



**Department of  
Environmental  
Conservation**

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**Summary Report  
For  
New York State  
Pesticide Sales and  
Applications  
2018**

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## **ACKNOWLEDGMENTS**

The Department wishes to acknowledge the cooperation and assistance of Cornell University, and specifically the Pesticide Sales and Use Reporting unit within the Pesticide Management Education Program in the College of Agriculture and Life Sciences, in the preparation and development of this annual report.

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## **Executive Summary**

The New York State Department of Environmental Conservation (Department), in conjunction with Cornell University, presents this summary report to the Governor and Legislature under Environmental Conservation Law Article 33, Title 12, known as the Pesticide Reporting Law (PRL). This report summarizes the pesticide sales and application data submitted to the Department for the calendar year 2018. The finalized data have been incorporated into a master database maintained by Cornell University. This database is accessible by the public and is an information source for health researchers or other users of the data.

The department received reports from 16,009 certified applicators and technicians, which is 95% of the 16,847 applicators and technicians required to submit a report for 2018.

The following is the total amount of pesticide products applied in New York State by certified commercial applicators and technicians in 2018:

- 3,648,396 Gallons of liquid formulation products
- 29,029,497 Pounds of solid formulation products
- Number of Products: 4,584

A summary of the quantity of pesticide products applied for each county can be found in Table 2 on pages 4 – 5 and in Figures 1 and 2 on pages 6 – 7.

The following is the total amount of pesticide products sold to private applicators for agricultural use in New York State in 2018:

- 808,181 Gallons
- 2,645,101 Pounds
- Number of Products: 1,301

The total quantity of pesticide products sold to private applicators reflects the sales of restricted use and general use pesticide products by commercial permit holders to private applicators to use for the purposes of producing an agricultural commodity. A summary of the quantity of pesticide products sold to private applicators by county can be found in Table 3 on pages 8 - 9 and in Figures 3 and 4 on pages 10 – 11.

The following is the total amount of restricted use pesticide products sold to commercial applicators for end use in New York State:

- 1,955,851 Gallons
- 13,604,943 Pounds

- Number of Products: 756

These numbers reflect sales by commercial permit holders to certified commercial applicators that intend to apply the pesticides.

The following is the total amount of restricted use pesticide products sold to distributors for resale in New York State:

- 1,455,409 Gallons
- 18,445,214 Pounds
- Number of Products: 509

These numbers reflect sales to commercial permit holders that intend to resell the pesticide product. Some or all of these quantities are also reflected in the quantities of products mentioned above that are sold to private or commercial applicators or used by commercial applicators and technicians.

Also provided in this report are summaries of the top ten pesticide products used and sold in New York State during 2018. See pages 12 – 16 for these summaries which include information such as the amount of the product used or sold, the product's active ingredients and the type of product.

**Please note:** Although the Department and Cornell University have gone to great lengths to assure the quality of the data, there are still significant concerns regarding potential inaccuracies in the data received from the regulated community. Users of this data are strongly cautioned about limitations of the data and are advised to go to the PRL Annual Reports page <https://www.dec.ny.gov/chemical/96898.html> to review information regarding data quality. The Department continues to reach out to regulated entities and provide information and technical assistance to them, and many times even works one on one with them to ensure they are accurately complying with the reporting requirements of the PRL. The Department also takes actions to hold entities accountable for any identifiable inaccuracies in reports provided and requires correction and re-submission where necessary.

For more information about the 2018 data and to use the searchable database, users can access this information at Cornell's Pesticide Sales and Use Reporting website: <https://psur.cce.cornell.edu/>.

## **I. INTRODUCTION**

The New York State Department of Environmental Conservation (Department), in conjunction with work conducted by Cornell University, presents this summary report of the final pesticide sales and application data for calendar year 2018 submitted under Environmental Conservation Law Article 33, Title 12, known as the Pesticide Reporting Law (PRL). This report summarizes the data as submitted to the Department, with some corrections as noted below. The finalized data have been incorporated into a master database maintained by Cornell University. This database is accessible to the public and is an information source for health researchers and other users of the data.

## **II. 2018 Pesticide Reporting Program**

### **A. Reports Received**

As of May 17, 2019, the Department received reports from 16,009 of the 16,847 commercial applicators and technicians required to report for the calendar year 2018. The Department also received reports from 278 of the 286 commercial permittees required to report for 2018. These figures indicate that 95% of commercial applicators and technicians and 97% of commercial permittees were in compliance with the PRL. The Department will continue to provide outreach and education to the regulated community to achieve maximum compliance with the reporting requirement.

### **B. Quality Control**

The Department continues to enhance and streamline the process for reporting, as well as the system for managing the 16,000 reports that are received annually.

Department staff continue to use a system of front-line quality control procedures to evaluate incoming reports to ensure basic criteria are met, regardless of whether the report was submitted on paper or electronically. Paper reports are checked for certain criteria to maximize the volume of data that will be transferrable into Cornell's master database. If a report did not meet these criteria, Department staff sought to correct the report with the person filing the report. If the errors were too numerous, the report was rejected and returned to the business or applicator to be corrected and resubmitted. Electronic reports are subjected to several validation processes including validating file format and certain data values. This process enables staff to contact report submitters for corrections in a timely manner.

As part of our standard quality assurance processes, the Department and Cornell identified reports that contained quantities that appeared to fall outside of accepted parameters. Staff reviewed reports containing these “out-of-range” quantities and the responsible applicators and businesses were contacted. Reporting errors were corrected by staff with the approval of the applicator or business. These corrected data were forwarded to Cornell to replace the original reports in the database.

### **C. Data Qualifications**

The reporting community, the Department and Cornell University work together to provide the best information possible for health researchers. However, the data is neither perfectly accurate nor complete. Although the Department and Cornell have gone to great lengths to assure the quality of the data, there are still significant concerns regarding potential inaccuracies in the data received from the regulated community. Users of this data are advised to go to the PRL Annual Reports page (<http://dec.ny.gov/chemical/96898.html>) to review information regarding data quality.

The Department continues to reach out to regulated entities and provide information and technical assistance to them, and many times even works one on one with them to ensure they are accurately complying with the reporting requirements of the PRL. The Department also takes actions to hold entities accountable for any identifiable inaccuracies in reports provided and requires correction and re-submission where necessary.



### III. 2018 Reporting Data

#### A. General Synopsis of Data

The following table provides a summary of pesticide sales and use reported by commercial applicators and technicians and commercial permit holders:

**Table 1**  
Calendar Year 2018  
Summary of Total Quantities Statewide

<b>Category</b>	<b>Number of Pesticide Products</b>	<b>Quantity (Gallons)**</b>	<b>Quantity (Pounds)**</b>
Applied by Commercial Applicators and Technicians	4,584	3,648,396	29,029,497
Sold to Private Applicators	1,301	808,181	2,645,101
Sold for End Use*	756	1,955,851	13,604,943
Sold for Resale*	509	1,455,409	18,445,214

\* Restricted use pesticides only

\*\* The total quantity of pesticides commercially applied and sold is a combination of the amount expressed in gallons and the amount expressed in pounds reported above. In other words, the quantity in gallons is separate from the quantity in pounds.

#### B. County Data Summary Tables and Maps

The following tables and maps summarize commercial pesticide applications and sales for 2018 by county:

**Table 2**  
**Calendar Year 2018**  
**Summary of Commercial Pesticide Applications by County\***

<b>County</b>	<b>Number of Pesticide Products</b>	<b>Amount (Gallons)**</b>	<b>Amount (Pounds)**</b>
Albany	765	135,692	974,636
Allegany	269	3,927	24,863
Bronx	782	34,913	128,921
Broome	490	11,168	171,454
Cattaraugus	384	25,343	77,203
Cayuga	557	67,908	66,851
Chautauqua	515	17,812	183,790
Chemung	376	5,833	77,634
Chenango	288	8,191	23,902
Clinton	267	19,196	80,181
Columbia	473	9,152	102,149
Cortland	344	85,748	156,463
Delaware	296	4,172	11,023
Dutchess	844	21,459	1,347,675
Erie	996	95,172	1,740,117
Essex	314	188,868	48,606
Franklin	219	9,520	21,354
Fulton	316	3,501	42,556
Genesee	524	41,692	70,867
Greene	320	21,433	2,410,210
Hamilton	131	461	7,538
Herkimer	333	10,915	46,972
Jefferson	393	80,562	116,204
Kings	805	40,272	173,397
Lewis	232	18,645	27,994
Livingston	581	47,735	73,013
Madison	430	8,686	85,685
Monroe	988	51,064	2,208,154
Montgomery	326	8,796	65,513
Nassau	1,275	189,620	1,717,133
New York	815	292,415	293,816
Niagara	637	320,976	313,875

<b>County</b>	<b>Number of Pesticide Products</b>	<b>Amount (Gallons)**</b>	<b>Amount (Pounds)**</b>
Oneida	594	16,451	518,158
Onondaga	849	92,725	1,055,170
Ontario	930	27,350	327,939
Orange	729	17,703	712,169
Orleans	431	14,222	36,982
Oswego	430	187,057	56,959
Otsego	295	6,198	19,687
Putnam	507	11,189	349,454
Queens	856	61,968	175,654
Rensselaer	559	72,388	251,402
Richmond	508	26,702	97,378
Rockland	690	15,206	843,239
Saratoga	686	145,440	1,706,968
Schenectady	547	10,700	523,120
Schoharie	287	4,692	4,967
Schuyler	221	5,955	5,835
Seneca	370	9,595	13,989
St Lawrence	297	47,385	33,356
Steuben	461	18,368	80,383
Suffolk	1,647	262,950	5,616,010
Sullivan	352	5,277	113,638
Tioga	305	3,477	21,778
Tompkins	637	9,707	99,545
Ulster	610	6,227	122,415
Warren	441	32,309	413,916
Washington	351	62,864	91,723
Wayne	552	96,493	148,619
Westchester	1,275	399,597	2,611,880
Wyoming	481	73,609	54,130
Yates	333	15,737	17,573

\* The above table does not include quantities which were reported where the county information was either missing, invalid or illegible.

\*\* The total quantity of pesticides sold in a county is a combination of the gallons and pounds reported above. In other words, the quantity in gallons is separate from the quantity in pounds.

Figure 1  
Commercial Pesticide Applications by Volume (Gallons) in 2018

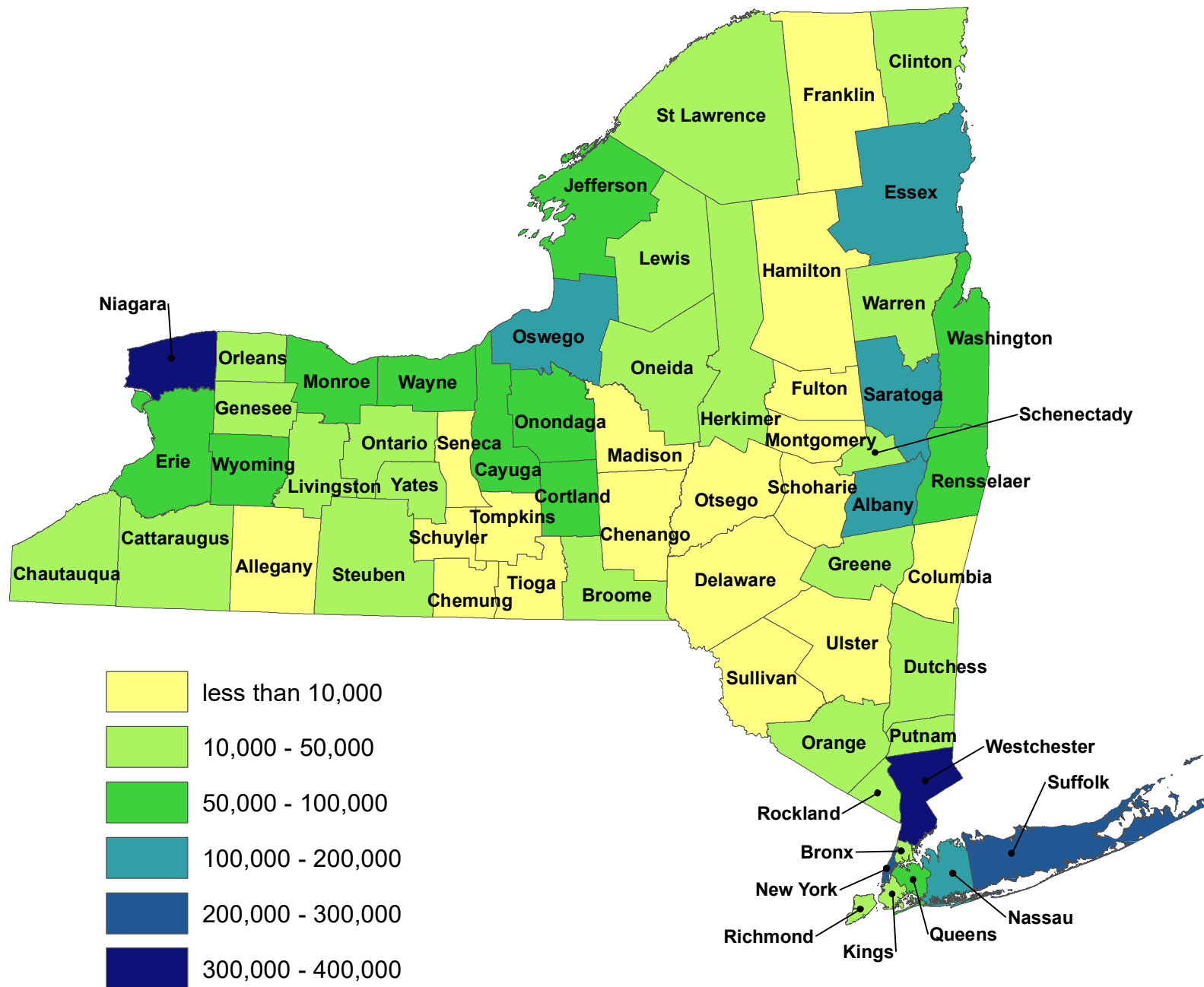
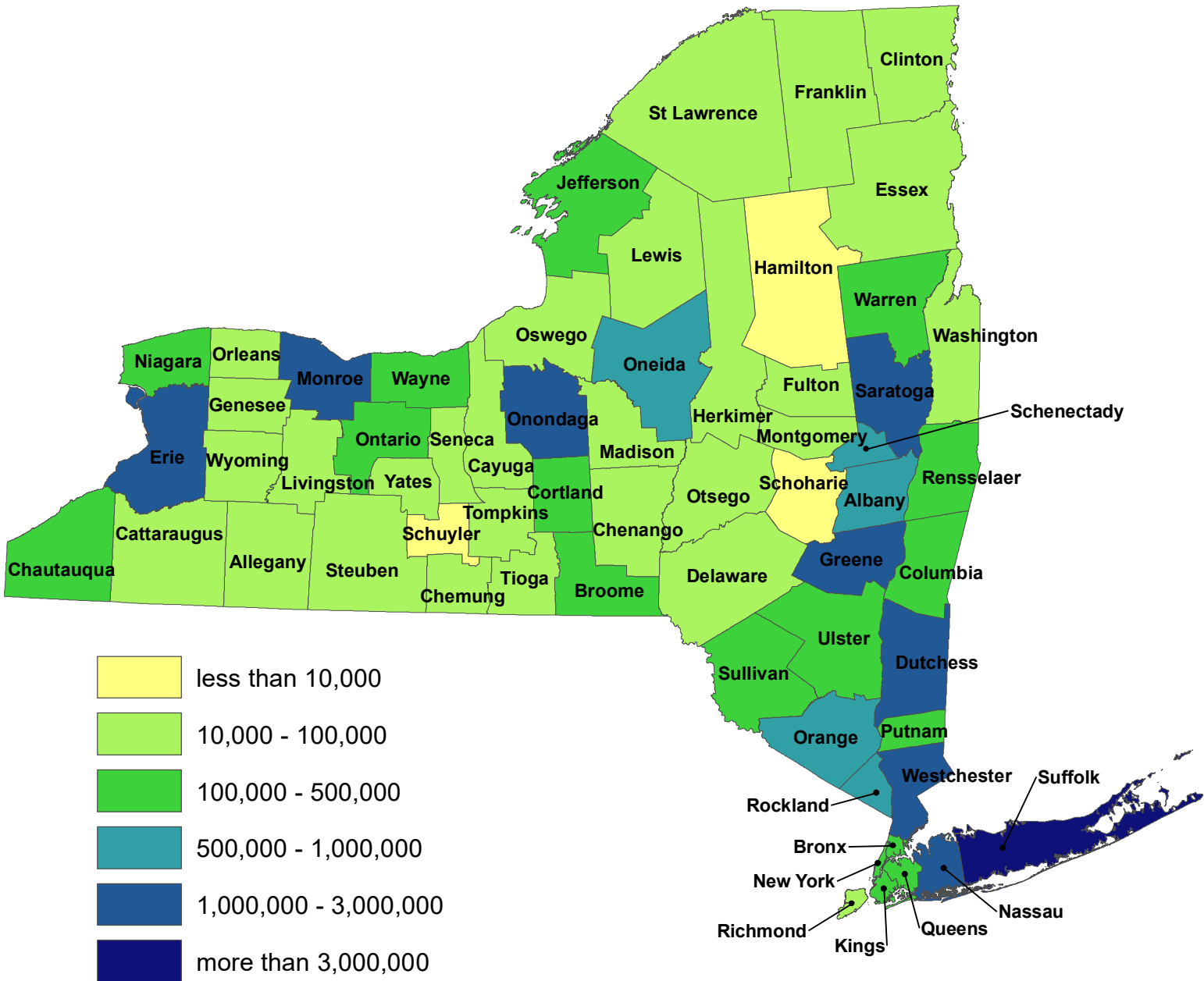


Figure 2  
Commercial Pesticide Applications by Weight (Pounds) in 2018



**Table 3**  
**Calendar Year 2018**  
**Summary of Pesticide Sales to Private Applicators by County**

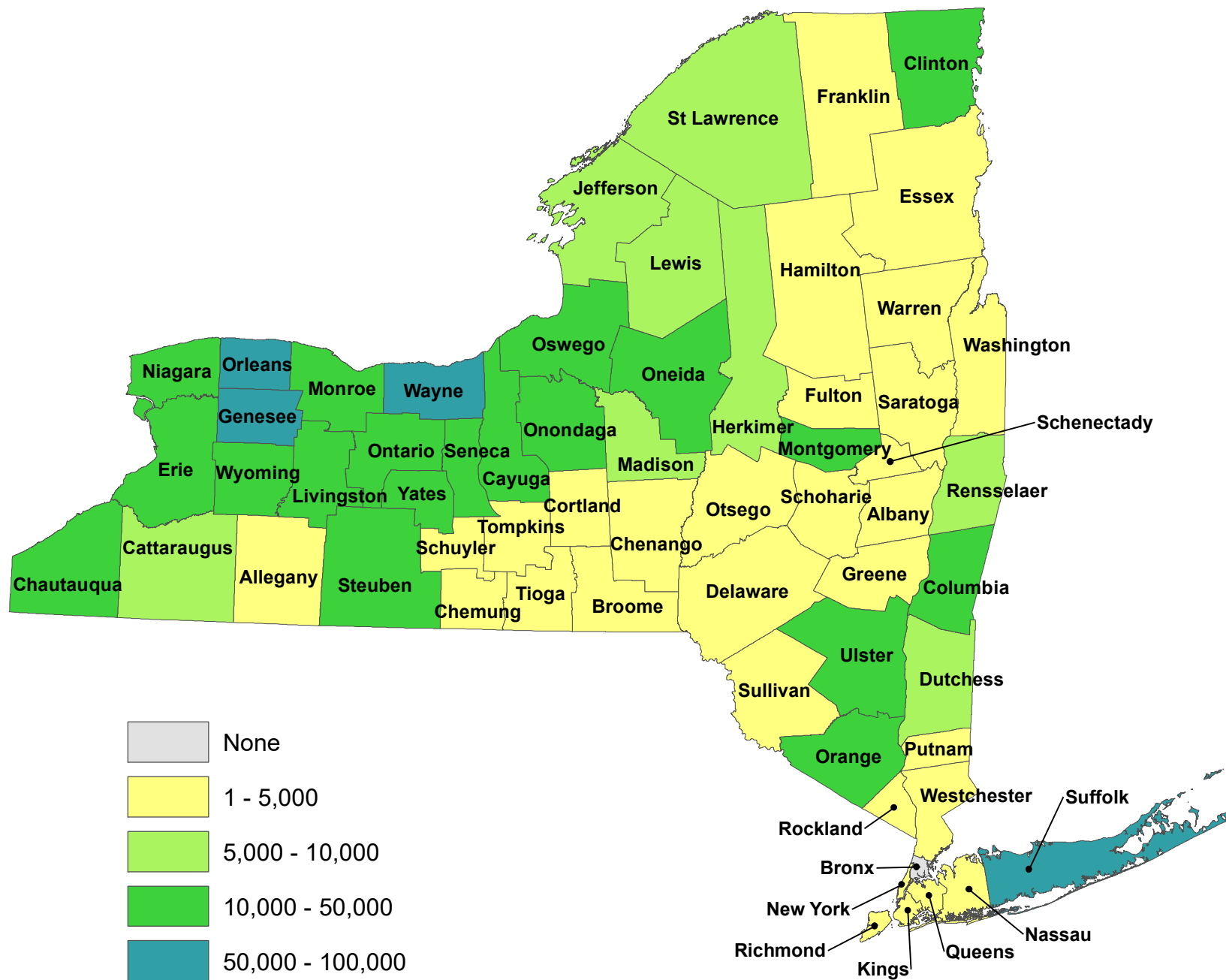
<b>County</b>	<b>Number of Pesticide Products</b>	<b>Amount (Gallons)**</b>	<b>Amount (Pounds)**</b>
Albany	138	1,071	5,422
Allegany	57	1,586	1,287
Bronx	1	0	30
Broome	125	457	4,241
Cattaraugus	133	5,073	6,970
Cayuga	362	34,826	50,055
Chautauqua	246	24,433	139,174
Chemung	51	747	757
Chenango	68	1,525	2,425
Clinton	151	19,723	145,951
Columbia	215	11,516	103,817
Cortland	50	2,034	974
Delaware	12	216	95
Dutchess	213	6,725	24,767
Erie	358	15,796	18,601
Essex	63	1,538	10,281
Franklin	77	3,097	4,351
Fulton	62	462	618
Genesee	318	72,227	69,608
Greene	93	2,355	2,385
Hamilton	1	20	0
Herkimer	107	5,626	3,096
Jefferson	96	7,098	21,231
Kings	17	184	134
Lewis	62	5,514	28,871
Livingston	223	19,876	13,231
Madison	162	5,017	5,570
Monroe	410	28,207	123,175
Montgomery	153	12,638	5,682
Nassau	18	110	34,578
New York	1	3	0
Niagara	327	27,988	135,213

<b>County</b>	<b>Number of Pesticide Products</b>	<b>Amount (Gallons)**</b>	<b>Amount (Pounds)**</b>
Oneida	227	17,974	14,215
Onondaga	315	22,430	32,394
Ontario	397	28,307	36,888
Orange	360	45,938	116,149
Orleans	352	54,783	120,497
Oswego	193	18,248	14,852
Otsego	106	2,332	30,894
Putnam	44	736	663
Queens	6	36	39
Rensselaer	151	5,429	5,615
Richmond	2	471	0
Rockland	31	319	697
Saratoga	145	2,736	7,097
Schenectady	72	322	336
Schoharie	100	2,105	1,032
Schuyler	178	4,887	28,211
Seneca	259	23,511	83,170
St Lawrence	89	8,697	12,314
Steuben	286	30,569	99,685
Suffolk	467	51,486	141,022
Sullivan	29	460	1,808
Tioga	102	4,833	2,667
Tompkins	169	4,034	9,339
Ulster	293	33,492	233,802
Warren	19	287	77
Washington	139	2,831	12,461
Wayne	382	82,504	527,999
Westchester	53	196	904
Wyoming	124	13,610	28,019
Yates	405	26,789	119,606

\* The above table does not include quantities which were reported where the county information was either missing, invalid or illegible.

\*\* The total quantity of pesticides sold in a county is a combination of the gallons and pounds reported above. In other words, the quantity in gallons is separate from the quantity in pounds.

Figure 3  
Pesticide Sales to Private Applicators by Volume (Gallons) in 2018







### **C. Summary of Top Ten Pesticide Products Applied and Sold**

The following tables summarize the top ten pesticide products applied by certified commercial applicators or technicians and the top ten pesticide products sold by commercial permit holders to certified private applicators. Each table presents information about each top ten product including the EPA registration number for each product, the quantity sold or the quantity applied, the percentage that the product quantity represents compared with the total quantities all products sold or all products applied, the active ingredients in each product, the percentage of that active ingredient in the product as well as the product's main type of use.

These summaries are product based. The amount of product applied or sold is the quantity reported for the product(s) with the corresponding EPA registration number. These products contain different amounts of active ingredients. The weight or volume reported here is the amount of all ingredients, not the amount of active ingredients alone.

**Table 4**  
**Calendar Year 2018**  
**Top Ten Pesticide Products by Volume (Gallons)**  
**Applied by Commercial Applicators or Technicians**

<b>EPA Registration Number</b>	<b>Quantity (GL)</b>	<b>Percentage of All Products</b>	<b>Active Ingredients</b>	<b>Percentage of Active Ingredient</b>	<b>Product Type</b>
59074-20001	621,616	17.0%	sodium hypochlorite	12.50%	antimicrobial
9359-2	277,307	7.6%	sodium hypochlorite	12.50%	antimicrobial
1448-433	252,020	6.9%	ammonia	7.59%	antimicrobial
279-3206	106,864	2.9%	bifenthrin	7.90%	insecticide
1706-240	96,285	2.6%	ammonium sulfate	20.00%	antimicrobial
75506-12	94,973	2.6%	copper carbonate, basic propiconazole tebuconazole	43.40% 0.50% 0.50%	wood preservative
34704-890	78,140	2.1%	isopropylamine salt of glyphosate	41.00%	herbicide
524-549	71,915	2.0%	potassium salt of glyphosate	48.70%	herbicide
100-1466	69,613	1.9%	bicyclopyrone atrazine s-metolachlor mesotrione	0.65% 10.93% 23.40% 2.60%	herbicide
1706-179	67,738	1.9%	sodium bromide sodium hypochlorite	9.23% 6.36%	antimicrobial, fungicide
<b>Top 10 Products</b>	<b>1,736,471</b>	<b>47.6%</b>			
<b>All Products</b>	<b>3,648,396</b>				

**Table 5**  
**Calendar Year 2018**  
**Top Ten Pesticide Products by Weight (Pounds)**  
**Applied by Commercial Applicators and Technicians**

<b>EPA Registration Number</b>	<b>Quantity (LB)</b>	<b>Percentage of All Products</b>	<b>Active Ingredients</b>	<b>Percentage of Active Ingredient</b>	<b>Product Type</b>
6836-304	1,441,635	5.0%	didecyl dimethyl ammonium carbonate and didecyl dimethyl ammonium bicarbonate	50.00%	wood preservative
432-1349-82757	1,334,342	4.6%	imidacloprid	0.20%	insecticide
100-1456-82757	1,303,917	4.5%	prodiamine	0.29%	herbicide
62190-9	916,831	3.2%	boric acid	26.30%	wood preservative
10404-89	847,367	2.9%	prodiamine	0.43%	herbicide
10404-85	841,619	2.9%	dithiopyr	0.10%	herbicide
9198-120	786,777	2.7%	dithiopyr	0.103%	herbicide
62719-488-82757	738,084	2.5%	dithiopyr	0.19%	herbicide
432-1349-34704	729,945	2.5%	imidacloprid	0.20%	herbicide
34704-776	704,328	2.4%	prodiamine	0.375%	herbicide
<b>Top 10 Products</b>	<b>9,644,845</b>	<b>33.2%</b>			
<b>All Products</b>	<b>29,029,497</b>				

**Table 6**  
**Calendar Year 2018**  
**Top Ten Pesticide Products by Volume (Gallons)**  
**Sold by Commercial Permit Holders to Certified Private Applicators**

<b>EPA Registration Number</b>	<b>Quantity (GL)</b>	<b>Percentage of All Products</b>	<b>Active Ingredients</b>	<b>Percentage of Active Ingredient</b>	<b>Product Type</b>
524-549	51,583	6.4%	potassium salt of glyphosate	48.70%	herbicide
34704-890	41,790	5.2%	isopropylamine salt of glyphosate	41.00%	herbicide
100-1466	40,557	5.0%	bicyclopyrone atrazine s-metolachlor mesotrione	0.65% 10.93% 23.40% 2.60%	herbicide
74530-43	30,869	3.8%	isopropylamine salt of glyphosate	41.00%	herbicide
71368-20	24,388	3.0%	isopropylamine salt of glyphosate	41.00%	herbicide
352-623	18,756	2.3%	s-metolachlor atrazine	35.80% 28.10%	herbicide
62719-556	17,426	2.2%	dimethylammonium salt of glyphosate	50.20%	herbicide
524-549-352	17,227	2.1%	potassium salt of glyphosate	48.70%	herbicide
5481-468	16,877	2.1%	metam-sodium	42.00%	herbicide, nematicide, fungicide
34704-805	15,978	2.0%	mineral oil	98.00%	insecticide, miticide, fungicide
<b>Top 10 Products</b>	<b>275,450</b>	<b>34.1%</b>			
<b>All Products</b>	<b>808,181</b>				

**Table 7**  
**Calendar Year 2018**  
**Top Ten Pesticide Products by Weight (Pounds)**  
**Sold by Commercial Permit Holders to Certified Private Applicators**

<b>EPA Registration Number</b>	<b>Quantity (LB)</b>	<b>Percentage of All Products</b>	<b>Active Ingredients</b>	<b>Percentage of Active Ingredient</b>	<b>Product Type</b>
66222-58	302,199	11.4%	captan	78.20%	fungicide
70506-185	267,040	10.1%	mancozeb	75.00%	fungicide
34704-1063	173,430	6.6%	mancozeb	75.00%	fungicide
74267-4	156,622	5.9%	bacillus pumilus, strain GHA 180	0.01%	fungicide
70506-234	153,402	5.8%	mancozeb	75.00%	fungicide
61282-49	119,000	4.5%	zinc phosphide (ZN3P2)	2.00%	rodenticide
74267-1	111,440	4.2%	Bacillus subtilis MBI 600	0.001%	fungicide
34704-1075	80,065	3.0%	captan	80.00%	fungicide
70506-201	71,970	2.7%	basic copper sulfate	71.10%	fungicide
70506-187	71,820	2.7%	sulfur	80.00%	fungicide
<b>Top 10 Products</b>	<b>1,506,988</b>	<b>57.0%</b>			
<b>All Products</b>	<b>2,645,101</b>				

#### **D. The Pesticide Sales and Use Reporting Website**

The summarized data from the 2018 reporting year, as well as previous years dating back to 1997, can be accessed using the Pesticide Sales and Use Reporting Program's website provided by Cornell University. Users of this website can generate summarized data by performing searches of the pesticide sales and use database. Users can generate reports by product or active ingredient and can filter their searches by county, zip code, sales, or applications. Results of these searches can be viewed online or downloaded to a computer. Cornell's Pesticide Sales and Use Reporting Website can be accessed at this link: <https://psur.cce.cornell.edu/>