



NEW YORK CITY DEPARTMENT OF
HEALTH AND MENTAL HYGIENE

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July 13, 2017

Honorable Melissa Mark-Viverito
Speaker, New York City Council
City Hall
New York, NY 10007

Dear Speaker Mark-Viverito:

Enclosed, please find a copy of the report, Pesticide Use by New York City Agencies in 2016. This report fulfills the reporting requirement of Local Law 37 of 2005 (LL37) which was amended in October, 2007 to require a summary report of pesticides used by agencies to be prepared and submitted by the Department of Health and Mental Hygiene. For more information on LL37, please visit the website we have set up at <http://nyc.gov/health/ll37>.

If you have any questions, please contact Sam Miller, Associate Commissioner for the Office of External Affairs at (347) 396-4078.

Sincerely,

A handwritten signature in black ink that reads "Mary T. Bassett".

Mary T. Bassett, MD, MPH
Commissioner

MTB/co
Encls.



Pesticide Use by New York City Agencies in 2016

Prepared by the Division of Environmental Health,
Bureau of Environmental Surveillance and Policy
New York City Department of Health and Mental Hygiene

July, 2017

Pesticide Use by New York City Agencies in 2016

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Pesticide Use by New York City Agencies in 2016

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 New York City. New York State receives pesticide use data from all commercial applicators. Comparing New York City agencies' use in 2009 (the last year for which New York State data has been processed), local government use accounts for an estimated 3% of the total volume of liquid pesticides, and 21% of the total pounds of solid pesticides applied within the five boroughs of New York City. In 2016, 34 municipal agencies reported their pesticide use to DOHMH in a format that enabled summarization within and across agencies. This report summarizes pesticides applied by or on behalf of agencies on city-owned or -leased property.

Key findings include:

- Pesticides were applied a total of 237,812 times by New York City agencies in 2016. Agencies used a total of 6,711 gallons of liquid and 163,182 pounds of solid pesticide products (Table 1).
- As in previous years, roaches were the most commonly targeted pests in 2016, with rats, mice, bed bugs and moquitos making up the top 5 targets (by total number of applications in descending order) (Table 3).
- Most liquid pesticide products (45% by volume) used by City Agencies were fungicides, while most solid products (59% 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 (53% by weight) were rodenticides.
- Insecticides
 - Insecticides were the most frequently applied type of pesticide, accounting for 66% of all applications (Table 1).
 - There was a 64% increase in the volume of liquid insecticides used in 2016, compared with 2015 (Figure 2). Nearly two thirds of this increase was due to increased use of pyrethroids by NYCHA to control bed bugs and cockroaches (Figure 6). This increase can be attributed to NYCHA's increase of proactive exterminations to address health and safety issues for tenants.
 - Liquid pyrethroid products targeting cockroaches – specifically – increased 92% from 2015 to 2016, reversing a recent declining trend since 2012. Treatments targeting bedbugs also increased to a lesser degree (Figure 6).
 - The use of solid mosquito larvicide almost doubled by weight compared with 2015. This increase was due to preventive treatments by the DOHMH Vector Control Program to target container-breeding mosquito species that may carry the

Zika virus. Based on extensive mosquito surveillance in 2016, the Health Department does not expect local Zika transmission.

- Herbicides
 - Liquid herbicide product use continued to decline in 2016 (Figure 2). Volume declined 25% mostly due to reduced use of glyphosate products (Figure 3).
 - However, use of solid herbicide products in 2016 was 2.5 times higher than the use in 2015, due to increased use of outdoor granular turf formulations, mainly on golf courses and large institutional lawns.
 - The Parks Department continued to no longer apply pre-emergent herbicides near roadways and along walkways and perimeters of city parks.
- “Best Management Practices” (BMP)
 - BMP products (Appendix 3) are largely gel and bait insecticides with little potential for human exposure. They accounted for 29% of the number of insecticide applications in 2016. BMP applications to treat cockroaches increased 63%, compared with 2015 (Figure 4).
- Rodenticides
 - Use of solid rodenticide products increased 25% by weight, compared with 2015. This increase is due to a 63% rise in the number of applications associated with expansion of neighborhood rat ‘indexing’ and control (Figure 1).

Pesticide Use by New York City Agencies in 2016

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 on annual basis. With the enactment of Local Law 37 in May 2005, 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 possible, probable or known human carcinogens was prohibited. And by November 2006, use of pesticides classified by the State of California’s Office of Environmental Health Hazard Assessment 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 for DOHMH to issue a summary report to the City Council and the Mayor. This is the tenth 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, just three agencies provided data in an electronic format that enabled data to be summarized. In 2016, Thirty four 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 Department for pesticides applied during calendar year 2016. 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. In August 2008, DOHMH launched the import function of NYCPURS, permitting importation of data maintained by other electronic systems, and since then more agencies and their contractors have used this system.

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, and the date and location the product was applied. 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/1137>.

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 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.

Where DOHMH was able to evaluate the completeness of these records, it is 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 from 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 in 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:

- The formats used were more streamlined for 2016 and we were able to capture more information pertaining to the target organisms of the pesticides applied by agencies.
- Reporting errors, especially in reporting the incorrect units, were greatly reduced in 2016 due to greater use of the NYCPURS system with input standardization and consistent formatting.

In 2016, 95% 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/1137>.

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. Some common rodenticide products used by agencies in 2016 were: Contrac All-Weather Blox®, Contrac Rodenticide®, Weatherblok Bait with Bitrex® and Difethialone Paste Place Packs®.

In 2016, a total of 39,275 pounds of rodenticides were applied by City agencies, accounting for 24% by weight of all pesticides applied, and 53% by weight when excluding mosquito larvicides (Table 1).

Insecticides

A total of 2,270 gallons and 95,694 pounds of insecticides were applied by New York City in 2016, accounting for 34% by volume, and 59% by weight of the total applications. Biological insecticides applied to target mosquito larvae account for 93% of insecticides by weight (Table 1). When those products are excluded, 6,675 pounds of insecticides by weight were applied making up 9% of solid pesticides applied. Insecticides used by NYC agencies in 2016 fell largely into three classes of products: conventional pyrethrins and pyrethroids, organophosphates and carbamates, and “Best Management Practices” 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 2016 include Whitmere Optem ME PT 600®, Steri-Fab®, Demand CS Insecticide®, Temprid SC Insecticide®, Suspend SC Insecticide® and Evercide Esfenvalerate 6% CS®.

Together, pyrethrins and pyrethroids accounted in 2016 for 63% of total liquid insecticides applied by volume and 4% of solid insecticides by weight, 52% by weight when excluding mosquito larvicides. These products made up 67% of the total number of insecticide applications. There was a 67% increase in pyrethroids applied by volume in 2016, due to increased applications by NYCHA targeting bedbugs and roaches.

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 2016 were outdoor applications of chlorpyrifos, acephate, and trichlorfon on certain golf courses which are exempt from use prohibitions. The only carbamate active ingredient used in 2016 was methomyl used in containerized baits. Organophosphate and carbamate products applied by agencies in 2016 include Orthene PCO Formula II®, Chlorpyrifos 4E AG®, Dylox 420 SL Turf and Ornamental Insecticide®, and Golden Malrin RF-128 Fly Killer®.

Reports submitted by agencies showed that in 2016, the use of organophosphates and carbamates accounted for just 3% of total liquid insecticides applied by agencies by volume -- a 26% decrease from 2015 levels and <1% of total solids by weight, 1% by weight excluding mosquito larvicides. These products remain a very small percentage of the insecticides used by city agencies, making up <1% of the total number of insecticide applications.

“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 program 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®, Vectobac CG Biological Larvicide Granules®, VBC-60394 FG Biological Larvicide Fine Granule®, MGK Roach Bait 2822®, and DuPont Advion Cockroach Gel Bait®.

In 2016 26% of the total insecticides applied by volume, and 95% by weight, were insecticidal dusts, gels and baits, or biological larvicides. Excluding mosquito larvicides, the totals equal 31% of solid insecticide products by weight. These products made up 29% of the total number of insecticide applications, a 66% increase compared with 2015.

Herbicides

The herbicides used by New York City agencies in 2016 were used primarily for vegetation control in parks and for the maintenance of highways and street medians. The active ingredients most commonly used in 2016 were glyphosate, dinitroanilines, chlorophenoxyacetic acids and ureas. Herbicides were a major contributor of pesticide use by agencies.

A total of 1,150 gallons and 21,598 pounds were applied, accounting for 17% of total volume and 13% of total weight, 29% when excluding mosquito larviciding, of all pesticides reported by weight in 2016. (Table 1)

Glyphosate

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.” 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 in developing severe kidney damage in agricultural workers. Currently no regulatory determination has been made at the federal or NY State level 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 2016, 53% of liquid herbicide use (by volume) contained glyphosate (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, benefin, benfluralin and proflaminate. Dinitroaniline products used by agencies in 2016 included Andersons Weed & Grass Preventer With 5% Trammel Herbicide® and Alligare Proflaminate 65 WG Herbicide®. In 2013, the Parks Department chose to no longer use pendimethalin-

containing herbicides, after they had in previous years requested a waiver to use this herbicide around cobblestones and concrete surfaces of sidewalks or walkways in areas adjacent to roadways, such as park perimeters or “Greenstreets” or in areas adjacent to roadways with limited access from the public.

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 - mecroprop-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 2016 were Riverdale Vanquish Herbicide® and Lesco Three-Way Bentgrass Selective Herbicide®. In 2016, 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 certain chronic risks. Classification as a possible human carcinogen varies within the group. Diuron, a urea herbicide among the five most heavily used herbicides reported by commercial applicators in the private market in the City in 2009 (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 in 2016 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 2016 were Dupont Oust Extra Herbicide®, Dupont Viewpoint Herbicide® and Nufarm Prosedge Selective Herbicide ®. In 2016, 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 2016 were chlorothalonil, thiophanate-methyl, propiconazole, azoxystrobin, iprodione and triadimefon. Common fungicide products applied in 2016 include Daconil Action®, Heritage Fungicide®, Bayleton Flo Turf and Ornamental Fungicide ® and Lesco Twosome Fungicide®.

Fungicides represented less than 1% of the total number of pesticide applications in 2016, but they made up 48% of total volume of liquid pesticides applied; they made up 4% of total weight of solid products, and 9% 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 measured as volume in gallons. Quantities for solid applications are measured as weight in pounds. Pesticides were applied a total of 237,812 times by New York City agencies in 2016, nearly double the 2015 number, with large increases in the number of applications targeting roaches and mosquito larvae. The pesticides applied most frequently by New York City agencies were insecticides. Insecticides were the most heavily used solid products (59% by weight), and fungicides were the most heavily used liquid (54% by volume). In 2016, 93% 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. If we exclude these products -- used as part of mosquito-borne disease control programs -- then only 9% of total solid pesticides by weight were insecticides, and 53% were rodenticide. The majority of rodenticide applied by the City of New York is placed directly into rat burrows and poses little risk of exposure to the public. Table 1, below, summarizes these findings in order of descending number of applications by pesticide type.

Table 1. Total Applications Reported Applied by NYC Agencies in 2016, by Pesticide Type

Pesticide Type	Volume		Weight			Times Applied	
	Gallons	% of Total	Pounds	% of Total	% wo WNV	Number	% of Total
Rodenticide	8.31	0.1%	39,274.74	24.1%	53.0%	75,551	31.8%
Insecticide	2,269.69	33.8%	95,694.09	58.6%	9.0%	158,002	66.4%
Herbicide	1,150.42	17.1%	21,597.70	13.2%	29.1%	3,293	1.4%
Fungicide	3,070.01	45.7%	6,614.81	4.1%	8.9%	901	0.4%
Other	213.00	3.2%	0.76	0.0%	0.0%	65	0.0%
Totals:	6,711.42		163,182.09			237,812	Totals:

Table 2, below lists the ten most frequently used products used for each pesticide type on New York City owned or leased property in 2016. 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 by EPA a known, possible or suspect carcinogen, 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 label requires 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. Both toxicity categories 3 and 4 carry the signal word "Caution." A complete list of products used by New York City by pesticide class is included in Appendix 1.

Table 2. Ten Most Frequently Applied Pesticide Products by NYC Agencies in 2016 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
Rodenticides								
7173-258	DIFETHIALONE PASTE PLACE PACKS	4.74	9,335.70	34,772	Difethialone	3	NO	NO
12455-69	CONTRAC RODENTICIDE	0.00	11,586.68	11,910	Bromadiolone	3	NO	NO
12455-90	FINAL RODENTICIDE	0.00	5,691.60	7,281	Brodifacoum	3	NO	NO
12455-133	CONTRAC WITH LUMITRACK	0.00	1,474.99	4,533	Bromadiolone	3	NO	NO
12455-86	CONTRAC RODENTICIDE PLACE PAC	0.63	2,350.69	4,196	Bromadiolone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	3,564.37	3,728	Bromadiolone	3	NO	NO
12455-56	DITRAC TRACKING POWDER	0.00	2,007.62	2,452	Diphacinone	2	NO	NO
7173-297	BROMADIOLONE PASTE 0901	0.00	579.44	1,997	Bromadiolone	3	NO	NO
100-1055	WEATHERBLOK BAIT WITH BITREX	0.00	507.31	1,098	Brodifacoum	3	NO	NO
12455-36	CONTRAC RAT AND MOUSE BAIT	0.00	988.53	1,074	Bromadiolone	3	NO	NO
Insecticides								
432-763	SUSPEND SC INSECTICIDE	593.69	47.76	69,970	Deltamethrin	3	NO	NO
432-1483	TEMPRID SC INSECTICIDE	103.68	0.05	19,254	Cyfluthrin, beta; Imidacloprid	3	NO	NO
432-1259	PRODUCT: RBF5	0.00	377.10	7,426	Fipronil	3	YES	NO
432-1460	MAXFORCE FC ROACH KILLER BAIT GEL F.05	0.57	281.61	7,321	Fipronil	3	YES	NO
499-304	WHITMIRE OPTEM ME PT 600	55.41	0.00	7,092	Cyfluthrin	3	NO	NO
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	191.16	5,303	Indoxacarb	3	NO	NO
73049-501	VBC-60394 FG BIOLOGICAL LARVICIDE FINE GRANULE	0.00	12,530.54	5,221	Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52	3	NO	NO
73049-429	VECTOMAX FG	0.00	33,329.42	4,957	Bacillus sphaericus; Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52	3	NO	NO
432-1257	MAXFORCE ROACH BAIT F.05	8.06	185.33	3,869	Fipronil	3	YES	NO
2724-351	ZOECON RF-259 EMULSIFIABLE CONCENTRATE	26.40	0.00	3,407	(7S)-Hydroprene	3	NO	NO
Herbicides								

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
524-579	ROUNDUP PROMAX	272.6758794	6.366875	1017	Glyphosate, potassium salt	3	NO	NO
62719-556	ACCORD XRT II	217.5204358	0	544	Glyphosate, dimethylammonium salt	3	NO	NO
62719-527	GARLON 4 ULTRA	56.26458795	0	348	Triclopyr	2	NO	NO
228-397	RIVERDALE VANQUISH HERBICIDE	33.242625	0	201	Dicamba, diglycolamine salt	3	NO	NO
432-1580	DUPONT VIEWPOINT HERBICIDE	0.1328125	21.375	178	Aminocyclopyrachlor; Imazapyr; Metsulfuron-methyl	3	NO	NO
62719-176	PATHFINDER II	84.875	0	170	Triclopyr, butoxyethyl ester	3	NO	NO
432-1516	ESPLANADE 200 SC	3.9765625	0	148	Indaziflam	3	NO	NO
62719-324	GLYPRO	28.9712664	0	132	Glyphosate, isopropylamine salt	3	NO	NO
100-937	PRIMO MAXX	20.121125	0	53	Trinexapac-ethyl	3	NO	NO
524-529	ROUNDUP PRO CONCENTRATE	39.46914063	0	46	Glyphosate, isopropylamine salt	3	NO	NO
Fungicides								
100-1364	DACONIL ACTION	570.57	0.02	101	Acibenzolar-S-methyl; Chlorothalonil	2	YES	NO
71065-3	COMPANION LIQUID BIOLOGICAL FUNGICIDE	347.30	0.00	57	Bacillus subtilis GBO3	3	NO	NO
100-1093	HERITAGE FUNGICIDE	0.00	118.28	54	Azoxystrobin	3	NO	NO
79676-17	LESCO TWOSOME FUNGICIDE	105.00	0.00	40	Iprodione; Thiophanate-methyl	3	NO	NO
55260-9	PROPLANT TURF AND ORNAMENTAL FUNGICIDE	94.40	0.00	36	Propamocarb hydrochloride	3	NO	NO
432-942	BANOL TURF AND ORNAMENTAL FUNGICIDE	78.75	0.00	32	Propamocarb hydrochloride	3	NO	NO
432-1445	BAYLETON FLO TURF AND ORNAMENTAL FUNGICIDE	25.89	0.00	28	Triadimefon	3	YES	YES
70127-2	NOVOZYMES BIOFUNGICIDE GREEN RELEAF 710-140	95.60	0.00	20	Bacillus licheniformis SB3086; IBA	3	NO	NO
264-1155	RHAPSODY AS0	177.60	0.00	19	QST 713 strain of dried Bacillus subtilis	3	NO	NO
432-1446	TARTAN FLO FUNGICIDE	41.58	0.00	19	Triadimefon; Trifloxystrobin	3	YES	YES
Other								

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
52483-1	HYPOCHLORITE SOLUTION	155.50	0.00	25	Sodium hypochlorite	1	NO	NO
60061-71	PETTIT MARINE PAINT PREMIUM SINGLE SEASON ABLATIVE	35.00	0.00	24	Copper oxide (ous)	2	NO	NO
59807-4	HORMODIN 1	0.00	0.26	6	IBA	3	NO	NO
73049-15	PROGIBB 4% PLANT GROWTH REGULATOR SOLUTION	0.00	0.00	4	Gibberellins	2	NO	NO
63838-5	CHEM-AQUA 42171	7.50	0.00	2	Sodium bromide; Sodium hypochlorite	1	NO	NO
71096-7	ORTHO BUG-GETA SNAIL & SLUG KILLER 1	0.00	0.50	2	Metaldehyde	3	NO	NO
1448-212	CHEMICIDE 100-15	12.00	0.00	1	Poly(oxyethylene) (dimethylimino) ethylene (dimethylimino) ethylene dichloride	3	NO	NO
58616-1	PCT 3026	3.00	0.00	1	Sodium bromide; Sodium hypochlorite	1	NO	NO

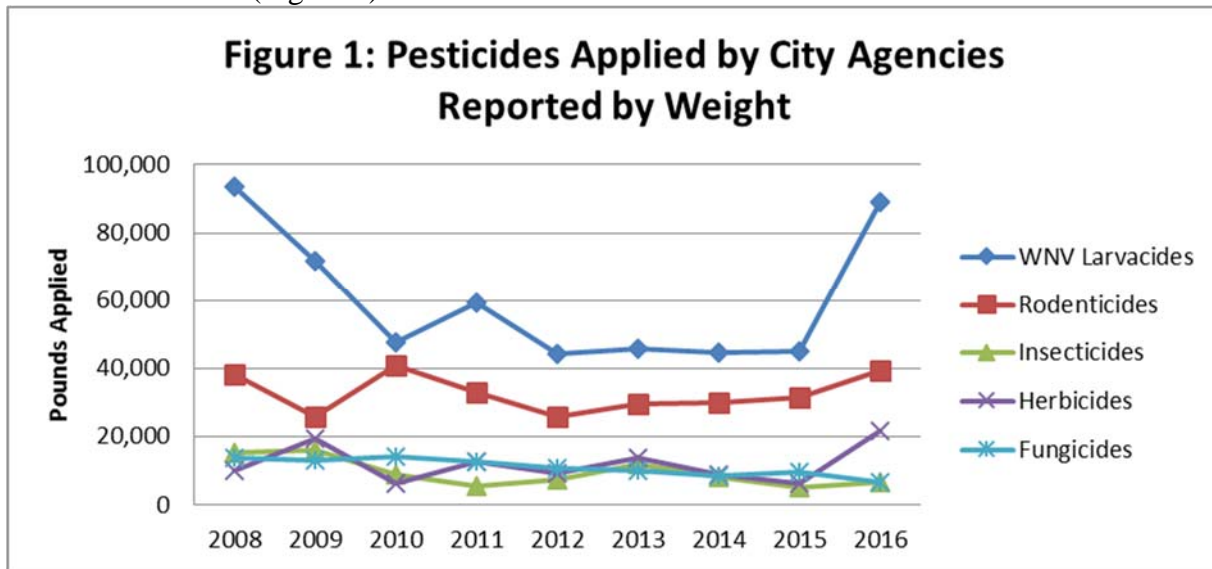
C. CHANGES IN PESTICIDE USE

The level of completeness of agency pesticide reporting has improved dramatically over the past ten years. Having a sufficiently complete record of pesticide applications by the City of New York and its contractors has now made it possible for a year-to-year comparison of trends in pesticide use by city agencies. Some of the analyses of these trends have used target pest to stratify the application amounts. A complete listing of application amounts by target pest is listed in Table 3.

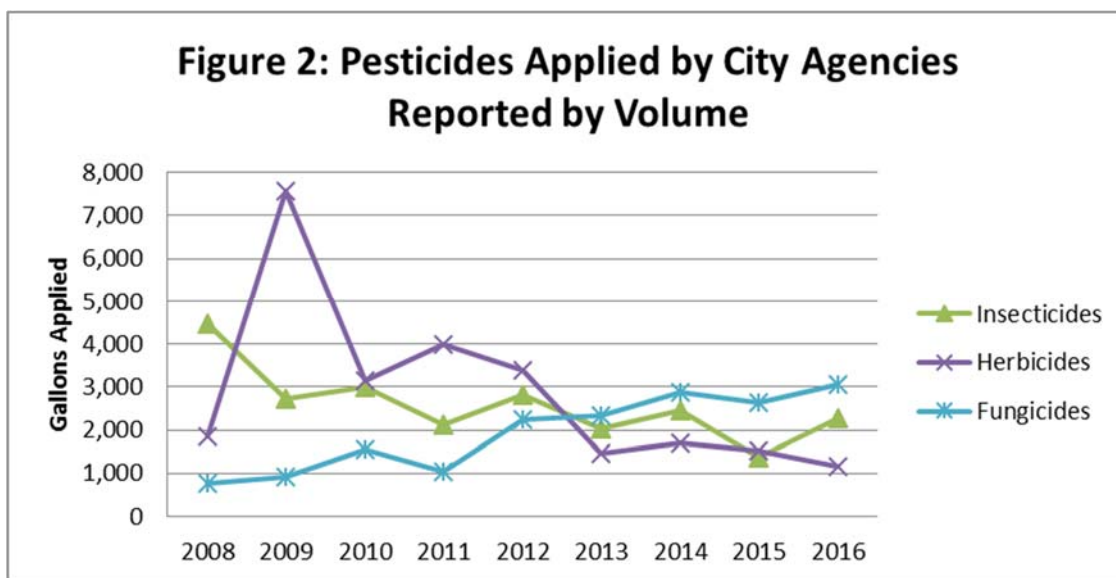
Table 3: Complete listing of pesticide applications by New York City Agencies by Target Pest, 2016

Target Pest	Volume in Gallons	Weight in Pounds	Total Applications	% of Total Applications
Roaches	997	2,083	119,944	50%
Rats	3	31,452	46,291	19%
Mice	10	7,769	29,305	12%
Bedbugs	528	12	16,029	7%
Mosquitoes	8	93,170	12,570	5%
Other Crawling Insects	169	53	3,706	2%
Weeds, vines, or grasses	1,150	21,598	3,293	1%
Flying insects	423	130	2,566	1%
Ants	58	153	2,324	1%
Fungal Disease or Infestation	3,070	6,615	901	0%
Other Pests	295	145	881	0%
Other Rodents	0	3	2	0%
Totals:	6,711	163,182	237,812	

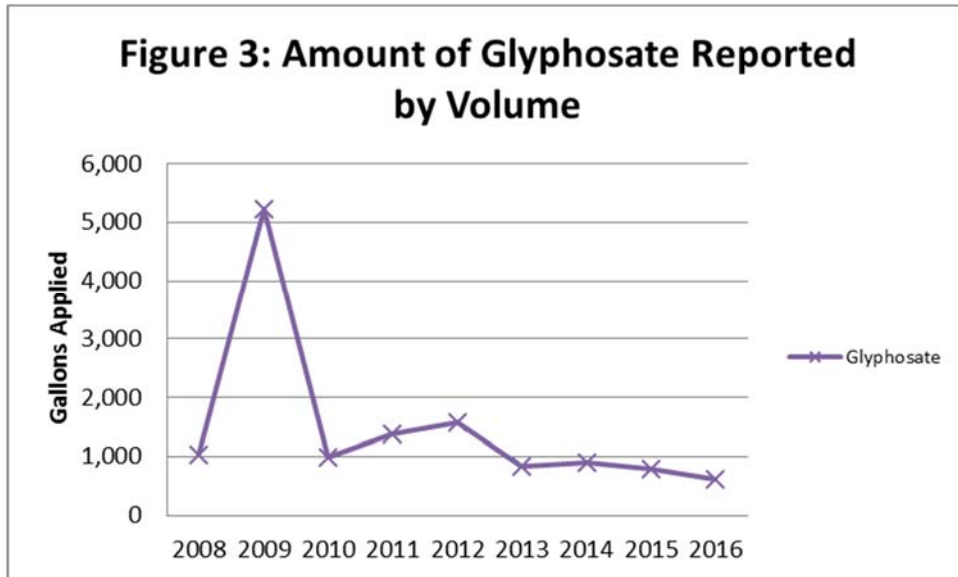
Figures 1 and 2 show trends from 2008 through 2016 in use of pesticides by city agencies by type of pesticide, with solid and liquid products reported by weight and volume, respectively. In Figure 1, DOHMH mosquito control program larvicides are charted separately from other insecticides because they represent a large proportion of city insecticide use, and because their year-to-year use varies more with weather than other insecticides. Use of solid larvicide and herbicide products showed a considerable increase (by weight) from 2015 to 2016, with an overall 68% increase in use of all pesticides reported by weight. The increase was partly driven by a 98% increase from levels reported in 2015 of solid insecticides. This increase was due to prophylactic treatments by DOHMH vector control to target container breeding mosquito that may carry the Zika virus. The increase of 2.5 times the amount of solid herbicide was due to the increased use of outdoor granular turf formulations, mainly on golf courses and large institutional lawns (Figure 1).



Rodenticides and mosquito larvicides are not included in Figure 2 as the products are almost exclusively solid formulations.



In 2016 overall, liquid herbicide use decreased 25% by volume (Figure 2) due to a 24% decrease in gallons of glyphosate applied (Figure 3). 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. Forest restoration work by Parks and their contractors accounts for approximately one third of the city's glyphosate use.

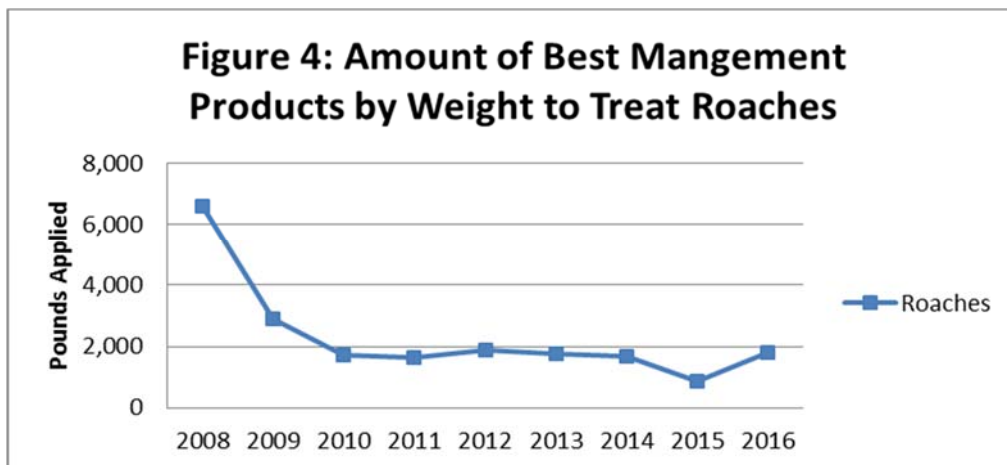


There was also a 64% increase in liquid insecticide use, reported by volume, driven by an increase at NYCHA of roach and bedbug applications, further discussed below. Fungicides reported by volume increased by 17% in 2016.

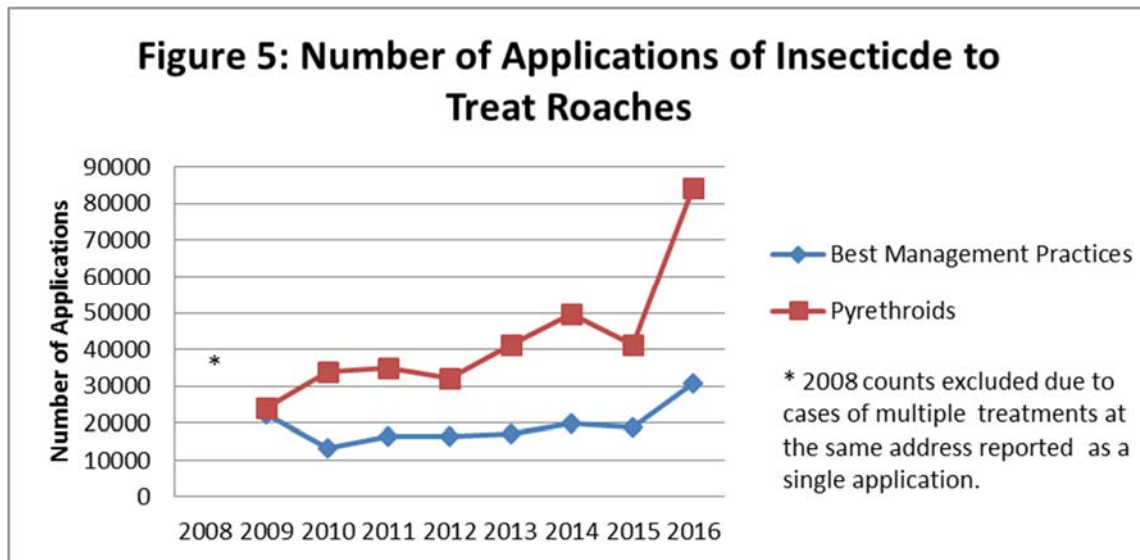
From 2008 to 2016, there was a 49% decrease in the volume of liquid insecticides used, with most of the change occurring between 2008 and 2009 (Figure 2). There had been a fairly consistent decline in larvacide use until a spike in 2016 to only 5% below the previous high point in 2008 due to the broader larvacide application plan in response to the threat of Zika virus (Figure 1).

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 has leveled off (Figure 4).

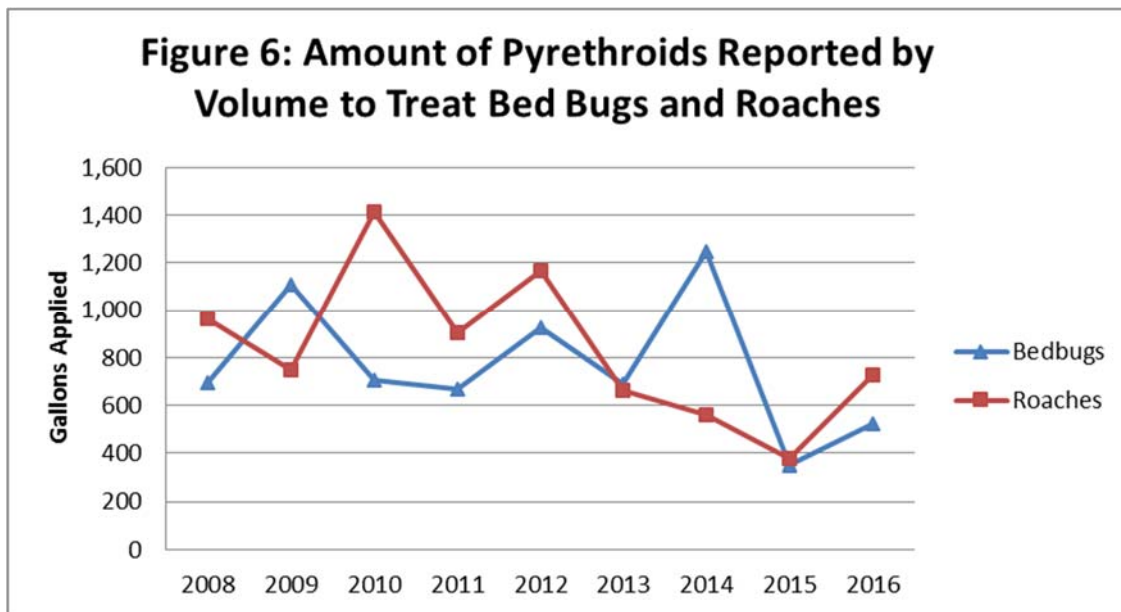


There was a doubling in the number of pyrethroid applications to treat roaches from 2015 to 2016, while the number of applications of BMP products increased by 63% (Figure 5). These increases in applications numbers for both pyrethroids and best management products corresponded to higher application amounts by volume and weight, respectively (Figure 4 and Figure 6). In 2016, pyrethroid applications by NYCHA had a slightly smaller average amount of product used per application, compared with average amount used in 2015, suggesting a tendency to report application by individual residence rather than by building or floor of NYCHA residences. However, the overall use of both classes of insecticides was clearly higher in 2016 than in 2015. This increase can be attributed to NYCHA’s increase of proactive exterminations to address health and safety issues for tenants. In addition to a roll-out of a new extermination program, NYCHA has re-instituted the practice of routine extermination treatments throughout the developments, and in 2016, conducted more preventative treatments and aggressive mitigation for infestation work orders than in years past.



Bed Bugs vs. Roaches

Use of pyrethroid spray products targeting roaches increased 92% by volume, and number of applications doubled from 2015 to 2016 (Figure 5 and Figure 6). There was also a 49% increase from 2015 to 2016 in gallons of pyrethroids used by city agencies to treat bed bugs (Figure 6). Citywide, the number of pyrethroid applications to treat bed bugs increased 62% in 2016, mostly due to an increase in the number of applications for bed bugs reported by NYCHA (data not shown). However, total volume of use for control of bed bugs and cockroaches remains well below totals seen in some previous years.



Rodents

Rodenticide use has remained steady in the last few years with only a modest 25% increase in 2016 by weight (Figure 1). There was also an increase of 63% in the number of rodenticide applications. This comes after greater year-to-year variability in earlier years 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 89,019 pounds of mosquito larvicide and 3,249 pounds of adulticide in 2016. This was close to double the larvicide reported by weight in 2015 (Figure 1). This increase was due to new practices to target a mosquito species that may carry Zika virus. Based on extensive mosquito surveillance in 2016, the Health Department does not expect local Zika transmission. Nevertheless, the agency will continue to monitor mosquito populations across the five boroughs, especially the populations which commonly carry mosquito-borne illnesses such as the West Nile virus. The amount of adulticide applied by DOHMH has varied year-to-year, depending on weather and severity of mosquitoes. Volume of liquid adulticide use increased only 9% in 2016, compared with 2015 (data not shown).

D. SUMMARY OF AGENCIES' PESTICIDE USE

For each reporting agency, we summarize below 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, Children’s Services 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 2016, primarily at facilities previously under management of the DJJ.

Table 4: Types of Pesticides Used by ACS in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	33.4	87.2%	132	31.9%
Insecticide	0.0	0.0%	4.9	12.8%	282	68.1%
Totals	0.0		38.3		414	

Table 5: Pesticide Products Used by ACS in 2016

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
Rodenticides								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	14.88	84	Difethialone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	18.50	48	Bromadiolone	3	NO	NO
Insecticides								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	2.61	228	Indoxacarb	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.15	29	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	2.13	25	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. It 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 by their 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 2016.

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 2016.

Table 6: Types of Pesticides Used by BPL in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	82.2	58.3%	260	21.4%
Insecticide	0.0	100.0%	58.8	41.7%	957	78.6%
Totals	0.0		141.0		1,217	

Table 7: Pesticide Products Used by BPL in 2016 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
Rodenticides								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	78.04	253	Difethialone	3	NO	NO
7173-113	ROZOL TRACKING POWDER	0.00	4.13	7	Chlorophacinone	2	NO	NO
Insecticides								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	14.44	628	Indoxacarb	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	7.70	210	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	23.81	51	Boric acid	3	NO	NO
432-763	SUSPEND SC INSECTICIDE	0.03	0.00	23	Deltamethrin	3	NO	NO
432-1483	TEMPRID SC INSECTICIDE	0.01	0.00	19	Cyfluthrin, beta; Imidacloprid	3	NO	NO
279-9554	CB INSECTICIDE WITH DELTAMETHRIN	0.00	9.69	12	Deltamethrin	3	NO	NO
432-1455	BES 0026 FLY SPOT BAIT	0.00	0.31	5	Imidacloprid; (Z)-9-Tricosene	3	NO	NO
1021-1815	EVERCIDE ESFENVALERATE 6.4% CS	0.00	0.00	4	Esfenvalerate	3	NO	NO
279-3384	ROACH KIL COMMERCIAL	0.00	2.81	2	Boric acid	3	NO	NO
100-1485	DUPONT ADVION ANT BAIT ARENA	0.00	0.06	2	Indoxacarb	3	NO	NO
1021-1641	CONQUER RESIDUAL INSECTICIDE CONCENTRATE	0.00	0.00	1	Esfenvalerate	3	NO	NO

Board of Elections

The Board of Elections is the administrative body that oversees elections through its staff at its main and five borough offices. The agency contracts for pest control through the city-wide contract administered by DCAS. Table 8 summarizes pesticide use by pesticide type. Table 9 lists all pesticide products used by BOE in 2016.

Table 8: Types of Pesticides Used by BOE in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	1.2	75.6%	3	15.8%
Insecticide	0.0	0.0%	0.4	24.4%	16	84.2%
Totals	0.0		1.6		19	

Table 9: Pesticide Products Used by BOE in 2016 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
Rodenticides								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	0.29	2	Difethialone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	0.94	1	Bromadiolone	3	NO	NO
Insecticides								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	0.02	13	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	0.38	3	Boric acid	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 city-wide contract administered by DCAS. Table 10 summarizes pesticide use by pesticide type. Table 11 lists all pesticide products used by OCME in 2016.

Table 10: Types of Pesticides Used by OCME in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	16.0	96.6%	14	23.7%
Insecticide	0.0	0.0%	0.6	3.4%	45	76.3%
Totals	0.0		16.5		59	

Table 11: Pesticide Products Used by OCME in 2016

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
Rodenticides								
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	15.63	12	Bromadiolone	3	NO	NO
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	0.33	2	Difethialone	3	NO	NO
Insecticides								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	0.29	35	Indoxacarb	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.04	7	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	0.23	3	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 contracts for pest control services through private vendors. The data reported is information 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 2016.

Table 12: Types of Pesticides Used by CUNY in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.9	6.3%	121.7	8.3%	414	40.9%
Insecticide	9.9	66.6%	23.3	1.6%	585	57.7%
Herbicide	4.0	27.1%	1320.0	90.1%	14	1.4%
Totals	14.8		1,465.0		1,013	

Table 13: Pesticide Products Used by CUNY in 2016 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
Rodenticides								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.05	51.90	274	Difethialone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	36.44	39	Bromadiolone	3	NO	NO
100-1055	WEATHERBLOK BAIT WITH BITREX	0.00	19.43	34	Brodifacoum	3	NO	NO
12455-36	CONTRAC RAT AND MOUSE BAIT	0.00	3.81	28	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
7173-297	BROMADIOLONE PASTE 0901	0.00	7.06	17	Bromadiolone	3	NO	NO
12455-86	CONTRAC RODENTICIDE PLACE PAC	0.63	0.55	11	Bromadiolone	3	NO	NO
47629-16	PRESCRIPTION TREATMENT BRAND SOREXA BLOCKS	0.17	0.00	5	Difenacoum	3	NO	NO
12455-80	DITRAC ALL-WEATHER BLOX	0.00	2.50	3	Diphacinone	3	NO	NO
12455-91	FINAL RODENTICIDE READY-TO-USE PLACE PAC	0.05	0.00	1	Brodifacoum	3	NO	NO
47629-17	PRESCRIPTION TREATMENT BRAND SOREXA PELLETT PLACE PACK	0.02	0.00	1	Difenacoum	3	NO	NO
12455-56	DITRAC TRACKING POWDER	0.00	0.03	1	Diphacinone	2	NO	NO
Insecticides								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	5.39	239	Indoxacarb	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	2.91	102	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	13.19	78	Boric acid	3	NO	NO
1021-1815	EVERCIDE ESFENVALERATE 6.4% CS	0.08	0.00	69	Esfenvalerate	3	NO	NO
432-1262	MAXFORCE IBH10	1.03	0.00	36	Hydramethylnon	3	YES	YES
432-1255	MAXFORCE GRANULAR INSECT BAIT	0.37	0.00	12	Hydramethylnon	3	YES	YES
73079-10	INVICT (TM) COCKROACH GEL	0.03	0.00	6	Imidacloprid	3	NO	NO
100-1066	DEMAND CS INSECTICIDE	0.10	0.00	5	Cyhalothrin, lambda	3	NO	NO
432-1483	TEMPRID SC INSECTICIDE	0.00	0.00	4	Cyfluthrin, beta; Imidacloprid	3	NO	NO
432-1257	MAXFORCE ROACH BAIT F.05	8.06	0.01	3	Fipronil	3	YES	NO
1021-1828	MGK ROACH BAIT 2822	0.00	0.28	3	Avermectin	3	NO	NO
432-1259	PRODUCT: RBF5	0.00	0.06	3	Fipronil	3	YES	NO
279-3443	D-FOAM INSECTICIDE	0.06	0.00	2	Deltamethrin	3	NO	NO
499-515	MOTHEREARTH GRANULAR SCATTER BAIT	0.04	0.00	2	Boric acid	3	NO	NO
73079-2	INTICE GRANULAR BAIT	0.03	0.00	2	Boric acid	3	NO	NO
499-444	WHITMIRE MICRO-GEN TC 164	0.02	0.31	2	Pyrethrins; Piperonyl butoxide	3	YES	NO
432-1264	MAXFORCE FC ANT KILLER BAIT GEL	0.00	0.06	2	Fipronil	3	YES	NO
432-1304	TEMPO 10 WP INSECTICIDE	0.00	0.04	2	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
100-1486	DUPONT ADVION COCKROACH BAIT ARENA	0.00	0.04	2	Indoxacarb	3	NO	NO
432-772	DELTA DUST	0.00	0.01	2	Deltamethrin	3	NO	NO
432-1256	MAXFORCE FC ANT BAIT STATIONS	0.05	0.00	1	Fipronil	3	YES	NO
499-496	PRESCRIPTION TREATMENT BRAND ADVANCE 360A DUAL CHOICE ANT BAIT STATIONS	0.01	0.00	1	Avermectin	3	NO	NO
432-763	SUSPEND SC	0.00	0.00	1	Deltamethrin	3	NO	NO
432-763	SUSPEND SC INSECTICIDE	0.00	0.00	1	Deltamethrin	3	NO	NO
2724-469	ZOECON (S)-HYDROPRENE ROACH CONTROL STATION II	0.00	0.00	1	(7S)-Hydroprene	3	NO	NO
279-9554	CB INSECTICIDE WITH DELTAMETHRIN	0.00	0.88	1	Deltamethrin	3	NO	NO
100-1485	DUPONT ADVION ANT BAIT ARENA	0.00	0.04	1	Indoxacarb	3	NO	NO
432-1531	BES0600 INSECTICIDE	0.00	0.03	1	Clothianidin	0	NO	NO
432-1455	BES 0026 FLY SPOT BAIT	0.00	0.02	1	Imidacloprid; (Z)-9-Tricosene	3	NO	NO
Herbicides								
71995-29	ROUNDUP WEED & GRASS KILLER CONCENTRATE PLUS	4.02	0.00	6	Glyphosate, isopropylamine salt; Diquat dibromide	3	NO	NO
9198-237	THE ANDERSONS WEED & GRASS PREVENTER WITH 5% TRAMMEL HERBICIDE (DISPER	0.00	200.00	5	Trifluralin	3	YES	NO
961-362	LEBANON FERTILIZER WITH BARRICADE (0.43%) PREEMERGENCE WEED CONTROL (0.00	800.00	2	Prodiamine	3	YES	NO
62719-590	LEBANON PROSCAPE FERTILIZER WITH LOCKUP	0.00	320.00	1	2,4-D; Dicamba; Penoxsulam	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 city-wide contract for

Pesticide Use by NYC in 2016

pest management services which city agencies can buy into. This contract is effective from May 1, 2015 to April 30, 2017. Several agencies are housed in DCAS managed buildings and the report submitted reflects these applications. Table 14 summarizes pesticide use by pesticide type. Table 15 lists all pesticide products used by DCAS in 2016.

Table 14: Types of Pesticides Used by DCAS in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	378.1	97.1%	300	42.7%
Insecticide	0.0	100.0%	11.3	2.9%	402	57.3%
Totals	0.0		389.4		702	

Table 15: Pesticide Products Used by DCAS in 2016 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
Rodenticides								
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	337.23	149	Bromadiolone	3	NO	NO
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	39.04	137	Difethialone	3	NO	NO
12455-36	CONTRAC RAT AND MOUSE BAIT	0.00	1.81	14	Bromadiolone	3	NO	NO
Insecticides								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	3.87	315	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	6.65	44	Boric acid	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.36	40	Indoxacarb	3	NO	NO
432-763	SUSPEND SC INSECTICIDE	0.00	0.00	1	Deltamethrin	3	NO	NO
432-772	DELTA DUST	0.00	0.31	1	Deltamethrin	3	NO	NO
432-1455	BES 0026 FLY SPOT BAIT	0.00	0.13	1	Imidacloprid; (Z)-9-Tricosene	3	NO	NO

Consumer Affairs, Department

The Department of Consumer Affairs (DCA) is responsible for enforcing the city's consumer protection laws, licensing businesses, dealing with consumer complaints, and participating in consumer education. It ensures that New York City's consumers and businesses benefit from a fair and vibrant marketplace. DCA contracts for pest management services for its managed buildings. Table 16 summarizes pesticide use by pesticide type. Table 17 lists all pesticide products used by DCA in 2016.

Table 16: Types of Pesticides Used by DCA in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	1.9	99.3%	3	50.0%
Insecticide	0.0	0.0%	0.0	0.7%	3	50.0%
Totals	0.0		1.9		6	

Pesticide Use by NYC in 2016

Table 17: Pesticide Products Used by DCA in 2016 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
Rodenticides								
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	1.88	2	Bromadiolone	3	NO	NO
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	0.02	1	Difethialone	3	NO	NO
Insecticides								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	0.01	3	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 ten correctional facilities that 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 and HHC in maintaining certain facilities. Table 18 summarizes pesticide use by pesticide type. Table 19 lists all pesticide products used by DOC in 2016.

Table 18: Types of Pesticides Used by DOC in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.1	0.5%	182.9	30.4%	246	12.2%
Insecticide	19.6	99.5%	419.5	69.6%	1778	87.8%
Totals	19.7		602.4		2,024	

Table 19: Pesticide Products Used by DOC in 2016 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
Rodenticides								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	66.13	114	Difethialone	3	NO	NO
12455-76	CONTRAC RODENTICIDE READY TO USE PLACE PAC	0.00	45.23	47	Bromadiolone	3	NO	NO
7173-218	GENERATION MINI BLOCKS	0.08	33.21	25	Difethialone	3	NO	NO
12455-69	CONTRAC RODENTICIDE	0.00	10.05	20	Bromadiolone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	15.06	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
7173-113	ROZOL TRACKING POWDER	0.00	2.97	12	Chlorophacinone	2	NO	NO
12455-56	DITRAC TRACKING POWDER	0.00	1.06	4	Diphacinone	2	NO	NO
7173-202	MAKI MINI BLOCKS	0.00	0.32	4	Bromadiolone	3	NO	NO
12455-36	CONTRAC RAT AND MOUSE BAIT	0.00	4.44	3	Bromadiolone	3	NO	NO
12455-61	LIQUA-TOX II	0.03	0.00	2	Diphacinone, sodium salt	3	NO	NO
12455-86	CONTRAC RODENTICIDE PLACE PAC	0.00	4.20	1	Bromadiolone	3	NO	NO
12455-75	CONTRAC RAT AND MOUSE BAIT READY TO USE PLACE PAC	0.00	0.25	1	Bromadiolone	3	NO	NO
Insecticides								
499-507	PRESCRIPTION TREATMENT BRAND ALPINE COCKROACH GEL BAIT RESERVOIR	0.00	90.14	511	Dinotefuran	3	NO	NO
432-763	SUSPEND SC	10.88	0.00	495	Deltamethrin	3	NO	NO
432-1363	TEMPO SC INSECTICIDE	2.40	0.01	313	Cyfluthrin, beta	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	3.66	162	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.58	21.31	63	Boric acid	3	NO	NO
397-13	STERI-FAB	4.40	1.13	56	Phenothrin; Isopropyl alcohol; Alkyl (60%C14, 25%C12, 15%C16) dimethylbenzyl ammonium chloride; Didecyl dimethyl ammonium chloride	2	NO	NO
73049-20	VECTOLEX CG BIOLOGICAL LARVICIDE	0.00	192.36	38	Bacillus sphaericus	3	NO	NO
432-1259	PRODUCT: RBF5	0.00	1.82	35	Fipronil	3	YES	NO
2724-274	GOLDEN MALRIN RF-128 FLY KILLER	0.00	88.00	18	Methomyl; (Z)-9-Tricosene	3	NO	NO
432-1455	BES 0026 FLY SPOT BAIT	1.30	1.38	17	Imidacloprid; (Z)-9-Tricosene	3	NO	NO
432-1257	MAXFORCE ROACH BAIT F.05	0.00	1.70	13	Fipronil	3	YES	NO
6218-47	SUMMIT B.T.I. BRIQUETS	0.00	1.87	10	Bacillus thuringiensis subspecies israelensis strain BMP 144	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
73049-429	VECTOMAX FG	0.00	0.74	9	Bacillus sphaericus; Bacillus thuringiensis, subsp. israelensis, strain AM 65-52	3	NO	NO
432-1264	MAXFORCE FC ANT KILLER BAIT GEL	0.00	0.31	9	Fipronil	3	YES	NO
432-1254	MAXFORCE PROFESSIONAL INSECT CONTROL ROACH KILLER	0.00	0.34	7	Hydramethylnon	3	YES	YES
9444-129	BORIC ACID POWDER	0.02	13.19	6	Boric acid	3	NO	NO
432-1531	BES0600 INSECTICIDE	0.00	0.42	6	Clothianidin	0	NO	NO
499-492	PRESCRIPTION TREATMENT BRAND 388B ADVANCE ANT GEL BAIT	0.00	0.31	5	Borax	3	NO	NO
432-1262	MAXFORCE IBH10	0.00	0.53	3	Hydramethylnon	3	YES	YES
432-1455	QUICKBAYT SPOT SPRAY	0.03	0.00	1	(Z)-9-Tricosene	3	NO	NO
73079-4	BORACTIN INSECTICIDE POWDER	0.00	0.25	1	Boric acid	3	NO	NO

Education, Department of

The Department of Education (DOE) provides primary and secondary education to over 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 nineteen in-house licensed pest management professionals that conduct monthly monitoring inspections and respond to pest problems for approximately 900 schools. DOE contracts with several pest management companies to additionally provide services for an additional 300 schools. Table 20 summarizes pesticide use by pesticide type. Table 21 lists all pesticide products used by DOE in 2016.

Table 20: Types of Pesticides Used by DOE in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	4.7	6.5%	2419.2	92.0%	7497	59.3%
Insecticide	67.4	93.5%	210.7	8.0%	5137	40.7%
Totals	72.1		2,629.9		12,634	

Table 21: Pesticide Products Used by DOE in 2016 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
Rodenticides								

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	4.69	1,911.61	6,861	Difethialone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	505.88	630	Bromadiolone	3	NO	NO
12455-75	CONTRAC RAT AND MOUSE BAIT READY TO USE PLACE PAC	0.00	1.38	5	Bromadiolone	3	NO	NO
7173-297	BROMADIOLOONE PASTE 0901	0.00	0.35	1	Bromadiolone	3	NO	NO
Insecticides								
432-1460	MAXFORCE FC ROACH KILLER BAIT GEL F.05	0.57	44.19	1,180	Fipronil	3	YES	NO
64405-2	REDZONE BAIT	0.00	127.51	1,148	Boric acid	3	NO	NO
499-510	PRESCRIPTION TREATMENT BRAND ALPINE COCKROACH GEL BAIT PISTON CAN	0.00	17.30	876	Dinotefuran	3	NO	NO
62577-12	ECOPCO ACU DUPONT ADVION COCKROACH GEL BAIT	50.23	0.27	694	Phenylethyl propionate	3	NO	NO
100-1484	GOURMET ANT BAIT GEL	0.06	11.32	432	Indoxacarb Disodium octaborate tetrahydrate	3	NO	NO
2724-484	RF 9707 AEROSOL	11.46	0.00	194	(7S)-Hydroprene	3	NO	NO
73079-6	GREEN ZONE GRANULAR BAIT	0.00	2.58	22	Boric acid	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.06	20	Indoxacarb	3	NO	NO
67425-14	ECOPCO ACU CONTACT INSECTICIDE	0.07	0.00	7	Phenylethyl propionate	3	NO	NO
432-1455	BES 0026 FLY SPOT BAIT	5.00	0.00	5	Imidacloprid; (Z)-9-Tricosene	3	NO	NO
432-763	SUSPEND SC INSECTICIDE	0.00	0.32	3	Deltamethrin	3	NO	NO
432-1251	MAXFORCE ROACH CONTROL SYSTEM	0.00	0.09	3	Hydramethylnon	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
8329-67	FLIT 10 EC BROAD SPECTRUM MULTI-USE INSECTICIDE	0.00	0.75	1	Permethrin	2	YES	NO
499-550	TC-323	0.00	0.06	1	Prallethrin	3	NO	NO
100-1486	DUPONT ADVION COCKROACH BAIT ARENA	0.00	0.04	1	Indoxacarb	3	NO	NO

Environmental Protection, Department of

The Department of Environmental Protection (DEP) has over 1,700 facilities upstate and downstate. 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 employ approximately 20 licensed applicators for upstate reservoir pest control. Table 22 summarizes pesticide use by pesticide type. Table 23 lists all pesticide products used by DEP in 2016.

Table 22: Types of Pesticides Used by DEP in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	271.8	76.2%	727	51.6%
Insecticide	6.0	8.0%	84.9	23.8%	638	45.3%
Herbicide	68.3	92.0%	0.0	0.0%	44	3.1%
Totals	74.2		356.7		1,409	

Table 23: Pesticide Products Used by DEP in 2016 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
Rodenticides								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	260.83	703	Difethialone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	10.56	19	Bromadiolone	3	NO	NO
7173-113	ROZOL TRACKING POWDER	0.00	0.19	3	Chlorophacinone	2	NO	NO
12455-36	CONTRAC RAT AND MOUSE BAIT	0.00	0.25	2	Bromadiolone	3	NO	NO
Insecticides								

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
499-510	PRESCRIPTION TREATMENT BRAND ALPINE COCKROACH GEL BAIT PISTON CAN	0.00	9.79	324	Dinotefuran	3	NO	NO
432-763	SUSPEND SC INSECTICIDE	0.00	47.44	103	Deltamethrin	3	NO	NO
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	0.95	87	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	22.58	70	Boric acid	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.13	21	Indoxacarb	3	NO	NO
432-1534	BES0668 Insecticide	3.00	3.09	7	Deltamethrin	3	NO	NO
499-496	PRESCRIPTION TREATMENT BRAND ADVANCE 360A DUAL CHOICE ANT BAIT STATIONS	0.04	0.00	5	Avermectin	3	NO	NO
432-1455	BES 0026 FLY SPOT BAIT	1.25	0.13	4	Imidacloprid; (Z)-9-Tricosene	3	NO	NO
499-362	WHITMIRE PT 515 WASP FREEZE	0.82	0.00	4	D-trans Allethrin; Phenothrin	3	YES	NO
9688-190	SPECTRACIDE DESTROYER BRAND WASP & HORNET KILLER	0.30	0.00	2	Cyhalothrin, lambda; Prallethrin	3	NO	NO
9688-317	HOT SHOT ANT & ROACH PLUS GERM KILLER 2	0.19	0.00	2	Alkyl (68%C12, 32%C14) dimethylethylbenzyl ammonium chloride; Alkyl* dimethyl benzyl ammonium chloride *(60%C14, 30%C16, 5%C18, 5%C12); Cypermethrin, beta; Prallethrin	3	YES	NO
2724-786	RF2050 SPRAY	0.13	0.00	1	Tetramethrin; Ethofenprox; Piperonyl butoxide	3	YES	NO
432-1483	TEMPRID SC INSECTICIDE	0.12	0.00	1	Cyfluthrin, beta; Imidacloprid	3	NO	NO
44757-3	PIC ORTHOBORIC ACID ROACH & ANT KILLER	0.06	0.00	1	Boric acid	3	NO	NO
432-1527	TEMPRID RTU	0.03	0.00	1	Cyfluthrin, beta; Imidacloprid	0	NO	NO
149-8	TERRO ANT KILLER II	0.02	0.00	1	Borax	3	NO	NO
432-1363	TEMPO SC INSECTICIDE	0.01	0.00	1	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
1021-1641	CONQUER RESIDUAL INSECTICIDE CONCENTRATE	0.00	0.50	1	Esfenvalerate	3	NO	NO
73079-6	GREEN ZONE GRANULAR BAIT	0.00	0.13	1	Boric acid	3	NO	NO
241-392	PHANTOM TERMITICIDE-INSECTICIDE	0.00	0.13	1	Chlorfenapyr	3	YES	NO
Herbicides								
432-1229	FINALE HERBICIDE	21.14	0.00	17	Glufosinate-ammonium	2	NO	NO
1381-192	CORNERSTONE PLUS	3.00	0.00	8	Glyphosate, isopropylamine salt	3	NO	NO
228-366	RAZOR HERBICIDE	1.29	0.00	8	Glyphosate, isopropylamine salt	3	NO	NO
524-536	MON 78473 HERBICIDE	27.50	0.00	5	Glyphosate, isopropylamine salt	3	NO	NO
524-475	ROUNDUP ULTRA HERBICIDE	3.00	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
66222-22	PRAMITOL 25E HERBICIDE	7.00	0.00	1	Prometon	3	NO	NO
524-579	ROUNDUP PROMAX	5.01	0.00	1	Glyphosate, potassium 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 city-wide contract administered by DCAS. Table 24 summarizes pesticide use by pesticide type. Table 25 lists all pesticide products used by DOF in 2010.

Table 24: 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%	1.4	18.2%	19	18.4%
Insecticide	0.0	0.0%	6.4	81.8%	84	81.6%
Totals	0.0		7.9		103	

Table 25: 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
Rodenticides								

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	0.31	3	Bromadiolone	3	NO	NO
Insecticides								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	0.27	46	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	6.13	21	Boric acid	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.03	17	Indoxacarb	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. It manages some 350 facilities throughout the City and contracts for pest control services. Table 26 summarizes pesticide use by pesticide type. Table 27 lists all pesticide products used by FDNY in 2016.

Table 26: Types of Pesticides Used by FDNY in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	186.7	85.4%	429	43.5%
Insecticide	0.0	100.0%	31.8	14.6%	557	56.5%
Totals	0.0		218.6		986	

Table 27: Pesticide Products Used by FDNY in 2016 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
Rodenticides								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	67.85	314	Difethialone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	113.56	98	Bromadiolone	3	NO	NO
12455-36	CONTRAC RAT AND MOUSE BAIT	0.00	5.31	17	Bromadiolone	3	NO	NO
Insecticides								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	2.93	352	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	28.67	145	Boric acid	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.24	59	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
432-763	SUSPEND SC INSECTICIDE	0.00	0.00	1	Deltamethrin	3	NO	NO

Health and Hospitals Corporation

The New York City Health and Hospitals Corporation (HHC) is a \$6.7 billion integrated healthcare delivery system with its own 420,000 member health plan, MetroPlus, and is the largest municipal healthcare organization in the country. HHC serves 1.4 million New Yorkers every year and more than 475,000 are uninsured. HHC provides medical, mental health and substance abuse services through its 11 acute care hospitals, four skilled nursing facilities, six large diagnostic and treatment centers and more than 70 community based clinics. HHC Health and Home Care also provide in-home services for New Yorkers. Because each facility is managed separately, pest control protocols differ among facilities. A few facilities have pest control professionals on staff, but the majority relies on outside contractors. Table 28 summarizes pesticide use by pesticide type. Table 29 lists products by pesticide types.

Table 28: Types of Pesticides Used by HHC in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.1	0.0%	539.4	50.5%	592	10.9%
Insecticide	692.3	100.0%	528.0	49.5%	4821	89.1%
Totals	692.4		1,067.4		5,413	

Table 29: Pesticide Products Used by HHC in 2016 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
Rodenticides								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	532.63	565	Difethialone	3	NO	NO
7173-113	ROZOL TRACKING POWDER	0.08	1.59	11	Chlorophacinone	2	NO	NO
12455-89	FINAL ALL-WEATHER BLOX	0.00	3.55	10	Brodifacoum	3	NO	NO
12455-106	TERAD3 BLOX	0.00	1.06	4	Cholecalciferol	3	NO	NO
7173-202	MAKI MINI BLOCKS	0.00	0.38	1	Bromadiolone	3	NO	NO
12455-95	FASTRAC ALL-WEATHER BLOX	0.00	0.22	1	Bromethalin	3	NO	NO
Insecticides								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	137.46	1,870	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
73079-4	BORACTIN INSECTICIDE POWDER	9.79	264.42	1,348	Boric acid	3	NO	NO
64405-2	REDZONE BAIT	5.63	110.78	266	Boric acid	3	NO	NO
100-1501	DUPONT ARILON INSECTICIDE	155.83	0.00	217	Indoxacarb	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	6.07	206	Indoxacarb	3	NO	NO
432-1483	TEMPRID SC INSECTICIDE	48.13	0.00	184	Cyfluthrin, beta; Imidacloprid	3	NO	NO
64405-8	NIBOR BORATE INSECTICIDE AND FUNGICIDE	162.54	3.38	164	Disodium octaborate tetrahydrate	3	NO	NO
432-772	DELTA DUST	0.14	1.25	136	Deltamethrin	3	NO	NO
432-1363	TEMPO SC INSECTICIDE	66.45	0.00	129	Cyfluthrin, beta	3	NO	NO
1021-1603	NYLAR 10EC	162.89	0.00	106	Pyriproxyfen	3	NO	NO
100-1066	DEMAND CS INSECTICIDE	40.72	0.00	101	Cyhalothrin, lambda	3	NO	NO
279-3384	ROACH KIL COMMERCIAL	0.61	0.00	37	Boric acid	3	NO	NO
432-1304	TEMPO 10 WP INSECTICIDE	29.77	0.00	26	Cyfluthrin, beta	3	NO	NO
100-1483	ADVION INSECT GRANULE	0.04	3.97	22	Indoxacarb	3	NO	NO
5481-8973	ORTHENE PCO FORMULA II	7.50	0.00	4	Acephate	3	YES	NO
1021-1424	PYROCIDE FOGGING CONCENTRATE 7338	0.00	0.31	2	Pyrethrins; Piperonyl butoxide; N-octyl bicycloheptene dicarboximide	3	YES	NO
432-763	SUSPEND SC INSECTICIDE	2.00	0.00	1	Deltamethrin	3	NO	NO
1677-43	STER-BAC	0.25	0.00	1	Alkyl (60%C14, 25%C12, 15%C16) dimethylbenzyl ammonium chloride	1	NO	NO
47000-73	SSI-50 INSECTICIDE	0.00	0.38	1	Pyrethrins; Piperonyl butoxide; N-octyl bicycloheptene dicarboximide	3	YES	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 twenty-one 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 as well as outside contractors. Table 30 summarizes pesticide use by pesticide type. Table 31 lists all pesticide products used by DOHMH in 2016.

Table 30 Types of Pesticides Used by DOHMH in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	21134.4	18.7%	28860	70.4%
Insecticide	0.0	0.0%	92037.7	81.3%	12162	29.6%
Herbicide	0.1	100.0%	0.0	0.0%	1	0.0%
Totals	0.1		113,172.1		41,022	

Table 31 Pesticide Products Used by DOHMH in 2016 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
Rodenticides								
12455-69	CONTRAC RODENTICIDE	0.00	11,365.86	11,611	Bromadiolone	3	NO	NO
12455-90	FINAL RODENTICIDE	0.00	5,691.60	7,281	Brodifacoum	3	NO	NO
12455-133	CONTRAC WITH LUMITRACK	0.00	1,474.99	4,533	Bromadiolone	3	NO	NO
7173-297	BROMADIOLONE PASTE 0901	0.00	471.05	1,794	Bromadiolone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	702.67	1,542	Bromadiolone	3	NO	NO
100-1055	WEATHERBLOK BAIT WITH BITREX	0.00	485.57	990	Brodifacoum	3	NO	NO
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	142.79	476	Difethialone	3	NO	NO
12455-36	CONTRAC RAT AND MOUSE BAIT	0.00	536.18	399	Bromadiolone	3	NO	NO
7173-205	GENERATION PELLETS	0.00	253.50	214	Difethialone	3	NO	NO
100-1050	TALON-G RODENTICIDE BAIT PACK MINI-PELLETS WITH BI	0.00	4.57	10	Brodifacoum	3	NO	NO
12455-75	CONTRAC RAT AND MOUSE BAIT READY TO USE PLACE PAC	0.00	5.21	9	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
12455-56	DITRAC TRACKING POWDER	0.00	0.38	1	Diphacinone	2	NO	NO
Insecticides								
73049-501	VBC-60394 FG BIOLOGICAL LARVICIDE FINE GRANULE	0.00	12,530.54	5,221	Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52	3	NO	NO
73049-429	VECTOMAX FG	0.00	33,328.68	4,948	Bacillus sphaericus; Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52	3	NO	NO
73049-19	VECTOBAC CG BIOLOGICAL LARVICIDE GRANULES	0.00	1,483.28	1,519	Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52	3	NO	NO
73049-20	VECTOLEX CG BIOLOGICAL LARVICIDE	0.00	206.17	115	Bacillus sphaericus	3	NO	NO
1021-1795	DUET DUAL-ACTION ADULTICIDE	0.00	1,592.32	99	Phenothrin; Piperonyl butoxide; Prallethrin	3	YES	NO
1021-1688	ANVIL 10+10 ULV	0.00	1,656.20	88	Phenothrin; Piperonyl butoxide	3	YES	NO
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	0.66	67	Indoxacarb	3	NO	NO
73049-10	VECTOBAC G BIOLOGICAL LARVICIDE GRANULES	0.00	32,500.00	46	Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52	3	NO	NO
2724-451	ZOECON 9010 GR	0.00	5,435.00	21	S-Methoprene	3	NO	NO
73049-57	VECTOLEX WDG BIOLOGICAL LARVICIDE WATER DISPERSIBLE GRANULE	0.00	104.00	13	Bacillus sphaericus 2362, serotype H5a5b, strain ABTS 1743 solids, spores and insecticidal toxins	3	NO	NO
64405-2	REDZONE BAIT	0.00	0.81	10	Boric acid	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.04	10	Indoxacarb	3	NO	NO
73049-56	VECTOBAC WDG BIOLOGICAL LARVICIDE	0.00	3,200.00	5	Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52	3	NO	NO
Herbicides								
71995-29	ROUNDUP WEED & GRASS KILLER CONCENTRATE PLUS	4.02	0.00	6	Glyphosate, isopropylamine salt; Diquat dibromide	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 and one facility, Preventative Assistance and Temporary Housing (PATH), is an intake facility. There are five adult facilities which also 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 32 summarizes pesticide use by pesticide type. Table 33 lists all pesticide products used by DHS in 2016.

Table 32: Types of Pesticides Used by DHS in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	251.2	51.8%	3502	32.8%
Insecticide	51.4	100.0%	233.4	48.2%	7161	67.2%
Totals	51.4		484.6		10,663	

Table 33: Pesticide Products Used by DHS in 2016 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
Rodenticides								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	237.12	3,165	Difethialone	3	NO	NO
56-42	BAIT BLOCK RODENTICIDE WITH PEANUT BUTTER FLAVORIZ	0.00	12.97	332	Diphacinone	3	NO	NO
12455-75	CONTRAC RAT AND MOUSE BAIT READY TO USE PLACE PAC	0.00	0.56	2	Bromadiolone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	0.38	2	Bromadiolone	3	NO	NO
7173-297	BROMADIOLONE PASTE 0901	0.00	0.19	1	Bromadiolone	3	NO	NO
Insecticides								
1021-1828	MGK ROACH BAIT 2822	0.00	107.91	2267	Avermectin	3	NO	NO
53883-276	DELTA 4.75% SC	18.59	0.00	1616	Deltamethrin	3	NO	NO
279-3206	TALSTAR TC FLOWABLE TERMITICIDE/INSECTICIDE	18.07	0.00	1395	Bifenthrin	3	YES	NO
432-763	SUSPEND SC INSECTICIDE	11.28	0.00	1387	Deltamethrin	3	NO	NO
64405-2	REDZONE BAIT	0.00	73.41	160	Boric acid	3	NO	NO
2724-351	ZOECON RF-259 EMULSIFIABLE CONCENTRATE	0.56	0.00	112	(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
2724-274	GOLDEN MALRIN RF-128 FLY KILLER	0.00	4.91	69	Methomyl; (Z)-9-Tricosene	3	NO	NO
1021-1767	MULTICIDE LICE & DUST MITE SPRAY 27911	0.00	46.50	62	Phenothrin; N-octyl bicycloheptene dicarboximide	3	YES	NO
397-13	STERI-FAB	2.36	0.00	32	Phenothrin; Isopropyl alcohol; Alkyl (60%C14, 25%C12, 15%C16) dimethylbenzyl ammonium chloride; Didecyl dimethyl ammonium chloride	2	NO	NO
53883-283	DM DUST 0.05% INSECTICIDE	0.00	0.20	19	Deltamethrin	3	NO	NO
432-1257	MAXFORCE ROACH BAIT F.05	0.00	0.43	11	Fipronil	3	YES	NO
432-1259	PRODUCT: RBF5	0.00	0.01	11	Fipronil	3	YES	NO
8033-109	TRANSPORT (R) MIKRON INSECTICIDE	0.12	0.00	9	Acetamiprid; Bifenthrin	3	YES	NO
499-470	WHITMIRE MICRO-GEN TC 198	0.38	0.00	3	Cyfluthrin	3	NO	NO
432-772	DELTA DUST	0.00	0.01	3	Deltamethrin	3	NO	NO
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	0.01	2	Indoxacarb	3	NO	NO
53883-92	CYPER TC INSECTICIDE	0.02	0.00	1	Cypermethrin, beta	3	YES	NO
2724-351	ZOECON GENCOR 9% EMULSIFIABLE CONCENTRATE	0.01	0.00	1	(7S)-Hydroprene	3	NO	NO
1021-1815	EVERCIDE ESFENVALERATE 6.4% CS	0.00	0.00	1	Esfenvalerate	3	NO	NO

Housing Authority

The New York City Housing Authority (NYCHA) manages 2,644 residential buildings and 178,466 apartments, as well as office space and grounds that cover 2,502 acres. NYCHA currently has a staff of some 75 pest management professionals that 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 mice, cockroaches and bedbugs and exterior rats, weeds, and mosquito control. Table 34 summarizes pesticide use by pesticide type. Table 35 lists the products used by NYCHA in 2016.

Pesticide Use by NYC in 2016

Table 34: Types of Pesticides Used by NYCHA in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.1	0.0%	11673.9	86.5%	29316	19.5%
Insecticide	1165.9	99.9%	1818.8	13.5%	121049	80.5%
Herbicide	1.4	0.1%	0.2	0.0%	17	0.0%
Totals	1,167.3		13,492.9		150,382	

Table 35: Pesticide Products Used by NYCHA in 2016 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
Rodenticides								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	5,748.39	21,229	Difethialone	3	NO	NO
12455-86	CONTRAC RODENTICIDE PLACE PAC	0.00	2,345.94	4,184	Bromadiolone	3	NO	NO
12455-56	DITRAC TRACKING POWDER	0.00	2,006.15	2,446	Diphacinone	2	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	1,165.00	439	Bromadiolone	3	NO	NO
12455-75	CONTRAC RAT AND MOUSE BAIT READY TO USE PLACE PAC	0.00	60.69	268	Bromadiolone	3	NO	NO
12455-108	FORMUS ALL-WEATHER BLOX	0.06	20.79	228	Brodifacoum	3	NO	NO
7173-297	BROMADIOLONE PASTE 0901	0.00	97.84	176	Bromadiolone	3	NO	NO
56-42	BAIT BLOCK RODENTICIDE WITH PEANUT BUTTER FLAVORIZ	0.00	122.06	158	Diphacinone	3	NO	NO
7173-288	DIFETHIALONE BLOCK 0707	0.00	6.19	86	Difethialone	3	NO	NO
7173-113	ROZOL TRACKING POWDER	0.00	62.50	56	Chlorophacino ne	2	NO	NO
12455-80	DITRAC ALL-WEATHER BLOX	0.00	31.31	26	Diphacinone	3	NO	NO
12455-89	FINAL ALL-WEATHER BLOX	0.00	2.06	7	Brodifacoum	3	NO	NO
7173-208	MAKI RODENTICIDE BAIT PACKS (PELLETS)	0.00	0.37	5	Bromadiolone	3	NO	NO
12455-69	CONTRAC RODENTICIDE	0.00	1.13	4	Bromadiolone	3	NO	NO
12455-36	CONTRAC RAT AND MOUSE BAIT	0.00	1.71	3	Bromadiolone	3	NO	NO
47629-16	DIFENACOUM RAT AND MOUSE BLOCK	0.00	1.75	1	Difenacoum	3	NO	NO
Insecticides								
432-763	SUSPEND SC INSECTICIDE	580.23	0.00	68,435	Deltamethrin	3	NO	NO
432-1483	TEMPRID SC INSECTICIDE	55.42	0.05	19,046	Cyfluthrin, beta; Imidacloprid	3	NO	NO
432-1259	PRODUCT: RBF5	0.00	374.46	7,359	Fipronil	3	YES	NO
499-304	WHITMIRE OPTEM ME PT 600	55.41	0.00	7,092	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
432-1460	MAXFORCE FC ROACH KILLER BAIT GEL F.05	0.00	237.43	6,141	Fipronil	3	YES	NO
432-1257	MAXFORCE ROACH BAIT F.05	0.00	182.90	3,832	Fipronil	3	YES	NO
2724-351	ZOECON RF-259 EMULSIFIABLE CONCENTRATE	25.73	0.00	3,293	(7S)-Hydroprene	3	NO	NO
397-13	STERI-FAB	365.78	0.00	3,159	Phenothrin; Isopropyl alcohol; Alkyl (60%C14, 25%C12, 15%C16) dimethylbenzyl ammonium chloride; Didecyl dimethyl ammonium chloride	2	NO	NO
64405-2	ECOLOGICAL ANT & INSECT BAIT	0.00	59.88	528	Boric acid	3	NO	NO
279-9554	CB INSECTICIDE WITH DELTAMETHRIN	36.09	0.02	332	Deltamethrin	3	NO	NO
2724-421	ZOECON RF-292 BRIQUET	0.00	902.71	324	S-Methoprene	3	NO	NO
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	9.91	255	Indoxacarb	3	NO	NO
499-507	PRESCRIPTION TREATMENT BRAND ALPINE COCKROACH GEL BAIT RESERVOIR	0.00	9.13	204	Dinotefuran	3	NO	NO
1021-1815	EVERCIDE ESFENVALERATE 6.4% CS	1.55	0.00	187	Esfenvalerate	3	NO	NO
62577-12	ECOPCO ACU	15.34	0.02	159	Phenylethyl propionate	3	NO	NO
1021-2569	MULTICIDE SPRAY 29511	26.98	0.00	128	Imidacloprid; Phenothrin; N-octyl bicycloheptene dicarboximide	0	YES	NO
432-1531	BES0600 INSECTICIDE	0.00	5.21	127	Clothianidin	0	NO	NO
2724-351	ZOECON GENCOR 9% EMULSIFIABLE CONCENTRATE	1.32	0.00	118	(7S)-Hydroprene	3	NO	NO
499-467	WHITMIRE AVERT TC 181	0.00	4.03	104	Avermectin	3	NO	NO
432-1375	PRE-EMPT FLY BAIT	0.00	20.46	91	Imidacloprid; (Z)-9-Tricosene	3	NO	NO
499-406	AVERT PRESCRIPTION TREATMENT TC 93A BAIT	0.00	1.45	33	Avermectin	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
100-1486	DUPONT ADVION COCKROACH BAIT ARENA	0.00	1.46	29	Indoxacarb	3	NO	NO
1001-73	ECOLOGIX COCKROACH BAIT	0.00	0.14	15	Xanthine; Oxypurinol	3	NO	NO
1021-2593	MGK? Formula 2976	1.88	0.17	14	Avermectin; Pyriproxyfen	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.50	11	Indoxacarb	3	NO	NO
241-313	SIEGE PBS GEL INSECTICIDE	0.00	6.59	9	Hydramethylno n	3	YES	YES
1021-1641	CONQUER RESIDUAL INSECTICIDE CONCENTRATE	0.03	0.00	7	Esfenvalerate	3	NO	NO
100-1483	ADVION INSECT GRANULE	0.00	0.75	4	Indoxacarb	3	NO	NO
6218-47	SUMMIT B.T.I. BRIQUETS	0.00	0.16	3	Bacillus thuringiensis subspecies israelensis strain BMP 144	3	NO	NO
64405-2	REDZONE BAIT	0.00	1.25	2	Boric acid	3	NO	NO
73049-20	VECTOLEX CG BIOLOGICAL LARVICIDE	0.00	0.07	2	Bacillus sphaericus	3	NO	NO
100-1485	DUPONT ADVION ANT BAIT ARENA	0.00	0.05	2	Indoxacarb	3	NO	NO
432-1255	MAXFORCE GRANULAR INSECT BAIT	0.00	0.00	2	Hydramethylno n	3	YES	YES
2724-675	PREMIUM ROACH SPRAY	0.13	0.00	1	Pyrethrins; Tetramethrin; Ethofenprox; Piperonyl butoxide	3	YES	NO
432-763	SUSPEND SC	0.02	0.00	1	Deltamethrin	3	NO	NO
Herbicides								
524-579	ROUNDUP PROMAX	1.28	0.00	11	Glyphosate, potassium salt	3	NO	NO
524-517	ACCORD XL HERBICIDE	0.08	0.00	5	Glyphosate, isopropylamine salt	3	NO	NO
62719-98	MASTER NURSERYMEN GARDEN WEEDER	0.00	0.24	1	Trifluralin	3	NO	NO

Housing Preservation and Development

Housing Preservation and Development (HPD) oversees occupied and vacant residential and commercial buildings, vacant lots as well as a limited number of agency offices. In addition, its Emergency Repair Program occasionally encounters and responds to rats and fleas in occupied

private buildings. There are no certified applicators on staff and the agency contracts for pest management services. Table 36 summarizes pesticide use by pesticide type. Table 37 lists all pesticide products used by HPD in 2016.

Table 36: Types of Pesticides Used by HPD in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	2.2	89.1%	169.1	99.6%	172	27.4%
Insecticide	0.3	10.9%	0.7	0.4%	455	72.6%
Totals	2.5		169.9		627	

Table 37: Pesticide Products Used by HPD in 2016

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
Rodenticides								
7173-202	MAKI MINI BLOCKS	2.21	169.13	172	Bromadiolone	3	NO	NO
Insecticides								
432-1363	TEMPO SC INSECTICIDE	0.25	0.00	427	Cyfluthrin, beta	3	NO	NO
432-1259	PRODUCT: RBF5	0.00	0.75	18	Fipronil	3	YES	NO
432-763	SUSPEND SC INSECTICIDE	0.02	0.00	7	Deltamethrin	3	NO	NO
432-1304	TEMPO 10 WP INSECTICIDE	0.00	0.00	3	Cyfluthrin, beta	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 38 summarizes pesticide use by pesticide type. Table 39 lists the products used by HRA/DSS in 2016.

Table 38: Types of Pesticides Used by HRA in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	121.9	97.4%	204	60.7%
Insecticide	0.0	100.0%	3.2	2.6%	132	39.3%
Totals	0.0		125.1		336	

Table 39: Pesticide Products Used by HRA in 2016 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
Rodenticides								

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	35.51	156	Difethialone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	86.44	48	Bromadiolone	3	NO	NO
Insecticides								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	1.16	108	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	1.98	12	Boric acid	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.06	9	Indoxacarb	3	NO	NO
432-763	SUSPEND SC INSECTICIDE	0.00	0.00	3	Deltamethrin	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 2016.

Parks and Recreation

New York City's 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.

This data includes pesticides applied on all city-owned golf courses. Local Law 37 exempts these locations from pesticide prohibitions. The table also includes the data from sister organizations that operate on DPR property such as zoos, conservancies, and botanic gardens. Table 40 summarizes pesticide use by pesticide type. Table 41 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 40: Types of Pesticides Used by DPR in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	1091.6	3.9%	2,070	34.7%
Insecticide	254.9	5.7%	196.5	0.7%	660	11.1%
Herbicide	903.2	20.3%	20256.1	71.9%	2,270	38.0%
Fungicide	3070.0	69.1%	6614.8	23.5%	901	15.1%

Pesticide Use by NYC in 2016

Other	213.0	4.8%	0.8	0.0%	65	1.1%
Totals	4441.0		28,159.7		5,966	

Table 41: Ten Most Frequently Applied Pesticide Products by DPR in 2016 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
Rodenticides								
12455-36	CONTRAC RAT AND MOUSE BAIT	0.00	433.13	589	Bromadiolone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	204.44	481	Bromadiolone	3	NO	NO
12455-69	CONTRAC RODENTICIDE	0.00	209.65	275	Bromadiolone	3	NO	NO
12455-106	TERAD3 BLOX	0.00	40.56	197	Cholecalciferol	3	NO	NO
12455-139	Final Soft Bait	0.00	34.13	137	Brodifacoum	3	NO	NO
7173-218	GENERATION MINI BLOCKS	0.00	69.69	83	Difethialone	3	NO	NO
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	45.73	74	Difethialone	3	NO	NO
100-1055	WEATHERBLOK BAIT WITH BITREX	0.00	2.31	74	Brodifacoum	3	NO	NO
12455-17	ZP RODENT BAIT AG	0.00	9.88	72	Zinc phosphide	3	NO	NO
7173-202	MAKI MINI BLOCKS	0.00	25.27	44	Bromadiolone	3	NO	NO
Insecticides								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	2.27	142	Indoxacarb	3	NO	NO
83100-6	PRIMERAONE IMIDACLOPRID 2F INSECTICIDE	8.86	0.00	39	Imidacloprid	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.35	32	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	7.07	27	Boric acid	3	NO	NO
499-362	WHITMIRE PT 515 WASP FREEZE	0.00	50.31	26	D-trans Allethrin; Phenothrin	3	YES	NO
48813-1	SUFFOIL-X	7.10	0.00	24	Petroleum distillates	3	NO	NO
86203-11	SAFARI 20SG INSECTICIDE	0.00	3.98	20	Dinotefuran	3	NO	NO
62719-291	CONSERVE SC TURF AND ORNAMENTAL	0.24	0.00	16	Spinosad	3	NO	NO
100-1489	DUPONT ACELEPRYN INSECTICIDE	11.03	0.00	15	DPX-E2Y45	0	NO	NO
53883-145	LAMBDA 9.7 EW INSECTICIDE	6.94	0.00	15	Cyhalothrin, lambda	2	NO	NO
Herbicides								
524-579	ROUNDUP PROMAX	266.26	6.37	1,004	Glyphosate, potassium salt	3	NO	NO
62719-556	ACCORD XRT II	173.27	0.00	356	Glyphosate, dimethylammonium salt	3	NO	NO
62719-527	GARLON 4 ULTRA	40.23	0.00	276	Triclopyr	2	NO	NO
62719-324	GLYPRO	28.97	0.00	132	Glyphosate, isopropylamine salt	3	NO	NO
100-937	PRIMO MAXX	20.12	0.00	53	Trinexapac-ethyl	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
524-529	ROUNDUP PRO CONCENTRATE	39.47	0.00	46	Glyphosate, isopropylamine salt	3	NO	NO
53883-373	QUALI-PRO T-NEX 1 AQ	70.48	0.00	45	Trinexapac-ethyl	3	NO	NO
86064-3	ARMOR TECH PGR 113 MC	21.56	0.00	45	Trinexapac-ethyl	3	NO	NO
228-397	RIVERDALE VANQUISH HERBICIDE	8.60	0.00	30	Dicamba, diglycolamine salt	3	NO	NO
62719-542	DIMENSION 2EW	36.54	0.00	28	Dithiopyr	2	NO	NO
Fungicides								
100-1364	DACONIL ACTION	570.57	0.02	101	Acibenzolar-S-methyl; Chlorothalonil	2	YES	NO
71065-3	COMPANION LIQUID BIOLOGICAL FUNGICIDE	347.30	0.00	57	Bacillus subtilis GBO3	3	NO	NO
100-1093	HERITAGE FUNGICIDE	0.00	118.28	54	Azoxystrobin	3	NO	NO
79676-17	LESCO TWOSOME FUNGICIDE	105.00	0.00	40	Iprodione; Thiophanate-methyl	3	NO	NO
55260-9	PROPLANT TURF AND ORNAMENTAL FUNGICIDE	94.40	0.00	36	Propamocarb hydrochloride	3	NO	NO
432-942	BANOL TURF AND ORNAMENTAL FUNGICIDE	78.75	0.00	32	Propamocarb hydrochloride	3	NO	NO
432-1445	BAYLETON FLO TURF AND ORNAMENTAL FUNGICIDE	25.89	0.00	28	Triadimefon	3	YES	YES
70127-2	NOVOZYMES BIOFUNGICIDE GREEN RELAF 710-140	95.60	0.00	20	Bacillus licheniformis SB3086; IBA	3	NO	NO
264-1155	RHAPSODY AS0	177.60	0.00	19	QST 713 strain of dried Bacillus subtilis	3	NO	NO
432-1446	TARTAN FLO FUNGICIDE	41.58	0.00	19	Triadimefon; Trifloxystrobin	3	YES	YES
Other								
52483-1	HYPOCHLORITE SOLUTION	155.50	0.00	25	Sodium hypochlorite	1	NO	NO
60061-71	PETTIT MARINE PAINT PREMIUM SINGLE SEASON ABLATIVE	35.00	0.00	24	Copper oxide (ous)	2	NO	NO
59807-4	HORMODIN 1	0.00	0.26	6	IBA	3	NO	NO
73049-15	PROGIBB 4% PLANT GROWTH REGULATOR SOLUTION	0.00	0.00	4	Gibberellins	2	NO	NO
63838-5	CHEM-AQUA 42171	7.50	0.00	2	Sodium bromide; Sodium hypochlorite	1	NO	NO
71096-7	ORTHO BUG-GETA SNAIL & SLUG KILLER 1	0.00	0.50	2	Metaldehyde	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
1448-212	CHEMICIDE 100-15	12.00	0.00	1	Poly(oxyethylene) (dimethylimino) ethylene (dimethylimino) ethylene dichloride	3	NO	NO
58616-1	PCT 3026	3.00	0.00	1	Sodium bromide; Sodium hypochlorite	1	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, and 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 42 summarizes pesticide use by pesticide type. Table 43 lists all pesticide products used by NYPD in 2016.

Table 42 Types of Pesticides Used by NYPD in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	311.8	95.1%	462	52.9%
Insecticide	0.0	100.0%	16.1	4.9%	412	47.1%
Totals	0.0		327.8		874	

Table 43: Pesticide Products Used by NYPD in 2016 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
Rodenticides								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	92.80	293	Difethialone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	217.31	152	Bromadiolone	3	NO	NO
12455-36	CONTRAC RAT AND MOUSE BAIT	0.00	1.64	17	Bromadiolone	3	NO	NO
Insecticides								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	2.25	311	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	13.54	72	Boric acid	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.21	24	Indoxacarb	3	NO	NO
432-763	SUSPEND SC INSECTICIDE	0.00	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
432-772	DELTA DUST	0.00	0.02	2	Deltamethrin	3	NO	NO
432-1455	BES 0026 FLY SPOT BAIT	0.00	0.06	1	Imidacloprid; (Z)-9-Tricosene	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 44 summarizes pesticide use by pesticide type. Table 45 lists all pesticide products used by QPL in 2016.

Table 44: Types of Pesticides Used by QPL in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	24.0	87.5%	63	72.4%
Insecticide	0.6	100.0%	3.4	12.5%	24	27.6%
Totals	0.6		27.4		87	

Table 45: Pesticide Products Used by QPL in 2016

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
Rodenticides								
12455-89	FINAL ALL-WEATHER BLOX	0.00	21.08	57	Brodifacoum	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	2.47	4	Bromadiolone	3	NO	NO
12455-121	TOMCAT MOUSE KILLER	0.00	0.31	1	Bromethalin	3	NO	NO
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	0.13	1	Difethialone	3	NO	NO
Insecticides								
64405-2	REDZONE BAIT	0.00	2.96	5	Boric acid	3	NO	NO
397-13	STERI-FAB	0.38	0.00	4	Phenothrin; Isopropyl alcohol; Alkyl (60%C14, 25%C12, 15%C16) dimethylbenzyl ammonium chloride; Didecyl dimethyl ammonium chloride	2	NO	NO
432-763	SUSPEND SC INSECTICIDE	0.12	0.00	3	Deltamethrin	3	NO	NO
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	0.06	3	Indoxacarb	3	NO	NO
499-370	PT 370 ASCEND FIRE ANT STOPPER BAIT	0.00	0.01	3	Avermectin	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
2724-351	ZOECON RF-259 EMULSIFIABLE CONCENTRATE	0.12	0.00	2	(7S)-Hydroprene	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.00	2	Indoxacarb	3	NO	NO
499-550	TC-323	0.00	0.38	1	Prallethrin	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. DSNY employs two certified pesticide applicators that make routine visits to facilities and responds to emergency calls because of the nature of the agency's work – managing garbage – pest problems are endemic at some facilities. DSNY also contracts for weed control on some of the City's rights-of-way. Table 46 summarizes pesticide use by pesticide type. Table 47 lists the products used by DSNY.

Table 46: Types of Pesticides Used by DSNY in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.2	13.4%	122.4	98.3%	166	22.3%
Insecticide	1.5	86.6%	2.1	1.7%	577	77.7%
Totals	1.7		124.5		743	

Table 47: List of Pesticides Applied by DSNY in 2016

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
Rodenticides								
12455-89	FINAL ALL-WEATHER BLOX	0.23	104.22	132	Brodifacoum	3	NO	NO
12455-76	CONTRAC RODENTICIDE READY TO USE PLACE PAC	0.00	17.72	33	Bromadiolone	3	NO	NO
12455-76	ZEP TOTAL CONTROL PELLET PACKS TOTAL CONTROL SYSTEMS	0.00	0.45	1	Bromadiolone	3	NO	NO
Insecticides								
100-1066	DEMAND CS INSECTICIDE	0.51	0.00	338	Cyhalothrin, lambda	3	NO	NO
432-763	SUSPEND SC	0.72	0.01	186	Deltamethrin	3	NO	NO
73766-1	GOURMET ANT BAIT GEL	0.02	1.54	21	Disodium octaborate tetrahydrate	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
432-1256	MAXFORCE FC ANT BAIT STATIONS	0.00	0.21	15	Fipronil	3	YES	NO
432-1257	MAXFORCE ROACH BAIT F.05	0.00	0.29	10	Fipronil	3	YES	NO
432-1258	MAXFORCE LARGE ROACH BAIT F.03	0.00	0.08	4	Fipronil	3	YES	NO
9444-168	ZEP TOTAL CONTROL TOTAL RELEASE FOGGER TOTAL CONTROL SYSTEMS	0.20	0.00	2	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

Taxi and Limousine Commission

The Taxi and Limousine Commission (TLC) licenses and regulates over 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 city-wide contract administered by DCAS. Table 48 summarizes pesticide use by pesticide type. Table 49 lists all pesticide products used by TLC in 2016.

Table 50: Types of Pesticides Used by TLC in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	6.6	97.7%	10	31.3%
Insecticide	0.0	0.0%	0.2	2.3%	22	68.8%
Totals	0.0		6.7		32	

Table 51: Pesticide Products Used by TLC in 2016

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
Rodenticides								
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	1.44	3	Bromadiolone	3	NO	NO
Insecticides								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	0.04	2	Indoxacarb	3	NO	NO

Transportation, Department of

The Department of Transportation (DOT) has a staff of over 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 50 summarizes pesticide use by pesticide type. Table 51 lists all pesticide products used by DOT in 2016.

Table 52: Types of Pesticides Used by DOT in 2016

Pesticide Type	Volume		Weight		Times Applied	
	Gallons	% of Total	Pounds	% of Total	Number	% of Total
Rodenticide	0.0	0.0%	131.9	85.3%	90	8.3%
Insecticide	0.0	0.0%	1.4	0.9%	43	4.0%
Herbicide	173.5	100.0%	21.4	13.8%	947	87.7%
Totals	173.5		154.7		1,080	

Table 53: Pesticide Products Used by DOT in 2016

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
Rodenticides								
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	7.98	50	Difethialone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	123.69	38	Bromadiolone	3	NO	NO
12455-36	CONTRAC RAT AND MOUSE BAIT	0.00	0.25	2	Bromadiolone	3	NO	NO
Insecticides								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	0.26	28	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	1.12	12	Boric acid	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.06	3	Indoxacarb	3	NO	NO
Herbicides								
62719-556	ACCORD XRT II	43.94	0.00	186	Glyphosate, dimethylammonium salt	3	NO	NO
432-1580	DUPONT VIEWPOINT HERBICIDE	0.13	21.38	178	Aminocyclopyrachlor; Imazapyr; Metsulfuron-methyl	3	NO	NO
228-397	RIVERDALE VANQUISH HERBICIDE	24.64	0.00	171	Dicamba, diglycolamine salt	3	NO	NO
62719-176	PATHFINDER II	82.37	0.00	165	Triclopyr, butoxyethyl ester	3	NO	NO
432-1516	ESPLANADE 200 SC	3.98	0.00	148	Indaziflam	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
62719-527	GARLON 4 ULTRA	16.03	0.00	72	Triclopyr	2	NO	NO
524-536	MON 78473 HERBICIDE	2.39	0.00	27	Glyphosate, isopropylamine salt	3	NO	NO

APPENDIX 1: Complete Listing of Pesticide Products Used by New York City Agencies by Pesticide Type in 2016

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox. Cat.	EPA Carcin	CA Dev. Toxin
Rodenticides								
7173-258	DIFETHIALONE PASTE PLACE PACKS	4.74	9,335.70	34,772	Difethialone	3	NO	NO
12455-69	CONTRAC RODENTICIDE	0.00	11,586.68	11,910	Bromadiolone	3	NO	NO
12455-90	FINAL RODENTICIDE	0.00	5,691.60	7,281	Brodifacoum	3	NO	NO
12455-133	CONTRAC WITH LUMITRACK	0.00	1,474.99	4,533	Bromadiolone	3	NO	NO
12455-86	CONTRAC RODENTICIDE PLACE PAC	0.63	2,350.69	4,196	Bromadiolone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	3,564.37	3,728	Bromadiolone	3	NO	NO
12455-56	DITRAC TRACKING POWDER	0.00	2,007.62	2,452	Diphacinone	2	NO	NO
7173-297	BROMADIOLONE PASTE 0901	0.00	579.44	1,997	Bromadiolone	3	NO	NO
100-1055	WEATHERBLOK BAIT WITH BITREX	0.00	507.31	1,098	Brodifacoum	3	NO	NO
12455-36	CONTRAC RAT AND MOUSE BAIT	0.00	988.53	1,074	Bromadiolone	3	NO	NO
56-42	BAIT BLOCK RODENTIICDE WITH PEANUT BUTTER FLAVORIZ	0.00	135.02	490	Diphacinone	3	NO	NO
12455-75	CONTRAC RAT AND MOUSE BAIT READY TO USE PLACE PAC	0.00	78.69	306	Bromadiolone	3	NO	NO
12455-108	FORMUS ALL-WEATHER BLOX	0.06	20.79	228	Brodifacoum	3	NO	NO
7173-202	MAKI MINI BLOCKS	2.21	195.09	221	Bromadiolone	3	NO	NO
7173-205	GENERATION PELLETS	0.00	253.50	214	Difethialone	3	NO	NO
12455-89	FINAL ALL-WEATHER BLOX	0.23	132.16	207	Brodifacoum	3	NO	NO
12455-106	TERAD3 BLOX	0.00	41.62	201	Cholecalciferol	3	NO	NO
12455-139	Final Soft Bait	0.00	34.13	137	Brodifacoum	3	NO	NO
7173-218	GENERATION MINI BLOCKS	0.08	102.90	108	Difethialone	3	NO	NO
7173-113	ROZOL TRACKING POWDER	0.08	71.38	89	Chlorophacinone	2	NO	NO
7173-288	DIFETHIALONE BLOCK 0707	0.00	6.19	86	Difethialone	3	NO	NO
12455-76	CONTRAC RODENTICIDE READY TO USE PLACE PAC	0.00	62.96	80	Bromadiolone	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
12455-17	ZP RODENT BAIT AG	0.00	9.88	72	Zinc phosphide	3	NO	NO
12455-80	DITRAC ALL-WEATHER BLOX	0.00	33.81	29	Diphacinone	3	NO	NO
100-1050	TALON-G RODENTICIDE BAIT PACK MINI-PELLETS WITH BI	0.00	4.57	10	Brodifacoum	3	NO	NO
7173-188	MAKI RAT AND MOUSE BAIT PACKS (PELLETS)	0.00	0.03	7	Bromadiolone	3	NO	NO
67517-66	JTEATON BROMETHALIN ALL WEATHER BAIT BLOCKS RODENTICIDE	0.00	0.31	6	Bromethalin	3	NO	NO
47629-16	PRESCRIPTION TREATMENT BRAND SOREXA BLOCKS	0.17	0.00	5	Difenacoum	3	NO	NO
7173-208	MAKI RODENTICIDE BAIT PACKS (PELLETS)	0.00	0.37	5	Bromadiolone	3	NO	NO
12455-61	LIQUA-TOX II	0.03	0.00	2	Diphacinone, sodium salt	3	NO	NO
12455-91	FINAL RODENTICIDE READY-TO-USE PLACE PAC	0.05	0.00	1	Brodifacoum	3	NO	NO
47629-17	PRESCRIPTION TREATMENT BRAND SOREXA PELLET PLACE PACK	0.02	0.00	1	Difenacoum	3	NO	NO
47629-16	DIFENACOUM RAT AND MOUSE BLOCK	0.00	1.75	1	Difenacoum	3	NO	NO
36488-63	DIFENACOUM RAT AND MOUSE BLOCK IV	0.00	1.69	1	Difenacoum	3	NO	NO
12455-76	ZEP TOTAL CONTROL PELLET PACKS TOTAL CONTROL SYSTEMS	0.00	0.45	1	Bromadiolone	3	NO	NO
12455-121	TOMCAT MOUSE KILLER	0.00	0.31	1	Bromethalin	3	NO	NO
12455-95	FASTRAC ALL-WEATHER BLOX	0.00	0.22	1	Bromethalin	3	NO	NO
Insecticides								
432-763	SUSPEND SC INSECTICIDE	593.69	47.76	69,970	Deltamethrin	3	NO	NO
432-1483	TEMPRID SC INSECTICIDE	103.68	0.05	19,254	Cyfluthrin, beta; Imidacloprid	3	NO	NO
432-1259	PRODUCT: RBF5	0.00	377.10	7,426	Fipronil	3	YES	NO
432-1460	MAXFORCE FC ROACH KILLER BAIT GEL F.05	0.57	281.61	7,321	Fipronil	3	YES	NO
499-304	WHITMIRE OPTEM ME PT 600	55.41	0.00	7,092	Cyfluthrin	3	NO	NO
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	191.16	5,303	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
73049-501	VBC-60394 FG BIOLOGICAL LARVICIDE FINE GRANULE	0.00	12,530.54	5,221	Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52	3	NO	NO
73049-429	VECTOMAX FG	0.00	33,329.42	4,957	Bacillus sphaericus; Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52	3	NO	NO
432-1257	MAXFORCE ROACH BAIT F.05	8.06	185.33	3,869	Fipronil	3	YES	NO
2724-351	ZOECON RF-259 EMULSIFIABLE CONCENTRATE	26.40	0.00	3,407	(7S)-Hydroprene	3	NO	NO
397-13	STERI-FAB	372.92	1.1	3,251	Phenothrin; Isopropyl alcohol; Alkyl (60%C14, 25%C12, 15%C16) dimethylbenzyl ammonium chloride; Didecyl dimethyl ammonium chloride	2	NO	NO
1021-1828	MGK ROACH BAIT 2822	0.00	108.18	2,270	Avermectin	3	NO	NO
64405-2	REDZONE BAIT	6.21	465.53	2,217	Boric acid	3	NO	NO
53883-276	DELTA 4.75% SC	18.59	0.00	1,616	Deltamethrin	3	NO	NO
73049-19	VECTOBAC CG BIOLOGICAL LARVICIDE GRANULES	0.00	1,483.28	1,519	Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52	3	NO	NO
279-3206	TALSTAR TC FLOWABLE TERMITICIDE/INSECTICIDE	21.73	0.00	1,398	Bifenthrin	3	YES	NO
73079-4	BORACTIN INSECTICIDE POWDER	9.79	264.67	1,349	Boric acid	3	NO	NO
499-510	PRESCRIPTION TREATMENT BRAND ALPINE COCKROACH GEL BAIT PISTON CAN	0.00	27.10	1,200	Dinotefuran	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	22.59	965	Indoxacarb	3	NO	NO
432-1363	TEMPO SC INSECTICIDE	69.10	0.01	870	Cyfluthrin, beta	3	NO	NO
62577-12	ECOPCO ACU	65.57	0.29	853	Phenylethyl propionate	3	NO	NO
499-507	PRESCRIPTION TREATMENT BRAND ALPINE COCKROACH GEL BAIT RESERVOIR	0.00	99.27	715	Dinotefuran	3	NO	NO
432-763	SUSPEND SC	11.62	0.01	683	Deltamethrin	3	NO	NO
64405-2	ECOLOGICAL ANT & INSECT BAIT	0.00	59.88	528	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
73766-1	GOURMET ANT BAIT GEL	0.09	12.86	453	Disodium octaborate tetrahydrate	3	NO	NO
100-1066	DEMAND CS INSECTICIDE	41.33	0.00	444	Cyhalothrin, lambda	3	NO	NO
279-9554	CB INSECTICIDE WITH DELTAMETHRIN	36.09	10.58	345	Deltamethrin	3	NO	NO
2724-421	ZOECON RF-292 BRIQUET	0.00	902.71	324	S-Methoprene	3	NO	NO
1021-1815	EVERCIDE ESFENVALERATE 6.4% CS	1.64	0.00	261	Esfenvalerate	3	NO	NO
100-1501	DUPONT ARILON INSECTICIDE	155.83	0.00	217	Indoxacarb	3	NO	NO
2724-484	RF 9707 AEROSOL	11.46	0.00	194	(7S)-Hydroprene	3	NO	NO
64405-8	NIBOR BORATE INSECTICIDE AND FUNGICIDE	162.54	3.38	164	Disodium octaborate tetrahydrate	3	NO	NO
73049-20	VECTOLEX CG BIOLOGICAL LARVICIDE	0.00	431.60	163	Bacillus sphaericus	3	NO	NO
432-772	DELTA DUST	0.14	1.60	144	Deltamethrin	3	NO	NO
432-1531	BES0600 INSECTICIDE	0.00	5.65	134	Clothianidin	0	NO	NO
1021-2569	MULTICIDE SPRAY 29511	26.98	0.00	128	Imidacloprid; Phenothrin; N-octyl bicycloheptene dicarboximide	0	YES	NO
2724-351	ZOECON GENCOR 9% EMULSIFIABLE CONCENTRATE	1.53	0.00	121	(7S)-Hydroprene	3	NO	NO
1021-1603	NYLAR 10EC	162.89	0.00	106	Pyriproxyfen	3	NO	NO
499-467	WHITMIRE AVERT TC 181	0.00	4.03	104	Avermectin	3	NO	NO
1021-1795	DUET DUAL-ACTION ADULTICIDE	0.00	1,592.32	99	Phenothrin; Piperonyl butoxide; Prallethrin	3	YES	NO
432-1375	PRE-EMPT FLY BAIT	0.00	20.46	91	Imidacloprid; (Z)-9-Tricosene	3	NO	NO
1021-1688	ANVIL 10+10 ULV	0.00	1,656.20	88	Phenothrin; Piperonyl butoxide	3	YES	NO
2724-274	GOLDEN MALRIN RF-128 FLY KILLER	0.00	92.91	87	Methomyl; (Z)-9-Tricosene	3	NO	NO
1021-1767	MULTICIDE LICE & DUST MITE SPRAY 27911	0.00	46.50	62	Phenothrin; N-octyl bicycloheptene dicarboximide	3	YES	NO
73049-10	VECTOBAC G BIOLOGICAL LARVICIDE GRANULES	0.00	32,500.00	46	Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52	3	NO	NO
83100-6	PRIMERAONE IMIDACLOPRID 2F INSECTICIDE	8.86	0.00	39	Imidacloprid	3	NO	NO
432-1262	MAXFORCE IBH10	1.03	0.53	39	Hydramethylnon	3	YES	YES
279-3384	ROACH KIL COMMERCIAL	0.61	2.81	39	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
432-1455	BES 0026 FLY SPOT BAIT	7.55	2.01	34	Imidacloprid; (Z)-9-Tricosene	3	NO	NO
100-1486	DUPONT ADVION COCKROACH BAIT ARENA	0.00	1.55	33	Indoxacarb	3	NO	NO
499-406	AVERT PRESCRIPTION TREATMENT TC 93A BAIT	0.00	1.45	33	Avermectin	3	NO	NO
432-1304	TEMPO 10 WP INSECTICIDE	29.77	0.04	31	Cyfluthrin, beta	3	NO	NO
499-362	WHITMIRE PT 515 WASP FREEZE	0.82	50.31	30	D-trans Allethrin; Phenothrin	3	YES	NO
100-1483	ADVION INSECT GRANULE	0.04	4.72	26	Indoxacarb	3	NO	NO
48813-1	SUFFOIL-X	7.10	0.00	24	Petroleum distillates	3	NO	NO
73079-6	GREEN ZONE GRANULAR BAIT	0.00	2.71	23	Boric acid	3	NO	NO
2724-451	ZOECON 9010 GR	0.00	5,435.00	21	S-Methoprene	3	NO	NO
86203-11	SAFARI 20SG INSECTICIDE	0.00	3.98	20	Dinotefuran	3	NO	NO
53883-283	DM DUST 0.05% INSECTICIDE	0.00	0.20	19	Deltamethrin	3	NO	NO
6218-47	SUMMIT B.T.I. BRIQUETS	0.00	4.65	18	Bacillus thuringiensis subspecies israelensis strain BMP 144	3	NO	NO
9688-190	SPECTRACIDE DESTROYER BRAND WASP & HORNET KILLER	0.30	18.75	17	Cyhalothrin, lambda; Prallethrin	3	NO	NO
62719-291	CONSERVE SC TURF AND ORNAMENTAL	0.24	0.00	16	Spinosad	3	NO	NO
432-1256	MAXFORCE FC ANT BAIT STATIONS	0.05	0.21	16	Fipronil	3	YES	NO
100-1489	DUPONT ACELEPRYN INSECTICIDE	11.03	0.00	15	DPX-E2Y45	0	NO	NO
53883-145	LAMBDA 9.7 EW INSECTICIDE	6.94	0.00	15	Cyhalothrin, lambda	2	NO	NO
1001-73	ECOLOGIX COCKROACH BAIT	0.00	0.14	15	Xanthine; Oxypurinol	3	NO	NO
1021-2593	MGK? Formula 2976	1.88	0.17	14	Avermectin; Pyriproxyfen	3	NO	NO
70051-2	TRIACT 70	1.70	0.00	14	Neem oil	3	NO	NO
100-1088	SCIMITAR GC INSECTICIDE	1.20	0.00	14	Cyhalothrin, lambda	3	NO	NO
432-1255	MAXFORCE GRANULAR INSECT BAIT	0.37	0.00	14	Hydramethylnon	3	YES	YES
432-1264	MAXFORCE FC ANT KILLER BAIT GEL	0.00	0.38	14	Fipronil	3	YES	NO
432-1506	MAXFORCE QUANTUM ANT BAIT	0.00	0.39	14	Imidacloprid	3	NO	NO
53883-371	QUALI-PRO ABAMECTIN 0.15 EC	0.46	0.00	13	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
73049-57	VECTOLEX WDG BIOLOGICAL LARVICIDE WATER DISPERSIBLE GRANULE	0.00	104.00	13	Bacillus sphaericus 2362, serotype H5a5b, strain ABTS 1743 solids, spores and insecticidal toxins	3	NO	NO
70506-121	UPI-2005 EXP-06 RUP INSECTICIDE	5.64	0.00	12	Cyhalothrin, lambda	2	NO	NO
70506-24	UP-STAR GOLD INSECTICIDE	22.25	0.00	11	Bifenthrin	3	YES	NO
59639-96	DISTANCE INSECT GROWTH REGULATOR	0.54	0.00	11	Pyriproxyfen	3	NO	NO
279-3287	FLONICAMID 50SG INSECTICIDE	0.00	0.98	11	Flonicamid	3	NO	NO
100-1543	MAINSRING GH & N	0.19	0.00	10	Cyantraniliprole	0	NO	NO
8033-109	TRANSPORT (R) MIKRON INSECTICIDE	0.12	0.00	9	Acetamiprid; Bifenthrin	3	YES	NO
1021-1641	CONQUER RESIDUAL INSECTICIDE CONCENTRATE	0.03	0.50	9	Esfenvalerate	3	NO	NO
241-313	SIEGE PBS GEL INSECTICIDE	0.00	6.59	9	Hydramethylnon	3	YES	YES
83100-5	LUCID ORNAMENTAL MITICIDE/INSECTICIDE	0.30	0.00	8	Avermectin	2	NO	NO
432-1312	MERIT 2F INSECTICIDE	17.37	0.00	7	Imidacloprid	3	NO	NO
53883-229	QUALI-PRO IMIDACLOPRID 2F TURF & ORNAMENTAL INSECT	9.11	0.00	7	Imidacloprid	3	NO	NO
432-1534	BES0668 Insecticide	3.00	3.09	7	Deltamethrin	3	NO	NO
67425-14	ECOPCO ACU CONTACT INSECTICIDE	0.07	0.00	7	Phenylethyl propionate	3	NO	NO
499-496	PRESCRIPTION TREATMENT BRAND ADVANCE 360A DUAL CHOICE ANT BAIT STATIONS	0.06	0.00	7	Avermectin	3	NO	NO
9688-246	CHEMSICO AEROSOL INSECTICIDE LI	0.00	7.66	7	Cyhalothrin, lambda; Imiprothrin	3	NO	NO
73049-39	DIPEL DF DRY FLOWABLE BIOLOGICAL INSECTICIDE	0.00	0.95	7	Bacillus thuringiensis, subsp. Kurstaki, strain ABTS-351, fermentation solids and solubles	3	NO	NO
432-1254	MAXFORCE PROFESSIONAL INSECT CONTROL ROACH KILLER	0.00	0.34	7	Hydramethylnon	3	YES	YES
66222-19	CHLORPYRIFOS 4E AG	14.25	0.00	6	Chlorpyrifos	2	NO	NO
66222-19	CHLORPYRIFOS 4E	13.50	0.00	6	Chlorpyrifos	2	NO	NO
432-1471	KONTOS	0.09	0.00	6	Spirotetramat	3	NO	NO
73079-10	INVICT (TM) COCKROACH GEL	0.03	0.00	6	Imidacloprid	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
432-1369	MARATHON II GREENHOUSE AND NURSERY INSECTICIDE	0.02	0.00	6	Imidacloprid	3	NO	NO
9444-129	BORIC ACID POWDER	0.02	13.19	6	Boric acid	3	NO	NO
73049-56	VECTOBAC WDG BIOLOGICAL LARVICIDE	0.00	3,200.03	6	Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52	3	NO	NO
69526-17	CIVITAS ONE	50.00	0.00	5	Mineral oil	3	NO	NO
69526-5	PURESpray SPRAY OIL 10E	20.85	0.00	5	Mineral oil	3	NO	NO
10163-324	M-PEDE INSECTICIDE/FUNGICIDE	0.26	0.00	5	Potassium laurate	2	NO	NO
8033-106	TRISTAR 8.5 SL INSECTICIDE	0.24	0.00	5	Acetamiprid	3	NO	NO
10163-326	CAPTIVA	0.03	0.00	5	Garlic; Resins, oleo-, capsicum; Soybean oil	3	NO	NO
499-492	PRESCRIPTION TREATMENT BRAND 388B ADVANCE ANT GEL BAIT	0.00	0.31	5	Borax	3	NO	NO
100-1485	DUPONT ADVION ANT BAIT ARENA	0.00	0.16	5	Indoxacarb	3	NO	NO
5481-8973	ORTHENE PCO FORMULA II	7.50	0.00	4	Acephate	3	YES	NO
279-3155	TALSTAR NURSERY FLOWABLE INSECTICIDE/MITICIDE	7.18	0.00	4	Bifenthrin	3	YES	NO
83529-2	AMORTECH IMD 2 SC	7.14	0.00	4	Imidacloprid	3	NO	NO
73049-38	VECTOBAC 12AS BIOLOGICAL LARVICIDE	2.94	0.00	4	Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52	3	NO	NO
66222-40	PEDESTAL	0.10	0.00	4	Novaluron	3	NO	NO
42697-60	SAFER BRAND O-INSECTICIDAL SOAP CONCENTRATE	0.02	0.00	4	Potassium laurate	2	NO	NO
66222-199	QUALI-PRO IMIDACLOPRID 75 WSB	0.00	21.94	4	Imidacloprid	3	NO	NO
82074-2	BOTANIGARD 22WP	0.00	0.72	4	Beauveria bassiana GHA	3	NO	NO
432-1258	MAXFORCE LARGE ROACH BAIT F.03	0.00	0.08	4	Fipronil	3	YES	NO
228-624	NUFARM CHLORPYRIFOS SPC 4 INSECTICIDE	9.25	0.00	3	Chlorpyrifos	2	NO	NO
83100-6	LADA 2F INSECTICIDE	5.16	0.00	3	Imidacloprid	3	NO	NO
432-1312	GARANT T&O 2F	0.94	0.00	3	Imidacloprid	3	NO	NO
499-470	WHITMIRE MICRO-GEN TC 198	0.38	0.00	3	Cyfluthrin	3	NO	NO
71711-4	SEPRO AKARI 5SC MITICIDE/INSECTICIDE	0.34	0.00	3	Fenpyroximate	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
8033-94	TRISTAR 30 SG INSECTICIDE	0.00	0.00	3	Acetamiprid	3	NO	NO
100-1487	PROVAUNT	0.00	32.55	3	Indoxacarb	3	NO	NO
432-1233	SKEETER-MITE 150-750 ULV	0.00	3.00	3	Permethrin; Piperonyl butoxide	3	YES	NO
432-1251	MAXFORCE ROACH CONTROL SYSTEM	0.00	0.09	3	Hydramethylnon	3	YES	YES
499-370	PT 370 ASCEND FIRE ANT STOPPER BAIT	0.00	0.01	3	Avermectin	3	NO	NO
432-1464	DYLOX 420 SL TURF AND ORNAMENTAL INSECTICIDE	12.56	0.00	2	Trichlorfon	3	YES	NO
66222-19	QUALI-PRO CHLOPYRIFOS 4E	4.36	0.00	2	Chlorpyrifos	2	NO	NO
100-1551	Ference	1.91	0.00	2	Cyantranilprole	0	NO	NO
4-80	BONIDE HORTICULTURAL AND DORMANT SPRAY OIL	1.00	0.00	2	Mineral oil	3	NO	NO
9444-168	ZEP TOTAL CONTROL TOTAL RELEASE FOGGER TOTAL CONTROL SYSTEMS	0.20	0.00	2	Esfenvalerate; Prallethrin; Pyriproxyfen	3	NO	NO
9688-317	HOT SHOT ANT & ROACH PLUS GERM KILLER 2	0.19	0.00	2	Alkyl (68%C12, 32%C14) dimethylethylbenzyl ammonium chloride; Alkyl* dimethyl benzyl ammonium chloride *(60%C14, 30%C16, 5%C18, 5%C12); Cypermethrin, beta; Prallethrin	3	YES	NO
279-3443	D-FOAM INSECTICIDE	0.06	0.00	2	Deltamethrin	3	NO	NO
499-515	MOTHEREARTH GRANULAR SCATTER BAIT	0.04	0.00	2	Boric acid	3	NO	NO
73079-2	INTICE GRANULAR BAIT	0.03	0.00	2	Boric acid	3	NO	NO
499-444	WHITMIRE MICRO-GEN TC 164	0.02	0.31	2	Pyrethrins; Piperonyl butoxide	3	YES	NO
239-2461	BONIDE SYSTEMIC INSECT CONTROL	0.01	0.09	2	Acephate	2	YES	NO
432-1318	LESCO SYSTEMIC INSECTICIDE CONTAINS MERIT IN WATER SOLUBLE PACKETS	0.00	3.20	2	Imidacloprid	3	NO	NO
2724-454	ZOECON 9026 FOGGER	0.00	2.63	2	Permethrin; S-Methoprene	3	YES	NO
499-550	TC-323	0.00	0.44	2	Prallethrin	3	NO	NO
1021-1424	PYROCIDE FOGGING CONCENTRATE 7338	0.00	0.31	2	Pyrethrins; Piperonyl butoxide; 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 Carc in	CA Dev. Toxin
84059-17	GRANDEVO	0.00	0.11	2	Chromobacterium subtsugae strain PRAA4-1 cells and spent fermentation media	3	NO	NO
279-3457	TRIPLE CROWN GOLF INSECTICIDE	5.63	0.00	1	Bifenthrin; Cypermethrin, zeta; Imidacloprid	2	YES	NO
53883-244	QUALI-PRO LAMBDA GC-0	0.28	0.00	1	Cyhalothrin, lambda	2	NO	NO
1677-43	STER-BAC	0.25	0.00	1	Alkyl (60%C14, 25%C12, 15%C16) dimethylbenzyl ammonium chloride	1	NO	NO
2724-786	RF2050 SPRAY	0.13	0.00	1	Tetramethrin; Ethofenprox; Piperonyl butoxide	3	YES	NO
2724-675	PREMIUM ROACH SPRAY	0.13	0.00	1	Pyrethrins; Tetramethrin; Ethofenprox; Piperonyl butoxide	3	YES	NO
44757-3	PIC ORTHOBORIC ACID ROACH & ANT KILLER	0.06	0.00	1	Boric acid	3	NO	NO
499-465	PRO-CONTROL FOGGER II	0.04	0.00	1	Pyrethrins; Piperonyl butoxide; N-octyl bicycloheptene dicarboximide	3	YES	NO
432-1455	QUICKBAYT SPOT SPRAY	0.03	0.00	1	(Z)-9-Tricosene	3	NO	NO
432-1527	TEMPRID RTU	0.03	0.00	1	Cyfluthrin, beta; Imidacloprid	0	NO	NO
149-8	TERRO ANT KILLER II	0.02	0.00	1	Borax	3	NO	NO
400-508	FLORAMITE SC	0.02	0.00	1	Bifenazate	3	NO	NO
53883-92	CYPER TC INSECTICIDE	0.02	0.00	1	Cypermethrin, beta	3	YES	NO
2724-469	ZOECON (S)-HYDROPRENE ROACH CONTROL STATION II	0.00	0.00	1	(7S)-Hydroprene	3	NO	NO
432-1457	MERIT FXT TABLET INSECTICIDE	0.00	2.48	1	Imidacloprid	3	NO	NO
432-1318	MERIT 75 WSP	0.00	1.30	1	Imidacloprid	3	NO	NO
8329-67	FLIT 10 EC BROAD SPECTRUM MULTI-USE INSECTICIDE	0.00	0.75	1	Permethrin	2	YES	NO
47000-73	SSI-50 INSECTICIDE	0.00	0.38	1	Pyrethrins; Piperonyl butoxide; N-octyl bicycloheptene dicarboximide	3	YES	NO
241-392	PHANTOM TERMITICIDE-INSECTICIDE	0.00	0.13	1	Chlorfenapyr	3	YES	NO
432-1402	DECATHLON 20 WP GREENHOUSE AND NURSERY INSECTICIDE	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
Herbicides								
524-579	ROUNDUP PROMAX	272.675 8794	6.36687 5	1017	Glyphosate, potassium salt	3	NO	NO
62719-556	ACCORD XRT II	217.520 4358	0	544	Glyphosate, dimethylammonium salt	3	NO	NO
62719-527	GARLON 4 ULTRA	56.2645 8795	0	348	Triclopyr	2	NO	NO
228-397	RIVERDALE VANQUISH HERBICIDE	33.2426 25	0	201	Dicamba, diglycolamine salt	3	NO	NO
432-1580	DUPONT VIEWPOINT HERBICIDE	0.13281 25	21.375	178	Aminocyclopyrachlor; Imazapyr; Metsulfuron-methyl	3	NO	NO
62719-176	PATHFINDER II	84.875	0	170	Triclopyr, butoxyethyl ester	3	NO	NO
432-1516	ESPLANADE 200 SC	3.97656 25	0	148	Indaziflam	3	NO	NO
62719-324	GLYPRO	28.9712 664	0	132	Glyphosate, isopropylamine salt	3	NO	NO
100-937	PRIMO MAXX	20.1211 25	0	53	Trinexapac-ethyl	3	NO	NO
524-529	ROUNDUP PRO CONCENTRATE	39.4691 4063	0	46	Glyphosate, isopropylamine salt	3	NO	NO
53883-373	QUALI-PRO T-NEX 1 AQ	70.4788 75	0	45	Trinexapac-ethyl	3	NO	NO
86064-3	ARMOR TECH PGR 113 MC	21.5561 25	0	45	Trinexapac-ethyl	3	NO	NO
524-536	MON 78473 HERBICIDE	29.8945 3125	0	32	Glyphosate, isopropylamine salt	3	NO	NO
62719-542	DIMENSION 2EW	36.5375	0	28	Dithiopyr	2	NO	NO
62719-445	DIMENSION* ULTRA 40WP	0	100.312 5	24	Dithiopyr	3	NO	NO
82052-1	AVENGER WEED KILLER CONCENTRATE	9.34765 625	0	23	Limonene	3	NO	NO
432-1229	FINALE HERBICIDE	21.1421 875	0	17	Glufosinate-ammonium	2	NO	NO
62719-40	GARLON 4	2.09904 8203	0	16	Triclopyr, butoxyethyl ester	3	NO	NO
9198-213	THE ANDERSONS 0.25% GRANULAR DITHIOPYR HERBICIDE	0	2525.5	16	Dithiopyr	3	NO	NO
62719-305	LONTREL TURF AND ORNAMENTAL	3.11566 687	0	12	Clopyralid	3	NO	NO
524-475	ROUNDUP ULTRA HERBICIDE	4.70334 4102	0	11	Glyphosate, isopropylamine salt	3	NO	NO
81880-1	SEDGEHAMMER	0	0.28197 9838	11	Halosulfuron-methyl	3	NO	NO
62719-566	TURFLON ESTER ULTRA	1.01367 1875	0	10	Triclopyr, butoxyethyl ester	3	NO	NO
100-1014	PACLOBUTRAZOL 2SC	3.208	0	9	Paclobutrazol	3	NO	NO
524-517	ACCORD XL HERBICIDE	0.70312 5	0	9	Glyphosate, isopropylamine salt	3	NO	NO
279-3419	F7275 70 WG HERBICIDE	0	1.295	9	Carfentrazone-ethyl; Quinclorac	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
1381-192	CORNERSTONE PLUS	3	0	8	Glyphosate, isopropylamine salt	3	NO	NO
228-366	RAZOR HERBICIDE	1.28906 25	0	8	Glyphosate, isopropylamine salt	3	NO	NO
7969-327	PYLEX HERBICIDE	0.03817 2861	0	8	Topramezone	3	NO	NO
42750-144	BW III	21.5812 5	0	7	2,4-D; Dicamba	1	NO	NO
71995-29	ROUNDUP WEED & GRASS KILLER CONCENTRATE PLUS	4.01562 5	0	6	Glyphosate, isopropylamine salt; Diquat dibromide	3	NO	NO
2217-833	SPEED ZONE BROADLEAF HERBICIDE	31.5625	0	5	2,4-D, 2-ethylhexyl ester; Carfentrazone-ethyl; Dicamba; Mecroprop-p	3	YES	NO
100-1267	TENACITY	0.55468 75	0	5	Mesotrione	3	NO	NO
53883-336	QUINCLORAC 1.5 L	0.47627 8903	0	5	Quinclorac, Dimethylamine Salt	3	NO	NO
279-3265	F8426 HERBICIDE	0.236	0	5	Carfentrazone-ethyl	3	NO	NO
86068-3	COMPARE-N-SAVE CONCENTRATE GRASS & WEED KILLER 41% GLYPHOSATE	0.02929 6875	0	5	Glyphosate, isopropylamine salt	2	NO	NO
9198-237	THE ANDERSONS WEED & GRASS PREVENTER WITH 5% TRAMMEL HERBICIDE (DISPER	0	200	5	Trifluralin	3	YES	NO
87373-4	HELENA T-METHYL 4.5 F-T&O	13.4375	0	4	Thiophanate-methyl	3	YES	YES
100-1139	BARRICADE 4FL	12.503	0	4	Prodiamine	3	YES	NO
59639-132	V-10137 1 EC (HERBICIDE)	0.05780 0845	0	4	Clethodim	3	NO	NO
352-401	DUPONT OUST HERBICIDE	0	0.22656 25	4	Sulfometuron methyl	3	NO	NO
432-1230	PROXY GROWTH REGULATOR	21.5	0	3	Ethephon	1	NO	NO
10404-43	LESCO THREE-WAY SELECTIVE HERBICIDE	11.9375	0	3	2,4-D, dimethylamine salt; Dicamba, dimethylamine salt; MCP-P, dimethylamine salt	1	NO	NO
228-453	BATTLESHIP 3	6.07031 25	0	3	MCPA, dimethylamine salt; Triclopyr, triethylamine salt; Fluroxypyr 1-methylheptyl ester	1	NO	NO
66330-276	DICAMBA DMA 4# AG	2.125	0	3	Dicamba, dimethylamine salt	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
241-437	CLEARCAST HERBICIDE	0.87176 7769	0	3	Imazamox	3	NO	NO
432-950	ACCLAIM EXTRA HERBICIDE	0.46093 75	0	3	Fenoxaprop-P (+)	3	NO	NO
62719-560	EF-1343	0.02662 8543	0	3	Florasulam	3	NO	NO
228-711	NUFARM PROSEEDGE SELECTIVE HERBICIDE2	0	0.105	3	Halosulfuron-methyl	3	NO	NO
10404-44	LESCO THREE-WAY BENTGRASS SELECTIVE HERBICIDE	1.53125	0	2	2,4-D, dimethylamine salt; Dicamba, dimethylamine salt; MCP-P, dimethylamine salt	3	NO	NO
2217-768	EMBARK E-Z-TU-USE PLANT GROWTH REGULATOR	1.5	0	2	Mefluidide, diethanolamine salt	3	NO	NO
524-343	ROUNDUP CUSTOM HERBICIDE	1.33593 75	0	2	Glyphosate, isopropylamine salt	3	NO	NO
228-365	AQUANEAT AQUATIC HERBICIDE	0.5	0	2	Glyphosate, isopropylamine salt	3	NO	NO
73220-12	SOLACE TURF GROWTH CONTROL	0.375	0	2	Trinexapac-ethyl	3	NO	NO
961-362	LEBANON FERTILIZER WITH BARRICADE (0.43%) PREEMERGENCE WEED CONTROL (0	800	2	Prodiamine	3	YES	NO
62719-517	ACCORD XRT	0	0	2	Glyphosate, isopropylamine salt	3	NO	NO
2217-696	BETAMEC 4 PRE-EMERGENCE GRASS KILLER	11	0	1	Bensulide	3	NO	NO
66222-151	QUALI-PRO ETHEPHON 2 SL	10	0	1	Ethephon	1	NO	NO
66222-22	PRAMITOL 25E HERBICIDE	7	0	1	Prometon	3	NO	NO
66222-151	ETHEPHON 2SL	6.503	0	1	Ethephon	1	NO	NO
228-590	4-SPEED XT SELECTIVE HERBICIDE	5	0	1	2,4-D, 2-ethylhexyl ester; Dicamba; Pyraflufen-ethyl; Triclopyr, butoxyethyl ester	3	YES	NO
86064-5	ARMORTECH (R) THREESOME(TM)	5	0	1	2,4-D, dimethylamine salt; Dicamba, dimethylamine salt; MCP-P, dimethylamine salt	1	NO	NO
228-409	TRIPLET LOW ODOR PREMIUM SELECTIVE HERBICIDE	5	0	1	2,4-D, triisopropanolamine salt; Dicamba; MCP-P, dimethylamine salt	1	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
80697-4	ARMOR TECH PAC 223	2.5	0	1	Paclobutrazol	3	NO	NO
2217-759	EMBARK 2-S PLANT GROWTH REGULATOR	0.273	0	1	Mefluidide, diethanolamine salt	3	NO	NO
53883-374	QUALI-PRO DITHIOPYR 40 WSB	0.078125	0	1	Dithiopyr	3	NO	NO
62719-488	PRIMERAONE DIMENSION 0.19% + FERTILIZER	0	13750	1	Dithiopyr	3	NO	NO
2217-581	THE ANDERSONS PROFESSIONAL TURF PRODUCTS 20-5-10	0	2200	1	2,4-D; Dicamba; Mecoprop-P	3	YES	NO
961-365	TURFGRASS FERTILIZER WITH BARRICADE 0.38% PREEMERGENCE WEED CONTROL	0	1600	1	Prodiamine	3	YES	NO
62719-590	LEBANON PROSCAPE FERTILIZER WITH LOCKUP	0	320	1	2,4-D; Dicamba; Penoxsulam	3	NO	NO
10163-213	GORDON'S PROFESSIONAL TURF & ORNAMENTAL PRODUCTS TUPERSAN HERBICIDE	0	48	1	Siduron	3	NO	NO
81927-36	ALLIGARE PRODIAMINE 65 WG HERBICIDE	0	20	1	Prodiamine	3	YES	NO
42750-90	QUINCLORAC 75DF SP	0	4	1	Quinclorac	3	NO	NO
62719-98	MASTER NURSERYMEN GARDEN WEEDER	0	0.2375	1	Trifluralin	3	NO	NO
Fungicides								
100-1364	DACONIL ACTION	570.57	0.02	101	Acibenzolar-S-methyl; Chlorothalonil	2	YES	NO
71065-3	COMPANION LIQUID BIOLOGICAL FUNGICIDE	347.30	0.00	57	Bacillus subtilis GBO3	3	NO	NO
100-1093	HERITAGE FUNGICIDE	0.00	118.28	54	Azoxystrobin	3	NO	NO
79676-17	LESCO TWOSOME FUNGICIDE	105.00	0.00	40	Iprodione; Thiophanate-methyl	3	NO	NO
55260-9	PROPLANT TURF AND ORNAMENTAL FUNGICIDE	94.40	0.00	36	Propamocarb hydrochloride	3	NO	NO
432-942	BANOL TURF AND ORNAMENTAL FUNGICIDE	78.75	0.00	32	Propamocarb hydrochloride	3	NO	NO
432-1445	BAYLETON FLO TURF AND ORNAMENTAL FUNGICIDE	25.89	0.00	28	Triadimefon	3	YES	YES
70127-2	NOVOZYMES BIOFUNGICIDE GREEN RELEASE 710-140	95.60	0.00	20	Bacillus licheniformis SB3086; IBA	3	NO	NO
264-1155	RHAPSODY AS0	177.60	0.00	19	QST 713 strain of dried Bacillus subtilis	3	NO	NO
432-1446	TARTAN FLO FUNGICIDE	41.58	0.00	19	Triadimefon; Trifloxystrobin	3	YES	YES

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox. Cat.	EPA Carc in	CA Dev. Toxin
60063-3	LESCO MANICURE ULTRA	0.00	590.00	18	Chlorothalonil	2	YES	NO
432-890	ALIETTE WDG BRAND FUNGICIDE	71.50	521.00	17	Fosetyl-AI	3	NO	NO
86064-1	ARMORTECH CLT 825 DF	0.00	1,026.50	17	Chlorothalonil	2	YES	NO
66222-154	QUALI-PRO CHLOROTHALONIL 720 SFT	133.68	0.00	16	Chlorothalonil	2	YES	NO
228-623	NUFARM PROPICONAZOLE SPC 14.3 MEC FUNGICIDE	0.90	0.00	16	Propiconazole	2	YES	NO
84059-3	REGALIA PTO BIOFUNGICIDE FOR USE ON TURF AND ORNAMENTALS	33.20	0.00	15	Reynoutria sachalinensis	3	NO	NO
50534-202	MANICURE ULTREX TURF & ORNAMENTAL	0.00	215.00	15	Chlorothalonil	1	YES	NO
70299-1	ZEROTOL ALGAECIDE/FUNGICIDE	61.91	0.00	14	Hydrogen peroxide	1	NO	NO
66222-117	ARMOR TECH TEB360 XL	31.71	0.00	14	Tebuconazole	3	YES	NO
53883-343	AZOXYSTROBIN 50 WG	0.00	4.22	14	Azoxystrobin	3	NO	NO
68539-3	T-22G BIOLOGICAL PLANT PROTECTANT GRANULES	0.00	39.50	13	Trichoderma harzianum rifai strain KRL-AG2	3	NO	NO
432-888	CHIPCO 26019 FLO BRAND FUNGICIDE	168.15	0.00	12	Iprodione	3	YES	NO
66222-41	QUALI-PRO PROPICONAZOLE 14.3	81.60	0.00	12	Propiconazole	2	NO	NO
228-626	NUFARM T-METHYL PRO 4.5 F FUNGICIDE	47.64	0.00	11	Thiophanate-methyl	3	YES	YES
100-1326	BANNER MAXX II	42.83	0.00	11	Propiconazole	3	YES	NO
432-890	LESCO PRODIGY SIGNATURE	0.00	484.00	11	Fosetyl-AI	3	NO	NO
432-1505	CHIPCO 26019T FUNGICIDE	71.50	0.00	10	Iprodione; Trifloxystrobin	3	YES	NO
228-684	NUFARM IPRDIONE SPC FUNGICIDE	56.15	0.00	10	Iprodione	3	YES	NO
33753-27	S445L	40.75	0.00	10	Glutaraldehyde	1	NO	NO
432-1529	TEBUCONAZOLE SC TURF AND ORNAMENTAL FUNGICIDE	31.00	0.00	10	Tebuconazole	3	YES	NO
84229-44	AMTIDE TEBU 3.6F FOLIAR FUNGICIDE	24.11	0.00	10	Tebuconazole	3	YES	NO
66222-41	PRIMEERAONE PROPICONAZOLA 14.3	13.36	0.00	10	Propiconazole	2	NO	NO
7969-350	LEXICON INTRINSIC BRAND FUNGICIDE	5.25	0.00	10	Fluxapyroxad; Pyraclostrobin	3	NO	NO
66222-150	EQUUS 500 ZN	97.50	0.00	8	Chlorothalonil	2	YES	NO
69361-27	TEBUCONAZOLE 3.6F FUNGICIDE	23.25	0.00	8	Tebuconazole	3	YES	NO
66222-117	ORIUS 3.6F	16.71	0.00	8	Tebuconazole	3	YES	NO
67702-2	CAMELOT O FUNGICIDE/BACTERICIDE	11.17	0.00	8	Copper octanoate	3	NO	NO
100-892	ARBOTECT 20-S FUNGICIDE	6.86	0.00	8	Thiabendazole	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
59639-144	V-10116 VPP FUNGICIDE	0.00	117.20	8	Metconazole	3	NO	NO
68173-3	AFFIRM WDG	0.00	60.90	8	Polyoxin D zinc salt	3	NO	NO
66222-134	THIOPHANATE METHYL 4.5 F	61.50	0.00	6	Thiophanate-methyl	3	YES	YES
71512-13	SEGWAY FUNGICIDE	1.70	0.00	6	Cyazofamid	3	NO	NO
70644-1	NUTROL	0.00	372.00	6	Phosphoric acid, monopotassium salt	3	NO	NO
432-1541	12ESP705 FUNGICIDE	0.00	310.38	6	Fosetyl-Al	3	NO	NO
7969-224	CURALAN EG	0.00	242.95	6	Vinclozolin	3	YES	YES
86064-2	ARMOR TECH CLT 720 FL	55.00	0.00	5	Chlorothalonil	2	YES	NO
87290-44	ARMORTECH ZOXY 2 SC	4.50	0.00	5	Azoxystrobin	3	NO	NO
62719-388	FORE 80WP RAINSHIELD	0.00	214.50	5	Mancozeb	3	YES	NO
70299-15	GC PRO	0.00	140.00	5	Sodium percarbonate	1	NO	NO
7969-255	HONOR FUNGICIDE	0.00	79.60	5	Nicobifen; Pyraclostrobin	3	YES	NO
50534-209	MANICURE 6 FLOWABLE	53.25	0.00	4	Chlorothalonil	3	YES	NO
53883-375	QUALI-PRO IPRO 2SE	47.00	0.00	4	Iprodione	3	YES	NO
7969-290	INSIGNIA SC INTRINSIC BRAND FUNGICIDE	12.31	0.00	4	Pyraclostrobin	2	NO	NO
42750-292	AZOXY 11% + TEB 26% FL	9.50	0.00	4	Azoxystrobin; Tebuconazole	3	YES	NO
100-1433	BRISKWAY	8.73	0.00	4	Azoxystrobin; Difenoconazole	3	YES	NO
100-741	LESCO SPECTATOR ULTRA 1.3 FUNGICIDE	28.77	0.00	3	Propiconazole	2	YES	NO
53883-380	QUALI-PRO IPRO 2	13.44	0.00	3	Iprodione	3	YES	NO
89442-1	TEBUCONAZOLE 3.6 SELECT	12.00	0.00	3	Tebuconazole	3	YES	NO
100-796	SUBDUE MAXX	8.14	0.00	3	Mefenoxam	3	NO	NO
73512-1	KEYPLEX 350	5.13	0.00	3	Brewer's yeast extract hydrolysate from Saccharomyces cerevisiae	3	NO	NO
7969-349	Xzemplar Fungicide	3.25	0.00	3	Fluxapyroxad	3	NO	NO
66222-216	QUALI-PRO MEFENOXAM 2AQ	2.98	0.00	3	Mefenoxam	2	NO	NO
228-623	PRIMERAONE PROPICONAZOLE 14.3	2.75	0.00	3	Propiconazole	2	YES	NO
432-1223	PROSTAR 70 WP	2.00	48.00	3	Flutolanil	3	NO	NO
9198-115	THE ANDERSONS TURF FUNGICIDE WITH 5.0% DACONIL	0.00	1,640.00	3	Chlorothalonil	1	YES	NO
70506-234	MANZATE PRO-STICK FUNGICIDE	0.00	220.00	3	Mancozeb	3	YES	NO
66222-161	QUALI-PRO FOSETYL - AL 80 WDG	0.00	47.20	3	Fosetyl-Al	3	NO	NO
100-1434	MEDALLION WDG	0.00	0.06	3	Fludioxonil	3	NO	NO
1001-69	LESCO CAVALIER FLOWABLE	66.00	0.00	2	Thiophanate-methyl	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
100-1216	BANNER HERITAGE MAXX	16.40	0.00	2	Azoxystrobin; Propiconazole	3	YES	NO
228-623	LESCO SPECTATOR ULTRA 1.3 FUNGICIDE	3.00	0.00	2	Propiconazole	2	YES	NO
53883-353	QUALI-PRO T-NEX	2.32	0.00	2	Trinexapac-ethyl	3	NO	NO
100-1448	MEDALLION SC	1.34	0.00	2	Fludioxonil	3	NO	NO
400-521	TERRAGUARD SC	0.06	0.00	2	Triflumizole	3	NO	NO
100-1323	HERITAGE G	0.00	60.00	2	Azoxystrobin	3	NO	NO
53883-343	AZOXY 50 WDG SELECT FUNGICIDE	0.00	8.00	2	Azoxystrobin	3	NO	NO
464-693	CHEMICAR 15	17.00	0.00	1	Glutaraldehyde	1	NO	NO
100-1347	CONCERT II	10.00	0.00	1	Propiconazole	1	YES	NO
53883-309	QUALI-PRO ENCLAVE 5.3F	9.63	0.00	1	Chlorothalonil; Thiophanate-methyl; Iprodione; Tebuconazole	3	YES	YES
66222-185	QUALI-PRO MYCLOBUTANIL 20EW T&O	3.04	0.00	1	Myclobutanil	3	NO	YES
53883-363	BUMPER 14.3 EC (PROPICONAZOLE) FUNGICIDE	0.97	0.00	1	Propiconazole	2	YES	NO
71512-13	GORDON'S PROFESSIONAL TURF & ORNAMENTAL PRODUCTS SEGWAY FUNGICIDE	0.61	0.00	1	Cyazofamid	3	NO	NO
69592-19	CEASE	0.25	0.00	1	QST 713 strain of dried Bacillus subtilis	3	NO	NO
71962-1	AGRI-FOS SYSTEMIC FUNGICIDE	0.01	0.00	1	Mono- and di-potassium salts of phosphorous acid	3	NO	NO
70051-2	TRIPLE ACTION NEEM OIL	0.00	0.00	1	Neem oil	3	NO	NO
10465-3	LIQUID COPPER FUNGICIDE	0.00	0.00	1	Cuprammonium acetate	3	NO	NO
66222-149	ARMOR TECH CLT 825	0.00	34.00	1	Chlorothalonil	2	YES	NO
7969-196	EMERALD FUNGICIDE	0.00	16.00	1	Nicobifen	2	YES	NO
Other (Repellents, Biochemical Pesticides, Etc.)								
52483-1	HYPOCHLORITE SOLUTION	155.50	0.00	25	Sodium hypochlorite	1	NO	NO
60061-71	PETTIT MARINE PAINT PREMIUM SINGLE SEASON ABLATIVE	35.00	0.00	24	Copper oxide (ous)	2	NO	NO
59807-4	HORMODIN 1	0.00	0.26	6	IBA	3	NO	NO
73049-15	PROGIBB 4% PLANT GROWTH REGULATOR SOLUTION	0.00	0.00	4	Gibberellins	2	NO	NO
63838-5	CHEM-AQUA 42171	7.50	0.00	2	Sodium bromide; Sodium hypochlorite	1	NO	NO
71096-7	ORTHO BUG-GETA SNAIL & SLUG KILLER	0.00	0.50	2	Metalddehyde	3	NO	NO

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EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox. Cat.	EPA Carc in	CA Dev. Toxin
1448-212	CHEMICIDE 100-15	12.00	0.00	1	Poly(oxyethylene) (dimethylimino) ethylene (dimethylimino) ethylene dichloride	3	NO	NO
58616-1	PCT 3026	3.00	0.00	1	Sodium bromide; Sodium hypochlorite	1	NO	NO

APPENDIX 2: Complete Listing of Pesticide Products Used by the Department of Parks and Recreation in 2016

EPA Reg. #	EPA Product Name	Volume (Gals)	Weight (Lbs)	No. Appl's.	Active Ingredient(s)	EPA Tox Cat	EPA Carcin	CA Dev. Toxin
Rodenticides								
12455-36	CONTRAC RAT AND MOUSE BAIT	0.00	433.13	589	Bromadiolone	3	NO	NO
12455-79	CONTRAC ALL-WEATHER BLOX	0.00	204.44	481	Bromadiolone	3	NO	NO
12455-69	CONTRAC RODENTICIDE	0.00	209.65	275	Bromadiolone	3	NO	NO
12455-106	TERAD3 BLOX	0.00	40.56	197	Cholecalciferol	3	NO	NO
12455-139	Final Soft Bait	0.00	34.13	137	Brodifacoum	3	NO	NO
7173-218	GENERATION MINI BLOCKS	0.00	69.69	83	Difethialone	3	NO	NO
7173-258	DIFETHIALONE PASTE PLACE PACKS	0.00	45.73	74	Difethialone	3	NO	NO
100-1055	WEATHERBLOK BAIT WITH BITREX	0.00	2.31	74	Brodifacoum	3	NO	NO
12455-17	ZP RODENT BAIT AG	0.00	9.88	72	Zinc phosphide	3	NO	NO
7173-202	MAKI MINI BLOCKS	0.00	25.27	44	Bromadiolone	3	NO	NO
12455-75	CONTRAC RAT AND MOUSE BAIT READY TO USE PLACE PAC	0.00	10.59	21	Bromadiolone	3	NO	NO
7173-297	BROMADIOLONE PASTE 0901	0.00	2.94	8	Bromadiolone	3	NO	NO
7173-188	MAKI RAT AND MOUSE BAIT PACKS (PELLETS)	0.00	0.03	7	Bromadiolone	3	NO	NO
67517-66	JTEATON BROMETHALIN ALL WEATHER BAIT BLOCKS RODENTICIDE	0.00	0.31	6	Bromethalin	3	NO	NO
36488-63	DIFENACOUM RAT AND MOUSE BLOCK IV	0.00	1.69	1	Difenacoum	3	NO	NO
12455-89	FINAL ALL-WEATHER BLOX	0.00	1.25	1	Brodifacoum	3	NO	NO
Insecticides								
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	2.27	142	Indoxacarb	3	NO	NO
83100-6	PRIMERAONE IMIDACLOPRID 2F INSECTICIDE	8.86	0.00	39	Imidacloprid	3	NO	NO
100-1498	DUPONT ADVION ANT GEL	0.00	0.35	32	Indoxacarb	3	NO	NO
64405-2	REDZONE BAIT	0.00	7.07	27	Boric acid	3	NO	NO
499-362	WHITMIRE PT 515 WASP FREEZE	0.00	50.31	26	D-trans Allethrin; Phenothrin	3	YES	NO
48813-1	SUFFOIL-X	7.10	0.00	24	Petroleum distillates	3	NO	NO
86203-11	SAFARI 20SG INSECTICIDE	0.00	3.98	20	Dinotefuran	3	NO	NO
62719-291	CONSERVE SC TURF AND ORNAMENTAL	0.24	0.00	16	Spinosad	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
100-1489	DUPONT ACELEPRYN INSECTICIDE	11.03	0.00	15	DPX-E2Y45	0	NO	NO
53883-145	LAMBDA 9.7 EW INSECTICIDE	6.94	0.00	15	Cyhalothrin, lambda	2	NO	NO
9688-190	SPECTRACIDE DESTROYER BRAND WASP & HORNET KILLER	0.00	18.75	15	Cyhalothrin, lambda; Prallethrin	3	NO	NO
70051-2	TRIACT 70	1.70	0.00	14	Neem oil	3	NO	NO
100-1088	SCIMITAR GC INSECTICIDE	1.20	0.00	14	Cyhalothrin, lambda	3	NO	NO
432-1506	MAXFORCE QUANTUM ANT BAIT	0.00	0.39	14	Imidacloprid	3	NO	NO
53883-371	QUALI-PRO ABAMECTIN 0.15 EC	0.46	0.00	13	Avermectin	2	NO	NO
70506-121	UPI-2005 EXP-06 RUP INSECTICIDE	5.64	0.00	12	Cyhalothrin, lambda	2	NO	NO
70506-24	UP-STAR GOLD INSECTICIDE	22.25	0.00	11	Bifenthrin	3	YES	NO
59639-96	DISTANCE INSECT GROWTH REGULATOR	0.54	0.00	11	Pyriproxyfen	3	NO	NO
279-3287	FLONICAMID 50SG INSECTICIDE	0.00	0.98	11	Flonicamid	3	NO	NO
100-1543	MAINSRING GH & N	0.19	0.00	10	Cyantraniliprole	0	NO	NO
83100-5	LUCID ORNAMENTAL MITICIDE/INSECTICIDE	0.30	0.00	8	Avermectin	2	NO	NO
73049-20	VECTOLEX CG BIOLOGICAL LARVICIDE	0.00	33.00	8	Bacillus sphaericus	3	NO	NO
432-1312	MERIT 2F INSECTICIDE	17.37	0.00	7	Imidacloprid	3	NO	NO
53883-229	QUALI-PRO IMIDACLOPRID 2F TURF & ORNAMENTAL INSECT	9.11	0.00	7	Imidacloprid	3	NO	NO
9688-246	CHEMSICO AEROSOL INSECTICIDE LI	0.00	7.66	7	Cyhalothrin, lambda; Imiprothrin	3	NO	NO
73049-39	DIPEL DF DRY FLOWABLE BIOLOGICAL INSECTICIDE	0.00	0.95	7	Bacillus thuringiensis, subsp. Kurstaki, strain ABTS-351, fermentation solids and solubles	3	NO	NO
66222-19	CHLORPYRIFOS 4E AG	14.25	0.00	6	Chlorpyrifos	2	NO	NO
66222-19	CHLORPYRIFOS 4E	13.50	0.00	6	Chlorpyrifos	2	NO	NO
432-1471	KONTOS	0.09	0.00	6	Spirotetramat	3	NO	NO
432-1369	MARATHON II GREENHOUSE AND NURSERY INSECTICIDE	0.02	0.00	6	Imidacloprid	3	NO	NO
69526-17	CIVITAS ONE	50.00	0.00	5	Mineral oil	3	NO	NO
69526-5	PURESpray SPRAY OIL 10E	20.85	0.00	5	Mineral oil	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
10163-324	M-PEDE INSECTICIDE/FUNGI CIDE	0.26	0.00	5	Potassium laurate	2	NO	NO
8033-106	TRISTAR 8.5 SL INSECTICIDE	0.24	0.00	5	Acetamiprid	3	NO	NO
10163-326	CAPTIVA	0.03	0.00	5	Garlic; Resins, oleo-, capsicum; Soybean oil	3	NO	NO
6218-47	SUMMIT B.T.I. BRIQUETS	0.00	2.63	5	Bacillus thuringiensis subspecies Israelensis strain BMP 144	3	NO	NO
279-3155	TALSTAR NURSERY FLOWABLE INSECTICIDE/MITICI DE	7.18	0.00	4	Bifenthrin	3	YES	NO
83529-2	AMORTECH IMD 2 SC	7.14	0.00	4	Imidacloprid	3	NO	NO
73049-38	VECTOBAC 12AS BIOLOGICAL LARVICIDE	2.94	0.00	4	Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52	3	NO	NO
66222-40	PEDESTAL	0.10	0.00	4	Novaluron	3	NO	NO
42697-60	SAFER BRAND O- INSECTICIDAL SOAP CONCENTRATE	0.02	0.00	4	Potassium laurate	2	NO	NO
66222-199	QUALI-PRO IMIDACLOPRID 75 WSB	0.00	21.94	4	Imidacloprid	3	NO	NO
82074-2	BOTANIGARD 22WP	0.00	0.72	4	Beauveria bassiana GHA	3	NO	NO
228-624	NUFARM CHLORPYRIFOS SPC 4 INSECTICIDE	9.25	0.00	3	Chlorpyrifos	2	NO	NO
83100-6	LADA 2F INSECTICIDE	5.16	0.00	3	Imidacloprid	3	NO	NO
279-3206	TALSTAR TC FLOWABLE TERMITICIDE/INSEC TICIDE	3.66	0.00	3	Bifenthrin	3	YES	NO
432-1312	GARANT T&O 2F	0.94	0.00	3	Imidacloprid	3	NO	NO
71711-4	SEPRO AKARI 5SC MITICIDE/INSECTICI DE	0.34	0.00	3	Fenpyroximate	2	NO	NO
8033-94	TRISTAR 30 SG INSECTICIDE	0.00	0.00	3	Acetamiprid	3	NO	NO
100-1487	PROVAUNT	0.00	32.55	3	Indoxacarb	3	NO	NO
432-1233	SKEETER-MITE 150- 750 ULV	0.00	3.00	3	Permethrin; Piperonyl butoxide	3	YES	NO
432-1264	MAXFORCE FC ANT KILLER BAIT GEL	0.00	0.02	3	Fipronil	3	YES	NO
432-1464	DYLOX 420 SL TURF AND ORNAMENTAL INSECTICIDE	12.56	0.00	2	Trichlorfon	3	YES	NO
66222-19	QUALI-PRO CHLORPYRIFOS 4E	4.36	0.00	2	Chlorpyrifos	2	NO	NO
100-1551	Ference	1.91	0.00	2	Cyantraniliprole	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
4-80	BONIDE HORTICULTURAL AND DORMANT SPRAY OIL	1.00	0.00	2	Mineral oil	3	NO	NO
2724-351	ZOECON GENCOR 9% EMULSIFIABLE CONCENTRATE	0.20	0.00	2	(7S)-Hydroprene	3	NO	NO
239-2461	BONIDE SYSTEMIC INSECT CONTROL	0.01	0.09	2	Acephate	2	YES	NO
432-1318	LESCO SYSTEMIC INSECTICIDE CONTAINS MERIT IN WATER SOLUBLE PACKETS	0.00	3.20	2	Imidacloprid	3	NO	NO
2724-454	ZOECON 9026 FOGGER	0.00	2.63	2	Permethrin; S-Methoprene	3	YES	NO
84059-17	GRANDEVO	0.00	0.11	2	Chromobacterium subtsugae strain PRAA4-1 cells and spent fermentation media	3	NO	NO
279-3457	TRIPLE CROWN GOLF INSECTICIDE	5.63	0.00	1	Bifenthrin; Cypermethrin, zeta; Imidacloprid	2	YES	NO
53883-244	QUALI-PRO LAMBDA GC-0	0.28	0.00	1	Cyhalothrin, lambda	2	NO	NO
400-508	FLORAMITE SC	0.02	0.00	1	Bifenazate	3	NO	NO
432-1457	MERIT FXT TABLET INSECTICIDE	0.00	2.48	1	Imidacloprid	3	NO	NO
432-1318	MERIT 75 WSP	0.00	1.30	1	Imidacloprid	3	NO	NO
432-1402	DECATHLON 20 WP GREENHOUSE AND NURSERY INSECTICIDE	0.00	0.06	1	Cyfluthrin	3	NO	NO
73049-56	VECTOBAC WDG BIOLOGICAL LARVICIDE	0.00	0.03	1	Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52	3	NO	NO
499-496	PRESCRIPTION TREATMENT BRAND ADVANCE 360A DUAL CHOICE ANT BAIT STATIONS	0.00	0.00	1	Avermectin	3	NO	NO
Herbicides								
524-579	ROUNDUP PROMAX	266.26	6.37	1,004	Glyphosate, potassium salt	3	NO	NO
62719-556	ACCORD XRT II	173.27	0.00	356	Glyphosate, dimethylammonium salt	3	NO	NO
62719-527	GARLON 4 ULTRA	40.23	0.00	276	Triclopyr	2	NO	NO
62719-324	GLYPRO	28.97	0.00	132	Glyphosate, isopropylamine salt	3	NO	NO
100-937	PRIMO MAXX	20.12	0.00	53	Trinexapac-ethyl	3	NO	NO
524-529	ROUNDUP PRO CONCENTRATE	39.47	0.00	46	Glyphosate, isopropylamine salt	3	NO	NO
53883-373	QUALI-PRO T-NEX 1 AQ	70.48	0.00	45	Trinexapac-ethyl	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
86064-3	ARMOR TECH PGR 113 MC	21.56	0.00	45	Trinexapac-ethyl	3	NO	NO
228-397	RIVERDALE VANQUISH HERBICIDE	8.60	0.00	30	Dicamba, diglycolamine salt	3	NO	NO
62719-542	DIMENSION 2EW	36.54	0.00	28	Dithiopyr	2	NO	NO
62719-445	DIMENSION* ULTRA 40WP	0.00	100.31	24	Dithiopyr	3	NO	NO
82052-1	AVENGER WEED KILLER CONCENTRATE	9.35	0.00	23	Limonene	3	NO	NO
62719-40	GARLON 4	2.10	0.00	16	Triclopyr, butoxyethyl ester	3	NO	NO
9198-213	THE ANDERSONS 0.25% GRANULAR DITHIOPYR HERBICIDE	0.00	2,525.50	16	Dithiopyr	3	NO	NO
62719-305	LONTREL TURF AND ORNAMENTAL	3.12	0.00	12	Clopyralid	3	NO	NO
81880-1	SEDGEHAMMER	0.00	0.28	11	Halosulfuron-methyl	3	NO	NO
62719-566	TURFLON ESTER ULTRA	1.01	0.00	10	Triclopyr, butoxyethyl ester	3	NO	NO
100-1014	PACLOBUTRAZOL 2SC	3.21	0.00	9	Paclobutrazol	3	NO	NO
524-475	ROUNDUP ULTRA HERBICIDE	1.70	0.00	9	Glyphosate, isopropylamine salt	3	NO	NO
279-3419	F7275 70 WG HERBICIDE	0.00	1.30	9	Carfentrazone-ethyl; Quinclorac	3	NO	NO
7969-327	PYLEX HERBICIDE	0.04	0.00	8	Topramezone	3	NO	NO
42750-144	BW III	21.58	0.00	7	2,4-D; Dicamba	1	NO	NO
2217-833	SPEED ZONE BROADLEAF HERBICIDE	31.56	0.00	5	2,4-D, 2-ethylhexyl ester; Carfentrazone-ethyl; Dicamba; Mecroprop-p	3	YES	NO
62719-176	PATHFINDER II	2.51	0.00	5	Triclopyr, butoxyethyl ester	3	NO	NO
100-1267	TENACITY	0.55	0.00	5	Mesotrione	3	NO	NO
53883-336	QUINCLORAC 1.5 L	0.48	0.00	5	Quinclorac, Dimethylamine Salt	3	NO	NO
279-3265	F8426 HERBICIDE	0.24	0.00	5	Carfentrazone-ethyl	3	NO	NO
86068-3	COMPARE-N-SAVE CONCENTRATE GRASS & WEED KILLER 41% GLYPHOSATE	0.03	0.00	5	Glyphosate, isopropylamine salt	2	NO	NO
87373-4	HELENA T-METHYL 4.5 F-T&O	13.44	0.00	4	Thiophanate-methyl	3	YES	YES
100-1139	BARRICADE 4FL	12.50	0.00	4	Prodiamine	3	YES	NO
524-517	ACCORD XL HERBICIDE	0.63	0.00	4	Glyphosate, isopropylamine salt	3	NO	NO
59639-132	V-10137 1 EC (HERBICIDE)	0.06	0.00	4	Clethodim	3	NO	NO
352-401	DUPONT OUST HERBICIDE	0.00	0.23	4	Sulfometuron methyl	3	NO	NO
432-1230	PROXY GROWTH REGULATOR	21.50	0.00	3	Ethephon	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
10404-43	LESCO THREE-WAY SELECTIVE HERBICIDE	11.94	0.00	3	2,4-D, dimethylamine salt; Dicamba, dimethylamine salt; MCP-P, dimethylamine salt	1	NO	NO
228-453	BATTLESHIP 3	6.07	0.00	3	MCPA, dimethylamine salt; Triclopyr, triethylamine salt; Fluroxypyr 1-methylheptyl ester	1	NO	NO
66330-276	DICAMBA DMA 4# AG	2.13	0.00	3	Dicamba, dimethylamine salt	2	NO	NO
241-437	CLEARCAST HERBICIDE	0.87	0.00	3	Imazamox	3	NO	NO
432-950	ACCLAIM EXTRA HERBICIDE	0.46	0.00	3	Fenoxaprop-P (+)	3	NO	NO
62719-560	EF-1343	0.03	0.00	3	Florasulam	3	NO	NO
228-711	NUFARM PROSEGE SELECTIVE HERBICIDE2	0.00	0.11	3	Halosulfuron-methyl	3	NO	NO
10404-44	LESCO THREE-WAY BENTGRASS SELECTIVE HERBICIDE	1.53	0.00	2	2,4-D, dimethylamine salt; Dicamba, dimethylamine salt; MCP-P, dimethylamine salt	3	NO	NO
2217-768	EMBAK E-Z-TU-USE PLANT GROWTH REGULATOR	1.50	0.00	2	Mefluidide, diethanolamine salt	3	NO	NO
524-343	ROUNDUP CUSTOM HERBICIDE	1.34	0.00	2	Glyphosate, isopropylamine salt	3	NO	NO
228-365	AQUANEAT AQUATIC HERBICIDE	0.50	0.00	2	Glyphosate, isopropylamine salt	3	NO	NO
73220-12	SOLACE TURF GROWTH CONTROL	0.38	0.00	2	Trinexapac-ethyl	3	NO	NO
62719-517	ACCORD XRT	0.00	0.00	2	Glyphosate, isopropylamine salt	3	NO	NO
2217-696	BETAMEC 4 PRE-EMERGENCE GRASS KILLER	11.00	0.00	1	Bensulide	3	NO	NO
66222-151	QUALI-PRO ETHEPHON 2 SL	10.00	0.00	1	Ethephon	1	NO	NO
66222-151	ETHEPHON 2SL	6.50	0.00	1	Ethephon	1	NO	NO
228-409	TRIPLET LOW ODOR PREMIUM SELECTIVE HERBICIDE	5.00	0.00	1	2,4-D, triisopropanolamine salt; Dicamba; MCP-P, dimethylamine salt	1	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
228-590	4-SPEED XT SELECTIVE HERBICIDE	5.00	0.00	1	2,4-D, 2-ethylhexyl ester; Dicamba; Pyraflufen-ethyl; Triclopyr, butoxyethyl ester	3	YES	NO
86064-5	ARMORTECH (R) THREESOME(TM)	5.00	0.00	1	2,4-D, dimethylamine salt; Dicamba, dimethylamine salt; MCP-P, dimethylamine salt	1	NO	NO
80697-4	ARMOR TECH PAC 223	2.50	0.00	1	Paclobutrazol	3	NO	NO
2217-759	EMBARK 2-S PLANT GROWTH REGULATOR	0.27	0.00	1	Mefluidide, diethanolamine salt	3	NO	NO
53883-374	QUALI-PRO DITHIOPYR 40 WSB	0.08	0.00	1	Dithiopyr	3	NO	NO
62719-488	PRIMERAONE DIMENSION 0.19% + FERTILIZER	0.00	13,750.00	1	Dithiopyr	3	NO	NO
2217-581	THE ANDERSONS PROFESSIONAL TURF PRODUCTS 20-5-10	0.00	2,200.00	1	2,4-D; Dicamba; Mecoprop-P	3	YES	NO
961-365	TURFGRASS FERTILIZER WITH BARRICADE 0.38% PREEMERGENCE WEED CONTROL	0.00	1,600.00	1	Prodiamine	3	YES	NO
10163-213	GORDON'S PROFESSIONAL TURF & ORNAMENTAL PRODUCTS TUPERSAN HERBICIDE	0.00	48.00	1	Siduron	3	NO	NO
81927-36	ALLIGARE PRODIAMINE 65 WG HERBICIDE	0.00	20.00	1	Prodiamine	3	YES	NO
42750-90	QUINCLORAC 75DF SP	0.00	4.00	1	Quinclorac	3	NO	NO
Fungicides								
100-1364	DACONIL ACTION	570.57	0.02	101	Acibenzolar-S-methyl; Chlorothalonil	2	YES	NO
71065-3	COMPANION LIQUID BIOLOGICAL FUNGICIDE	347.30	0.00	57	Bacillus subtilis GBO3	3	NO	NO
100-1093	HERITAGE FUNGICIDE	0.00	118.28	54	Azoxystrobin	3	NO	NO
79676-17	LESCO TWOSOME FUNGICIDE	105.00	0.00	40	Iprodione; Thiophanate-methyl	3	NO	NO
55260-9	PROPLANT TURF AND ORNAMENTAL FUNGICIDE	94.40	0.00	36	Propamocarb hydrochloride	3	NO	NO
432-942	BANOL TURF AND ORNAMENTAL FUNGICIDE	78.75	0.00	32	Propamocarb hydrochloride	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
432-1445	BAYLETON FLO TURF AND ORNAMENTAL FUNGICIDE	25.89	0.00	28	Triadimefon	3	YES	YES
70127-2	NOVOZYMES BIOFUNGICIDE GREEN RELEAF 710- 140	95.60	0.00	20	Bacillus licheniformis SB3086; IBA	3	NO	NO
264-1155	RHAPSODY AS0	177.60	0.00	19	QST 713 strain of dried Bacillus subtilis	3	NO	NO
432-1446	TARTAN FLO FUNGICIDE	41.58	0.00	19	Triadimefon; Trifloxystrobin	3	YES	YES
60063-3	LESCO MANICURE ULTRA	0.00	590.00	18	Chlorothalonil	2	YES	NO
432-890	ALIETTE WDG BRAND FUNGICIDE	71.50	521.00	17	Fosetyl-Al	3	NO	NO
86064-1	ARMORTECH CLT 825 DF	0.00	1,026.50	17	Chlorothalonil	2	YES	NO
66222-154	QUALI-PRO CHLOROTHALONIL 720 SFT	133.68	0.00	16	Chlorothalonil	2	YES	NO
228-623	NUFARM PROPICONAZOLE SPC 14.3 MEC FUNGICIDE	0.90	0.00	16	Propiconazole	2	YES	NO
84059-3	REGALIA PTO BIOFUNGICIDE FOR USE ON TURF AND ORNAMENTALS	33.20	0.00	15	Reynoutria sachalinensis	3	NO	NO
50534-202	MANICURE ULTREX TURF & ORNAMENTAL	0.00	215.00	15	Chlorothalonil	1	YES	NO
70299-1	ZEROTOL ALGAECIDE/FUNGIC IDE	61.91	0.00	14	Hydrogen peroxide	1	NO	NO
66222-117	ARMOR TECH TEB360 XL	31.71	0.00	14	Tebuconazole	3	YES	NO
53883-343	AZOXYSTROBIN 50 WG	0.00	4.22	14	Azoxystrobin	3	NO	NO
68539-3	T-22G BIOLOGICAL PLANT PROTECTANT GRANULES	0.00	39.50	13	Trichoderma harzianum rifai strain KRL-AG2	3	NO	NO
432-888	CHIPCO 26019 FLO BRAND FUNGICIDE	168.15	0.00	12	Iprodione	3	YES	NO
66222-41	QUALI-PRO PROPICONAZOLE 14.3	81.60	0.00	12	Propiconazole	2	NO	NO
228-626	NUFARM T-METHYL PRO 4.5 F FUNGICIDE	47.64	0.00	11	Thiophanate- methyl	3	YES	YES
100-1326	BANNER MAXX II	42.83	0.00	11	Propiconazole	3	YES	NO
432-890	LESCO PRODIGY SIGNATURE	0.00	484.00	11	Fosetyl-Al	3	NO	NO
432-1505	CHIPCO 26019T FUNGICIDE	71.50	0.00	10	Iprodione; Trifloxystrobin	3	YES	NO
228-684	NUFARM IPRODIONE SPC FUNGICIDE	56.15	0.00	10	Iprodione	3	YES	NO
33753-27	S445L	40.75	0.00	10	Glutaraldehyde	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
432-1529	TEBUCONAZOLE SC TURF AND ORNAMENTAL FUNGICIDE	31.00	0.00	10	Tebuconazole	3	YES	NO
84229-44	AMTIDE TEBU 3.6F FOLIAR FUNGICIDE	24.11	0.00	10	Tebuconazole	3	YES	NO
66222-41	PRIMEERAONE PROPICONAZOLA 14.3	13.36	0.00	10	Propiconazole	2	NO	NO
7969-350	LEXICON INTRINSIC BRAND FUNGICIDE	5.25	0.00	10	Fluxapyroxad; Pyraclostrobin	3	NO	NO
66222-150	EQUUS 500 ZN	97.50	0.00	8	Chlorothalonil	2	YES	NO
69361-27	TEBUCONAZOLE 3.6F FUNGICIDE	23.25	0.00	8	Tebuconazole	3	YES	NO
66222-117	ORIUS 3.6F	16.71	0.00	8	Tebuconazole	3	YES	NO
67702-2	CAMELOT O FUNGICIDE/BACTERICIDE	11.17	0.00	8	Copper octanoate	3	NO	NO
100-892	ARBOTECT 20-S FUNGICIDE	6.86	0.00	8	Thiabendazole	3	NO	NO
59639-144	V-10116 VPP FUNGICIDE	0.00	117.20	8	Metconazole	3	NO	NO
68173-3	AFFIRM WDG	0.00	60.90	8	Polyoxin D zinc salt	3	NO	NO
66222-134	THIOPHANATE METHYL 4.5 F	61.50	0.00	6	Thiophanate-methyl	3	YES	YES
71512-13	SEGWAY FUNGICIDE	1.70	0.00	6	Cyazofamid	3	NO	NO
70644-1	NUTROL	0.00	372.00	6	Phosphoric acid, monopotassium salt	3	NO	NO
432-1541	12ESP705 FUNGICIDE	0.00	310.38	6	Fosetyl-Al	3	NO	NO
7969-224	CURALAN EG	0.00	242.95	6	Vinclozolin	3	YES	YES
86064-2	ARMOR TECH CLT 720 FL	55.00	0.00	5	Chlorothalonil	2	YES	NO
87290-44	ARMORTECH ZOXY 2 SC	4.50	0.00	5	Azoxystrobin	3	NO	NO
62719-388	FORE 80WP RAINSHIELD	0.00	214.50	5	Mancozeb	3	YES	NO
70299-15	GC PRO	0.00	140.00	5	Sodium percarbonate	1	NO	NO
7969-255	HONOR FUNGICIDE	0.00	79.60	5	Nicobifen; Pyraclostrobin	3	YES	NO
50534-209	MANICURE 6 FLOWABLE	53.25	0.00	4	Chlorothalonil	3	YES	NO
53883-375	QUALI-PRO IPRO 2SE	47.00	0.00	4	Iprodione	3	YES	NO
7969-290	INSIGNIA SC INTRINSIC BRAND FUNGICIDE	12.31	0.00	4	Pyraclostrobin	2	NO	NO
42750-292	AZOXY 11% + TEB 26% FL	9.50	0.00	4	Azoxystrobin; Tebuconazole	3	YES	NO
100-1433	BRISKWAY	8.73	0.00	4	Azoxystrobin; Difenoconazole	3	YES	NO
100-741	LESCO SPECTATOR ULTRA 1.3 FUNGICIDE	28.77	0.00	3	Propiconazole	2	YES	NO
53883-380	QUALI-PRO IPRO 2	13.44	0.00	3	Iprodione	3	YES	NO
89442-1	TEBUCONAZOLE 3.6 SELECT	12.00	0.00	3	Tebuconazole	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
100-796	SUBDUE MAXX	8.14	0.00	3	Mefenoxam	3	NO	NO
73512-1	KEYPLEX 350	5.13	0.00	3	Brewer's yeast extract hydrolysate from <i>Saccharomyces cerevisiae</i>	3	NO	NO
7969-349	Xzemplar Fungicide	3.25	0.00	3	Fluxapyroxad	3	NO	NO
66222-216	QUALI-PRO MEFENOXAM 2AQ	2.98	0.00	3	Mefenoxam	2	NO	NO
228-623	PRIMERAONE PROPICONAZOLE 14.3	2.75	0.00	3	Propiconazole	2	YES	NO
432-1223	PROSTAR 70 WP	2.00	48.00	3	Flutolanil	3	NO	NO
9198-115	THE ANDERSONS TURF FUNGICIDE WITH 5.0% DACONIL	0.00	1,640.00	3	Chlorothalonil	1	YES	NO
70506-234	MANZATE PRO-STICK FUNGICIDE	0.00	220.00	3	Mancozeb	3	YES	NO
66222-161	QUALI-PRO FOSETYL -AL 80 WDG	0.00	47.20	3	Fosetyl-Al	3	NO	NO
100-1434	MEDALLION WDG	0.00	0.06	3	Fludioxonil	3	NO	NO
1001-69	LESCO CAVALIER FLOWABLE	66.00	0.00	2	Thiophanate-methyl	3	YES	YES
100-1216	BANNER HERITAGE MAXX	16.40	0.00	2	Azoxystrobin; Propiconazole	3	YES	NO
228-623	LESCO SPECTATOR ULTRA 1.3 FUNGICIDE	3.00	0.00	2	Propiconazole	2	YES	NO
53883-353	QUALI-PRO T-NEX	2.32	0.00	2	Trinexapac-ethyl	3	NO	NO
100-1448	MEDALLION SC	1.34	0.00	2	Fludioxonil	3	NO	NO
400-521	TERRAGUARD SC	0.06	0.00	2	Triflumizole	3	NO	NO
100-1323	HERITAGE G	0.00	60.00	2	Azoxystrobin	3	NO	NO
53883-343	AZOXY 50 WDG SELECT FUNGICIDE	0.00	8.00	2	Azoxystrobin	3	NO	NO
464-693	CHEMICAR 15	17.00	0.00	1	Glutaraldehyde	1	NO	NO
100-1347	CONCERT II	10.00	0.00	1	Propiconazole	1	YES	NO
53883-309	QUALI-PRO ENCLAVE 5.3F	9.63	0.00	1	Chlorothalonil; Thiophanate-methyl; Iprodione; Tebuconazole	3	YES	YES
66222-185	QUALI-PRO MYCLOBUTANIL 20EW T&O	3.04	0.00	1	Myclobutanil	3	NO	YES
53883-363	BUMPER 14.3 EC (PROPICONAZOLE) FUNGICIDE	0.97	0.00	1	Propiconazole	2	YES	NO
71512-13	GORDON'S PROFESSIONAL TURF & ORNAMENTAL PRODUCTS SEGWAY FUNGICIDE	0.61	0.00	1	Cyazofamid	3	NO	NO
69592-19	CEASE	0.25	0.00	1	QST 713 strain of dried <i>Bacillus subtilis</i>	3	NO	NO
71962-1	AGRI-FOS SYSTEMIC FUNGICIDE	0.01	0.00	1	Mono- and di-potassium salts of phosphorous acid	3	NO	NO
70051-2	TRIPLE ACTION NEEM OIL	0.00	0.00	1	Neem oil	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
10465-3	LIQUID COPPER FUNGICIDE	0.00	0.00	1	Cuprammonium acetate	3	NO	NO
66222-149	ARMOR TECH CLT 825	0.00	34.00	1	Chlorothalonil	2	YES	NO
7969-196	EMERALD FUNGICIDE	0.00	16.00	1	Nicobifen	2	YES	NO
400-416	TERRAZOLE 35% WETTABLE POWDER	0.00	5.50	1	Terrazole	3	YES	NO
Other (Repellents, Biochemical Pesticides, Etc.)								
52483-1	HYPOCHLORITE SOLUTION	155.50	0.00	25	Sodium hypochlorite	1	NO	NO
60061-71	PETTIT MARINE PAINT PREMIUM SINGLE SEASON ABLATIVE	35.00	0.00	24	Copper oxide (ous)	2	NO	NO
59807-4	HORMODIN 1	0.00	0.26	6	IBA	3	NO	NO
73049-15	PROGIBB 4% PLANT GROWTH REGULATOR SOLUTION	0.00	0.00	4	Gibberellins	2	NO	NO
63838-5	CHEM-AQUA 42171	7.50	0.00	2	Sodium bromide; Sodium hypochlorite	1	NO	NO
71096-7	ORTHO BUG-GETA SNAIL & SLUG KILLER 1	0.00	0.50	2	Metaldehyde	3	NO	NO
1448-212	CHEMICIDE 100-15	12.00	0.00	1	Poly(oxyethylene) (dimethylimino) ethylene (dimethylimino) ethylene dichloride	3	NO	NO
58616-1	PCT 3026	3.00	0.00	1	Sodium bromide; Sodium hypochlorite	1	NO	NO

APPENDIX 3: Complete Listing of “Best Management Practices” Insecticides Used Citywide in 2016

EPA Reg. #	EPA Prod Name	Volume in Gallons	Weight in Pounds	Total Applications	Active Ingredient Data
432-1259	PRODUCT: RBF5	0.00	377.10	7,426	Fipronil
432-1460	MAXFORCE FC ROACH KILLER BAIT GEL F.05	0.57	281.61	7,321	Fipronil
100-1484	DUPONT ADVION COCKROACH GEL BAIT	0.00	191.16	5,303	Indoxacarb
73049-501	VBC-60394 FG BIOLOGICAL LARVICIDE FINE GRANULE	0.00	12530.54	5,221	Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52
73049-429	VECTOMAX FG	0.00	33329.42	4,957	Bacillus sphaericus; Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52
432-1257	MAXFORCE ROACH BAIT F.05	8.06	185.33	3,869	Fipronil
1021-1828	MGK ROACH BAIT 2822	0.00	108.18	2,270	Avermectin
64405-2	REDZONE BAIT	6.21	465.53	2,217	Boric acid
73049-19	VECTOBAC CG BIOLOGICAL LARVICIDE GRANULES	0.00	1483.28	1,519	Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52
73079-4	BORACTIN INSECTICIDE POWDER	9.79	264.67	1,349	Boric acid
100-1498	DUPONT ADVION ANT GEL	0.00	22.59	965	Indoxacarb
62577-12	ECOPCO ACU	65.57	0.29	853	Phenylethyl propionate
64405-2	ECOLOGICAL ANT & INSECT BAIT	0.00	59.88	528	Boric acid
73766-1	GOURMET ANT BAIT GEL	0.09	12.86	453	Disodium octaborate tetrahydrate
100-1501	DUPONT ARILON INSECTICIDE	155.83	0.00	217	Indoxacarb
64405-8	NIBOR BORATE INSECTICIDE AND FUNGICIDE	162.54	3.38	164	Disodium octaborate tetrahydrate
73049-20	VECTOLEX CG BIOLOGICAL LARVICIDE	0.00	431.60	163	Bacillus sphaericus
1021-1603	NYLAR 10EC	162.89	0.00	106	Pyriproxyfen
432-1375	PRE-EMPT FLY BAIT	0.00	20.46	91	Imidacloprid; (Z)-9-Tricosene
73049-10	VECTOBAC G BIOLOGICAL LARVICIDE GRANULES	0.00	32500.00	46	Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52
432-1262	MAXFORCE IBH10	1.03	0.53	39	Hydramethylnon
279-3384	ROACH KIL COMMERCIAL	0.61	2.81	39	Boric acid
432-1455	BES 0026 FLY SPOT BAIT	7.55	2.01	34	Imidacloprid; (Z)-9-Tricosene
100-1486	DUPONT ADVION COCKROACH BAIT ARENA	0.00	1.55	33	Indoxacarb
499-406	AVERT PRESCRIPTION TREATMENT TC 93A BAIT	0.00	1.45	33	Avermectin
100-1483	ADVION INSECT GRANULE	0.04	4.72	26	Indoxacarb
48813-1	SUFFOIL-X	7.10	0.00	24	Petroleum distillates
73079-6	GREEN ZONE GRANULAR BAIT	0.00	2.71	23	Boric acid
2724-451	ZOECON 9010 GR	0.00	5435.00	21	S-Methoprene
6218-47	SUMMIT B.T.I. BRIQUETS	0.00	4.65	18	Bacillus thuringiensis subspecies Israelensis strain BMP 144
62719-291	CONSERVE SC TURF AND ORNAMENTAL	0.24	0.00	16	Spinosad

432-1256	MAXFORCE FC ANT BAIT STATIONS	0.05	0.21	16	Fipronil
1021-2593	MGK? Formula 2976	1.88	0.17	14	Avermectin; Pyriproxyfen
70051-2	TRIACT 70	1.70	0.00	14	Neem oil
432-1255	MAXFORCE GRANULAR INSECT BAIT	0.37	0.00	14	Hydramethylnon
432-1264	MAXFORCE FC ANT KILLER BAIT GEL	0.00	0.38	14	Fipronil
432-1506	MAXFORCE QUANTUM ANT BAIT	0.00	0.39	14	Imidacloprid
73049-57	VECTOLEX WDG BIOLOGICAL LARVICIDE WATER DISPERSIBLE GRANULE	0.00	104.00	13	Bacillus sphaericus 2362, serotype H5a5b, strain ABTS 1743 solids, spores and insecticidal toxins
59639-96	DISTANCE INSECT GROWTH REGULATOR	0.54	0.00	11	Pyriproxyfen
241-313	SIEGE PBS GEL INSECTICIDE	0.00	6.59	9	Hydramethylnon
73049-39	DIPEL DF DRY FLOWABLE BIOLOGICAL INSECTICIDE	0.00	0.95	7	Bacillus thuringiensis, subsp. Kurstaki, strain ABTS-351, fermentation solids and solubles
432-1254	MAXFORCE PROFESSIONAL INSECT CONTROL ROACH KILLER	0.00	0.34	7	Hydramethylnon
73079-10	INVICT (TM) COCKROACH GEL	0.03	0.00	6	Imidacloprid
73049-56	VECTOBAC WDG BIOLOGICAL LARVICIDE	0.00	3200.03	6	Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52
10163-324	M-PEDE INSECTICIDE/FUNGICIDE	0.26	0.00	5	Potassium laurate
100-1485	DUPONT ADVION ANT BAIT ARENA	0.00	0.16	5	Indoxacarb
73049-38	VECTOBAC 12AS BIOLOGICAL LARVICIDE	2.94	0.00	4	Bacillus thuringiensis, subsp. Israelensis, strain AM 65-52
42697-60	SAFER BRAND O-INSECTICIDAL SOAP CONCENTRATE	0.02	0.00	4	Potassium laurate
432-1258	MAXFORCE LARGE ROACH BAIT F.03	0.00	0.08	4	Fipronil
100-1487	PROVAUNT	0.00	32.55	3	Indoxacarb
432-1251	MAXFORCE ROACH CONTROL SYSTEM	0.00	0.09	3	Hydramethylnon
499-370	PT 370 ASCEND FIRE ANT STOPPER BAIT	0.00	0.01	3	Avermectin
499-515	MOTHEREARTH GRANULAR SCATTER BAIT	0.04	0.00	2	Boric acid
73079-2	INTICE GRANULAR BAIT	0.03	0.00	2	Boric acid
44757-3	PIC ORTHOBORIC ACID ROACH & ANT KILLER	0.06	0.00	1	Boric acid
432-1455	QUICKBAYT SPOT SPRAY	0.03	0.00	1	(Z)-9-Tricosene
70051-2	TRIPLE ACTION NEEM OIL	0.00	0.00	1	Neem oil