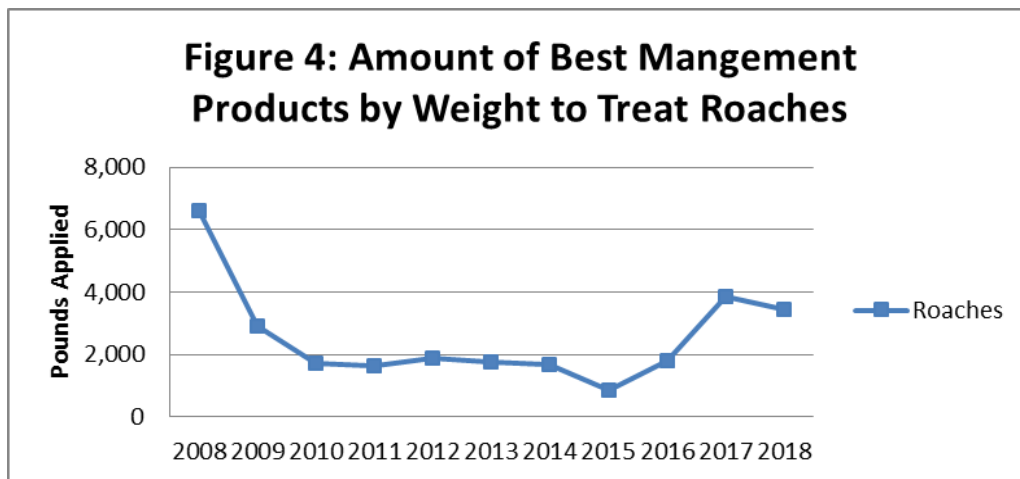
There was also a 10% decrease in liquid insecticide use, reported by volume, due to a reduction at NYCHA of roach and bedbug applications, discussed below. This reduction was seen even as more liquid BMP insecticides, the preferred treatment, are being reported by volume (Appendix 1 & 3). From 2008 to 2018, there was a 40% decrease in the volume of liquid insecticides used, with much of the reduction happening between 2008 and 2009 (Figure 2).

**Use of spray formulations vs. Best Management Practices**

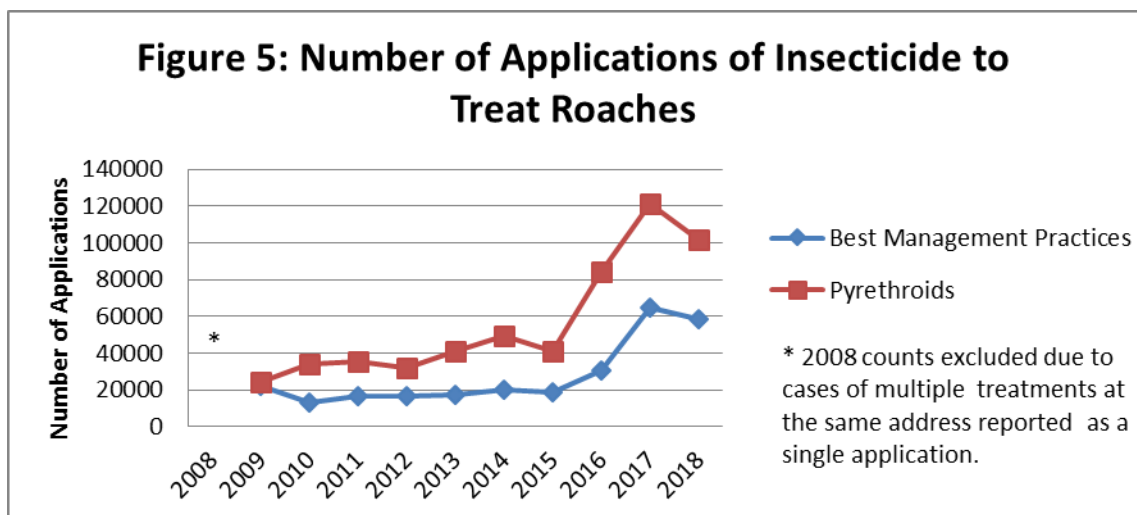
After a large reduction in BMP products to combat roaches from 2008 to 2010, the reported use of these products had leveled off through 2015, followed by significant increases,



including a doubling of the amount applied in 2017. Despite an 11% decline in 2018, the City has maintained most of the increase in BMP products targeting roaches (Figure 4).

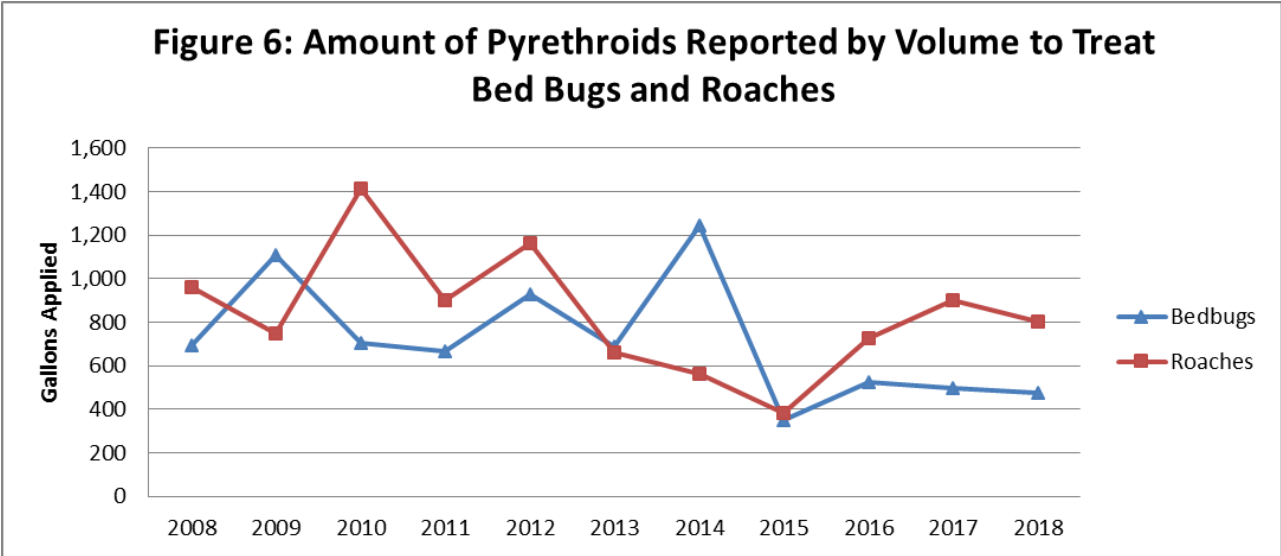


There was a 16% decrease in the number of pyrethroid applications to treat roaches from 2017 to 2018, while the number of applications of BMP products decreased by 10% after the number of applications more than doubled in 2017 (Figure 5). These decreases in applications numbers for both pyrethroids and BMP products corresponded to lower application amounts by volume and weight, respectively (Figure 6 and Figure 4).



### Bed Bugs vs. Roaches

Use of pyrethroid spray products targeting roaches decreased 11% by volume, and number of applications decreased by 16% from 2017 to 2018 (Figure 6 and Figure 5). There was also a 4% decrease from 2017 to 2018 in gallons of pyrethroids used by city agencies to treat bed bugs (Figure 6). Citywide, the number of pyrethroid applications to treat bed bugs decreased 13% in 2018, due to a decrease in the number of applications for bed bugs reported by NYCHA (data not shown). Looking at pyrethroid use from 2008 to 2018, the total volume for control of bed bugs has remained low since 2015 compared with previous years, while use volume for cockroaches in the past 3 years has remained at mid-level.



**Rodents**

Rodenticide use increased by 23% in 2018 by weight (Figure 1). There was also an increase of 6% in the number of rodenticide applications. This variability year to year is due in part to the varying frequency of neighborhood rat indexing and control activity by DOHMH.

**Mosquitoes**

Mosquito control measures include larviciding (killing larvae) and adulticiding (killing flying adults). The DOHMH Vector Control program applied 54,800 pounds of mosquito larvicide and 4,572 pounds of adulticide in 2018. Larvicide reported by weight increased by 5% in 2018 (Figure 1). The agency will continue to monitor mosquito populations across the five boroughs, especially the populations that commonly carry mosquito-borne illnesses such as the West Nile and Zika viruses. The amount of adulticide applied by DOHMH has varied year to year, depending on weather and severity of mosquitoes. In 2018, the volume of liquid adulticide used increased 43% compared with 2017 due to increased mosquito activity (data not shown).

**D. SUMMARY OF AGENCIES’ PESTICIDE USE**

For each reporting agency, we summarize total pesticide use by pesticide type, followed by a listing of pesticide products used by reporting City agencies.

**Administration for Children’s Services**

The New York City Administration for Children’s Services (ACS) provides for the protection of New York City’s children from abuse and neglect. Along with their community partners, ACS provides neighborhood-based services to help ensure children grow up in safe,

permanent homes with strong families. The Department of Juvenile Justice (DJJ) was merged into this agency in December 2010. The agency contracts for pest management services. Table 4 summarizes pesticide use by pesticide type. Table 5 lists all pesticide products used by ACS in 2018, primarily at facilities previously under management of the DJJ.

**Table 4: Types of Pesticides Used by ACS in 2018**

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	22.7	80.8%	51	16.2%
Insecticide	0.0	0.0%	5.4	19.2%	263	83.8%
<b>Totals</b>	<b>0.0</b>		<b>28.0</b>		<b>314</b>	

**Table 5: Pesticide Products Used by ACS in 2018**

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	9.24	56	Difethialone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	8.00	19	Bromadiolone	3	NO	NO
<b>Insecticides</b>								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	8.26	232	Indoxacarb	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.58	34	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	2.30	30	Boric acid	3	NO	NO

### ***Aging, Department for the***

The Department for the Aging (DFTA) promotes, administers and coordinates the development and provision of services for older New Yorkers to help them maintain their independence and participation in their communities. DFTA contracts with non-profit senior service providers to administer 76 different city-owned and city-leased sites, 33 of which engage in food preparation or storage. These facilities are privately operated and contract individually with private vendors for pest control to address typical structural urban pest issues, such as roaches, rodents, and flies. Pesticide use arranged by privately operated facilities with subcontractors is not required to be reported and is not included in this report, which includes only pest management services contracted directly by DFTA. The agency reported that no pesticides were used during 2018.

### ***Brooklyn Public Libraries***

The Brooklyn Public Library (BPL) serves Brooklyn's 2.5 million residents, offering thousands of public programs, millions of books and use of more than 850 free Internet-accessible computers at its 66 locations. Contractors are hired for pest management as needed and the major

pest infestations are roaches and mice. Table 6 summarizes pesticide use by pesticide type. Table 7 lists all pesticide products used by BPL in 2018.

**Table 6: Types of Pesticides Used by BPL in 2018**

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	46.1	44.3%	206	21.4%
Insecticide	0.0	100.0%	58.0	55.7%	756	78.6%
<b>Totals</b>	<b>0.0</b>		<b>104.1</b>		<b>962</b>	

**Table 7: Pesticide Products Used by BPL in 2018 by Pesticide Type**

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	46.10	204	Difethialone	3	NO	NO
12455-56	DITRAC TRACKING POWDER	0.00	0.02	2	Diphacinone	2	NO	NO
<b>Insecticides</b>								
64405-2	REDZONE BAIT	0.00	49.31	309	Boric acid	3	NO	NO
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	2.18	296	Indoxacarb	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.83	107	Indoxacarb	3	NO	NO
279-9554	CB INSECTICIDE WITH DELTAMETHRIN	0.00	5.06	13	Deltamethrin	3	NO	NO
432-1483	TEMPRID SC INSECTICIDE	0.00	0.00	8	Cyfluthrin, beta; Imidacloprid	3	NO	NO
432-763	SUSPEND SC INSECTICIDE	0.01	0.00	4	Deltamethrin	3	NO	NO
432-772	DELTA DUST	0.00	0.41	4	Deltamethrin	3	NO	NO
100-1485	DUPONT ADVION ANT BAIT ARENA	0.00	0.04	4	Indoxacarb	3	NO	NO
53883-335	N + P Regulator	0.00	0.00	3	Pyriproxyfen; Novaluron	3	NO	NO
1021-1641-57076	CONQUER RESIDUAL INSECTICIDE CONCENTRATE	0.00	0.00	2	Esfenvalerate	3	NO	NO
432-1544	TEMPRID SC-F INSECTICIDE	0.00	0.00	2	Cyfluthrin, beta; Imidacloprid	3	NO	NO
100-1486	DUPONT ADVION COCKROACH BAIT ARENA	0.00	0.04	2	Indoxacarb	3	NO	NO
2724-351	ZOECON RF-259 EMULSIFIABLE CONCENTRATE	0.00	0.00	1	(7S)-Hydroprene	3	NO	NO
499-550	TC-323	0.00	0.13	1	Prallethrin	3	NO	NO

## Board of Elections

The Board of Elections is the administrative body that oversees elections through staff at its main and five borough offices. The agency contracts for pest control through the citywide contract administered by DCAS. Table 8 summarizes pesticide use by pesticide type. Table 9 lists all pesticide products used by BOE in 2018.

**Table 8: Types of Pesticides Used by BOE in 2018**

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	3.5	91.3%	11	34.4%
Insecticide	0.0	0.0%	0.3	8.7%	21	65.6%
<b>Totals</b>	<b>0.0</b>		<b>3.8</b>		<b>32</b>	

**Table 9: Pesticide Products Used by BOE in 2018 by Pesticide Type**

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	0.66	7	Difethialone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	2.81	4	Bromadiolone	3	NO	NO
<b>Insecticides</b>								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	0.30	20	Indoxacarb	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.03	1	Indoxacarb	3	NO	NO

## Chief Medical Examiner

The Office of Chief Medical Examiner (OCME) is responsible for investigating deaths in unusual circumstances, approving requests for cremation, providing additional forensic services to support criminal investigations, and managing all functions of the City mortuary. The agency contracts for pest control through the citywide contract administered by DCAS. Table 10 summarizes pesticide use by pesticide type. Table 11 lists all pesticide products used by OCME in 2018.

**Table 10: Types of Pesticides Used by OCME in 2018**

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	14.7	84.7%	41	42.3%
Insecticide	0.0	0.0%	2.7	15.3%	56	57.7%
<b>Totals</b>	<b>0.0</b>		<b>17.3</b>		<b>97</b>	

**Table 11: Pesticide Products Used by OCME in 2018**

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	14.56	40	Bromadiolone	3	NO	NO
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	0.09	1	Difethialone	3	NO	NO
<b>Insecticides</b>								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	2.40	52	Indoxacarb	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.19	3	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	0.06	1	Boric acid	3	NO	NO

## City University of New York

The City University of New York (CUNY) is the nation's largest urban public university and consists of 23 institutions. The University serves more than 260,000 degree-credit students and 273,000 adult continuing and professional education students. Individual institutions contract for pest control services through private vendors. The data reports were received from 15 colleges, Baruch College, Borough of Manhattan Community College, Brooklyn College, Bronx Community College, City College, College of Technology, The Graduate Center, Hostos Community College, John Jay College, Kingsborough Community College, La Guardia Community College, Lehman College, Medgar Evers College, Queens Borough Community College, and York College. Table 12 summarizes pesticide use by pesticide type. Table 13 lists all pesticide products used by CUNY in 2018.

**Table 12: Types of Pesticides Used by CUNY in 2018**

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.3	0.4%	214.2	78.7%	628	33.9%
Insecticide	68.2	94.4%	58.1	21.3%	1,213	65.5%
Herbicide	3.8	5.2%	0.0	0.0%	11	0.6%
<b>Totals</b>	<b>72.2</b>		<b>272.3</b>		<b>1,852</b>	

**Table 13: Pesticide Products Used by CUNY in 2018 by Pesticide Type**

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.01	135.98	375	Difethialone	3	NO	NO
82744-2-56	JT EATON NECTUS SOFT BAIT 2G SECOND GENERATION RODENTICIDE	0.00	2.59	86	Bromadiolone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	36.50	78	Bromadiolone	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
100-1055	WEATHERBLOK BAIT WITH BITREX	0.00	28.09	60	Brodifacoum	3	NO	NO
12455-16	ZP TRACKING POWDER	0.00	0.88	7	Zinc phosphide	1	NO	NO
47629-16-499	PRESCRIPTION TREATMENT BRAND SOREXA BLOCKS	0.15	0.00	6	Difenacoum	3	NO	NO
7173-297	BROMADIOLONE PASTE 0901	0.00	3.76	6	Bromadiolone	3	NO	NO
7173-113	ROZOL TRACKING POWDER	0.00	1.25	4	Chlorophacinone	2	NO	NO
12455-69	CONTRAC RODENTICIDE	0.00	0.25	2	Bromadiolone	3	NO	NO
12455-91	FINAL RODENTICIDE READY-TO-USE PLACE PAC	0.11	0.00	1	Brodifacoum	3	NO	NO
47629-17-499	PRESCRIPTION TREATMENT BRAND SOREXA PELLET PLACE PACK	0.02	0.00	1	Difenacoum	3	NO	NO
47629-16	DIFENACOUM RAT AND MOUSE BLOCK	0.01	0.00	1	Difenacoum	3	NO	NO
12455-139	Final Soft Bait	0.00	4.96	1	Brodifacoum	3	NO	NO
<b>Insecticides</b>								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	4.45	397	Indoxacarb	3	NO	NO
1021-1828	MGK ROACH BAIT 2822	0.01	3.95	125	Avermectin	3	NO	NO
432-763	SUSPEND SC INSECTICIDE	0.94	0.00	123	Deltamethrin	3	NO	NO
64405-2	REDZONE BAIT	0.00	13.68	94	Boric acid	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	1.43	81	Indoxacarb	3	NO	NO
279-3206	TALSTAR TC FLOWABLE TERMITICIDE/INSECTICIDE	0.16	0.00	42	Bifenthrin	3	YES	NO
1021-2593	VENDETTA PLUS COCKROACH GEL BAIT	0.00	1.45	39	Avermectin; Pyriproxyfen	3	NO	NO
432-1483	TEMPRID SC INSECTICIDE	0.06	0.00	37	Cyfluthrin, beta; Imidacloprid	3	NO	NO
1021-1603	NYLAR 10EC	18.01	0.00	31	Pyriproxyfen	3	NO	NO
73079-4	BORACTIN INSECTICIDE POWDER	0.00	12.50	26	Boric acid	3	NO	NO
64405-8	NIBOR BORATE INSECTICIDE AND FUNGICIDE	18.00	0.31	23	Disodium octaborate tetrahydrate	3	NO	NO
73079-12	SILICIDE(TM)	0.00	5.06	20	Diatomaceous earth	3	NO	NO
432-1262	MAXFORCE IBH10	0.44	0.04	19	Hydramethylnon	3	YES	YES
432-1255	MAXFORCE GRANULAR INSECT BAIT	0.51	0.00	18	Hydramethylnon	3	YES	YES
5481-8973	ORTHENE PCO FORMULA II	17.25	0.00	17	Acephate	3	YES	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
2724-351	ZOECON RF-259 EMULSIFIABLE CONCENTRATE	0.14	0.00	15	(7S)-Hydroprene	3	NO	NO
432-1544	TEMPRID SC-F INSECTICIDE	0.02	0.00	11	Cyfluthrin, beta; Imidacloprid	3	NO	NO
53883-276	DELTA 4.75% SC	0.08	0.00	10	Deltamethrin	3	NO	NO
1677-43	STER-BAC	4.50	0.00	9	Alkyl (60%C14, 25%C12, 15%C16) dimethylbenzyl ammonium chloride	1	NO	NO
100-1501	DUPONT ARILON INSECTICIDE	7.00	0.00	8	Indoxacarb	3	NO	NO
1021-1177	PYROCIDE FOGGING CONCENTRATE 5628	0.00	10.50	8	Pyrethrins; Piperonyl butoxide; N-octyl bicycloheptene dicarboximide	3	YES	NO
100-1066	DEMAND CS INSECTICIDE	0.19	0.00	7	Cyhalothrin, lambda	3	NO	NO
499-492	PRESCRIPTION TREATMENT BRAND 388B ADVANCE ANT GEL BAIT	0.29	0.05	5	Borax	3	NO	NO
397-13	STERI-FAB	0.06	0.00	5	Phenothrin; Isopropyl alcohol; Alkyl (60%C14, 25%C12, 15%C16) dimethylbenzyl ammonium chloride; Didecyl dimethyl ammonium chloride	2	NO	NO
73079-10	INVICT (TM) COCKROACH GEL	0.03	0.00	5	Imidacloprid	3	NO	NO
432-1257	MAXFORCE ROACH BAIT F.05	0.00	0.13	5	Fipronil	3	YES	NO
432-1256	MAXFORCE FC ANT BAIT STATIONS	0.07	0.03	4	Fipronil	3	YES	NO
432-1460	MAXFORCE FC ROACH KILLER BAIT GEL F.05	0.02	0.00	4	Fipronil	3	YES	NO
1021-1424	PYROCIDE FOGGING CONCENTRATE 7338	0.00	4.00	3	Pyrethrins; Piperonyl butoxide; N-octyl bicycloheptene dicarboximide	3	YES	NO
279-9557	CB DELTAMETHRIN FOAM INSECTICIDE	0.08	0.00	2	Deltamethrin	3	NO	NO
499-496	PRESCRIPTION TREATMENT BRAND ADVANCE 360A DUAL CHOICE ANT BAIT STATIONS	0.01	0.07	2	Avermectin	3	NO	NO
432-763-62719	SUSPEND SC	0.01	0.00	2	Deltamethrin	3	NO	NO



EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
432-1455	BES 0026 FLY SPOT BAIT	0.00	0.19	2	Imidacloprid; (Z)-9-Tricosene	3	NO	NO
432-1304	TEMPO 10 WP INSECTICIDE	0.00	0.06	2	Cyfluthrin, beta	3	NO	NO
499-362-55809	WASP AND HORNET KILLER II	0.14	0.00	1	D-trans Allethrin; Phenothrin	3	YES	NO
499-362-70627	BOLT WASP & HORNET KILLER	0.07	0.00	1	D-trans Allethrin; Phenothrin	3	YES	NO
499-515	MOTHEREARTH GRANULAR SCATTER BAIT	0.02	0.00	1	Boric acid	3	NO	NO
279-9554	CB INSECTICIDE WITH DELTAMETHRIN	0.02	0.00	1	Deltamethrin	3	NO	NO
73079-2	INTICE GRANULAR BAIT	0.02	0.00	1	Boric acid	3	NO	NO
432-1526	BES0570 INSECTICIDE	0.01	0.00	1	Pyrethrins	3	YES	NO
100-1486	DUPONT ADVION COCKROACH BAIT ARENA	0.00	0.00	1	Indoxacarb	3	NO	NO
499-495	TC-233	0.00	0.00	1	S-Bioallethrin	3	YES	NO
2724-469	ZOECON (S)-HYDROPRENE ROACH CONTROL STATION II	0.00	0.00	1	(7S)-Hydroprene	3	NO	NO
432-772	DELTA DUST	0.00	0.13	1	Deltamethrin	3	NO	NO
1021-2796	MGK Formula 3113	0.00	0.07	1	Clothianidin; Pyriproxyfen	0	NO	NO
432-1363	TEMPO SC INSECTICIDE	0.00	0.00	1	Cyfluthrin, beta	3	NO	NO
<b>Herbicides</b>								
524-579	ROUNDUP PROMAX	3.76	0.00	11	Glyphosate, potassium salt	3	NO	NO

### ***Citywide Administrative Services, Department of***

The Department of Citywide Administrative Services (DCAS) supports government recruitment, oversees surplus city-owned property and the commercial real estate portfolio for the City, and provides supplies and equipment. Of the 14,000 city-owned lots, DCAS is directly responsible for the management of approximately 2,400 of these properties. DCAS cleans and maintains 53 DCAS-managed buildings with 13,365,398 square feet of space throughout the city. These include City Hall, the four Borough Halls, the Manhattan and Brooklyn Municipal Buildings, and all state and municipal court buildings. DCAS manages the citywide contract for pest management services that city agencies can buy into. This contract was effective from May 1, 2017 to April 30, 2018. Several agencies are housed in DCAS managed buildings, and the DCAS report reflects these applications. Table 14 summarizes pesticide use by pesticide type. Table 15 lists all pesticide products used by DCAS in 2018.

**Table 14: Types of Pesticides Used by DCAS in 2018**

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	198.0	87.1%	334	44.5%
Insecticide	0.0	0.0%	29.3	12.9%	417	55.5%
<b>Totals</b>	<b>0.0</b>		<b>227.3</b>		<b>751</b>	

**Table 15: Pesticide Products Used by DCAS in 2018 by Pesticide Type**

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	78.09	168	Difethialone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	119.63	164	Bromadiolone	3	NO	NO
12455-69	CONTRAC RODENTICIDE	0.00	0.16	1	Bromadiolone	3	NO	NO
7173-297	BROMADIOLONE PASTE 0901	0.00	0.11	1	Bromadiolone	3	NO	NO
<b>Insecticides</b>								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	5.12	311	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	23.74	71	Boric acid	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.44	35	Indoxacarb	3	NO	NO

## **Corrections, Department of**

The Department of Corrections (DOC) is responsible for New York City's inmates, housing the majority of them on Riker's Island. It oversees 44 facilities, including eleven correctional facilities which have food preparation areas, laundries, residential areas for inmates, and office space. DOC does not employ contractors for pest management purposes, but relies on in-house pest control professionals and works with DCAS in maintaining certain facilities. Table 16 summarizes pesticide use by pesticide type. Table 17 lists all pesticide products used by DOC in 2018.

**Table 16: Types of Pesticides Used by DOC in 2018**

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	245.9	52.1%	307	12.1%
Insecticide	92.5	100.0%	225.8	47.9%	2234	87.9%
<b>Totals</b>	<b>92.5</b>		<b>471.7</b>		<b>2,541</b>	

**Table 17: Pesticide Products Used by DOC in 2018 by Pesticide Type**

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	34.01	96	Difethialone	3	NO	NO
7173-218	GENERATION MINI BLOCKS	0.00	66.31	92	Difethialone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	77.49	64	Bromadiolone	3	NO	NO
7173-172	ROZOL BLUE TRACKING POWDER	0.00	6.00	15	Chlorophacinone	2	NO	NO
12455-36	CONTRAC RAT AND MOUSE BAIT	0.00	25.38	14	Bromadiolone	3	NO	NO
12455-86	CONTRAC RODENTICIDE PLACE PAC	0.00	8.82	13	Bromadiolone	3	NO	NO
12455-56	DITRAC TRACKING POWDER	0.00	15.16	8	Diphacinone	2	NO	NO
12455-78	DITRAC RAT AND MOUSE BAIT PLACE PAC	0.00	12.75	5	Diphacinone	3	NO	NO
<b>Insecticides</b>								
432-763-62719	SUSPEND SC	19.81	0.00	654	Deltamethrin	3	NO	NO
432-1363	TEMPO SC INSECTICIDE	16.48	0.63	459	Cyfluthrin, beta	3	NO	NO
499-507	PRESCRIPTION TREATMENT BRAND ALPINE COCKROACH GEL BAIT RESERVOIR	0.01	11.88	249	Dinotefuran	3	NO	NO
397-13	STERI-FAB	16.18	0.00	170	Phenothrin; Isopropyl alcohol; Alkyl (60%C14, 25%C12, 15%C16) dimethylbenzyl ammonium chloride; Didecyl dimethyl ammonium chloride	2	NO	NO
100-1498	DUPONT ADVION ANT GEL	30.00	6.91	158	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	73.98	107	Boric acid	3	NO	NO
432-1259	PRODUCT: RBF5	0.00	3.25	72	Fipronil	3	YES	NO
432-1455	BES 0026 FLY SPOT BAIT	8.15	10.19	74	Imidacloprid; (Z)-9-Tricosene	3	NO	NO
73079-4	BORACTIN INSECTICIDE POWDER	1.46	44.94	59	Boric acid	3	NO	NO
1021-2593	VENDETTA PLUS COCKROACH GEL BAIT	0.00	1.81	58	Avermectin; Pyriproxyfen	3	NO	NO
432-1460	MAXFORCE FC ROACH KILLER BAIT GEL F.05	0.00	2.54	55	Fipronil	3	YES	NO
73049-20	VECTOLEX CG BIOLOGICAL LARVICIDE	0.00	12.00	28	Bacillus sphaericus	3	NO	NO
432-1262	MAXFORCE IBH10	0.00	4.25	22	Hydramethylnon	3	YES	YES
64405-2-149	TERRO SLUG & SNAIL BAIT	0.00	0.92	14	Boric acid	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
2724-274	GOLDEN MALRIN RF-128 FLY KILLER	0.00	11.88	12	Methomyl; (Z)-9-Tricosene	3	NO	NO
432-1264	MAXFORCE FC ANT KILLER BAIT GEL	0.13	0.22	11	Fipronil	3	YES	NO
432-1257	MAXFORCE ROACH BAIT F.05	0.00	27.20	9	Fipronil	3	YES	NO
73079-2	INTICE GRANULAR BAIT	0.00	9.50	6	Boric acid	3	NO	NO
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	0.07	4	Indoxacarb	3	NO	NO
9688-255-8845	SPECTRACIDE COMMERCIAL WASP & HORNET KILLER 3	0.29	0.00	3	Deltamethrin; S-Bioallethrin	3	YES	NO
2724-274-59	GOLDEN MUSCAMYL(TM) FLY BAIT	0.00	3.00	2	Methomyl; (Z)-9-Tricosene	3	NO	NO
279-3386	DRAX ANT KIL-PF	0.00	0.12	2	Boric acid	3	NO	NO
1021-2796	MGK Formula 3113	0.00	0.26	1	Clothianidin; Pyriproxyfen	0	NO	NO
9444-131-72155	BAYER ADVANCED ANT KILLER POWER PEN READYTO-USE BAIT	0.00	0.11	1	Boric acid	3	NO	NO
3125-380-59807	DECATHLON ORNAMENTAL INSECTICIDE	0.00	0.04	1	Cyfluthrin	3	NO	NO
73079-6	GREEN ZONE GRANULAR BAIT	0.00	0.04	1	Boric acid	3	NO	NO
432-1254	MAXFORCE PROFESSIONAL INSECT CONTROL ROACH KILLER	0.00	0.03	1	Hydramethylnon	3	YES	YES
432-1304	TEMPO 10 WP INSECTICIDE	0.00	0.00	1	Cyfluthrin, beta	3	NO	NO

## Education, Department of

The Department of Education (DOE) provides primary and secondary education to more than 1 million pre-kindergarten to grade 12 students. Pest management at all New York City public schools is overseen by their Pest Control Unit. There are approximately 20 in-house licensed pest management professionals who conduct monthly monitoring inspections and respond to pest problems for approximately 900 schools. DOE contracts with several pest management companies to provide services for an additional 300 schools. Table 18 summarizes pesticide use by pesticide type. Table 19 lists all pesticide products used by DOE in 2018.

**Table 18: Types of Pesticides Used by DOE in 2018**

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	3897.1	83.3%	10637	38.9%
Insecticide	89.2	100.0%	783.2	16.7%	16703	61.1%
<b>Totals</b>	<b>89.2</b>		<b>4,680.3</b>		<b>27,340</b>	

**Table 19: Pesticide Products Used by DOE in 2018 by Pesticide Type**

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	1794.86	6829	Difethialone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	748.06	1,328	Bromadiolone	3	NO	NO
82744-2-56	JT EATON NECTUS SOFT BAIT 2G SECOND GENERATION RODENTICIDE	0.00	210.92	1,301	Bromadiolone	3	NO	NO
12455-69	CONTRAC RODENTICIDE	0.00	1,063.08	725	Bromadiolone	3	NO	NO
7173-297	BROMADIOLONE PASTE 0901	0.00	61.54	395	Bromadiolone	3	NO	NO
12455-146	CONTRAC SOFT BAIT	0.00	18.44	58	Bromadiolone	3	NO	NO
7173-113	ROZOL TRACKING POWDER	0.00	0.19	1	Chlorophacinone	2	NO	NO
<b>Insecticides</b>								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	29.44	5356	Indoxacarb	3	NO	NO
73079-14	IMIDACLOPRID GRANULAR BAIT	0.00	340.68	2274	Imidacloprid	3	NO	NO
64405-2	REDZONE BAIT	0.00	249.81	1868	Boric acid	3	NO	NO
499-510	PRESCRIPTION TREATMENT BRAND ALPINE COCKROACH GEL BAIT PISTON CAN	0.00	24.90	1087	Dinotefuran	3	NO	NO
73766-1	GOURMET ANT BAIT GEL	0.00	23.66	1017	Disodium octaborate tetrahydrate	3	NO	NO
1021-2593	VENDETTA PLUS COCKROACH GEL BAIT	0.00	26.63	886	Avermectin; Pyriproxyfen	3	NO	NO
89459-59	ENVI ACU CONTACT Insecticide	52.71	0.00	630	Phenylethyl propionate	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	1.23	557	Indoxacarb	3	NO	NO
1021-2796	MGK Formula 3113	0.00	16.30	542	Clothianidin; Pyriproxyfen	0	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
432-1257	MAXFORCE ROACH BAIT F.05	0.00	6.47	523	Fipronil	3	YES	NO
432-1460	MAXFORCE FC ROACH KILLER BAIT GEL F.05	0.00	11.23	470	Fipronil	3	YES	NO
89459-84	RF2228 LH AEROSOL	20.36	0.00	353	Cyhalothrin, lambda; (7S)-Hydroprene	3	NO	NO
499-294	AVERT PRESCRIPTION TREATMENT 310	0.00	3.79	315	Avermectin	3	NO	NO
2724-484	RF 9707 AEROSOL	8.59	2.46	220	(7S)-Hydroprene	3	NO	NO
2724-469	ZOECON (S)-HYDROPRENE ROACH CONTROL STATION II	3.53	0.00	185	(7S)-Hydroprene	3	NO	NO
432-1259	PRODUCT: RBF5	0.00	2.78	94	Fipronil	3	YES	NO
432-1506	MAXFORCE QUANTUM ANT BAIT	0.00	0.76	86	Imidacloprid	3	NO	NO
8033-114-279	ENDZONE INSECTICIDE STICKER	0.00	12.25	85	Acetamiprid	3	NO	NO
499-370	PT 370 ASCEND FIRE ANT STOPPER BAIT	0.00	5.10	38	Avermectin	3	NO	NO
73079-6	GREEN ZONE GRANULAR BAIT	0.00	6.03	37	Boric acid	3	NO	NO
6218-47	SUMMIT B.T.I. BRIQUETS	0.00	14.00	36	Bacillus thuringiensis subspecies israelensis strain BMP 144	3	NO	NO
499-507	PRESCRIPTION BRAND ALPINE COCKROACH GEL BAIT RESERVOIR	0.00	0.21	13	Dinotefuran	3	NO	NO
432-763	SUSPEND SC INSECTICIDE	0.00	0.41	12	Deltamethrin	3	NO	NO
89459-60	ENVI AR-X MULTI-PURPOSE INSECTICIDE	0.00	0.77	6	Pyrethrins; Phenylethyl propionate	3	YES	NO
432-1455	BES 0026 FLY SPOT BAIT	4.00	0.00	4	Imidacloprid; (Z)-9-Tricosene	3	NO	NO
1021-1767	MULTICIDE LICE & DUST MITE SPRAY 27911	0.00	3.19	3	Phenothrin; N-octyl bicycloheptene dicarboximide	3	YES	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
499-550	TC-323	0.00	0.50	2	Prallethrin	3	NO	NO
1021-1641-57076	CONQUER RESIDUAL INSECTICIDE CONCENTRATE	0.00	0.38	2	Esfenvalerate	3	NO	NO
432-772	DELTA DUST	0.00	0.19	2	Deltamethrin	3	NO	NO

## Environmental Protection, Department of

The Department of Environmental Protection (DEP) has more than 1,700 facilities upstate and in NYC. These include water pollution control plants, well stations, pumping stations, shafts, chambers, reservoirs, aqueducts, tunnels, gate houses, office space, garages, repair shops, maintenance shops, and police precincts within New York City. DEP contracts for some pest control services and employs approximately 10 licensed applicators for upstate reservoir pest control. Table 20 summarizes pesticide use by pesticide type. Table 21 lists all pesticide products used by DEP in 2018.

**Table 20: Types of Pesticides Used by DEP in 2018**

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.5	0.5%	307.6	86.0%	1017	55.6%
Insecticide	3.4	3.6%	50.2	14.0%	757	41.4%
Herbicide	91.0	95.9%	0.0	0.0%	56	3.1%
<b>Totals</b>	<b>94.9</b>		<b>357.8</b>		<b>1,830</b>	

**Table 21: Pesticide Products Used by DEP in 2018 by Pesticide Type**

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	295.89	988	Difethialone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.48	11.50	27	Bromadiolone	3	NO	NO
12455-36	CONTRAC RAT AND MOUSE BAIT	0.00	0.25	2	Bromadiolone	3	NO	NO
<b>Insecticides</b>								
499-510	PRESCRIPTION TREATMENT BRAND ALPINE COCKROACH GEL BAIT PISTON CAN	0.00	16.38	530	Dinotefuran	3	NO	NO
432-763	SUSPEND SC	0.00	22.88	90	Deltamethrin	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	0.85	53	Indoxacarb	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.18	19	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	1.33	13	Boric acid	3	NO	NO
499-550	TC-323	0.00	6.00	10	Prallethrin	3	NO	NO
499-496	PRESCRIPTION TREATMENT BRAND ADVANCE 360A DUAL CHOICE ANT BAIT STATIONS	0.07	0.00	6	Avermectin	3	NO	NO
149-8	TERRO PCO LIQUID ANT BAIT	0.04	0.00	6	Borax	3	NO	NO
499-304	WHITMIRE OPTEM ME PT 600	0.00	1.75	6	Cyfluthrin	3	NO	NO
499-362	WHITMIRE PT 515 WASP FREEZE	1.23	0.00	4	D-trans Allethrin; Phenothrin	3	YES	NO
9688-190	SPECTRACIDE DESTROYER BRAND WASP & HORNET KILLER	0.61	0.00	4	Cyhalothrin, lambda; Prallethrin	3	NO	NO
499-527	PRESCRIPTION TREATMENT BRAND ALPINE DUST INSECTICIDE	0.00	0.39	3	Dinotefuran; Diatomaceous earth	3	NO	NO
73079-4	BORACTIN INSECTICIDE POWDER	0.00	0.38	3	Boric acid	3	NO	NO
1021-1691	TERRO ANT KILLER SPRAY 2	0.23	0.00	2	Esfenvalerate; Prallethrin; N-octyl bicycloheptene dicarboximide	3	YES	NO
2724-786	RF2050 SPRAY	0.07	0.00	2	Tetramethrin; Ethofenprox; Piperonyl butoxide	3	YES	NO
432-1534	BES0668 Insecticide	1.00	0.00	1	Deltamethrin	3	NO	NO
499-539	TC 278	0.08	0.00	1	Pyrethrins; Piperonyl butoxide	3	YES	NO
432-1527	TEMPRID RTU	0.03	0.00	1	Cyfluthrin, beta; Imidacloprid	0	NO	NO
44757-3	PIC ORTHOBORIC ACID ROACH & ANT KILLER	0.02	0.00	1	Boric acid	3	NO	NO
499-470	JOHNSON WAX PROFESSIONAL BRAND RESIDUAL INSECTICIDE CRAWLING INSECT	0.00	0.06	1	Cyfluthrin	3	NO	NO



EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
432-772	DELTA DUST	0.00	0.00	1	Deltamethrin	3	NO	NO
<b>Herbicides</b>								
241-346	ARSENAL HERBICIDE	69.89	0.00	32	Imazapyr, isopropylamine salt	3	NO	NO
1381-192	CORNERSTONE PLUS	17.64	0.00	8	Glyphosate, isopropylamine salt	3	NO	NO
432-1229	FINALE HERBICIDE	2.06	0.00	6	Glufosinate-ammonium	2	NO	NO
228-366	RAZOR HERBICIDE	0.29	0.00	5	Glyphosate, isopropylamine salt	3	NO	NO
1381-241	CORNERSTONE PLUS 5	0.39	0.00	2	Glyphosate, isopropylamine salt	3	NO	NO
62719-556	ACCORD XRT II	0.31	0.00	2	Glyphosate, dimethylammonium salt	3	NO	NO
62719-31	TORDON 101R	0.43	0.00	1	2,4-D, triisopropanolamine salt; Picloram, triisopropanolamine salt	3	NO	NO

## Finance, Department of

The Department of Finance (DOF) collects City revenues, ensures compliance with City tax and other revenue laws, evaluates all real property in the City, provides a forum for the public to dispute tax and parking violation liability, and maintains property records. The agency contracts for pest control through the citywide contract administered by DCAS. Table 22 summarizes pesticide use by pesticide type. Table 23 lists all pesticide products used by DOF in 2010.

**Table 22: Types of Pesticides Used by DOF in 2010**

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	8.2	71.8%	18	23.4%
Insecticide	0.0	0.0%	3.2	28.2%	59	76.6%
<b>Totals</b>	<b>0.0</b>		<b>11.5</b>		<b>77</b>	

**Table 23: Pesticide Products Used by DOF in 2010 by Pesticide Type**

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	3.19	8	Bromadiolone	3	NO	NO
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	0.88	4	Difethialone	3	NO	NO
<b>Insecticides</b>								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	0.32	31	Indoxacarb	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
64405-2	REDZONE BAIT	0.00	0.10	2	Boric acid	3	NO	NO

## Fire Department

The Fire Department of New York City (FDNY) is responsible for the protection against fires and fire hazards, and providing emergency medical services, technical rescue and response to various biological, chemical and radioactive hazards. FDNY manages some 350 facilities throughout the City and contracts for pest control services. Table 24 summarizes pesticide use by pesticide type. Table 25 lists all pesticide products used by FDNY in 2018.

**Table 24: Types of Pesticides Used by FDNY in 2018**

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	329.4	96.4%	791	53.5%
Insecticide	0.1	100.0%	12.2	3.6%	688	46.5%
<b>Totals</b>	<b>0.1</b>		<b>341.6</b>		<b>1,479</b>	

**Table 25: Pesticide Products Used by FDNY in 2018 by Pesticide Type**

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	247.63	418	Bromadiolone	3	NO	NO
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	78.43	351	Difethialone	3	NO	NO
7173-297	BROMADIOLONE PASTE 0901	0.00	2.22	13	Bromadiolone	3	NO	NO
12455-69	CONTRAC RODENTICIDE	0.00	1.13	9	Bromadiolone	3	NO	NO
<b>Insecticides</b>								
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	247.63	418	Bromadiolone	3	NO	NO
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	78.43	351	Difethialone	3	NO	NO
7173-297	BROMADIOLONE PASTE 0901	0.00	2.22	13	Bromadiolone	3	NO	NO
12455-69	CONTRAC RODENTICIDE	0.00	1.13	9	Bromadiolone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	247.63	418	Bromadiolone	3	NO	NO
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	78.43	351	Difethialone	3	NO	NO
7173-297	BROMADIOLONE PASTE 0901	0.00	2.22	13	Bromadiolone	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
12455-69	CONTRAC RODENTICIDE	0.00	1.13	9	Bromadiolone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	247.63	418	Bromadiolone	3	NO	NO
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	78.43	351	Difethialone	3	NO	NO
7173-297	BROMADIOLONE PASTE 0901	0.00	2.22	13	Bromadiolone	3	NO	NO
12455-69	CONTRAC RODENTICIDE	0.00	1.13	9	Bromadiolone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	247.63	418	Bromadiolone	3	NO	NO
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	78.43	351	Difethialone	3	NO	NO

## Health + Hospitals

New York City Health + Hospitals (H+H) is an \$8.5 billion integrated healthcare delivery system with its own 522,000 member health plan, MetroPlus, and is the largest municipal healthcare organization in the country. H+H serves 1.1 million New Yorkers every year and more than 382,000 are uninsured. H+H provides comprehensive medical, mental health and substance abuse services through its more than 70 locations including 11 acute care hospitals, five skilled nursing facilities, and six large diagnostic and treatment centers. H+H Health and Home Care also provides in-home services for New Yorkers. Pest control protocols differ among facilities, because each is managed separately. A few facilities have pest control professionals on staff, but the majority rely on outside contractors. Table 26 summarizes pesticide use by pesticide type. Table 27 lists products by pesticide types.

**Table 26: Types of Pesticides Used by H+H in 2018**

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	646.2	27.9%	690	11.1%
Insecticide	770.8	100.0%	1665.2	72.0%	5509	88.9%
Other	0.0	0.0%	1.9	0.1%	1	0.0%
<b>Totals</b>	<b>770.8</b>		<b>2,313.3</b>		<b>6,200</b>	

**Table 27: Pesticide Products Used by H+H in 2018 by Pesticide Type**

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	643.86	682	Difethialone	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
7173-113	ROZOL TRACKING POWDER	0.00	2.34	8	Chlorophacinone	2	NO	NO
<b>Insecticides</b>								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	297.98	1,842	Indoxacarb	3	NO	NO
73079-4	BORACTIN INSECTICIDE POWDER	0.00	391.55	1,220	Boric acid	3	NO	NO
397-13	STERI-FAB	0.00	828.06	624	Phenothrin; Isopropyl alcohol; Alkyl (60%C14, 25%C12, 15%C16) dimethylbenzyl ammonium chloride; Didecyl dimethyl ammonium chloride	2	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	10.02	302	Indoxacarb	3	NO	NO
100-1066	DEMAND CS INSECTICIDE	93.61	0.00	218	Cyhalothrin, lambda	3	NO	NO
100-1501	DUPONT ARILON INSECTICIDE	242.83	0.00	179	Indoxacarb	3	NO	NO
432-1483	TEMPRID SC INSECTICIDE	36.67	0.00	173	Cyfluthrin, beta; Imidacloprid	3	NO	NO
432-1363	TEMPO SC INSECTICIDE	41.12	0.00	168	Cyfluthrin, beta	3	NO	NO
432-772	DELTA DUST	0.00	11.38	160	Deltamethrin	3	NO	NO
1021-1603	NYLAR 10EC	156.20	0.00	107	Pyriproxyfen	3	NO	NO
1677-43	STER-BAC	30.78	0.00	102	Alkyl (60%C14, 25%C12, 15%C16) dimethylbenzyl ammonium chloride	1	NO	NO
64405-8	NIBOR BORATE INSECTICIDE AND FUNGICIDE	145.75	4.91	98	Disodium octaborate tetrahydrate	3	NO	NO
100-1483	ADVION INSECT GRANULE	0.00	22.42	93	Indoxacarb	3	NO	NO
432-763-62719	SUSPEND SC	0.81	0.00	92	Deltamethrin	3	NO	NO
64405-2	REDZONE BAIT	0.00	76.78	56	Boric acid	3	NO	NO
432-1460	MAXFORCE FC ROACH KILLER BAIT GEL F.05	0.00	0.24	18	Fipronil	3	YES	NO
432-1304	TEMPO 10 WP INSECTICIDE	10.45	0.00	12	Cyfluthrin, beta	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
47000-73-1677	SSI-50 INSECTICIDE	0.00	18.82	12	Pyrethrins; Piperonyl butoxide; N-octyl bicycloheptene dicarboximide	3	YES	NO
5481-8973	ORTHENE PCO FORMULA II	12.50	0.00	11	Acephate	3	YES	NO
100-1485	DUPONT ADVION ANT BAIT ARENA	0.00	1.57	6	Indoxacarb	3	NO	NO
73766-1	GOURMET ANT BAIT GEL	0.00	0.26	6	Disodium octaborate tetrahydrate	3	NO	NO
100-1481	DUPONT ADVION FIRE ANT BAIT	0.00	1.13	3	Indoxacarb	3	NO	NO
499-370	PT 370 ASCEND FIRE ANT STOPPER BAIT	0.00	0.01	2	Avermectin	3	NO	NO
1021-1767	MULTICIDE LICE & DUST MITE SPRAY 27911	0.05	0.00	1	Phenothrin; N-octyl bicycloheptene dicarboximide	3	YES	NO
499-568	PT ALPINE PRESSURIZED FLY BAIT	0.04	0.00	1	Dinotefuran	3	NO	NO
89459-12	RF2220 PREMIUM AEROSOL II-M	0.01	0.00	1	Ethofenprox; S-Methoprene; Tetramethrin; Pyrethrins; Piperonyl butoxide	0	YES	NO
432-1262	MAXFORCE IBH10	0.00	0.00	1	Hydramethylnon	3	YES	YES
6218-47	SUMMIT B.T.I. BRIQUETS	0.00	0.07	1	Bacillus thuringiensis subspecies israelensis strain BMP 144	3	NO	NO
<b>Other</b>								
55943-1	HOT FOOT BIRD REPELLENT	0.00	1.88	1	Polybutenes	3	NO	NO

### ***Health and Mental Hygiene, Department of***

The Department of Health and Mental Hygiene (DOHMH) protects and promotes the health and mental well-being of all New Yorkers. The Bureau of Veterinary and Pest Control Services at DOHMH protects the public from animal- and vector-borne diseases, and other hazards, including those that result from uncontrolled or unregulated rodents and other animals, and from mosquito-borne pathogens. Two programs, Pest Control Services (PCS) and Vector Surveillance and Control (VSC) have pest management responsibilities. PCS focuses on rodent control – performing inspections, cleanups and treatments of both private and public property. Currently, PCS employs approximately 20 pest management professionals to bait properties that have signs of active rodents with rodenticide placed either directly in rat burrows or in tamper-

resistant bait stations. Pest management in facilities operated by the DOHMH is done through private contractors. Though Local Law 37 requires the reporting of pesticide use on only public property, applications on private property done by PCS are included in Tables 24 and 25. VSC is charged with mosquito management and uses licensed pest management staff and outside contractors. Table 28 summarizes pesticide use by pesticide type. Table 29 lists all pesticide products used by DOHMH in 2018.

**Table 28 Types of Pesticides Used by DOHMH in 2018**

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	31547.1	34.7%	41326	88.1%
Insecticide	0.0	0.0%	59489.3	65.3%	5605	11.9%
<b>Totals</b>	<b>0.0</b>		<b>91,036.4</b>		<b>46,931</b>	

**Table 29 Pesticide Products Used by DOHMH in 2018 by Pesticide Type**

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								
12455-69	CONTRAC RODENTICIDE	0.00	12841.98	15599	Bromadiolone	3	NO	NO
12455-90	FINAL RODENTICIDE	0.00	7970.77	11811	Brodifacoum	3	NO	NO
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	1102.35	3803	Difethialone	3	NO	NO
12455-133	CONTRAC WITH LUMITRACK	0.00	1146.69	3801	Bromadiolone	3	NO	NO
7173-297	BROMADIOLONE PASTE 0901	0.00	1,036.87	3,237	Bromadiolone	3	NO	NO
100-1055	WEATHERBLOK BAIT WITH BITREX	0.00	625.58	1,418	Brodifacoum	3	NO	NO
7173-304	BROMETHALIN SOFT BAIT	0.00	102.37	727	Bromethalin	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	197.91	277	Bromadiolone	3	NO	NO
12455-146	CONTRAC SOFT BAIT	0.00	72.50	256	Bromadiolone	3	NO	NO
12455-36	CONTRAC RAT AND MOUSE BAIT	0.00	351.52	184	Bromadiolone	3	NO	NO
12455-148	Rat Ice	0.00	6,075.00	165	Carbon dioxide	2	NO	NO
7173-205	GENERATION PELLETS	0.00	13.69	39	Difethialone	3	NO	NO
12455-56	DITRAC TRACKING POWDER	0.00	1.81	5	Diphacinone	2	NO	NO
12455-75	CONTRAC RAT AND MOUSE BAIT READY TO USE PLACE PAC	0.00	7.81	2	Bromadiolone	3	NO	NO
12455-86	CONTRAC RODENTICIDE PLACE PAC	0.00	0.23	2	Bromadiolone	3	NO	NO
<b>Insecticides</b>								

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
73049-429	VECTOMAX FG	0.00	38,822.20	5,208	Bacillus sphaericus; Bacillus thuringiensis, subsp. israelensis, strain AM 65-52	3	NO	NO
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	1.34	148	Indoxacarb	3	NO	NO
1021-1688-8329	ANVIL 10+10 ULV	0.00	3,612.14	114	Phenothrin; Piperonyl butoxide	3	YES	NO
73049-20	VECTOLEX CG BIOLOGICAL LARVICIDE	0.00	15,673.62	60	Bacillus sphaericus	3	NO	NO
1021-1795-8329	DUET DUAL-ACTION ADULTICIDE	0.00	959.68	28	Phenothrin; Piperonyl butoxide; Prallethrin	3	YES	NO
73049-501	VBC-60394 FG BIOLOGICAL LARVICIDE FINE GRANULE	0.00	145.00	22	Bacillus thuringiensis, subsp. israelensis, strain AM 65-52	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.29	11	Indoxacarb	3	NO	NO
432-1534	BES0668 Insecticide	0.00	273.28	7	Deltamethrin	3	NO	NO

### Homeless Services, Department of

The Department of Homeless Services (DHS) manages homeless shelters and dormitory facilities across the City. Of these, six are Family Services operated, five provide dormitory facilities for families with children, one facility – Preventative Assistance and Temporary Housing (PATH) – is an intake facility, and five adult facilities provide housing for men. DHS also operates and manages warehouses. Pest management services, which primarily address rodent and cockroach infestations, are provided by an outside contractor. Table 30 summarizes pesticide use by pesticide type. Table 31 lists all pesticide products used by DHS in 2018.

**Table 30: Types of Pesticides Used by DHS in 2018**

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	22.1	51.9%	58	35.2%
Insecticide	0.0	0.0%	20.4	48.1%	107	64.8%
<b>Totals</b>	<b>0.0</b>		<b>42.5</b>		<b>165</b>	

**Table 31: Pesticide Products Used by DHS in 2018 by Pesticide Type**

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	10.58	40	Difethialone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	11.50	18	Bromadiolone	3	NO	NO
<b>Insecticides</b>								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	0.64	74	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	19.79	31	Boric acid	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.01	2	Indoxacarb	3	NO	NO

## Housing Authority

The New York City Housing Authority (NYCHA) manages more than 2,400 residential buildings and more than 173,000 apartments, as well as office space and grounds that cover approximately 2,400 acres. NYCHA currently has a staff of more than 100 pest management professionals who perform routine inspections and treatments, carry out specialized intensive IPM interventions, apply pesticides, and respond to complaints and requests from other agencies. NYCHA staff members regularly address a range of insect and rodent problems, including interior rodents, cockroaches and bedbugs, and exterior rats, and weeds. Mosquito control and supplemental treatments are done by vendor services. Table 32 summarizes pesticide use by pesticide type on NYCHA property. Table 33 lists the products used by NYCHA in 2018. Please note the data in the column marked Volume (Gals) in Tables 32 and 33 reflect the amount of liquid insecticide when diluted with one gallon of water, not the amount of insecticide used during each application.

**Table 32: Types of Pesticides Used by NYCHA in 2018**

Pesticide Type	Volume*		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	17400.8	90.2%	30393	16.6%
Insecticide	1214.5	96.6%	1887.0	9.8%	152963	83.4%
Herbicide	42.5	3.4%	0.0	0.0%	27	0.0%
<b>Totals</b>	<b>1,257.0</b>		<b>19,287.8</b>		<b>183,383</b>	

**Table 33: Pesticide Products Used by NYCHA in 2018 by Pesticide Type**

EPA Reg. #	EPA Product Name	Volume (Gals)*	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	8,822.29	24,058	Difethialone	3	NO	NO
12455-86	CONTRAC RODENTICIDE PLACE PAC	0.00	3,140.09	3,336	Bromadiolone	3	NO	NO
12455-56	DITRAC TRACKING POWDER	0.00	517.33	936	Diphacinone	2	NO	NO



EPA Reg. #	EPA Product Name	Volume (Gals)*	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
12455-80	DITRAC ALL-WEATHER BLOX	0.00	1,162.95	398	Diphacinone	3	NO	NO
12455-69	CONTRAC RODENTICIDE	0.00	1,971.43	344	Bromadiolone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	420.88	327	Bromadiolone	3	NO	NO
12455-75	CONTRAC RAT AND MOUSE BAIT READY TO USE PLACE PAC	0.00	60.97	264	Bromadiolone	3	NO	NO
12455-148	Rat Ice	0.00	882.00	208	Carbon dioxide	2	NO	NO
7173-297	BROMADIOLONE PASTE 0901	0.00	251.66	162	Bromadiolone	3	NO	NO
82744-2-56	JT EATON NECTUS SOFT BAIT 2G SECOND GENERATION RODENTICIDE	0.00	32.61	118	Bromadiolone	3	NO	NO
12455-108	FORMUS ALL-WEATHER BLOX	0.01	8.39	87	Brodifacoum	3	NO	NO
7173-113	ROZOL TRACKING POWDER	0.00	61.94	58	Chlorophacino ne	2	NO	NO
56-42	BAIT BLOCK RODENTICIDE WITH PEANUT BUTTER FLAVORIZ	0.00	9.31	12	Diphacinone	3	NO	NO
12455-36	CONTRAC RAT AND MOUSE BAIT	0.00	2.86	4	Bromadiolone	3	NO	NO
7969-382	Selontra Rodent Bait	0.00	1.19	4	Cholecalciferol	3	NO	NO
12455-89	FINAL ALL-WEATHER BLOX	0.00	1.19	4	Brodifacoum	3	NO	NO
7173-208	MAKI RODENTICIDE BAIT PACKS (PELLETS)	0.00	0.67	4	Bromadiolone	3	NO	NO
7173-288	DIFETHIALONE BLOCK 0707	0.00	0.90	3	Difethialone	3	NO	NO
12455-146	CONTRAC SOFT BAIT	0.00	0.40	1	Bromadiolone	3	NO	NO
<b>Insecticides</b>								
432-1483	TEMPRID SC INSECTICIDE	148.95	0.00	51,946	Cyfluthrin, beta; Imidacloprid	3	NO	NO
432-763	SUSPEND SC INSECTICIDE	393.99	0.00	48,950	Deltamethrin	3	NO	NO
432-1257	MAXFORCE ROACH BAIT F.05	0.00	494.76	13,267	Fipronil	3	YES	NO
432-1460	MAXFORCE FC ROACH KILLER BAIT GEL F.05	0.00	368.52	9,772	Fipronil	3	YES	NO
432-1259	PRODUCT: RBF5	0.00	457.45	8,955	Fipronil	3	YES	NO
499-304	WHITMIRE OPTEM ME PT 600	40.84	0.00	5,227	Cyfluthrin	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)*	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
397-13	STERI-FAB	556.15	0.00	4,081	Phenothrin; Isopropyl alcohol; Alkyl (60%C14, 25%C12, 15%C16) dimethylbenzyl ammonium chloride; Didecyl dimethyl ammonium chloride	2	NO	NO
2724-351	ZOECON RF-259 EMULSIFIABLE CONCENTRATE	27.18	0.00	3,479	(7S)-Hydroprene	3	NO	NO
1021-2593	VENDETTA PLUS COCKROACH GEL BAIT	0.00	98.86	2,794	Avermectin; Pyriproxyfen	3	NO	NO
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	125.65	2,351	Indoxacarb	3	NO	NO
73079-4	BORACTIN INSECTICIDE POWDER	0.00	113.84	438	Boric acid	3	NO	NO
64405-2-74455	ECOLOGICAL ANT & INSECT BAIT	0.00	36.69	312	Boric acid	3	NO	NO
100-1486	DUPONT ADVION COCKROACH BAIT ARENA	0.00	3.96	182	Indoxacarb	3	NO	NO
6218-47	SUMMIT B.T.I. BRIQUETS	0.00	131.10	144	Bacillus thuringiensis subspecies israelensis strain BMP 144	3	NO	NO
62577-12	ECOPCO ACU	17.27	0.00	127	Phenylethyl propionate	3	NO	NO
1021-1603	NYLAR 10EC	0.42	0.00	108	Pyriproxyfen	3	NO	NO
1021-2796	MGK Formula 3113	0.00	3.17	99	Clothianidin; Pyriproxyfen	0	NO	NO
1021-2569	MULTICIDE SPRAY 29511	18.66	0.00	92	Imidacloprid; Phenothrin; N-octyl bicycloheptene dicarboximide	0	YES	NO
279-9554	CB INSECTICIDE WITH DELTAMETHRIN	8.66	13.44	91	Deltamethrin	3	NO	NO
1021-1815	EVERCIDE ESFENVALERATE 6.4% CS	0.23	0.00	90	Esfenvalerate	3	NO	NO
432-1375	PRE-EMPT FLY BAIT	0.00	23.58	90	Imidacloprid; (Z)-9-Tricosene	3	NO	NO
432-1531	BES0600 INSECTICIDE	0.00	3.54	86	Clothianidin	0	NO	NO
2724-351-50809	ZOECON GENCOR 9% EMULSIFIABLE CONCENTRATE	0.65	0.00	76	(7S)-Hydroprene	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)*	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
53883-276	DELTA 4.75% SC	1.18	0.00	75	Deltamethrin	3	NO	NO
7173-304	BROMETHALIN SOFT BAIT	0.00	51.73	65	Bromethalin	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.12	1.21	41	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	3.00	18	Boric acid	3	NO	NO
499-467	WHITMIRE AVERT TC 181	0.00	0.54	17	Avermectin	3	NO	NO
499-406	AVERT PRESCRIPTION TREATMENT TC 93A BAIT	0.00	0.46	16	Avermectin	3	NO	NO
499-370	PT 370 ASCEND FIRE ANT STOPPER BAIT	0.00	1.06	8	Avermectin	3	NO	NO
1021-1641-57076	CONQUER RESIDUAL INSECTICIDE CONCENTRATE	0.01	0.00	5	Esfenvalerate	3	NO	NO
73079-14	IMIDACLOPRID GRANULAR BAIT	0.00	1.88	4	Imidacloprid	3	NO	NO
100-1483	ADVION INSECT GRANULE	0.00	0.26	4	Indoxacarb	3	NO	NO
432-1455	BES 0026 FLY SPOT BAIT	0.00	0.10	4	Imidacloprid; (Z)-9-Tricosene	3	NO	NO
241-313-9444	SIEGE PBS GEL INSECTICIDE	0.00	1.07	3	Hydramethylnon	3	YES	YES
89186-1	Aprehend	0.04	0.00	2	Beauveria bassiana GHA	3	NO	NO
73079-12	SILICIDE(TM)	0.00	0.38	2	Diatomaceous earth	3	NO	NO
100-1485	DUPONT ADVION ANT BAIT ARENA	0.00	0.02	2	Indoxacarb	3	NO	NO
89459-59	ENVI ACU CONTACT Insecticide	0.20	0.00	1	Phenylethyl propionate	3	NO	NO
2724-786	RF2050 SPRAY	0.01	0.00	1	Tetramethrin; Ethofenprox; Piperonyl butoxide	3	YES	NO
432-763-62719	SUSPEND SC	0.00	0.00	1	Deltamethrin	3	NO	NO
499-550	TC-323	0.00	2.50	1	Prallethrin	3	NO	NO
<b>Herbicides</b>								
9688-293-8845	SPECTRACIDE WEED & GRASS KILLER 2	13.00	0.00	16	Dicamba, dimethylamine salt; Diquat dibromide; Fluazifop-P-butyl	3	NO	NO
524-579	ROUNDUP PROMAX	1.50	0.00	6	Glyphosate, potassium salt	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)*	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
71995-33	ROUNDUP WEED & GRASS KILLER READY-TO-USE PLUS	26.00	0.00	3	Glyphosate, isopropylamine salt; Nonanoic acid	3	NO	NO
9688-109-8845	SPECTRACIDE BRUSH KILLER	1.00	0.00	1	Dicamba, dimethylamine salt; 2,4-D, dimethylamine salt; MCP-P, dimethylamine salt	3	NO	NO
239-2657	ORTHO GROUND CLEAR TOTAL VEGETATION KILLER	1.00	0.00	1	Glyphosate, isopropylamine salt; Imazapyr, isopropylamine salt	2	NO	NO

\*NOTE: The data reflect the amount of liquid insecticide when diluted with one gallon of water, not the amount of insecticide used during each application.

## Housing Preservation and Development

Housing Preservation and Development (HPD) oversees occupied and vacant residential and commercial buildings, vacant lots, and a limited number of agency offices. In addition, its Emergency Repair Program occasionally encounters and responds to rats and fleas in occupied private buildings. HPD has no certified applicators on staff and contracts for pest management services. Table 34 summarizes pesticide use by pesticide type. Table 35 lists all pesticide products used by HPD in 2018.

**Table 34: Types of Pesticides Used by HPD in 2018**

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	15.1%	56.4	97.8%	144	12.2%
Insecticide	0.1	84.9%	1.2	2.2%	1032	87.8%
<b>Totals</b>	<b>0.1</b>		<b>57.6</b>		<b>1,176</b>	

**Table 35: Pesticide Products Used by HPD in 2018**

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								
7173-202	MAKI MINI BLOCKS	0.02	37.98	98	Bromadiolone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	15.50	30	Bromadiolone	3	NO	NO
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	1.50	10	Difethialone	3	NO	NO
7173-297	BROMADIOLONE PASTE 0901	0.00	1.38	6	Bromadiolone	3	NO	NO
<b>Insecticides</b>								
432-1363	TEMPO SC INSECTICIDE	0.10	0.96	1016	Cyfluthrin, beta	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	0.06	11	Indoxacarb	3	NO	NO
432-1304	TEMPO 10 WP INSECTICIDE	0.00	0.00	2	Cyfluthrin, beta	3	NO	NO
432-1259	PRODUCT: RBF5	0.00	0.22	2	Fipronil	3	YES	NO
432-763	SUSPEND SC INSECTICIDE	0.02	0.00	1	Deltamethrin	3	NO	NO

## Human Resources Administration

The New York City Human Resources Administration/Department of Social Services (HRA/DSS) provides temporary help to individuals and families with social service and economic needs to assist them in reaching self-sufficiency. HRA serves more than 3 million New Yorkers through essential and diverse programs and services. HRA/DSS has numerous offices and public service centers throughout the 5 boroughs. Table 36 summarizes pesticide use by pesticide type. Table 37 lists the products used by HRA/DSS in 2018.

**Table 36: Types of Pesticides Used by HRA in 2018**

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	78.9	95.9%	144	52.7%
Insecticide	0.0	100.0%	3.4	4.1%	129	47.3%
<b>Totals</b>	<b>0.0</b>		<b>82.3</b>		<b>273</b>	

**Table 37: Pesticide Products Used by HRA in 2018 by Pesticide Type**

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	62.92	121	Difethialone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	15.69	22	Bromadiolone	3	NO	NO
7173-297	BROMADIOLONE PASTE 0901	0.00	0.32	1	Bromadiolone	3	NO	NO
<b>Insecticides</b>								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	2.28	107	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	1.01	11	Boric acid	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.08	11	Indoxacarb	3	NO	NO

## New York Public Libraries

The New York Public Library (NYPL), through its 85 branches libraries services residents in the boroughs of Manhattan, the Bronx and Staten Island. Pest management is provided by private contractors. No application data was provided by NYPL for 2018.

## Parks and Recreation

New York City has 28,000 acres of parks, playgrounds, athletic fields, natural areas, recreational facilities, comfort stations, beaches, historic buildings, and parkways maintained by the Department of Parks and Recreation (DPR). The major pest issues facing DPR are weeds (including weed shrubs and weed trees) and rodents. Rarer infestations of exotic insect pests and diseases, often targeting trees, also occur. To address these, DPR employs 104 certified pesticide applicators. Herbicides account for the largest share of DPR's total pesticide use. Contractors are hired for pest management when peripheral rodent problems arise on capital projects.

DPR reports include pesticides applied on all city-owned golf courses. Local Law 37 exempts these locations from pesticide prohibitions. These tables also include data from sister organizations that operate on DPR property, such as zoos, conservancies, and botanic gardens. Table 38 summarizes pesticide use by pesticide type. Table 39 below lists for each pesticide type, all products used, unless there were more than 10, in which case the 10 most frequently applied products are listed. Appendix 2 includes a complete product listing for DPR.

**Table 38: Types of Pesticides Used by DPR in 2018**

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	8519.5	23.3%	2,099	39.2%
Insecticide	397.6	8.4%	459.7	1.3%	699	13.0%
Herbicide	569.2	12.0%	20387.0	55.8%	1,288	24.0%
Fungicide	3650.6	77.2%	7153.9	19.6%	1,178	22.0%
Other	113.0	2.4%	1.2	0.0%	96	1.8%
<b>Totals</b>	<b>4730.4</b>		<b>36521.2</b>		<b>5,360</b>	

**Table 39: Ten Most Frequently Applied Pesticide Products by DPR in 2018 by Pesticide Type**

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								
12455-148	Rat Ice	0.00	7,674.50	1,114	Carbon dioxide	2	NO	NO
12455-36	CONTRAC RAT AND MOUSE BAIT	0.00	171.38	280	Bromadiolone	3	NO	NO
12455-69	CONTRAC RODENTICIDE	0.00	296.06	231	Bromadiolone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	110.56	151	Bromadiolone	3	NO	NO
12455-86	CONTRAC RODENTICIDE PLACE PAC	0.00	95.95	100	Bromadiolone	3	NO	NO
12455-106	TERAD3 BLOX	0.00	83.63	77	Cholecalciferol	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	28.06	51	Difethialone	3	NO	NO
7173-297	BROMADIOLONE PASTE 0901	0.00	10.61	32	Bromadiolone	3	NO	NO
12455-76	CONTRAC RODENTICIDE READY TO USE PLACE PAC	0.00	5.20	26	Bromadiolone	3	NO	NO
7173-202	MAKI MINI BLOCKS	0.00	13.44	22	Bromadiolone	3	NO	NO
<b>Insecticides</b>								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	1.44	69	Indoxacarb	3	NO	NO
9688-190-8845	SPECTRACIDE DESTROYER BRAND WASP & HORNET KILLER	1.51	36.81	37	Cyhalothrin, lambda; Prallethrin	3	NO	NO
70051-2-59807	TRIACT 70	6.93	0.00	35	Neem oil	3	NO	NO
53883-244-66222	QUALI-PRO LAMBDA GC-0	10.29	0.00	31	Cyhalothrin, lambda	2	NO	NO
70506-121	UPI-2005 EXP-06 RUP INSECTICIDE	9.43	0.00	31	Cyhalothrin, lambda	2	NO	NO
432-1312-67760	GARANT T&O 2F	26.83	0.00	24	Imidacloprid	3	NO	NO
64405-2	REDZONE BAIT	0.00	1.20	24	Boric acid	3	NO	NO
100-1088	SCIMITAR GC INSECTICIDE	2.27	0.00	23	Cyhalothrin, lambda	3	NO	NO
48813-1-68539	SUFFOIL-X	4.69	0.00	21	Petroleum distillates	3	NO	NO
432-1369-59807	MARATHON II GREENHOUSE AND NURSERY INSECTICIDE	0.03	0.00	21	Imidacloprid	3	NO	NO
<b>Herbicides</b>								
524-579	ROUNDUP PROMAX	132.48	0.00	422	Glyphosate, potassium salt	3	NO	NO
62719-556	ACCORD XRT II	22.58	0.00	185	Glyphosate, dimethylammonium salt	3	NO	NO
62719-324	GLYPRO	35.64	0.00	129	Glyphosate, isopropylamine salt	3	NO	NO
62719-527	GARLON 4 ULTRA	10.17	0.00	84	Triclopyr	2	NO	NO
100-937	PRIMO MAXX	27.73	0.00	83	Trinexapac-ethyl	3	NO	NO
62719-542	DIMENSION 2EW	48.99	4900.00	65	Dithiopyr	2	NO	NO
524-529	ROUNDUP PRO CONCENTRATE	36.54	0.00	45	Glyphosate, isopropylamine salt	3	NO	NO
53883-373	QUALI-PRO T-NEX 1 AQ	24.36	0.00	34	Trinexapac-ethyl	3	NO	NO
62719-566	TURFLON ESTER ULTRA	1.09	0.00	17	Triclopyr, butoxyethyl ester	3	NO	NO
62719-176	PATHFINDER II	12.82	0.00	15	Triclopyr, butoxyethyl ester	3	NO	NO
<b>Fungicides</b>								
53883-353	QUALI-PRO T-NEX	114.20	0.00	110	Trinexapac-ethyl	3	NO	NO
100-1364	DACONIL ACTION	427.49	0.00	63	Acibenzolar-S-methyl; Chlorothalonil	2	YES	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
71065-3	COMPANION LIQUID BIOLOGICAL FUNGICIDE	327.20	0.00	54	Bacillus subtilis GBO3	3	NO	NO
432-942	BANOL TURF AND ORNAMENTAL FUNGICIDE	106.18	0.00	47	Propamocarb hydrochloride	3	NO	NO
100-1093	HERITAGE FUNGICIDE	0.00	109.64	47	Azoxystrobin	3	NO	NO
60063-7-10404	LESCO MANICRUE 6FL	305.41	0.00	37	Chlorothalonil	2	YES	NO
432-1445	BAYLETON FLO TURF AND ORNAMENTAL FUNGICIDE	38.86	0.00	32	Triadimefon	3	YES	YES
432-1541	12ESP705 FUNGICIDE	0.00	1307.00	29	Fosetyl-Al	3	NO	NO
53883-323-86064	ARMOR TECH TMI 2020XL	63.50	0.00	28	Thiophanate-methyl; Iprodione	3	YES	YES
7969-349	Xzemplar Fungicide	16.60	0.00	28	Fluxapyroxad	3	NO	NO
<b>Other</b>								
52483-1	HYPOCHLORITE SOLUTION	80.25	0.00	50	Sodium hypochlorite	1	NO	NO
14802-8-74466	MICROBE LIFE ALGAWAY 5.4 ALGAECIDE FOR PONDS	3.00	0.00	12	Poly(oxyethylene) (dimethylimino) ethylene (dimethylimino) ethylene dichloride	3	NO	NO
2693-193	OPTIMA-BLUE	8.25	0.00	7	Copper oxide (ous)	2	NO	NO
59807-4	HORMODIN 1	0.00	0.31	7	IBA	3	NO	NO
60061-71	PETTIT MARINE PAINT PREMIUM SINGLE SEASON ABLATIVE	10.00	0.00	5	Copper oxide (ous)	2	NO	NO
63838-5	BROMMAX 7.1	6.50	0.00	5	Sodium bromide; Sodium hypochlorite	1	NO	NO
73049-15	PROGIBB 4% PLANT GROWTH REGULATOR SOLUTION	0.00	0.00	3	Gibberellins	2	NO	NO
2693-172	AQUARIUS ANTIFOULING BOTTOM PAINT 568 NAVY BLUE	3.00	0.00	2	Copper oxide (ous)	2	NO	NO
60061-137	PETTIT HYDROCOAT ECO COPPER FREE MULTI-SEASON ABLATIVE	2.00	0.00	2	1H-Pyrrole-3-carbonitrile,4-bromo-2-(4-chlorophenyl)-5-(trifluoromethyl)-; Zinc 2-pyridinethiol-1-oxide	2	NO	NO
71096-7-239	ORTHO BUG-GETA SNAIL & SLUG KILLER 1	0.00	0.91	2	Metaldehyde	3	NO	NO



## Police Department

The Police Department (NYPD) is committed to providing a safe and secure environment for the public. It manages 76 precincts, 12 Transit Districts, nine Housing Police Service Areas, and other investigative and specialized units. The major pest issues facing its facilities are structural pests and are managed by private contractors as needed. Table 40 summarizes pesticide use by pesticide type. Table 41 lists all pesticide products used by NYPD in 2018.

**Table 40 Types of Pesticides Used by NYPD in 2018**

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	281.5	97.1%	627	53.7%
Insecticide	0.0	0.0%	8.5	2.9%	540	46.3%
<b>Totals</b>	<b>0.0</b>		<b>290.0</b>		<b>1,167</b>	

**Table 41: Pesticide Products Used by NYPD in 2018 by Pesticide Type**

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	219.50	349	Bromadiolone	3	NO	NO
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	61.50	275	Difethialone	3	NO	NO
12455-69	CONTRAC RODENTICIDE	0.00	0.38	2	Bromadiolone	3	NO	NO
7173-297	BROMADIOLONE PASTE 0901	0.00	0.13	1	Bromadiolone	3	NO	NO
<b>Insecticides</b>								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	2.90	442	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	4.96	59	Boric acid	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.61	39	Indoxacarb	3	NO	NO

## Queens Public Libraries

The Queens Public Library (QPL) manages 64 libraries, as well as indoor, outdoor and office facilities. Contractors are hired for pest management as needed and the major pest infestations are roaches and mice. Table 42 summarizes pesticide use by pesticide type. Table 43 lists all pesticide products used by QPL in 2018.

**Table 42: Types of Pesticides Used by QPL in 2018**

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	99.5	92.7%	145	30.0%
Insecticide	0.0	100.0%	7.8	7.3%	338	70.0%

<b>Totals</b>	<b>0.0</b>	<b>107.3</b>	<b>483</b>
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**Table 43: Pesticide Products Used by QPL in 2018**

<b>EPA Reg. #</b>	<b>EPA Product Name</b>	<b>Volume (Gals)</b>	<b>Weight (Lbs)</b>	<b>No. Appl's.</b>	<b>Active Ingredient(s)</b>	<b>EPA Tox Cat</b>	<b>EPA Carcin</b>	<b>CA Dev. Toxin</b>
<b>Rodenticides</b>								
12455-89	FINAL ALL-WEATHER BLOX	0.00	63.93	90	Brodifacoum	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	25.49	40	Bromadiolone	3	NO	NO
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	8.82	10	Difethialone	3	NO	NO
12455-121	TOMCAT MOUSE KILLER	0.00	1.25	5	Bromethalin	3	NO	NO
12455-89	FINAL ALL-WEATHER BLOX	0.00	63.93	90	Brodifacoum	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	25.49	40	Bromadiolone	3	NO	NO
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	8.82	10	Difethialone	3	NO	NO
12455-121	TOMCAT MOUSE KILLER	0.00	1.25	5	Bromethalin	3	NO	NO
<b>Insecticides</b>								
1021-2593	VENDETTA PLUS COCKROACH GEL BAIT	0.00	5.03	71	Avermectin; Pyriproxyfen	3	NO	NO
2724-351	ZOECON RF-259 EMULSIFIABLE CONCENTRATE	0.26	0.00	50	(7S)-Hydroprene	3	NO	NO
432-763	SUSPEND SC INSECTICIDE	0.66	0.00	30	Deltamethrin	3	NO	NO
1021-1815	EVERCIDE ESFENVALERATE 6.4% CS	0.08	0.00	30	Esfenvalerate	3	NO	NO
1021-2796	MGK Formula 3113	0.00	1.49	30	Clothianidin; Pyriproxyfen	0	NO	NO
100-1066	DEMAND CS INSECTICIDE	0.19	0.00	25	Cyhalothrin, lambda	3	NO	NO
64405-2	REDZONE BAIT	0.00	0.17	21	Boric acid	3	NO	NO
1021-1641-57076	CONQUER RESIDUAL INSECTICIDE CONCENTRATE	0.03	0.00	15	Esfenvalerate	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.13	15	Indoxacarb	3	NO	NO
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	0.22	11	Indoxacarb	3	NO	NO
397-13	STERI-FAB	0.94	0.00	10	Phenothrin; Isopropyl alcohol; Alkyl (60%C14, 25%C12, 15%C16) dimethylbenzyl ammonium chloride; Didecyl dimethyl ammonium chloride	2	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
100-1486	DUPONT ADVION COCKROACH BAIT ARENA	0.00	0.55	10	Indoxacarb	3	NO	NO
499-370	PT 370 ASCEND FIRE ANT STOPPER BAIT	0.00	0.07	10	Avermectin	3	NO	NO
499-294	AVERT PRESCRIPTION TREATMENT 310	0.00	0.09	5	Avermectin	3	NO	NO
499-527	PRESCRIPTION TREATMENT BRAND ALPINE DUST INSECTICIDE	0.00	0.03	5	Dinotefuran; Diatomaceous earth	3	NO	NO

## Sanitation, Department of

The Department of Sanitation (DSNY) manages garages, office buildings, transfer stations, and various publicly-owned lots throughout the city. Because of the nature of the agency's work – managing garbage – pest problems are endemic at some facilities, so DSNY employs two certified pesticide applicators who make routine visits to facilities and respond to emergency calls. DSNY also contracts for weed control on some of the City's rights-of-way. Table 44 summarizes pesticide use by pesticide type. Table 45 lists the products used by DSNY.

**Table 44: Types of Pesticides Used by DSNY in 2018**

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	230.3	94.0%	238	32.8%
Insecticide	14.0	100.0%	14.6	6.0%	487	67.2%
<b>Totals</b>	<b>14.0</b>		<b>244.9</b>		<b>725</b>	

**Table 45: List of Pesticides Applied by DSNY in 2018**

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								
12455-89	FINAL ALL-WEATHER BLOX	0.00	125.20	139	Brodifacoum	3	NO	NO
12455-76	CONTRAC RODENTICIDE READY TO USE PLACE PAC	0.00	105.08	99	Bromadiolone	3	NO	NO
<b>Insecticides</b>								
100-1066	DEMAND CS INSECTICIDE	1.05	0.68	412	Cyhalothrin, lambda	3	NO	NO
432-763-62719	SUSPEND SC	0.26	0.00	42	Deltamethrin	3	NO	NO
73766-1	GOURMET ANT BAIT GEL	0.00	11.27	22	Disodium octaborate tetrahydrate	3	NO	NO
432-1257	MAXFORCE ROACH BAIT F.05	12.60	0.09	5	Fipronil	3	YES	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
9444-168-1270	ZEP TOTAL CONTROL TOTAL RELEASE FOGGER TOTAL CONTROL SYSTEMS	0.08	0.00	1	Esfenvalerate; Prallethrin; Pyriproxyfen	3	NO	NO
499-465	PRO-CONTROL FOGGER II	0.04	0.00	1	Pyrethrins; Piperonyl butoxide; N-octyl bicycloheptene dicarboximide	3	YES	NO
100-1066-72113	BORDER INSECTICIDE	0.00	0.00	1	Cyhalothrin, lambda	3	NO	NO
2724-274	GOLDEN MALRIN RF-128 FLY KILLER	0.00	2.50	1	Methomyl; (Z)-9-Tricosene	3	NO	NO
432-1256	MAXFORCE FC ANT BAIT STATIONS	0.00	0.03	1	Fipronil	3	YES	NO
432-1258	MAXFORCE LARGE ROACH BAIT F.03	0.00	0.02	1	Fipronil	3	YES	NO

## Taxi and Limousine Commission

The Taxi and Limousine Commission (TLC) licenses and regulates more than 50,000 vehicles and approximately 100,000 drivers, performs safety and emissions inspections of the more than 13,000 medallion taxicabs three times each year, and holds numerous hearings for violations of City and TLC rules and regulations, making it the most active taxi and limousine licensing regulatory agency in the United States. The agency contracts for pest control through the citywide contract administered by DCAS. Table 46 summarizes pesticide use by pesticide type. Table 47 lists all pesticide products used by TLC in 2018.

**Table 48: Types of Pesticides Used by TLC in 2018**

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	9.4	99.1%	29	48.3%
Insecticide	0.0	0.0%	0.1	0.9%	31	51.7%
<b>Totals</b>	<b>0.0</b>		<b>9.5</b>		<b>60</b>	

**Table 49: Pesticide Products Used by TLC in 2018**

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	9.31	28	Bromadiolone	3	NO	NO
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	0.07	1	Difethialone	3	NO	NO
<b>Insecticides</b>								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	0.07	29	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	0.01	2	Boric acid	3	NO	NO

## Transportation, Department of

The Department of Transportation (DOT) has a staff of more than 4,000 that oversees one of the most complex urban transportation networks in the world. They manage approximately 5,800 miles of streets, sidewalks, and highways and 789 bridge structures, including six tunnels. They operate the Staten Island Ferry, oversee ferry operations on City-owned piers and operate approximately 75 facilities throughout the City. DOT is responsible for pest management at maintenance yards, lots, and agency offices throughout the city, as well as on rights-of-way along city highways. DOT is also contracted by New York State to provide right-of-way maintenance on state highways within city borders. Table 48 summarizes pesticide use by pesticide type. Table 49 lists all pesticide products used by DOT in 2018.

**Table 48: Types of Pesticides Used by DOT in 2018**

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	19.4	45.0%	83	7.8%
Insecticide	0.0	0.0%	0.6	1.5%	24	2.3%
Herbicide	133.8	100.0%	23.1	53.6%	956	89.9%
<b>Totals</b>	<b>133.8</b>		<b>43.1</b>		<b>1,063</b>	

**Table 49: Pesticide Products Used by DOT in 2018**

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	15.43	77	Difethialone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	3.94	6	Bromadiolone	3	NO	NO
<b>Insecticides</b>								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	0.03	10	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	0.59	7	Boric acid	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.01	7	Indoxacarb	3	NO	NO
<b>Herbicides</b>								
62719-556	ACCORD XRT II	24.83	0.00	228	Glyphosate, dimethylammonium salt	3	NO	NO
62719-176	PATHFINDER II	85.60	0.00	221	Triclopyr, butoxyethyl ester	3	NO	NO
432-1580	DUPONT VIEWPOINT HERBICIDE	0.00	23.06	221	Aminocyclopyrachlor; Imazapyr; Metsulfuron-methyl	3	NO	NO
432-1229	FINALE HERBICIDE	3.55	0.00	29	Glufosinate-ammonium	2	NO	NO
62719-527	GARLON 4 ULTRA	1.84	0.00	28	Triclopyr	2	NO	NO

## APPENDIX 1: Complete Listing of Pesticide Products Used by New York City Agencies by Pesticide Type in 2018

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox. Cat.	EPA Carc in	CA Dev. Toxin
<b>Rodenticides</b>								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.01	13,184.98	38218	Difethialone	3	NO	NO
12455-69	CONTRAC RODENTICIDE	0.00	16,174.47	16913	Bromadiolone	3	NO	NO
12455-90	FINAL RODENTICIDE	0.00	7,970.77	11811	Brodifacoum	3	NO	NO
7173-297	BROMADIOLONE PASTE 0901	0.00	1,368.59	3854	Bromadiolone	3	NO	NO
12455-133	CONTRAC WITH LUMITRACK	0.00	1,146.69	3801	Bromadiolone	3	NO	NO
12455-86	CONTRAC RODENTICIDE PLACE PAC	0.00	3,245.10	3451	Bromadiolone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.46	2,286.13	3381	Bromadiolone	3	NO	NO
82744-2-56	JT EATON NECTUS SOFT BAIT 2G SECOND GENERATION RODENTICIDE	0.00	246.12	1505	Bromadiolone	3	NO	NO
12455-148	Rat Ice	0.00	14,631.50	1487	Carbon dioxide	2	NO	NO
100-1055	WEATHERBLOK BAIT WITH BITREX	0.00	653.67	1478	Brodifacoum	3	NO	NO
12455-56	DITRAC TRACKING POWDER	0.00	534.32	951	Diphacinone	2	NO	NO
12455-36	CONTRAC RAT AND MOUSE BAIT	0.00	551.13	482	Bromadiolone	3	NO	NO
12455-80	DITRAC ALL-WEATHER BLOX	0.00	1,162.95	398	Diphacinone	3	NO	NO
12455-146	CONTRAC SOFT BAIT	0.00	117.78	323	Bromadiolone	3	NO	NO
12455-75	CONTRAC RAT AND MOUSE BAIT READY TO USE PLACE PAC	0.00	69.35	267	Bromadiolone	3	NO	NO
12455-89	FINAL ALL-WEATHER BLOX	0.00	190.32	233	Brodifacoum	3	NO	NO
12455-76	CONTRAC RODENTICIDE READY TO USE PLACE PAC	0.00	110.28	125	Bromadiolone	3	NO	NO
7173-202	MAKI MINI BLOCKS	0.02	51.42	120	Bromadiolone	3	NO	NO
7173-218	GENERATION MINI BLOCKS	0.00	66.31	92	Difethialone	3	NO	NO
12455-108	FORMUS ALL-WEATHER BLOX	0.01	8.39	87	Brodifacoum	3	NO	NO
12455-106	TERAD3 BLOX	0.00	83.63	77	Cholecalciferol	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox. Cat.	EPA Carc in	CA Dev. Toxin
7173-113	ROZOL TRACKING POWDER	0.00	65.72	71	Chlorophacinone	2	NO	NO
7173-205	GENERATION PELLETS	0.00	13.69	39	Difethialone	3	NO	NO
7173-172	ROZOL BLUE TRACKING POWDER	0.00	6.00	15	Chlorophacinone	2	NO	NO
56-42	BAIT BLOCK RODENTICIDE WITH PEANUT BUTTER FLAVORIZ	0.00	9.31	12	Diphacinone	3	NO	NO
12455-16	ZP TRACKING POWDER	0.00	0.88	7	Zinc phosphide	1	NO	NO
47629-16-499	PRESCRIPTION TREATMENT BRAND SOREXA BLOCKS	0.15	0.00	6	Difenacoum	3	NO	NO
12455-78	DITRAC RAT AND MOUSE BAIT PLACE PAC	0.00	12.75	5	Diphacinone	3	NO	NO
12455-121	TOMCAT MOUSE KILLER	0.00	1.25	5	Bromethalin	3	NO	NO
7969-382	Selontra Rodent Bait	0.00	1.19	4	Cholecalciferol	3	NO	NO
7173-208	MAKI RODENTICIDE BAIT PACKS (PELLETS)	0.00	0.67	4	Bromadiolone	3	NO	NO
7173-288	DIFETHIALONE BLOCK 0707	0.00	0.90	3	Difethialone	3	NO	NO
67517-95-56	ANSWER KILLS MICE WITH REFILLABLE BAIT STATION	0.00	0.50	3	Bromethalin	3	NO	NO
12455-91	FINAL RODENTICIDE READY-TO-USE PLACE PAC	0.11	0.00	1	Brodifacoum	3	NO	NO
47629-17-499	PRESCRIPTION TREATMENT BRAND SOREXA PELLET PLACE PACK	0.02	0.00	1	Difenacoum	3	NO	NO
47629-16	DIFENACOUM RAT AND MOUSE BLOCK	0.01	0.00	1	Difenacoum	3	NO	NO
12455-139	Final Soft Bait	0.00	4.96	1	Brodifacoum	3	NO	NO
36488-63	DIFENACOUM RAT AND MOUSE BLOCK IV	0.00	1.56	1	Difenacoum	3	NO	NO
12455-68	CONTRAC MOUSE BAIT STATION	0.00	1.00	1	Bromadiolone	3	NO	NO
7173-188	MAKI RAT AND MOUSE BAIT PACKS (PELLETS)	0.00	0.06	1	Bromadiolone	3	NO	NO
<b>Insecticides</b>								
432-1483	TEMPRID SC INSECTICIDE	185.69	0.00	52,164	Cyfluthrin, beta; Imidacloprid	3	NO	NO
432-763	SUSPEND SC INSECTICIDE	397.62	73.16	49,390	Deltamethrin	3	NO	NO
432-1257	MAXFORCE ROACH BAIT F.05	12.60	528.66	13,809	Fipronil	3	YES	NO
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	483.67	12,241	Indoxacarb	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox. Cat.	EPA Carc in	CA Dev. Toxin
432-1460	MAXFORCE FC ROACH KILLER BAIT GEL F.05	0.02	382.56	10,322	Fipronil	3	YES	NO
432-1259	PRODUCT: RBF5	0.00	463.69	9,123	Fipronil	3	YES	NO
499-304	WHITMIRE OPTEM ME PT 600	40.84	5.88	5,241	Cyfluthrin	3	NO	NO
73049-429	VECTOMAX FG	0.00	38,822.49	5,209	Bacillus sphaericus; Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52	3	NO	NO
397-13	STERI-FAB	573.33	828.06	4,890	Phenothrin; Isopropyl alcohol; Alkyl (60%C14, 25%C12, 15%C16) dimethylbenzyl ammonium chloride; Didecyl dimethyl ammonium chloride	2	NO	NO
1021-2593	MGK? Formula 2976	0.00	133.81	3,849	Avermectin; Pyriproxyfen	3	NO	NO
2724-351	ZOECON RF-259 EMULSIFIABLE CONCENTRATE	27.59	0.50	3,547	(7S)-Hydroprene	3	NO	NO
64405-2	REDZONE BAIT	0.00	529.94	2,850	Boric acid	3	NO	NO
73079-14	IMIDACLOPRID GRANULAR BAIT	0.00	342.56	2,278	Imidacloprid	3	NO	NO
73079-4	BORACTIN INSECTICIDE POWDER	1.46	563.02	1,744	Boric acid	3	NO	NO
432-1363	TEMPO SC INSECTICIDE	57.69	1.59	1,644	Cyfluthrin, beta	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	30.12	26.43	1,501	Indoxacarb	3	NO	NO
499-510	PRESCRIPTION TREATMENT BRAND ALPINE COCKROACH GEL BAIT PISTON CAN	0.00	35.79	1,493	Dinotefuran	3	NO	NO
73766-1	GOURMET ANT BAIT GEL	0.00	35.19	1,046	Disodium octaborate tetrahydrate	3	NO	NO
432-763-62719	SUSPEND SC	20.89	0.00	791	Deltamethrin	3	NO	NO
1021-2796	MGK Formula 3113	0.00	21.34	677	Clothianidin; Pyriproxyfen	0	NO	NO
100-1066	DEMAND CS INSECTICIDE	95.03	0.68	663	Cyhalothrin, lambda	3	NO	NO
89459-59	ENVI ACU CONTACT Insecticide	52.91	0.00	631	Phenylethyl propionate	3	NO	NO
89459-84	RF2228 LH AEROSOL	20.36	0.00	353	Cyhalothrin, lambda; (7S)-Hydroprene	3	NO	NO
499-294	AVERT PRESCRIPTION TREATMENT 310	0.00	3.88	320	Avermectin	3	NO	NO
64405-2-74455	ECOLOGICAL ANT & INSECT BAIT	0.00	36.69	312	Boric acid	3	NO	NO



EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox. Cat.	EPA Carc in	CA Dev. Toxin
499-507	PRESCRIPTION TREATMENT BRAND ALPINE COCKROACH GEL BAIT RESERVOIR	0.01	12.10	263	Dinotefuran	3	NO	NO
1021-1603	NYLAR 10EC	174.62	0.00	246	Pyriproxyfen	3	NO	NO
2724-484	RF 9707 AEROSOL	8.59	2.46	220	(7S)-Hydroprene	3	NO	NO
100-1486	DUPONT ADVION COCKROACH BAIT ARENA	0.00	4.57	197	Indoxacarb	3	NO	NO
100-1501	DUPONT ARILON INSECTICIDE	249.83	0.00	187	Indoxacarb	3	NO	NO
2724-469	ZOECON (S)-HYDROPRENE ROACH CONTROL STATION II	3.53	0.00	186	(7S)-Hydroprene	3	NO	NO
6218-47	SUMMIT B.T.I. BRIQUETS	0.00	145.17	181	Bacillus thuringiensis subspecies israelensis strain BMP 144	3	NO	NO
432-772	DELTA DUST	0.00	12.11	167	Deltamethrin	3	NO	NO
62577-12	ECOPCO ACU	17.27	0.00	127	Phenylethyl propionate	3	NO	NO
1021-1828	MGK ROACH BAIT 2822	0.01	3.95	125	Avermectin	3	NO	NO
64405-8	NIBOR BORATE INSECTICIDE AND FUNGICIDE	163.75	5.22	121	Disodium octaborate tetrahydrate	3	NO	NO
1021-1815	EVERCIDE ESFENVALERATE 6.4% CS	0.30	0.00	120	Esfenvalerate	3	NO	NO
432-1455	BES 0026 FLY SPOT BAIT	40.39	10.48	116	Imidacloprid; (Z)-9-Tricosene	3	NO	NO
1021-1688-8329	ANVIL 10+10 ULV	0.00	3,612.14	114	Phenothrin; Piperonyl butoxide	3	YES	NO
1677-43	STER-BAC	35.28	0.00	111	Alkyl (60%C14, 25%C12, 15%C16) dimethylbenzyl ammonium chloride	1	NO	NO
279-9554	CB INSECTICIDE WITH DELTAMETHRIN	8.69	19.13	107	Deltamethrin	3	NO	NO
100-1483	ADVION INSECT GRANULE	0.00	22.68	97	Indoxacarb	3	NO	NO
432-1506	MAXFORCE QUANTUM ANT BAIT	0.00	0.84	94	Imidacloprid	3	NO	NO
1021-2569	MULTICIDE SPRAY 29511	18.66	0.00	92	Imidacloprid; Phenothrin; N-octyl bicycloheptene dicarboximide	0	YES	NO
432-1375	PRE-EMPT FLY BAIT	0.00	23.58	90	Imidacloprid; (Z)-9-Tricosene	3	NO	NO
2724-351-50809	ZOECON GENCOR 9% EMULSIFIABLE CONCENTRATE	1.29	0.00	88	(7S)-Hydroprene	3	NO	NO
73049-20	VECTOLEX CG BIOLOGICAL LARVICIDE	0.00	15,685.62	88	Bacillus sphaericus	3	NO	NO
432-1531	BES0600 INSECTICIDE	0.00	3.54	86	Clothianidin	0	NO	NO
53883-276	DELTA 4.75% SC	1.25	0.00	85	Deltamethrin	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox. Cat.	EPA Carc in	CA Dev. Toxin
8033-114-279	ENDZONE INSECTICIDE STICKER	0.00	12.25	85	Acetamiprid	3	NO	NO
499-370	PT 370 ASCEND FIRE ANT STOPPER BAIT	0.00	6.23	58	Avermectin	3	NO	NO
73079-6	GREEN ZONE GRANULAR BAIT	0.00	7.45	45	Boric acid	3	NO	NO
432-1262	MAXFORCE IBH10	0.44	4.29	42	Hydramethylnon	3	YES	YES
279-3206	TALSTAR TC FLOWABLE TERMITICIDE/INSECTI CIDE	0.16	0.00	42	Bifenthrin	3	YES	NO
9688-190-8845	SPECTRACIDE DESTROYER BRAND WASP & HORNET KILLER	1.85	36.81	40	Cyhalothrin, lambda; Prallethrin	3	NO	NO
70051-2-59807	TRIACT 70	6.93	0.00	35	Neem oil	3	NO	NO
53883-244-66222	QUALI-PRO LAMBDA GC-0	10.29	0.00	31	Cyhalothrin, lambda	2	NO	NO
70506-121	UPI-2005 EXP-06 RUP INSECTICIDE	9.43	0.00	31	Cyhalothrin, lambda	2	NO	NO
5481-8973	ORTHENE PCO FORMULA II	29.75	0.00	28	Acephate	3	YES	NO
1021-1795-8329	DUET DUAL-ACTION ADULTICIDE	0.00	959.68	28	Phenothrin; Piperonyl butoxide; Prallethrin	3	YES	NO
1021-1641-57076	CONQUER RESIDUAL INSECTICIDE CONCENTRATE	0.04	0.50	25	Esfenvalerate	3	NO	NO
432-1312-67760	GARANT T&O 2F	26.83	0.00	24	Imidacloprid	3	NO	NO
100-1088	SCIMITAR GC INSECTICIDE	2.27	0.00	23	Cyhalothrin, lambda	3	NO	NO
73049-501	VBC-60394 FG BIOLOGICAL LARVICIDE FINE GRANULE	0.00	145.00	22	Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52	3	NO	NO
73079-12	SILICIDE(TM)	0.00	5.44	22	Diatomaceous earth	3	NO	NO
48813-1-68539	SUFFOIL-X	4.69	0.00	21	Petroleum distillates	3	NO	NO
432-1369-59807	MARATHON II GREENHOUSE AND NURSERY INSECTICIDE	0.03	0.00	21	Imidacloprid	3	NO	NO
432-1255	MAXFORCE GRANULAR INSECT BAIT	0.52	0.13	20	Hydramethylnon	3	YES	YES
83100-6-88975	PRIMERAONE IMIDACLOPRID 2F INSECTICIDE	11.26	0.00	19	Imidacloprid	3	NO	NO
73049-39	DIPEL DF DRY FLOWABLE BIOLOGICAL INSECTICIDE	0.03	2.08	19	Bacillus thuringiensis, subsp. Kurstaki, strain ABTS-351, fermentation solids and solubles	3	NO	NO
86203-11-59639	SAFARI 20SG INSECTICIDE	0.00	4.86	18	Dinotefuran	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox. Cat.	EPA Carc in	CA Dev. Toxin
100-1489	DUPONT ACELEPRYN INSECTICIDE	12.23	0.00	17	DPX-E2Y45	0	NO	NO
432-1304	TEMPO 10 WP INSECTICIDE	10.45	0.06	17	Cyfluthrin, beta	3	NO	NO
499-467	WHITMIRE AVERT TC 181	0.00	0.54	17	Avermectin	3	NO	NO
499-406	AVERT PRESCRIPTION TREATMENT TC 93A BAIT	0.00	0.46	16	Avermectin	3	NO	NO
69526-17	CIVITAS ONE	62.50	0.00	15	Mineral oil	3	NO	NO
70506-24	UP-STAR GOLD INSECTICIDE	27.84	0.00	14	Bifenthrin	3	YES	NO
59639-96	DISTANCE INSECT GROWTH REGULATOR	0.43	0.00	14	Pyriproxyfen	3	NO	NO
64405-2-149	TERRO SLUG & SNAIL BAIT	0.00	0.92	14	Boric acid	3	NO	NO
62719-291	CONSERVE SC TURF AND ORNAMENTAL	0.19	0.00	13	Spinosad	3	NO	NO
432-1544	TEMPRID SC-F INSECTICIDE	0.02	0.00	13	Cyfluthrin, beta; Imidacloprid	3	NO	NO
2724-274	GOLDEN MALRIN RF-128 FLY KILLER	0.00	14.38	13	Methomyl; (Z)-9-Tricosene	3	NO	NO
100-1485	DUPONT ADVION ANT BAIT ARENA	0.00	1.66	13	Indoxacarb	3	NO	NO
228-624	NUFARM CHLORPYRIFOS SPC 4 INSECTICIDE	46.17	0.00	12	Chlorpyrifos	2	NO	NO
70051-9-59807	AZATIN O BIOLOGICAL INSECTICIDE	0.35	0.00	12	Azadirachtin	3	NO	NO
47000-73-1677	SSI-50 INSECTICIDE	0.00	18.82	12	Pyrethrins; Piperonyl butoxide; N-octyl bicycloheptene dicarboximide	3	YES	NO
432-1312	MERIT 2F INSECTICIDE	19.83	0.00	11	Imidacloprid	3	NO	NO
66222-203	QUALI-PRO IMIDACLOPRID 2F TURF & ORNAMENTAL INSECTICIDE	14.43	0.00	11	Imidacloprid	3	NO	NO
100-1543	MAINSRING GH & N	0.17	0.00	11	Cyantraniliprole	0	NO	NO
432-1264	MAXFORCE FC ANT KILLER BAIT GEL	0.13	0.22	11	Fipronil	3	YES	NO
1381-237	ABAMECTIN .15EC	0.12	0.00	10	Avermectin	2	NO	NO
400-508	FLORAMITE SC	0.10	0.00	10	Bifenazate	3	NO	NO
499-496	PRESCRIPTION TREATMENT BRAND ADVANCE 360A DUAL CHOICE ANT BAIT STATIONS	0.10	0.07	10	Avermectin	3	NO	NO
62719-523	BLACKHAWK	0.92	24.64	9	Spinosad	3	NO	NO
66222-19-1386	CHLORPYRIFOS 4E	19.52	0.00	8	Chlorpyrifos	2	NO	NO
53883-366	QUALI-PRO BIFENTHRIN GOLF & NURSERY 7 9F	4.13	0.0	8	Bifenthrin	3	YES	NO
2724-454	ZOECON 9026 FOGGER	2.00	17.38	8	Permethrin; S-Methoprene	3	YES	NO
10163-324	M-PEDE INSECTICIDE/FUNGICIDE	0.25	0.00	8	Potassium laurate	2	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox. Cat.	EPA Carc in	CA Dev. Toxin
432-1471-59807	KONTOS	0.05	0.00	8	Spirotetramat	3	NO	NO
1021-1177	PYROCIDE FOGGING CONCENTRATE 5628	0.00	10.50	8	Pyrethrins; Piperonyl butoxide; N-octyl bicycloheptene dicarboximide	3	YES	NO
4-80	BONIDE HORTICULTURAL AND DORMANT SPRAY OIL	1.17	0.00	7	Mineral oil	3	NO	NO
73079-2	INTICE GRANULAR BAIT	0.02	9.50	7	Boric acid	3	NO	NO
432-1534	BES0668 Insecticide	0.00	273.28	7	Deltamethrin	3	NO	NO
70506-150	IMIGOLD 2F TURF & ORNAMENTAL INSECTICIDE	13.09	0.00	6	Imidacloprid	3	NO	NO
53883-229-73220	QUALI-PRO IMIDACLOPRID 2F TURF & ORNAMENTAL INSECT	12.38	0.00	6	Imidacloprid	3	NO	NO
2724-476	ENSTAR II INSECT GROWTH REGULATOR (ENSTAR 5E)	0.15	0.00	6	(S)-Kinoprene	2	NO	NO
89459-60	ENVI AR-X MULTI-PURPOSE INSECTICIDE	0.00	0.77	6	Pyrethrins; Phenylethyl propionate	3	YES	NO
432-1464	DYLOX 420 SL TURF AND ORNAMENTAL INSECTICIDE	22.46	0.00	5	Trichlorfon	3	YES	NO
499-492	PRESCRIPTION TREATMENT BRAND 388B ADVANCE ANT GEL BAIT	0.29	0.05	5	Borax	3	NO	NO
9688-255-8845	SPECTRACIDE COMMERCIAL WASP & HORNET KILLER 3	0.29	3.12	5	Deltamethrin; S-Bioallethrin	3	YES	NO
432-1256	MAXFORCE FC ANT BAIT STATIONS	0.07	0.06	5	Fipronil	3	YES	NO
73079-10	INVICT (TM) COCKROACH GEL	0.03	0.00	5	Imidacloprid	3	NO	NO
66222-199	QUALI-PRO IMIDACLOPRID 75 WSB	0.00	19.16	5	Imidacloprid	3	NO	NO
100-1487	PROVAUNT	0.00	13.78	5	Indoxacarb	3	NO	NO
499-527	PRESCRIPTION TREATMENT BRAND ALPINE DUST INSECTICIDE	0.00	0.03	5	Dinotefuran; Diatomaceous earth	3	NO	NO
66222-19	CHLORPYRIFOS 4E AG	7.30	0.00	4	Chlorpyrifos	2	NO	NO
100-1551	Ference	4.77	0.00	4	Cyantraniliprole	0	NO	NO
499-362	WHITMIRE PT 515 WASP FREEZE	1.00	0.00	4	D-trans Allethrin; Phenothrin	3	YES	NO
1021-1767	MULTICIDE LICE & DUST MITE SPRAY 27911	0.05	3.19	4	Phenothrin; N-octyl bicycloheptene dicarboximide	3	YES	NO
53883-335	N + P Regulator	0.03	0.00	4	Pyriproxyfen; Novaluron	3	NO	NO
432-1308	DYLOX 6.2 GRANULAR INSECTICIDE	0.00	315.00	4	Trichlorfon	3	YES	NO
499-550	TC-323	0.00	3.13	4	Prallethrin	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox. Cat.	EPA Carc in	CA Dev. Toxin
432-1227-10404	LESCO SEVIN SL	17.38	0.00	3	Carbaryl	3	YES	NO
83100-6	LADA 2F INSECTICIDE	12.81	0.00	3	Imidacloprid	3	NO	NO
279-3155	TALSTAR NURSERY FLOWABLE INSECTICIDE/MITICIDE	3.51	0.00	3	Bifenthrin	3	YES	NO
432-1527	TEMPRID RTU	0.09	0.00	3	Cyfluthrin, beta; Imidacloprid	0	NO	NO
66222-40-400	PEDESTAL	0.06	0.00	3	Novaluron	3	NO	NO
149-8-64405	TERRO PCO LIQUID ANT BAIT	0.02	0.00	3	Borax	3	NO	NO
432-1318	MERIT 75 WSP	0.00	12.40	3	Imidacloprid	3	NO	NO
432-1318-10404	LESCO SYSTEMIC INSECTICIDE CONTAINS MERIT IN WATER SOLUBLE PACKETS	0.00	11.40	3	Imidacloprid	3	NO	NO
1021-1424	PYROCIDE FOGGING CONCENTRATE 7338	0.00	4.00	3	Pyrethrins; Piperonyl butoxide; N-octyl bicycloheptene dicarboximide	3	YES	NO
100-1481	DUPONT ADVION FIRE ANT BAIT	0.00	1.13	3	Indoxacarb	3	NO	NO
241-313-9444	SIEGE PBS GEL INSECTICIDE	0.00	1.07	3	Hydramethylnon	3	YES	YES
279-3287	FLONICAMID 50SG INSECTICIDE	0.00	0.21	3	Flonicamid	3	NO	NO
69526-5	PURESPRAY SPRAY OIL 10E	10.10	0.00	2	Mineral oil	3	NO	NO
279-3457	TRIPLE CROWN GOLF INSECTICIDE	6.60	0.00	2	Bifenthrin; Cypermethrin, zeta; Imidacloprid	2	YES	NO
2217-937	SAGACITY 10SL	1.26	0.00	2	Dinotefuran	3	NO	NO
2724-786	RF2050 SPRAY	0.51	0.00	2	Tetramethrin; Ethofenprox; Piperonyl butoxide	3	YES	NO
53883-145	LAMBDA 9.7 EW INSECTICIDE	0.31	0.00	2	Cyhalothrin, lambda	2	NO	NO
74578-10	TREE-AGE G4	0.28	0.00	2	Emamectin, benzoate	3	NO	NO
100-1611	Divanem	0.09	0.00	2	Avermectin	2	NO	NO
279-9557	CB DELTAMETHRIN FOAM INSECTICIDE	0.08	0.00	2	Deltamethrin	3	NO	NO
89186-1	Aprehend	0.04	0.00	2	Beauveria bassiana GHA	3	NO	NO
228-588	MALLET 75 WP	0.00	12.00	2	Imidacloprid	3	NO	NO
2724-274-59	GOLDEN MUSCAMYL(TM) FLY BAIT	0.00	3.00	2	Methomyl; (Z)-9-Tricosene	3	NO	NO
279-3386	DRAX ANT KIL-PF	0.00	0.12	2	Boric acid	3	NO	NO
73049-38	VECTOBAC 12AS BIOLOGICAL LARVICIDE	0.38	0.00	1	Bacillus thuringiensis, subsp. israelensis, strain AM 65-52	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox. Cat.	EPA Carcin	CA Dev. Toxin
71711-4-67690	SEPRO AKARI 5SC MITICIDE/INSECTICIDE	0.28	0.00	1	Fenpyroximate	2	NO	NO
499-362-55809	WASP AND HORNET KILLER II	0.14	0.00	1	D-trans Allethrin; Phenothrin	3	YES	NO
11694-109-10637	MARKSMAN WASP & HORNET KILLER	0.09	0.00	1	Permethrin; Tetramethrin; Piperonyl butoxide	3	YES	NO
9444-168-1270	ZEP TOTAL CONTROL TOTAL RELEASE FOGGER TOTAL CONTROL SYSTEMS	0.08	0.00	1	Esfenvalerate; Prallethrin; Pyriproxyfen	3	NO	NO
499-362-70627	BOLT WASP & HORNET KILLER	0.07	0.00	1	D-trans Allethrin; Phenothrin	3	YES	NO
499-568	PT ALPINE PRESSURIZED FLY BAIT	0.04	0.00	1	Dinotefuran	3	NO	NO
499-465	PRO-CONTROL FOGGER II	0.04	0.00	1	Pyrethrins; Piperonyl butoxide; N-octyl bicycloheptene dicarboximide	3	YES	NO
499-515	MOTHEREARTH GRANULAR SCATTER BAIT	0.02	0.00	1	Boric acid	3	NO	NO
149-8	TERRO ANT KILLER II	0.02	0.00	1	Borax	3	NO	NO
89459-12	RF2220 PREMIUM AEROSOL II-M	0.01	0.00	1	Ethofenprox; S-Methoprene; Tetramethrin; Pyrethrins; Piperonyl butoxide	0	YES	NO
8033-106-1001	TRISTAR 8.5 SL INSECTICIDE	0.01	0.00	1	Acetamiprid	3	NO	NO
432-1526	BES0570 INSECTICIDE	0.01	0.00	1	Pyrethrins	3	YES	NO
100-1066-72113	BORDER INSECTICIDE	0.00	0.00	1	Cyhalothrin, lambda	3	NO	NO
499-495	TC-233	0.00	0.00	1	S-Bioallethrin	3	YES	NO
432-1457	MERIT FXT TABLET INSECTICIDE	0.00	0.15	1	Imidacloprid	3	NO	NO
9444-131-72155	BAYER ADVANCED ANT KILLER POWER PEN READYTO-USE BAIT	0.00	0.11	1	Boric acid	3	NO	NO
3125-380-59807	DECATHLON ORNAMENTAL INSECTICIDE	0.00	0.04	1	Cyfluthrin	3	NO	NO
432-1254	MAXFORCE PROFESSIONAL INSECT CONTROL ROACH KILLER	0.00	0.03	1	Hydramethylnon	3	YES	YES
432-1258	MAXFORCE LARGE ROACH BAIT F.03	0.00	0.02	1	Fipronil	3	YES	NO
1001-73	ECOLOGIX COCKROACH BAIT	0.00	0.00	1	Xanthine; Oxypurinol	3	NO	NO
<b>Herbicides</b>								
524-579	ROUNDUP PROMAX	137.74	0.00	439	Glyphosate, potassium salt	3	NO	NO
62719-556	ACCORD XRT II	48.37	0.00	420	Glyphosate, dimethylammonium salt	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox. Cat.	EPA Carcin	CA Dev. Toxin
228-397	RIVERDALE VANQUISH HERBICIDE	22.79	0.00	244	Dicamba, diglycolamine salt	3	NO	NO
62719-176	PATHFINDER II	98.42	0.00	236	Triclopyr, butoxyethyl ester	3	NO	NO
432-1580	DUPONT VIEWPOINT HERBICIDE	0.00	23.06	221	Aminocyclopyrachlor; Imazapyr; Metsulfuron-methyl	3	NO	NO
62719-324	GLYPRO	35.64	0.00	129	Glyphosate, isopropylamine salt	3	NO	NO
62719-527	GARLON 4 ULTRA	12.02	0.00	112	Triclopyr	2	NO	NO
100-937	PRIMO MAXX	27.73	0.00	83	Trinexapac-ethyl	3	NO	NO
62719-542	DIMENSION 2EW	48.99	4,900.00	65	Dithiopyr	2	NO	NO
524-529	ROUNDUP PRO CONCENTRATE	36.54	0.00	45	Glyphosate, isopropylamine salt	3	NO	NO
432-1229	FINALE HERBICIDE	5.11	0.00	39	Glufosinate-ammonium	2	NO	NO
53883-373	QUALI-PRO T-NEX 1 AQ	24.36	0.00	34	Trinexapac-ethyl	3	NO	NO
62719-566	TURFLON ESTER ULTRA	1.09	0.00	17	Triclopyr, butoxyethyl ester	3	NO	NO
9688-293-8845	SPECTRACIDE WEED & GRASS KILLER 2	13.00	0.00	16	Dicamba, dimethylamine salt; Diquat dibromide; Fluazifop-P-butyl	3	NO	NO
62719-305	LONTREL TURF AND ORNAMENTAL	2.01	0.00	13	Clopyralid	3	NO	NO
82052-1	AVENGER WEED KILLER CONCENTRATE	9.37	0.00	11	Limonene	3	NO	NO
100-1267	TENACITY	0.29	0.00	11	Mesotrione	3	NO	NO
7969-327	PYLEX HERBICIDE	0.41	0.00	10	Topramezone	3	NO	NO
10404-43	LESCO THREE-WAY SELECTIVE HERBICIDE	45.63	0.00	9	2,4-D, dimethylamine salt; Dicamba, dimethylamine salt; MCP-P, dimethylamine salt	1	NO	NO
62719-560	EF-1343	0.07	0.00	9	Florasulam	3	NO	NO
9198-213	THE ANDERSONS 0.25% GRANULAR DITHIOPYR HERBICIDE	0.00	677.50	9	Dithiopyr	3	NO	NO
62719-445	DIMENSION* ULTRA 40WP	0.00	59.06	9	Dithiopyr	3	NO	NO
279-3419	F7275 70 WG HERBICIDE	0.00	1.30	8	Carfentrazone-ethyl; Quinclorac	3	NO	NO
432-1230	PROXY GROWTH REGULATOR	55.32	0.00	7	Ethephon	1	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox. Cat.	EPA Carc in	CA Dev. Toxin
241-437-67690	CLEARCAST HERBICIDE	1.40	0.00	7	Imazamox	3	NO	NO
1381-192	CORNERSTONE PLUS	15.33	0.00	6	Glyphosate, isopropylamine salt	3	NO	NO
7969-272	DRIVE XLR8 HERBICIDE	8.91	0.00	6	Quinclorac	3	NO	NO
81880-1-10163	SEDGEHAMMER	0.00	0.24	6	Halosulfuron-methyl	3	NO	NO
241-346	ARSENAL HERBICIDE	12.66	0.00	5	Imazapyr, isopropylamine salt	3	NO	NO
62719-92	CONFRONT	3.54	0.00	5	Clopyralid, triethanolamine; Triclopyr, triethylamine salt	1	NO	NO
53883-336	QUINCLORAC 1.5 L	0.49	0.00	5	Quinclorac, Dimethylamine Salt	3	NO	NO
100-1014	PACLOBUTRAZOL 2SC	0.34	0.00	5	Paclobutrazol	3	NO	NO
279-3265	F8426 HERBICIDE	0.03	0.00	5	Carfentrazone-ethyl	3	NO	NO
86068-3-84009	HDX WEED & GRASS KILLER CONCENTRATE	0.03	0.00	5	Glyphosate, isopropylamine salt	2	NO	NO
66222-151	ETHEPHON 2SL	23.67	0.00	4	Ethephon	1	NO	NO
100-1139	BARRICADE 4FL	10.02	0.00	4	Prodiamine	3	YES	NO
70506-259	GOLDWING	7.95	0.00	4	Trinexapac-ethyl	3	NO	NO
228-366	RAZOR HERBICIDE	0.44	0.00	4	Glyphosate, isopropylamine salt	3	NO	NO
1001-91	GWN-6010 PLANT GROWTH REGULATOR	0.00	6.24	4	Prohexadione calcium	3	NO	NO
71995-33	ROUNDUP WEED & GRASS KILLER READY-TO-USE PLUS	26.00	0.00	3	Glyphosate, isopropylamine salt; Nonanoic acid	3	NO	NO
228-409	TRIPLET LOW ODOR PREMIUM SELECTIVE HERBICIDE	3.50	0.00	3	2,4-D, triisopropanolamine salt; Dicamba; MCPP-P, dimethylamine salt	1	NO	NO
89442-7	TRIN-PAC SELECT	0.52	0.00	3	Trinexapac-ethyl	3	NO	NO
524-535	ROUNDUP QUIKPRO HERBICIDE	0.06	12.56	3	Glyphosate, monoammonium salt; Diquat dibromide	3	NO	NO
228-711	NUFARM PROSEEDGE SELECTIVE HERBICIDE2	0.00	0.05	3	Halosulfuron-methyl	3	NO	NO
86064-5	ARMORTECH (R) THREESOME(TM)	9.86	0.00	2	2,4-D, dimethylamine salt; Dicamba, dimethylamine salt; MCPP-P, dimethylamine salt	1	NO	NO



EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox. Cat.	EPA Carc in	CA Dev. Toxin
432-1532	SPECTICLE TOTAL	3.75	0.00	2	Diquat dibromide; Indaziflam; Glyphosate, isopropylamine salt	3	NO	NO
2217-833	SPEED ZONE BROADLEAF HERBICIDE	1.18	0.00	2	2,4-D, 2-ethylhexyl ester; Carfentrazone-ethyl; Dicamba; Mecroprop-p	3	YES	NO
432-950	ACCLAIM EXTRA HERBICIDE	0.44	0.00	2	Fenoxaprop-P (+)	3	NO	NO
228-446	RAZOR BURN	0.34	0.00	2	Diquat dibromide; Glyphosate, isopropylamine salt	3	NO	NO
86064-3	ARMOR TECH PGR 113 MC	0.25	0.00	2	Trinexapac-ethyl	3	NO	NO
80697-4-86064	ARMOR TECH PAC 223	0.20	0.00	2	Paclobutrazol	3	NO	NO
524-475	ROUNDUP ULTRA HERBICIDE	0.10	0.00	2	Glyphosate, isopropylamine salt	3	NO	NO
2217-696	BETAMEC 4 PRE-EMERGENCE GRASS KILLER	10.00	0.00	1	Bensulide	3	NO	NO
228-312	TRIPLET SF	5.16	0.00	1	Dicamba, dimethylamine salt; 2,4-D, dimethylamine salt; MCP-P, dimethylamine salt	1	NO	NO
2217-656-72112	VESSEL	2.60	0.00	1	Dicamba, dimethylamine salt; 2,4-D, dimethylamine salt; MCP-P, dimethylamine salt	1	NO	NO
42750-144-5905	BW III	2.23	0.00	1	2,4-D; Dicamba	1	NO	NO
10404-44	LESCO THREE-WAY BENTGRASS SELECTIVE HERBICIDE	2.00	0.00	1	2,4-D, dimethylamine salt; Dicamba, dimethylamine salt; MCP-P, dimethylamine salt	3	NO	NO
239-2657	ORTHO GROUND CLEAR TOTAL VEGETATION KILLER	1.00	0.00	1	Glyphosate, isopropylamine salt; Imazapyr, isopropylamine salt	2	NO	NO
9688-109-8845	SPECTRACIDE BRUSH KILLER	1.00	0.00	1	Dicamba, dimethylamine salt; 2,4-D, dimethylamine salt; MCP-P, dimethylamine salt	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox. Cat.	EPA Carc in	CA Dev. Toxin
524-517	ACCORD XL HERBICIDE	0.31	0.00	1	Glyphosate, isopropylamine salt	3	NO	NO
62097-24-53883	PAC-LOW	0.06	0.00	1	Paclobutrazol	3	NO	NO
10404-86	LESCO DIMENSION 0.15% PLUS FERTILIZER	0.00	8,000.00	1	Dithiopyr	3	NO	NO
62719-504-961	LEBANON PROSCAPE FERTILIZER WITH DIMENSION 0.15% FG TURF AND ORNAMENTA	0.00	6,300.00	1	Dithiopyr	3	NO	NO
9198-176	ANDERSON'S GOOSE/CRABGRASS CONTROL	0.00	430.00	1	Bensulide; Oxadiazon	2	YES	YES
<b>Fungicides</b>								
53883-353	QUALI-PRO T-NEX	114.20	0.00	110	Trinexapac-ethyl	3	NO	NO
100-1364	DACONIL ACTION	427.49	0.00	63	Acibenzolar-S-methyl; Chlorothalonil	2	YES	NO
71065-3	COMPANION LIQUID BIOLOGICAL FUNGICIDE	327.20	0.00	54	Bacillus subtilis GBO3	3	NO	NO
432-942	BANOL TURF AND ORNAMENTAL FUNGICIDE	106.18	0.00	47	Propamocarb hydrochloride	3	NO	NO
100-1093	HERITAGE FUNGICIDE	0.00	109.64	47	Azoxystrobin	3	NO	NO
60063-7-10404	LESCO MANICRUE 6FL	305.41	0.00	37	Chlorothalonil	2	YES	NO
432-1445	BAYLETON FLO TURF AND ORNAMENTAL FUNGICIDE	38.86	0.00	32	Triadimefon	3	YES	YES
432-1541	12ESP705 FUNGICIDE	0.00	1,307.00	29	Fosetyl-AI	3	NO	NO
53883-323-86064	ARMOR TECH TMI 2020XL	63.50	0.00	28	Thiophanate-methyl; Iprodione	3	YES	YES
7969-349	Xzemplar Fungicide	16.60	0.00	28	Fluxapyroxad	3	NO	NO
50534-202-100	MANICURE ULTREX TURF & ORNAMENTAL	0.12	1,001.00	26	Chlorothalonil	1	YES	NO
86064-1	ARMORTECH CLT 825 DF	0.00	654.00	26	Chlorothalonil	2	YES	NO
53883-433	QUALI-PRO MEFENOXAM 2AQ	17.70	0.00	24	Mefenoxam	2	NO	NO
84059-3-87865	REGALIA PTO BIOFUNGICIDE FOR USE ON TURF AND ORNAMENTALS	58.20	0.00	23	Reynoutria sachalinensis	3	NO	NO
55260-9	PROPLANT TURF AND ORNAMENTAL FUNGICIDE	53.12	0.00	22	Propamocarb hydrochloride	3	NO	NO
53883-343	AZOXYSTROBIN 50 WG	0.63	9.74	22	Azoxystrobin	3	NO	NO
70127-2	NOVOZYMES BIOFUNGICIDE GREEN RELEAF 710-140	95.60	0.00	20	Bacillus licheniformis SB3086; IBA	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox. Cat.	EPA Carc in	CA Dev. Toxin
66222-117	ORIOUS 3.6F	40.86	0.00	19	Tebuconazole	3	YES	NO
70299-12	ZEROTOL 2.0	13.55	0.00	19	Peroxyacetic acid; Hydrogen peroxide	1	NO	NO
228-633	NUFARM PROPICONAZOLE SPC EC FUNGICIDE	24.71	0.00	17	Propiconazole	2	YES	NO
71512-13-2217	SEGWAY FUNGICIDE	11.73	0.00	17	Cyazofamid	3	NO	NO
70506-272	PEGASUS DFX	0.00	1,384.25	17	Chlorothalonil	1	YES	NO
432-888-10404	LESCO 18 PLUS TURF & ORNAMENTAL FUNGICIDE	67.31	0.00	16	Iprodione	3	YES	NO
264-1155	RHAPSODY AS0	174.40	0.00	15	QST 713 strain of dried Bacillus subtilis	3	NO	NO
66222-134	THIOPHANATE METHYL 4.5 F	79.67	0.00	15	Thiophanate-methyl	3	YES	YES
432-1529	TEBUCONAZOLE SC TURF AND ORNAMENTAL FUNGICIDE	47.13	0.00	15	Tebuconazole	3	YES	NO
432-1446	TARTAN FLO FUNGICIDE	29.46	0.00	15	Triadimefon; Trifloxystrobin	3	YES	YES
432-1505	CHIPCO 26019T FUNGICIDE	121.15	0.00	14	Iprodione; Trifloxystrobin	3	YES	NO
432-888	CHIPCO 26019 FLO BRAND FUNGICIDE	171.00	0.00	13	Iprodione	3	YES	NO
59639-144	V-10116 VPP FUNGICIDE	0.00	114.87	13	Metconazole	3	NO	NO
432-1223	PROSTAR 70 WP	0.00	4.52	13	Flutolanil	3	NO	NO
53883-363	BUMPER 14.3 EC (PROPICONAZOLE) FUNGICIDE	45.84	0.00	11	Propiconazole	2	YES	NO
228-623-10404	LESCO SPECTATOR ULTRA 1.3 FUNGICIDE	25.16	0.00	11	Propiconazole	2	YES	NO
66222-154-73220	QUALI-PRO CHLOROTHALONIL 720 SFT	132.48	0.00	10	Chlorothalonil	2	NO	NO
228-623-88975	PRIMERAONE PROPICONAZOLE 14.3	55.72	0.00	10	Propiconazole	2	YES	NO
66222-117-86064	ARMOR TECH TEB360 XL	38.85	0.00	10	Tebuconazole	3	YES	NO
67702-2-67690	CAMELOT O FUNGICIDE/BACTERICIDE	6.13	0.00	10	Copper octanoate	3	NO	NO
62719-402-10404	LESCO MANCOZEB DG TURF AND ORNAMENTAL FUNGICIDE	0.00	291.75	10	Mancozeb	3	YES	NO
432-1522	ES TC006A	39.26	0.00	9	Mono- and di-potassium salts of phosphorous acid	0	NO	NO
7969-350	LEXICON INTRINSIC BRAND FUNGICIDE	5.97	0.00	9	Fluxapyroxad; Pyraclostrobin	3	NO	NO
60063-3	ECHO 825	0.00	754.50	9	Chlorothalonil	2	YES	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox. Cat.	EPA Carc in	CA Dev. Toxin
68173-3-1001	AFFIRM WDG	0.00	48.63	9	Polyoxin D zinc salt	3	NO	NO
68539-3	T-22G BIOLOGICAL PLANT PROTECTANT GRANULES	0.00	20.00	9	Trichoderma harzianum rifai strain KRL-AG2	3	NO	NO
53883-380	QUALI-PRO IPRO 2	78.47	0.00	8	Iprodione	3	YES	NO
228-626	NUFARM T-METHYL PRO 4.5 F FUNGICIDE	39.83	0.00	8	Thiophanate-methyl	3	YES	YES
70506-114	TEBUCONAZOLE 3.6 F FUNGICIDE	16.55	0.00	8	Tebuconazole	3	YES	NO
432-890	ALIETTE WDG BRAND FUNGICIDE	0.00	330.00	8	Fosetyl-AI	3	NO	NO
228-684	NUFARM IPRODIONE SPC FUNGICIDE	90.00	0.00	7	Iprodione	3	YES	NO
70051-107-59807	TRIATHLON BA	16.78	0.00	7	Bacillus subtilis var. amyloliquefaciens strain D747	3	NO	NO
228-737	NUP-15013 Fungicide	15.40	0.00	7	Fluazinam	3	YES	NO
70870-1-68539	MILSTOP BROAD SPECTRUM FOLIAR FUNGICIDE	0.36	0.09	7	Potassium bicarbonate	3	NO	NO
100-1326	BANNER MAXX II	30.00	0.00	6	Propiconazole	3	YES	NO
42750-292	AZOXY 11% + TEB 26% FL	2.47	0.00	6	Azoxystrobin; Tebuconazole	3	YES	NO
7969-184	Insignia Fungicide	1.97	12.00	6	Pyraclostrobin	3	NO	NO
7969-255	HONOR FUNGICIDE	1.88	91.70	6	Nicobifen; Pyraclostrobin	3	YES	NO
69526-13	CIVITAS	75.00	0.00	5	Mineral oil	3	NO	NO
70506-251	T-BIRD 4.5L	56.31	0.00	5	Thiophanate-methyl	3	YES	YES
66222-41-73320	QUALI-PRO PROPICONAZOLE 14.3	38.50	0.00	5	Propiconazole	2	NO	NO
100-1433	BRISKWAY	9.53	0.00	5	Azoxystrobin; Difenoconazole	3	YES	NO
400-422-59807	TERRAZOLE L	3.22	0.00	5	Terrazole	1	YES	NO
4-62	BONIDE SULPHUR PLANT FUNGICIDE MICRONIZED SPRAY OR DUST	0.00	12.50	5	Sulfur	3	NO	NO
86064-2	ARMOR TECH CLT 720 FL	45.00	0.00	4	Chlorothalonil	2	YES	NO
264-1155-68539	CEASE	8.00	0.00	4	QST 713 strain of dried Bacillus subtilis	3	NO	NO
228-630-10404	LESCO TWOSOME FUNGICIDE	8.00	0.00	4	Iprodione; Thiophanate-methyl	3	YES	YES
62719-463	EAGLE 20EW	0.06	0.00	4	Myclobutanil	3	NO	YES
2217-1019	EF-714 FUNGICIDE	57.27	0.00	3	Tebuconazole; Isofetamid	3	YES	NO
60063-7	ECHO 720	54.30	0.00	3	Chlorothalonil	2	YES	NO
42750-99	TEBUCONAZOLE 3.6FL	16.44	0.00	3	Tebuconazole	3	YES	NO
50534-211-100	DACONIL ZN FLOWABLE FUNGICIDE	10.00	10.00	3	Chlorothalonil	2	YES	NO
71512-20-100	SECURE	9.82	0.00	3	Fluazinam	2	YES	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox. Cat.	EPA Carc in	CA Dev. Toxin
42750-255	FLUDIOXONIL 1L TURF	8.19	0.00	3	Fludioxonil	3	NO	NO
71512-13-279	SEGWAY FUNGICIDE	4.61	0.00	3	Cyazofamid	3	NO	NO
66222-216	QUALI-PRO MEFENOXAM 2AQ	2.03	0.00	3	Mefenoxam	2	NO	NO
70299-15	GC PRO	0.00	700.00	3	Sodium percarbonate	1	NO	NO
70644-1-74697	NUTROL	0.00	120.00	3	Phosphoric acid, monopotassium salt	3	NO	NO
100-1347	CONCERT II	25.00	0.00	2	Propiconazole	1	YES	NO
70506-241	IPRODIONE 2F FUNGICIDE	14.25	0.00	2	Iprodione	3	YES	NO
69361-27	TEBUCONAZOLE 3.6F FUNGICIDE	14.00	0.00	2	Tebuconazole	3	YES	NO
228-623	NUFARM PROPICONAZOLE SPC 14.3 MEC FUNGICIDE	8.59	0.00	2	Propiconazole	2	YES	NO
59639-143	V-10162 VPP FUNGICIDE	3.29	0.00	2	Fluopicolide	3	NO	NO
100-892	ARBOTECT 20-S FUNGICIDE	3.11	0.00	2	Thiabendazole	3	YES	NO
228-739	NUP-15014 Fungicide	2.50	0.00	2	Tebuconazole; Fluazinam	3	YES	NO
73512-1	KEYPLEX 350	1.25	0.00	2	Brewer's yeast extract hydrolysate from Saccharomyces cerevisiae	3	NO	NO
100-796	SUBDUE MAXX	0.02	0.00	2	Mefenoxam	3	NO	NO
432-890-10404	LESCO PRODIGY SIGNATURE	0.00	66.00	2	Fosetyl-AI	3	NO	NO
53883-343-89442	AZOXY 50 WDG SELECT FUNGICIDE	0.00	4.00	2	Azoxystrobin	3	NO	NO
100-1434	MEDALLION WDG	0.00	0.09	2	Fludioxonil	3	NO	NO
464-693-63288	CHEMICAR 15	55.00	0.00	1	Glutaraldehyde	1	NO	NO
3377-78	STABROM PLUS BIOCID	35.00	0.00	1	Sodium N-bromosulfamate, mixture with sodium N-chlorosulfamate, potassium N-bromosulfamate, and potassium N-chlorosulfamate	1	NO	NO
432-1536	FLU+TFS SC 32.5	10.00	0.00	1	Trifloxystrobin; Fluopyram	3	NO	NO
100-1451	APPEAR	5.00	0.00	1	Mono- and di-potassium salts of phosphorous acid	3	NO	NO
53883-309	QUALI-PRO ENCLAVE 5.3F	4.81	0.00	1	Chlorothalonil; Thiophanate-methyl; Iprodione; Tebuconazole	3	YES	YES
50534-209-100	MANICURE 6 FLOWABLE	3.29	0.00	1	Chlorothalonil	3	YES	NO
84024-1	JUSTEQ07	3.00	0.00	1	Sodium bromide	1	NO	NO
53883-375	QUALI-PRO IPRO 2SE	2.75	0.00	1	Iprodione	3	YES	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox. Cat.	EPA Carc in	CA Dev. Toxin
70506-234	MANZATE PRO-STICK FUNGICIDE	1.50	0.00	1	Mancozeb	3	YES	NO
87290-44-86064	ARMORTECH ZOXY 2 SC	0.76	0.00	1	Azoxystrobin	3	NO	NO
89442-21	AZOXY 2SC SELECT	0.75	0.00	1	Azoxystrobin	3	NO	NO
84229-44	AMTIDE TEBU 3.6F FOLIAR FUNGICIDE	0.55	0.00	1	Tebuconazole	3	YES	NO
71962-1-54705	AGRI-FOS SYSTEMIC FUNGICIDE	0.50	0.00	1	Mono- and di-potassium salts of phosphorous acid	3	NO	NO
66330-379-279	DISARM +C FUNGICIDE	0.50	0.00	1	Fluoxastrobin (ISO); Chlorothalonil	3	YES	NO
400-521	TERRAGUARD SC	0.00	0.00	1	Triflumizole	3	NO	NO
70506-185	PENNCOZEB 75 DF	0.00	52.00	1	Mancozeb	3	YES	NO
7969-196	EMERALD FUNGICIDE	0.00	24.50	1	Nicobifen	2	YES	NO
62719-388	FORE 80WP RAINSHIELD	0.00	19.00	1	Mancozeb	3	YES	NO
100-1550	HERITAGE ACTION	0.00	8.00	1	Acibenzolar-S-methyl; Azoxystrobin	3	NO	NO
400-416	TERRAZOLE 35% WETTABLE POWDER	0.00	3.75	1	Terrazole	3	YES	NO
432-1371-59807	COMPASS O 50 WDG FUNGICIDE	0.00	0.38	1	Trifloxystrobin	3	NO	NO
<b>Other (Repellents, Biochemical Pesticides, Etc.)</b>								
52483-1	HYPOCHLORITE SOLUTION	80.25	0.00	50	Sodium hypochlorite	1	NO	NO
14802-8-74466	MICROBE LIFE ALGAWAY 5.4 ALGAECIDE FOR PONDS	3.00	0.00	12	Poly(oxyethylene) (dimethylimino) ethylene (dimethylimino) ethylene dichloride	3	NO	NO
2693-193	OPTIMA-BLUE	8.25	0.00	7	Copper oxide (ous)	2	NO	NO
59807-4	HORMODIN 1	0.00	0.31	7	IBA	3	NO	NO
60061-71	PETTIT MARINE PAINT PREMIUM SINGLE SEASON ABLATIVE	10.00	0.00	5	Copper oxide (ous)	2	NO	NO
63838-5	BROMMAX 7.1	6.50	0.00	5	Sodium bromide; Sodium hypochlorite	1	NO	NO
73049-15	PROGIBB 4% PLANT GROWTH REGULATOR SOLUTION	0.00	0.00	3	Gibberellins	2	NO	NO
2693-172	AQUARIUS ANTIFOULING BOTTOM PAINT 568 NAVY BLUE	3.00	0.00	2	Copper oxide (ous)	2	NO	NO
60061-137	PETTIT HYDROCOAT ECO COPPER FREE MULTI-SEASON ABLATIVE	2.00	0.00	2	1H-Pyrrole-3-carbonitrile,4-bromo-2-(4-chlorophenyl)-5-(trifluoromethyl)-; Zinc 2-pyridinethiol-1-oxide	2	NO	NO

<b>EPA Reg. #</b>	<b>EPA Product Name</b>	<b>Volume (Gals)</b>	<b>Weight (Lbs)</b>	<b>No. Appl's.</b>	<b>Active Ingredient(s)</b>	<b>EPA Tox. Cat.</b>	<b>EPA Carc in</b>	<b>CA Dev. Toxin</b>
71096-7-239	ORTHO BUG-GETA SNAIL & SLUG KILLER 1	0.00	0.91	2	Metalddehyde	3	NO	NO
90930-1	MILLER HOT SAUCE	0.00	0.00	1	Capsicum oleoresin	3	NO	NO
55943-1	HOT FOOT BIRD REPELLENT	0.00	1.88	1	Polybutenes	3	NO	NO

## APPENDIX 2: Complete Listing of Pesticide Products Used by the Department of Parks and Recreation in 2018

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
<b>Rodenticides</b>								
12455-148	Rat Ice	0.00	7,674.50	1,114	Carbon dioxide	2	NO	NO
12455-36	CONTRAC RAT AND MOUSE BAIT	0.00	171.38	280	Bromadiolone	3	NO	NO
12455-69	CONTRAC RODENTICIDE	0.00	296.06	231	Bromadiolone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	110.56	151	Bromadiolone	3	NO	NO
12455-86	CONTRAC RODENTICIDE PLACE PAC	0.00	95.95	100	Bromadiolone	3	NO	NO
12455-106	TERAD3 BLOX	0.00	83.63	77	Cholecalciferol	3	NO	NO
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	28.06	51	Difethialone	3	NO	NO
7173-297	BROMADIOLONE PASTE 0901	0.00	10.61	32	Bromadiolone	3	NO	NO
12455-76	CONTRAC RODENTICIDE READY TO USE PLACE PAC	0.00	5.20	26	Bromadiolone	3	NO	NO
7173-202	MAKI MINI BLOCKS	0.00	13.44	22	Bromadiolone	3	NO	NO
12455-146	CONTRAC SOFT BAIT	0.00	26.44	8	Bromadiolone	3	NO	NO
67517-95-56	ANSWER KILLS MICE WITH REFILLABLE BALT STATION	0.00	0.50	3	Bromethalin	3	NO	NO
36488-63	DIFENACOUM RAT AND MOUSE BLOCK IV	0.00	1.56	1	Difenacoum	3	NO	NO
12455-68	CONTRAC MOUSE BAIT STATION	0.00	1.00	1	Bromadiolone	3	NO	NO
12455-75	CONTRAC RAT AND MOUSE BAIT READY TO USE PLACE PAC	0.00	0.56	1	Bromadiolone	3	NO	NO
7173-188	MAKI RAT AND MOUSE BAIT PACKS (PELLETS)	0.00	0.06	1	Bromadiolone	3	NO	NO
<b>Insecticides</b>								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	1.44	69	Indoxacarb	3	NO	NO
9688-190-8845	SPECTRACIDE DESTROYER BRAND WASP & HORNET KILLER	1.51	36.81	37	Cyhalothrin, lambda; Prallethrin	3	NO	NO
70051-2-59807	TRIACT 70	6.93	0.00	35	Neem oil	3	NO	NO
53883-244-66222	QUALI-PRO LAMBDA GC-0	10.29	0.00	31	Cyhalothrin, lambda	2	NO	NO
70506-121	UPI-2005 EXP-06 RUP INSECTICIDE	9.43	0.00	31	Cyhalothrin, lambda	2	NO	NO
432-1312-67760	GARANT T&O 2F	26.83	0.00	24	Imidacloprid	3	NO	NO
64405-2	REDZONE BAIT	0.00	1.20	24	Boric acid	3	NO	NO



EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
100-1088	SCIMITAR GC INSECTICIDE	2.27	0.00	23	Cyhalothrin, lambda	3	NO	NO
48813-1-68539	SUFFOIL-X	4.69	0.00	21	Petroleum distillates	3	NO	NO
432-1369-59807	MARATHON II GREENHOUSE AND NURSERY INSECTICIDE	0.03	0.00	21	Imidacloprid	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.55	21	Indoxacarb	3	NO	NO
83100-6-88975	PRIMERAONE IMIDACLOPRID 2F INSECTICIDE	11.26	0.00	19	Imidacloprid	3	NO	NO
73049-39	DIPEL DF DRY FLOWABLE BIOLOGICAL INSECTICIDE	0.03	2.08	19	Bacillus thuringiensis, subsp. Kurstaki, strain ABTS-351, fermentation solids and solubles	3	NO	NO
86203-11-59639	SAFARI 20SG INSECTICIDE	0.00	4.86	18	Dinotefuran	3	NO	NO
100-1489	DUPONT ACELEPRYN INSECTICIDE	12.23	0.00	17	DPX-E2Y45	0	NO	NO
69526-17	CIVITAS ONE	62.50	0.00	15	Mineral oil	3	NO	NO
70506-24	UP-STAR GOLD INSECTICIDE	27.84	0.00	14	Bifenthrin	3	YES	NO
59639-96	DISTANCE INSECT GROWTH REGULATOR	0.43	0.00	14	Pyriproxyfen	3	NO	NO
62719-291	CONSERVE SC TURF AND ORNAMENTAL	0.19	0.00	13	Spinosad	3	NO	NO
228-624	NUFARM CHLORPYRIFOS SPC 4 INSECTICIDE	46.17	0.00	12	Chlorpyrifos	2	NO	NO
2724-351-50809	ZOECON GENCOR 9% EMULSIFIABLE CONCENTRATE	0.64	0.00	12	(7S)-Hydroprene	3	NO	NO
70051-9-59807	AZATIN O BIOLOGICAL INSECTICIDE	0.35	0.00	12	Azadirachtin	3	NO	NO
432-1312	MERIT 2F INSECTICIDE	19.83	0.00	11	Imidacloprid	3	NO	NO
66222-203	QUALI-PRO IMIDACLOPRID 2F TURF & ORNAMENTAL INSECTICIDE	14.43	0.00	11	Imidacloprid	3	NO	NO
100-1543	MAINSRING GH & N	0.17	0.00	11	Cyantraniliprole	0	NO	NO
1381-237	ABAMECTIN .15EC	0.12	0.00	10	Avermectin	2	NO	NO
400-508	FLORAMITE SC	0.10	0.00	10	Bifenazate	3	NO	NO
62719-523	BLACKHAWK	0.92	24.64	9	Spinosad	3	NO	NO
66222-19-1386	CHLORPYRIFOS 4E	19.52	0.00	8	Chlorpyrifos	2	NO	NO
53883-366	QUALI-PRO BIFENTHRIN GOLF & NURSERY 7 9F	4.13	0.00	8	Bifenthrin	3	YES	NO
10163-324	M-PEDE INSECTICIDE/FUNGI CIDE	0.25	0.00	8	Potassium laurate	2	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
432-1471-59807	KONTOS	0.05	0.00	8	Spirotetramat	3	NO	NO
4-80	BONIDE HORTICULTURAL AND DORMANT SPRAY OIL	1.17	0.00	7	Mineral oil	3	NO	NO
70506-150	IMIGOLD 2F TURF & ORNAMENTAL INSECTICIDE	13.09	0.00	6	Imidacloprid	3	NO	NO
53883-229-73220	QUALI-PRO IMIDACLOPRID 2F TURF & ORNAMENTAL INSECT	12.38	0.00	6	Imidacloprid	3	NO	NO
2724-476	ENSTAR II INSECT GROWTH REGULATOR (ENSTAR 5E)	0.15	0.00	6	(S)-Kinoprene	2	NO	NO
432-1506	MAXFORCE QUANTUM ANT BAIT	0.00	0.06	6	Imidacloprid	3	NO	NO
432-1464	DYLOX 420 SL TURF AND ORNAMENTAL INSECTICIDE	22.46	0.00	5	Trichlorfon	3	YES	NO
66222-199	QUALI-PRO IMIDACLOPRID 75 WSB	0.00	19.16	5	Imidacloprid	3	NO	NO
100-1487	PROVAUNT	0.00	13.78	5	Indoxacarb	3	NO	NO
66222-19	CHLORPYRIFOS 4E AG	7.30	0.00	4	Chlorpyrifos	2	NO	NO
100-1551	Ference	4.77	0.00	4	Cyantraniliprole	0	NO	NO
432-1308	DYLOX 6.2 GRANULAR INSECTICIDE	0.00	315.00	4	Trichlorfon	3	YES	NO
432-1227-10404	LESCO SEVIN SL	17.38	0.00	3	Carbaryl	3	YES	NO
83100-6	LADA 2F INSECTICIDE	12.81	0.00	3	Imidacloprid	3	NO	NO
279-3155	TALSTAR NURSERY FLOWABLE INSECTICIDE/MITICIDE	3.51	0.00	3	Bifenthrin	3	YES	NO
66222-40-400	PEDESTAL	0.06	0.00	3	Novaluron	3	NO	NO
432-1318	MERIT 75 WSP	0.00	12.40	3	Imidacloprid	3	NO	NO
432-1318-10404	LESCO SYSTEMIC INSECTICIDE CONTAINS MERIT IN WATER SOLUBLE PACKETS	0.00	11.40	3	Imidacloprid	3	NO	NO
279-3287	FLONICAMID 50SG INSECTICIDE	0.00	0.21	3	Flonicamid	3	NO	NO
69526-5	PURESPRAY SPRAY OIL 10E	10.10	0.00	2	Mineral oil	3	NO	NO
279-3457	TRIPLE CROWN GOLF INSECTICIDE	6.60	0.00	2	Bifenthrin; Cypermethrin, zeta; Imidacloprid	2	YES	NO
2217-937	SAGACITY 10SL	1.26	0.00	2	Dinotefuran	3	NO	NO
53883-145	LAMBDA 9.7 EW INSECTICIDE	0.31	0.00	2	Cyhalothrin, lambda	2	NO	NO
74578-10	TREE-AGE G4	0.28	0.00	2	Emamectin, benzoate	3	NO	NO
100-1611	Divanem	0.09	0.00	2	Avermectin	2	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
228-588	MALLET 75 WP	0.00	12.00	2	Imidacloprid	3	NO	NO
9688-255-8845	SPECTRACIDE COMMERCIAL WASP & HORNET KILLER 3	0.00	3.12	2	Deltamethrin; S-Bioallethrin	3	YES	NO
2724-351	ZOECON RF-259 EMULSIFIABLE CONCENTRATE	0.00	0.50	2	(7S)-Hydroprene	3	NO	NO
73049-38	VECTOBAC 12AS BIOLOGICAL LARVICIDE	0.38	0.00	1	Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52	3	NO	NO
71711-4-67690	SEPRO AKARI 5SC MITICIDE/INSECTICIDE	0.28	0.00	1	Fenpyroximate	2	NO	NO
11694-109-10637	MARKSMAN WASP & HORNET KILLER	0.09	0.00	1	Permethrin; Tetramethrin; Piperonyl butoxide	3	YES	NO
8033-106-1001	TRISTAR 8.5 SL INSECTICIDE	0.01	0.00	1	Acetamiprid	3	NO	NO
73049-429	VECTOMAX FG	0.00	0.29	1	Bacillus sphaericus; Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52	3	NO	NO
432-1457	MERIT FXT TABLET INSECTICIDE	0.00	0.15	1	Imidacloprid	3	NO	NO
<b>Herbicides</b>								
524-579	ROUNDUP PROMAX	132.48	0.00	422	Glyphosate, potassium salt	3	NO	NO
62719-556	ACCORD XRT II	22.58	0.00	185	Glyphosate, dimethylammonium salt	3	NO	NO
62719-324	GLYPRO	35.64	0.00	129	Glyphosate, isopropylamine salt	3	NO	NO
62719-527	GARLON 4 ULTRA	10.17	0.00	84	Triclopyr	2	NO	NO
100-937	PRIMO MAXX	27.73	0.00	83	Trinexapac-ethyl	3	NO	NO
62719-542	DIMENSION 2EW	48.99	4900.00	65	Dithiopyr	2	NO	NO
524-529	ROUNDUP PRO CONCENTRATE	36.54	0.00	45	Glyphosate, isopropylamine salt	3	NO	NO
53883-373	QUALI-PRO T-NEX 1 AQ	24.36	0.00	34	Trinexapac-ethyl	3	NO	NO
62719-566	TURFLON ESTER ULTRA	1.09	0.00	17	Triclopyr, butoxyethyl ester	3	NO	NO
62719-176	PATHFINDER II	12.82	0.00	15	Triclopyr, butoxyethyl ester	3	NO	NO
228-397	RIVERDALE VANQUISH HERBICIDE	4.80	0.00	15	Dicamba, diglycolamine salt	3	NO	NO
62719-305	LONTREL TURF AND ORNAMENTAL	2.01	0.00	13	Clopyralid	3	NO	NO
82052-1	AVENGER WEED KILLER CONCENTRATE	9.37	0.00	11	Limonene	3	NO	NO
100-1267	TENACITY	0.29	0.00	11	Mesotrione	3	NO	NO
7969-327	PYLEX HERBICIDE	0.41	0.00	10	Topramezone	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
10404-43	LESCO THREE-WAY SELECTIVE HERBICIDE	45.63	0.00	9	2,4-D, dimethylamine salt; Dicamba, dimethylamine salt; MCP-P, dimethylamine salt	1	NO	NO
62719-560	EF-1343	0.07	0.00	9	Florasulam	3	NO	NO
9198-213	THE ANDERSONS 0.25% GRANULAR DITHIOPYR HERBICIDE	0.00	677.50	9	Dithiopyr	3	NO	NO
62719-445	DIMENSION* ULTRA 40WP	0.00	59.06	9	Dithiopyr	3	NO	NO
279-3419	F7275 70 WG HERBICIDE	0.00	1.30	8	Carfentrazone-ethyl; Quinclorac	3	NO	NO
432-1230	PROXY GROWTH REGULATOR	55.32	0.00	7	Ethephon	1	NO	NO
241-437-67690	CLEARCAST HERBICIDE	1.40	0.00	7	Imazamox	3	NO	NO
7969-272	DRIVE XLR8 HERBICIDE	8.91	0.00	6	Quinclorac	3	NO	NO
81880-1-10163	SEDGEHAMMER	0.00	0.24	6	Halosulfuron-methyl	3	NO	NO
62719-92	CONFRONT	3.54	0.00	5	Clopyralid, triethanolamine; Triclopyr, triethylamine salt	1	NO	NO
53883-336	QUINCLORAC 1.5 L	0.49	0.00	5	Quinclorac, Dimethylamine Salt	3	NO	NO
100-1014	PACLOBUTRAZOL 2SC	0.34	0.00	5	Paclobutrazol	3	NO	NO
279-3265	F8426 HERBICIDE	0.03	0.00	5	Carfentrazone-ethyl	3	NO	NO
86068-3-84009	HDX WEED & GRASS KILLER CONCENTRATE	0.03	0.00	5	Glyphosate, isopropylamine salt	2	NO	NO
66222-151	ETHEPHON 2SL	23.67	0.00	4	Ethephon	1	NO	NO
100-1139	BARRICADE 4FL	10.02	0.00	4	Prodiamine	3	YES	NO
70506-259	GOLDWING	7.95	0.00	4	Trinexapac-ethyl	3	NO	NO
1001-91	GWN-6010 PLANT GROWTH REGULATOR	0.00	6.24	4	Prohexadione calcium	3	NO	NO
228-409	TRIPLET LOW ODOR PREMIUM SELECTIVE HERBICIDE	3.50	0.00	3	2,4-D, triisopropanolamine salt; Dicamba; MCP-P, dimethylamine salt	1	NO	NO
89442-7	TRIN-PAC SELECT	0.52	0.00	3	Trinexapac-ethyl	3	NO	NO
524-535	ROUNDUP QUIKPRO HERBICIDE	0.06	12.56	3	Glyphosate, monoammonium salt; Diquat dibromide	3	NO	NO
228-711	NUFARM PROSEGE SELECTIVE HERBICIDE2	0.00	0.05	3	Halosulfuron-methyl	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
86064-5	ARMORTECH (R) THREESOME(TM)	9.86	0.00	2	2,4-D, dimethylamine salt; Dicamba, dimethylamine salt; MCP-P, dimethylamine salt	1	NO	NO
432-1532	SPECTICLE TOTAL	3.75	0.00	2	Diquat dibromide; Indaziflam; Glyphosate, isopropylamine salt	3	NO	NO
2217-833	SPEED ZONE BROADLEAF HERBICIDE	1.18	0.00	2	2,4-D, 2-ethylhexyl ester; Carfentrazone-ethyl; Dicamba; Mecroprop-p	3	YES	NO
432-950	ACCLAIM EXTRA HERBICIDE	0.44	0.00	2	Fenoxaprop-P (+)	3	NO	NO
228-446	RAZOR BURN	0.34	0.00	2	Diquat dibromide; Glyphosate, isopropylamine salt	3	NO	NO
86064-3	ARMOR TECH PGR 113 MC	0.25	0.00	2	Trinexapac-ethyl	3	NO	NO
80697-4-86064	ARMOR TECH PAC 223	0.20	0.00	2	Paclobutrazol	3	NO	NO
524-475	ROUNDUP ULTRA HERBICIDE	0.10	0.00	2	Glyphosate, isopropylamine salt	3	NO	NO
2217-696	BETAMEC 4 PRE-EMERGENCE GRASS KILLER	10.00	0.00	1	Bensulide	3	NO	NO
228-312	TRIPLET SF	5.16	0.00	1	Dicamba, dimethylamine salt; 2,4-D, dimethylamine salt; MCP-P, dimethylamine salt	1	NO	NO
2217-656-72112	VESSEL	2.60	0.00	1	Dicamba, dimethylamine salt; 2,4-D, dimethylamine salt; MCP-P, dimethylamine salt	1	NO	NO
42750-144-5905	BW III	2.23	0.00	1	2,4-D; Dicamba	1	NO	NO
10404-44	LESCO THREE-WAY BENTGRASS SELECTIVE HERBICIDE	2.00	0.00	1	2,4-D, dimethylamine salt; Dicamba, dimethylamine salt; MCP-P, dimethylamine salt	3	NO	NO
524-517	ACCORD XL HERBICIDE	0.31	0.00	1	Glyphosate, isopropylamine salt	3	NO	NO
62097-24-53883	PAC-LOW	0.06	0.00	1	Paclobutrazol	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
10404-86	LESCO DIMENSION 0.15% PLUS FERTILIZER	0.00	8,000.00	1	Dithiopyr	3	NO	NO
62719-504-961	LEBANON PROSCAPE FERTILIZER WITH DIMENSION 0.15% FG TURF AND ORNAMENTA	0.00	6,300.00	1	Dithiopyr	3	NO	NO
9198-176	ANDERSON'S GOOSE/CRABGRASS CONTROL	0.00	430.00	1	Bensulide; Oxadiazon	2	YES	YES
<b>Fungicides</b>								
53883-353	QUALI-PRO T-NEX	114.20	0.00	110	Trinexapac-ethyl	3	NO	NO
100-1364	DACONIL ACTION	427.49	0.00	63	Acibenzolar-S-methyl; Chlorothalonil	2	YES	NO
71065-3	COMPANION LIQUID BIOLOGICAL FUNGICIDE	327.20	0.00	54	Bacillus subtilis GBO3	3	NO	NO
432-942	BANOL TURF AND ORNAMENTAL FUNGICIDE	106.18	0.00	47	Propamocarb hydrochloride	3	NO	NO
100-1093	HERITAGE FUNGICIDE	0.00	109.64	47	Azoxystrobin	3	NO	NO
60063-7-10404	LESCO MANICRUE 6FL	305.41	0.00	37	Chlorothalonil	2	YES	NO
432-1445	BAYLETON FLO TURF AND ORNAMENTAL FUNGICIDE	38.86	0.00	32	Triadimefon	3	YES	YES
432-1541	12ESP705 FUNGICIDE	0.00	1307.00	29	Fosetyl-Al	3	NO	NO
53883-323-86064	ARMOR TECH TMI 2020XL	63.50	0.00	28	Thiophanate-methyl; Iprodione	3	YES	YES
7969-349	Xzemplar Fungicide	16.60	0.00	28	Fluxapyroxad	3	NO	NO
50534-202-100	MANICURE ULTREX TURF & ORNAMENTAL	0.12	1001.00	26	Chlorothalonil	1	YES	NO
86064-1	ARMORTECH CLT 825 DF	0.00	654.00	26	Chlorothalonil	2	YES	NO
53883-433	QUALI-PRO MEFENOXAM 2AQ	17.70	0.00	24	Mefenoxam	2	NO	NO
84059-3-87865	REGALIA PTO BIOFUNGICIDE FOR USE ON TURF AND ORNAMENTALS	58.20	0.00	23	Reynoutria sachalinensis	3	NO	NO
55260-9	PROPLANT TURF AND ORNAMENTAL FUNGICIDE	53.12	0.00	22	Propamocarb hydrochloride	3	NO	NO
53883-343	AZOXYSTROBIN 50 WG	0.63	9.74	22	Azoxystrobin	3	NO	NO
70127-2	NOVOZYMES BIOFUNGICIDE GREEN RELEAF 710-140	95.60	0.00	20	Bacillus licheniformis SB3086; IBA	3	NO	NO
66222-117	ORIUS 3.6F	40.86	0.00	19	Tebuconazole	3	YES	NO
70299-12	ZEROTOL 2.0	13.55	0.00	19	Peroxyacetic acid; Hydrogen peroxide	1	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
228-633	NUFARM PROPICONAZOLE SPC EC FUNGICIDE	24.71	0.00	17	Propiconazole	2	YES	NO
71512-13-2217	SEGWAY FUNGICIDE	11.73	0.00	17	Cyazofamid	3	NO	NO
70506-272	PEGASUS DFX	0.00	1,384.25	17	Chlorothalonil	1	YES	NO
432-888-10404	LESCO 18 PLUS TURF & ORNAMENTAL FUNGICIDE	67.31	0.00	16	Iprodione	3	YES	NO
264-1155	RHAPSODY ASO	174.40	0.00	15	QST 713 strain of dried Bacillus subtilis	3	NO	NO
66222-134	THIOPHANATE METHYL 4.5 F	79.67	0.00	15	Thiophanate- methyl	3	YES	YES
432-1529	TEBUCONAZOLE SC TURF AND ORNAMENTAL FUNGICIDE	47.13	0.00	15	Tebuconazole	3	YES	NO
432-1446	TARTAN FLO FUNGICIDE	29.46	0.00	15	Triadimefon; Trifloxystrobin	3	YES	YES
432-1505	CHIPCO 26019T FUNGICIDE	121.15	0.00	14	Iprodione; Trifloxystrobin	3	YES	NO
432-888	CHIPCO 26019 FLO BRAND FUNGICIDE	171.00	0.00	13	Iprodione	3	YES	NO
59639-144	V-10116 VPP FUNGICIDE	0.00	114.87	13	Metconazole	3	NO	NO
432-1223	PROSTAR 70 WP	0.00	4.52	13	Flutolanil	3	NO	NO
53883-363	BUMPER 14.3 EC (PROPICONAZOLE) FUNGICIDE	45.84	0.00	11	Propiconazole	2	YES	NO
228-623-10404	LESCO SPECTATOR ULTRA 1.3 FUNGICIDE	25.16	0.00	11	Propiconazole	2	YES	NO
66222-154-73220	QUALI-PRO CHLOROTHALONIL 720 SFT	132.48	0.00	10	Chlorothalonil	2	NO	NO
228-623-88975	PRIMERAONE PROPICONAZOLE 14.3	55.72	0.00	10	Propiconazole	2	YES	NO
66222-117-86064	ARMOR TECH TEB360 XL	38.85	0.00	10	Tebuconazole	3	YES	NO
67702-2-67690	CAMELOT O FUNGICIDE/BACTER ICIDE	6.13	0.00	10	Copper octanoate	3	NO	NO
62719-402-10404	LESCO MANCOZEB DG TURF AND ORNAMENTAL FUNGICIDE	0.00	291.75	10	Mancozeb	3	YES	NO
432-1522	ES TC006A	39.26	0.00	9	Mono- and di- potassium salts of phosphorous acid	0	NO	NO
7969-350	LEXICON INTRINSIC BRAND FUNGICIDE	5.97	0.00	9	Fluxapyroxad; Pyraclostrobin	3	NO	NO
60063-3	ECHO 825	0.00	754.50	9	Chlorothalonil	2	YES	NO
68173-3-1001	AFFIRM WDG	0.00	48.63	9	Polyoxin D zinc salt	3	NO	NO
68539-3	T-22G BIOLOGICAL PLANT PROTECTANT GRANULES	0.00	20.00	9	Trichoderma harzianum rifai strain KRL-AG2	3	NO	NO
53883-380	QUALI-PRO IPRO 2	78.47	0.00	8	Iprodione	3	YES	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
228-626	NUFARM T-METHYL PRO 4.5 F FUNGICIDE	39.83	0.00	8	Thiophanate-methyl	3	YES	YES
70506-114	TEBUCONAZOLE 3.6 F FUNGICIDE	16.55	0.00	8	Tebuconazole	3	YES	NO
432-890	ALIETTE WDG BRAND FUNGICIDE	0.00	330.00	8	Fosetyl-Al	3	NO	NO
228-684	NUFARM IPRODIONE SPC FUNGICIDE	90.00	0.00	7	Iprodione	3	YES	NO
70051-107-59807	TRIATHLON BA	16.78	0.00	7	Bacillus subtilis var. amyloliquefaciens strain D747	3	NO	NO
228-737	NUP-15013 Fungicide	15.40	0.00	7	Fluazinam	3	YES	NO
70870-1-68539	MILSTOP BROAD SPECTRUM FOLIAR FUNGICIDE	0.36	0.09	7	Potassium bicarbonate	3	NO	NO
100-1326	BANNER MAXX II	30.00	0.00	6	Propiconazole	3	YES	NO
42750-292	AZOXY 11% + TEB 26% FL	2.47	0.00	6	Azoxystrobin; Tebuconazole	3	YES	NO
7969-184	Insignia Fungicide	1.97	12.00	6	Pyraclostrobin	3	NO	NO
7969-255	HONOR FUNGICIDE	1.88	91.70	6	Nicobifen; Pyraclostrobin	3	YES	NO
69526-13	CIVITAS	75.00	0.00	5	Mineral oil	3	NO	NO
70506-251	T-BIRD 4.5L	56.31	0.00	5	Thiophanate-methyl	3	YES	YES
66222-41-73320	QUALI-PRO PROPICONAZOLE 14.3	38.50	0.00	5	Propiconazole	2	NO	NO
100-1433	BRISKWAY	9.53	0.00	5	Azoxystrobin; Difenoconazole	3	YES	NO
400-422-59807	TERRAZOLE L	3.22	0.00	5	Terrazole	1	YES	NO
4-62	BONIDE SULPHUR PLANT FUNGICIDE MICRONIZED SPRAY OR DUST	0.00	12.50	5	Sulfur	3	NO	NO
86064-2	ARMOR TECH CLT 720 FL	45.00	0.00	4	Chlorothalonil	2	YES	NO
264-1155-68539	CEASE	8.00	0.00	4	QST 713 strain of dried Bacillus subtilis	3	NO	NO
228-630-10404	LESCO TWOSOME FUNGICIDE	8.00	0.00	4	Iprodione; Thiophanate-methyl	3	YES	YES
62719-463	EAGLE 20EW	0.06	0.00	4	Myclobutanil	3	NO	YES
2217-1019	EF-714 FUNGICIDE	57.27	0.00	3	Tebuconazole; Isofetamid	3	YES	NO
60063-7	ECHO 720	54.30	0.00	3	Chlorothalonil	2	YES	NO
42750-99	TEBUCONAZOLE 3.6FL	16.44	0.00	3	Tebuconazole	3	YES	NO
50534-211-100	DACONIL ZN FLOWABLE FUNGICIDE	10.00	10.00	3	Chlorothalonil	2	YES	NO
71512-20-100	SECURE	9.82	0.00	3	Fluazinam	2	YES	NO
42750-255	FLUDIOXONIL 1L TURF	8.19	0.00	3	Fludioxonil	3	NO	NO
71512-13-279	SEGWAY FUNGICIDE	4.61	0.00	3	Cyazofamid	3	NO	NO



EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
66222-216	QUALI-PRO MEFENOXAM 2AQ	2.03	0.00	3	Mefenoxam	2	NO	NO
70299-15	GC PRO	0.00	700.00	3	Sodium percarbonate	1	NO	NO
70644-1-74697	NUTROL	0.00	120.00	3	Phosphoric acid, monopotassium salt	3	NO	NO
100-1347	CONCERT II	25.00	0.00	2	Propiconazole	1	YES	NO
70506-241	IPRODIONE 2F FUNGICIDE	14.25	0.00	2	Iprodione	3	YES	NO
69361-27	TEBUCONAZOLE 3.6F FUNGICIDE	14.00	0.00	2	Tebuconazole	3	YES	NO
228-623	NUFARM PROPICONAZOLE SPC 14.3 MEC FUNGICIDE	8.59	0.00	2	Propiconazole	2	YES	NO
59639-143	V-10162 VPP FUNGICIDE	3.29	0.00	2	Fluopicolide	3	NO	NO
100-892	ARBOTECT 20-S FUNGICIDE	3.11	0.00	2	Thiabendazole	3	YES	NO
228-739	NUP-15014 Fungicide	2.50	0.00	2	Tebuconazole; Fluazinam	3	YES	NO
73512-1	KEYPLEX 350	1.25	0.00	2	Brewer's yeast extract hydrolysate from Saccharomyces cerevisiae	3	NO	NO
100-796	SUBDUE MAXX	0.02	0.00	2	Mefenoxam	3	NO	NO
432-890-10404	LESCO PRODIGY SIGNATURE	0.00	66.00	2	Fosetyl-Al	3	NO	NO
53883-343-89442	AZOXY 50 WDG SELECT FUNGICIDE	0.00	4.00	2	Azoxystrobin	3	NO	NO
100-1434	MEDALLION WDG	0.00	0.09	2	Fludioxonil	3	NO	NO
464-693-63288	CHEMICAR 15	55.00	0.00	1	Glutaraldehyde	1	NO	NO
3377-78	STABROM PLUS BIOCID	35.00	0.00	1	Sodium N-bromosulfamate, mixture with sodium N-chlorosulfamate, potassium N-bromosulfamate, and potassium N-chlorosulfamate	1	NO	NO
432-1536	FLU+TFS SC 32.5	10.00	0.00	1	Trifloxystrobin; Fluopyram	3	NO	NO
100-1451	APPEAR	5.00	0.00	1	Mono- and di-potassium salts of phosphorous acid	3	NO	NO
53883-309	QUALI-PRO ENCLAVE 5.3F	4.81	0.00	1	Chlorothalonil; Thiophanate-methyl; Iprodione; Tebuconazole	3	YES	YES
50534-209-100	MANICURE 6 FLOWABLE	3.29	0.00	1	Chlorothalonil	3	YES	NO
84024-1	JUSTEQ07	3.00	0.00	1	Sodium bromide	1	NO	NO
53883-375	QUALI-PRO IPRO 2SE	2.75	0.00	1	Iprodione	3	YES	NO
70506-234	MANZATE PRO-STICK FUNGICIDE	1.50	0.00	1	Mancozeb	3	YES	NO
87290-44-86064	ARMORTECH ZOXY 2 SC	0.76	0.00	1	Azoxystrobin	3	NO	NO

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
89442-21	AZOXY 2SC SELECT	0.75	0.00	1	Azoxystrobin	3	NO	NO
84229-44	AMTIDE TEBU 3.6F FOLIAR FUNGICIDE	0.55	0.00	1	Tebuconazole	3	YES	NO
71962-1-54705	AGRI-FOS SYSTEMIC FUNGICIDE	0.50	0.00	1	Mono- and di-potassium salts of phosphorous acid	3	NO	NO
66330-379-279	DISARM +C FUNGICIDE	0.50	0.00	1	Fluoxastrobin (ISO); Chlorothalonil	3	YES	NO
400-521	TERRAGUARD SC	0.00	0.00	1	Triflumizole	3	NO	NO
70506-185	PENNZOZEB 75 DF	0.00	52.00	1	Mancozeb	3	YES	NO
7969-196	EMERALD FUNGICIDE	0.00	24.50	1	Nicobifen	2	YES	NO
62719-388	FORE 80WP RAINSHIELD	0.00	19.00	1	Mancozeb	3	YES	NO
100-1550	HERITAGE ACTION	0.00	8.00	1	Acibenzolar-S-methyl; Azoxystrobin	3	NO	NO
400-416	TERRAZOLE 35% WETTABLE POWDER	0.00	3.75	1	Terrazole	3	YES	NO
432-1371-59807	COMPASS O 50 WDG FUNGICIDE	0.00	0.38	1	Trifloxystrobin	3	NO	NO
53883-353	QUALI-PRO T-NEX	114.20	0.00	110	Trinexapac-ethyl	3	NO	NO
100-1364	DACONIL ACTION	427.49	0.00	63	Acibenzolar-S-methyl; Chlorothalonil	2	YES	NO
71065-3	COMPANION LIQUID BIOLOGICAL FUNGICIDE	327.20	0.00	54	Bacillus subtilis GBO3	3	NO	NO
432-942	BANOL TURF AND ORNAMENTAL FUNGICIDE	106.18	0.00	47	Propamocarb hydrochloride	3	NO	NO
<b>Other (Repellents, Biochemical Pesticides, Etc.)</b>								
52483-1	HYPOCHLORITE SOLUTION	80.25	0.00	50	Sodium hypochlorite	1	NO	NO
14802-8-74466	MICROBE LIFE ALGAWAY 5.4 ALGAEICIDE FOR PONDS	3.00	0.00	12	Poly(oxyethylene) (dimethylimino) ethylene (dimethylimino) ethylene dichloride	3	NO	NO
2693-193	OPTIMA-BLUE	8.25	0.00	7	Copper oxide (ous)	2	NO	NO
59807-4	HORMODIN 1	0.00	0.31	7	IBA	3	NO	NO
60061-71	PETTIT MARINE PAINT PREMIUM SINGLE SEASON ABLATIVE	10.00	0.00	5	Copper oxide (ous)	2	NO	NO
63838-5	BROMMAX 7.1	6.50	0.00	5	Sodium bromide; Sodium hypochlorite	1	NO	NO
73049-15	PROGIBB 4% PLANT GROWTH REGULATOR SOLUTION	0.00	0.00	3	Gibberellins	2	NO	NO
2693-172	AQUARIUS ANTIFOULING BOTTOM PAINT 568 NAVY BLUE	3.00	0.00	2	Copper oxide (ous)	2	NO	NO

<b>EPA Reg. #</b>	<b>EPA Product Name</b>	<b>Volume (Gals)</b>	<b>Weight (Lbs)</b>	<b>No. Appl's.</b>	<b>Active Ingredient(s)</b>	<b>EPA Tox Cat</b>	<b>EPA Carcin</b>	<b>CA Dev. Toxin</b>
60061-137	PETTIT HYDROCOAT ECO COPPER FREE MULTI-SEASON ABLATIVE	2.00	0.00	2	1H-Pyrrole-3-carbonitrile,4-bromo-2-(4-chlorophenyl)-5-(trifluoromethyl)-; Zinc 2-pyridinethiol-1-oxide	2	NO	NO
71096-7-239	ORTHO BUG-GETA SNAIL & SLUG KILLER 1	0.00	0.91	2	Metaldehyde	3	NO	NO
90930-1	MILLER HOT SAUCE	0.00	0.00	1	Capsicum oleoresin	3	NO	NO

### APPENDIX 3: Complete Listing of “Best Management Practices” Insecticides Used Citywide in 2018

EPA Reg. #	EPA Prod Name	Volume in Gallons	Weight in Pounds	Total Applications	Active Ingredient Data
432-1257	MAXFORCE ROACH BAIT F.05	12.60	528.66	13,809	Fipronil
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	483.67	12,241	Indoxacarb
432-1460	MAXFORCE FC ROACH KILLER BAIT GEL F.05	0.02	382.56	10,322	Fipronil
432-1259	PRODUCT: RBF5	0.00	463.69	9,123	Fipronil
73049-429	VECTOMAX FG	0.00	38822.49	5,209	Bacillus sphaericus; Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52
1021-2593	VENDETTA PLUS COCKROACH GEL BAIT	0.00	133.81	3,849	Avermectin; Pyriproxyfen
64405-2	REDZONE BAIT	0.00	529.94	2,850	Boric acid
73079-14	IMIDACLOPRID GRANULAR BAIT	0.00	342.56	2,278	Imidacloprid
73079-4	BORACTIN INSECTICIDE POWDER	1.46	563.02	1,744	Boric acid
100-1498	DUPONT ADVION ANT GEL	30.12	26.43	1,501	Indoxacarb
73766-1	GOURMET ANT BAIT GEL	0.00	35.19	1,046	Disodium octaborate tetrahydrate
7173-304	BROMETHALIN SOFT BAIT	0.00	154.10	792	Bromethalin
1021-2796	MGK Formula 3113	0.00	21.34	677	Clothianidin; Pyriproxyfen
89459-59	ENVI ACU CONTACT Insecticide	52.91	0.00	631	Phenylethyl propionate
64405-2	ECOLOGICAL ANT & INSECT BAIT	0.00	36.69	312	Boric acid
1021-1603	NYLAR 10EC	174.62	0.00	246	Pyriproxyfen
100-1486	DUPONT ADVION COCKROACH BAIT ARENA	0.00	4.57	197	Indoxacarb
100-1501	DUPONT ARILON INSECTICIDE	249.83	0.00	187	Indoxacarb
6218-47	SUMMIT B.T.I. BRIQUETS	0.00	145.17	181	Bacillus thuringiensis subspecies Israelensis strain BMP 144
62577-12	ECOPCO ACU	17.27	0.00	127	Phenylethyl propionate
1021-1828	MGK ROACH BAIT 2822	0.01	3.95	125	Avermectin
64405-8	NIBOR BORATE INSECTICIDE AND FUNGICIDE	163.75	5.22	121	Disodium octaborate tetrahydrate
432-1455	BES 0026 FLY SPOT BAIT	40.39	10.48	116	Imidacloprid; (Z)-9-Tricosene
100-1483	ADVION INSECT GRANULE	0.00	22.68	97	Indoxacarb
432-1506	MAXFORCE QUANTUM ANT BAIT	0.00	0.84	94	Imidacloprid
432-1375	PRE-EMPT FLY BAIT	0.00	23.58	90	Imidacloprid; (Z)-9-Tricosene
73049-20	VECTOLEX CG BIOLOGICAL LARVICIDE	0.00	15685.62	88	Bacillus sphaericus

499-370	PT 370 ASCEND FIRE ANT STOPPER BAIT	0.00	6.23	58	Avermectin
73079-6	GREEN ZONE GRANULAR BAIT	0.00	7.45	45	Boric acid
432-1262	MAXFORCE IBH10	0.44	4.29	42	Hydramethylnon
70051-2	TRIACT 70	6.93	0.00	35	Neem oil
73049-501	VBC-60394 FG BIOLOGICAL LARVICIDE FINE GRANULE	0.00	145.00	22	Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52
73079-12	SILICIDE(TM)	0.00	5.44	22	Diatomaceous earth
48813-1	SUFFOIL-X	4.69	0.00	21	Petroleum distillates
432-1255	MAXFORCE GRANULAR INSECT BAIT	0.52	0.13	20	Hydramethylnon
73049-39	DIPEL DF DRY FLOWABLE BIOLOGICAL INSECTICIDE	0.03	2.08	19	Bacillus thuringiensis, subsp. Kurstaki, strain ABTS-351, fermentation solids and solubles
499-406	AVERT PRESCRIPTION TREATMENT TC 93A BAIT	0.00	0.46	16	Avermectin
59639-96	DISTANCE INSECT GROWTH REGULATOR	0.43	0.00	14	Pyriproxyfen
64405-2	TERRO SLUG & SNAIL BAIT	0.00	0.92	14	Boric acid
62719-291	CONSERVE SC TURF AND ORNAMENTAL	0.19	0.00	13	Spinosad
100-1485	DUPONT ADVION ANT BAIT ARENA	0.00	1.66	13	Indoxacarb
432-1264	MAXFORCE FC ANT KILLER BAIT GEL	0.13	0.22	11	Fipronil
62719-523	BLACKHAWK	0.92	24.64	9	Spinosad
10163-324	M-PEDE INSECTICIDE/FUNGICIDE	0.25	0.00	8	Potassium laurate
73079-2	INTICE GRANULAR BAIT	0.02	9.50	7	Boric acid
432-1256	MAXFORCE FC ANT BAIT STATIONS	0.07	0.06	5	Fipronil
73079-10	INVICT (TM) COCKROACH GEL	0.03	0.00	5	Imidacloprid
100-1487	PROVAUNT	0.00	13.78	5	Indoxacarb
499-527	PRESCRIPTION TREATMENT BRAND ALPINE DUST INSECTICIDE	0.00	0.03	5	Dinotefuran; Diatomaceous earth
53883-335	N + P Regulator	0.03	0.00	4	Pyriproxyfen; Novaluron
100-1481	DUPONT ADVION FIRE ANT BAIT	0.00	1.13	3	Indoxacarb
241-313	SIEGE PBS GEL INSECTICIDE	0.00	1.07	3	Hydramethylnon
279-3386	DRAX ANT KIL-PF	0.00	0.12	2	Boric acid
73049-38	VECTOBAC 12AS BIOLOGICAL LARVICIDE	0.38	0.00	1	Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52
499-568	PT ALPINE PRESSURIZED FLY BAIT	0.04	0.00	1	Dinotefuran
499-515	MOTHEREARTH GRANULAR SCATTER BAIT	0.02	0.00	1	Boric acid
432-1254	MAXFORCE PROFESSIONAL INSECT CONTROL ROACH KILLER	0.00	0.03	1	Hydramethylnon
432-1258	MAXFORCE LARGE ROACH BAIT F.03	0.00	0.02	1	Fipronil