New York State Department of Environmental Conservation

Division of Solid & Hazardous Materials

FINAL ANNUAL REPORT FOR NEW YORK STATE PESTICIDE SALES AND APPLICATIONS 2001

GEORGE E. PATAKI, *Governor*

ERIN M. CROTTY, *Commissioner*

ACKNOWLEDGMENTS

The Department wishes to acknowledge the cooperation and assistance of Cornell University in the preparation and development of this annual report.

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Executive Summary

This report details the final 2001 pesticides sales and application data submitted under Environmental Conservation Law Article 33, Title 12, known as the Pesticide Reporting Law (PRL). The New York State Department of Environmental Conservation (Department), in conjunction with Cornell University, presents a final data summary of commercial pesticide sales and use for calendar year 2001.

The Department and Cornell have quality assured the data. These 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 final data show there were greater than 5.9 million "records" of applications and sales reported for 2001, totaling approximately 661 million keystrokes of data. The total amount of pesticides reported as applied by commercial applicators in 2001 was 2,270,744.77 gallons and 16,933,247.04 pounds. This compares to 2,936,143.16 gallons and 17,844,438.00 pounds applied in 2000.

Please note: Although the Department and Cornell have gone to great lengths to quality assure the data, there are still concerns regarding the quality of the data received from the regulated community. Users of the data should review Section III.D., Data Qualifications, prior to use. In addition, the Department and Cornell attempt to provide the users with the best data available and, therefore, occasional revisions to the data are required. Users are advised to go to the following website for the most up-to-date data:

www.dec.state.ny.us/website/dshm/prl/index.htm

Pesticide Reporting Program

The Department continued its efforts to increase the compliance rate for reporting in the year 2001, primarily through public outreach and education, supplemented by enforcement.

The Department, in conjunction with its computer contractor, continued to operate a user-friendly website for regulated entities to report their sales and applications data. This made it easier for those entities that keep their records in an electronic format to report their sales and applications to the Department.

For the 2001 report year, the total number of applicators, technicians and permittees reporting was:

19,365 Commercial Applicators and Technicians
351 Commercial Permittees (Sales)

These figures indicate 95.8 percent of the 20,217 certified applicators and technicians, and 92 percent of the 382 commercial permittees reported for 2001. Despite direct mailings, discussions at Statewide workshops and meetings and other attempts by the Department to notify the regulated community of the reporting requirement, many are still unaware they are required to report, even if they make no applications that year. The Department will continue to provide outreach and education to the regulated community in an attempt to achieve maximum compliance with the reporting requirement.

The Department's long-term goal is to continually improve the reporting rate and data quality by raising the threshold for report acceptance each year. The Department continues to refine its front-line quality control program where Department staff evaluate incoming reports to ensure basic criteria were met. The criteria were established to maximize the volume of data that would be transferrable into Cornell's master database. To be accepted, a report must:

a) be in the Department's standard format;
b) contain complete data in every column;
c) have valid certification numbers for all certified commercial applicators and technicians or a valid commercial permit number;
d) be legible;
e) list the "undiluted" quantity of pesticide used;
f) list an acceptable "unit of measurement";
g) list the exact date of application; and
h) contain complete addresses (including number and street, full name of city or village and zip code).

If a report did not meet these criteria, Department staff sought to correct the report, if possible, through telephone discussion or by mail, with the person filing the report. This approach minimized the number of rejected reports. If the errors were too numerous, the report was rejected and returned to the business or applicator to be corrected and resubmitted.

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

reporting errors which were then corrected by staff with the approval of the applicator or business. These corrected data were tabulated and forwarded to Cornell, which has used them to supercede the original reports in the database.

Also, when the initial data was reviewed, an error in reporting for some cooling tower and wood preservative products was detected. Many applicators erroneously reported those applications in "pounds" rather than "gallons." This error dramatically inflated the quantities of those products in the data reports. Cornell was able to convert the quantities for 67 of those products from pounds to the liquid quantities. This resulted in converting what was originally reported as 2,166,025.09 pounds, into 185,937.57 gallons. The 2001 annual report reflects the corrected data.

The above procedures helped to eliminate some of the constraints on data quality identified in previous annual reports; however, some constraints remain. The Department intends to eliminate as many constraints as possible by expanding the list of acceptance criteria. In this way, the acceptance threshold will rise continuously but gradually, paralleling the learning curve for the regulated community, the Department and Cornell. The goal is to maximize the quantity and quality of data available to health researchers and other users of the data.

The Department will continue to work with the reporting community to achieve maximum compliance. As a supplement to the education and outreach efforts, the Department took enforcement actions against those entities who failed to report for the year 2001. An Order on Consent was sent to approximately 1,680 certified commercial pesticide applicators and technicians and commercial permit holders who did not report for the year 2001. As a result of this action, many of those entities were assessed a civil penalty. Total civil penalties assessed for not reporting for the year 2001 were approximately $46,000. Many applicators and technicians elected to voluntarily surrender their certification instead of paying a penalty. The result of this surrender is they are no longer certified to make commercial pesticide applications. Those entities who did not settle the violation will not be granted renewal privileges until their violation is resolved.

The detailed data on applications and sales are voluminous, and contained in the eight separate data summaries included as part of this report (see the Table of Contents for a description of each summary). These detailed data summaries are available on the Department's website *www.dec.state.ny.us/website/dshm/prl/index.htm* or on CD ROM. For a copy on CD ROM, please call 1-888-457-0110.

To make the information presented more easily understood and in response to recommendations, the Department is moving toward translating the volume (gallons) of pesticides reported into pounds. In order to convert the volume of a liquid into pounds, the specific gravity of the liquid must be known. The Department has changed its product

To make the information presented more easily understood and in response to recommendations, the Department is moving toward translating the volume (gallons) of pesticides reported into pounds. In order to convert the volume of a liquid into pounds, the specific gravity of the liquid must be known. The Department has changed its product registration practices to capture the specific gravity of each liquid pesticide product as it is registered for sale or use in New York State. There are currently 12,286 registered products in New York State. Of these, approximately 5,500 are liquid formulations. Cornell was able to obtain specific gravity data from California on approximately 3,700 of those products, leaving about 1,800 products for the Department to obtain. At the time of this report, the Department has captured the specific gravity data for approximately 1,500 of those products. It will be approximately one year before the Department is able to complete this transition and provide the information as pounds only.

The following totals are those most frequently requested:

Total amount of pesticides applied by commercial applicators in New York State in 2001:

- 2,270,744.77 Gallons
- 16,933,247.04 Pounds

The three largest total amounts of pesticide products applied by commercial applicators, by weight, were:

- Lesco Pre-M Plus Fertilizer (EPA Registration No. 10404-82) }
- Fertilizer with Merit Insecticide (EPA Registration No. 3125-474-9198) }
- Lesco Merit 0.2 plus Fertilizer (EPA Registration No. 3125-474-10404) }

} This product contains small amounts of pesticides combined with large amounts of fertilizer and other ingredients. The weight reported here is the weight of all ingredients, not the weight of pesticides alone.

The three largest total amounts of pesticide products applied by commercial applicators, by volume, were:

- Sunnysol 150 (EPA Registration No. 1744-20001)
- Surchlor Disinfectant (EPA Registration No. 9359-2)
- Lesco Pre-M Plus Fertilizer (EPA Registration No. 10404-82) } }

} } This product contains small amounts of pesticides combined with large amounts of fertilizer and other ingredients. The weight reported here is the weight of all ingredients, not the weight of pesticides alone.

Total amount of pesticides sold to private applicators for agricultural use in New York State in 2001:

- 1,005,461.36 Gallons
- 5,414,188.06 Pounds

The three largest total amounts of pesticide products sold to private applicators, by weight, were:

- Lorsban Insecticide (EPA Registration No. 62719-34)
- Force 3G Insecticide (EPA Registration No. 10182-373)
- Dithane DF Agricultural Fungicide (EPA Registration No. 707-180)

The three largest total amounts of pesticide products sold to private applicators, by volume, were:

- Prowl 3.3 EC Herbicide (EPA Registration No. 241-337)
- Bicep Lite II Magnum (EPA Registration No. 100-827)
- Roundup Ultramax (EPA Registration No. 524-512)

Total amount of pesticides sold to distributors for resale in New York State in 2001 was:

- 284,158.84 Gallons
- 3,196,046.03 Pounds

Total amount of pesticides sold to applicators for end use in New York State in 2001 was:

- 159,316.71 Gallons
- 1,878,873.11 Pounds

Please note: Although the Department and Cornell have gone to great lengths to quality assure the data, there are still concerns regarding the quality of the data received from the regulated community. Users of the data should review Section III.D., Data Qualifications, prior to use. In addition, the Department and Cornell attempt to provide the users with best data available and, therefore, occasional revisions to the data are required. Users are advised to go to the following website for the most up-to-date data:

www.dec.state.ny.us/website/dshm/prl/index.htm

For more detailed information, please refer to the attached report.

I . INTRODUCTION

The Department, in conjunction with work conducted by Cornell University, presents a final data summary for calendar year 2001 of pesticide sales and use. This report also describes refinements made in 2001 to the pesticide reporting program and provides detailed information in eight data summaries. These summaries provide pesticide sales and use information by county, zip code and product.

It is not the Department's role, for purposes of this report, to draw any correlations between pesticide use and health impacts. This critical activity is the prerogative of independent health researchers who elect to use the database.

II. IMPLEMENTATION OF THE PESTICIDE REPORTING PROGRAM

The Department's pesticide reporting program performs a range of functions: outreach to industry, environmental interest groups, cancer research advocacy groups and the public; interpretation and clarification of statutory and regulatory requirements; and development and execution of procedures for reporting and managing data and regulatory compliance.

A. Public Outreach and Education

The Department places primary emphasis on the education of the regulated community to encourage the highest level of compliance and to obtain the most accurate data possible. To further that goal, the Department conducted workshops at nine locations across the State: Albany, Binghamton, Buffalo, Fishkill, Long Island, New York City, Rochester, Saranac Lake, and Syracuse. These locations were chosen in response to suggestions from the regulated community and other interest groups. The workshops were attended by approximately 2,500 applicators and businesses. In 2001, the Department also participated in many other events across the State for pesticide user groups and associations, cancer advocacy groups, environmental advocacy groups, the public and others. These events reached thousands of interested parties. Also, the Department mass-mailed information and forms, on several occasions, to thousands of known regulated entities that were impacted by the Pesticide Reporting Law.

In addition, the Department continued to communicate with regulated entities through an e-mail address *(prl@gw.dec.state.ny.us)* and a toll-free telephone number (1-888-457-0110). Through these outlets, customers can contact the Department, have questions answered, request report forms or conduct other business associated with the pesticide program.

The Department's website *(www.dec.state.ny.us/website/dshm/pesticid/prl.htm)* is also available for Pesticide Reporting Law information. This website provides internet access to Pesticide Reporting Law information including a link to the electronic reporting website, a copy of the statute, forms that can be downloaded and printed, general guidance materials and copies of past annual reports, with a link to Cornell's website that contains final data for 1997, 1998, 1999, 2000 and now 2001. Also available on the website are the Department's Technical and Administrative Guidance Memoranda (TAGMs) which provide guidance and clarify program issues for Department staff, the public and the regulated community. The first of these TAGMs, relating to the Pesticide Reporting Law DSHM-97-05, became effective January 20, 1998. The second TAGM (DSHM 99-10) became effective January 21, 2000 and was revised and reissued as TAGM PES 99-10, effective May 18, 2001.

In addition, the Department also has two Program Policies which clarify record keeping and reporting requirements of the Pesticide Reporting Law and existing regulations in Parts 325 and 326. Program Policy OGC-3 established a policy of enforcement discretion with regard to the New York State pesticide record keeping and reporting requirements for commercial applicators. Program Policy OGC-4 established a policy of enforcement discretion with regard to the New York State pesticide record keeping and reporting requirements for commercial permit holders, including importers, manufacturers and compounders. These two Program Policies state that the Department would allow and accept an annual report or reports submitted in accordance with the Pesticide Reporting Law, in lieu of the reports required under 6 NYCRR Parts 325.25 and 326.10. These policies also state the record keeping requirements for both commercial applicators and commercial permit holders, and help clarify statutory and regulatory requirements for the regulated community and facilitate compliance with such mandates.

B. Quality Control

The Department continues to refine and streamline the process for reporting, and the system for managing the 20,000 reports that are received annually.

The Department refined its front-line quality control program where Department staff evaluate incoming reports to ensure basic criteria were met. The criteria were established to maximize the volume of data that would be transferrable into Cornell's master database. To be accepted, a report must:

a) be in the Department's standardized format;
b) contain data in all columns;

c) have valid certification numbers for all certified commercial applicators and technicians or a valid commercial permit number;
d) be legible;
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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. Many of these turned out to be reporting errors which were then corrected by staff with the approval of the applicator or business. These corrected data were tabulated and forwarded to Cornell, which has used them to supercede the original reports in the database.

Also, when the initial data was reviewed, an error in reporting for some cooling tower and wood preservative products, was detected. Many applicators erroneously reported those applications in "pounds" rather than "gallons." This error dramatically inflated the quantities of those products in the data reports. Cornell was able to convert the quantities for 67 of those products from pounds to the liquid quantities. This resulted in converting what was originally reported as 2,166,025.09 pounds, into 185,937.57 gallons. The 2001 annual report has been revised to reflect the corrected data.

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C. Electronic Reporting

The Department, in conjunction with its computer contractor, continues to operate a user-friendly website that allows regulated entities to report their PRL sales and applications data. The electronic reporting programs enable users to keep their pesticide records on a computer and to report their sales and applications to the Department. The data can be submitted to the Department via e-mail, or on floppy disk, CD ROM, or FTP. This user-friendly approach to PRL data submission improves the quality of the data received and facilitates the transmission of such data to Cornell.

A website established in 2000 (*www.nysprl.com*) and linked from the Pesticide Reporting Law main web page, provides three updated electronic reporting options for the regulated community: Option 1 Excel Reporting Form; Option 2 Visual Basic Reporting Form; and Option 3 ASCII Text guidelines. The electronic reporting options are also available on CD ROM upon request. The contractor continues to provide a help desk that can be accessed both by telephone and e-mail.

The regulated community electronically submitted 1,934 PRL sales and application reports for year 2001, compared to 905 reports submitted for 2000. These submissions contained data for 2,887 applicators/technicians and 69 commercial permit holders, compared to 1,581 applicators/technicians and 75 commercial permit holders in 2000. The total number of 2001 records was 1,273,796, compared to 644,909 records in 2000. The Department encourages regulated entities to report electronically. These efforts have been successful, resulting in an 81% increase in the number of entities reporting electronically from the year 2000 to 2001. The Department will continue to encourage and assist in the expansion of electronic reporting by the regulated community.

D. Scannable Reports

Scannable report forms were another reporting option available to commercial applicators for reporting year 2001. "Scannable" means the data on the forms might be optically scanned into the computer database, minimizing manual entry of the data. It was hoped that this would be a cost-effective reporting method for New York State, because it could improve accuracy and reduce manual data entry costs.

To date, the performance of the scannable reports has not been good, with much of the data contained on these forms having to be manually entered instead of being scanned. This was primarily due to the inability of the optical character recognition software to read the handwriting on the scannable forms. The existing supply of scannable report forms was available for use through the 2001 reporting year. The

Department reviewed the performance of the scannable forms and determined it was not cost effective to continue with that report format. Therefore, the scannable forms were discontinued at the end of reporting year 2001.

A letter was sent to those entities who had previously reported on the scannable forms. They were notified the scannable forms were being discontinued and were given a range of reporting options. They were encouraged to use one of the electronic reporting options and they were given the opportunity to order free pads of the Applicator/Technician Pesticide Annual Report form (Form 44-15-26) for use in reporting their 2002 applications. The scannable forms will not be accepted for year 2002 reports.

E. Cornell University

Under the present legislation, the database will keep track of the quantities and locations of pesticides applied by commercial applicators. It will also keep track of the quantities and application locations of restricted use and agricultural general use pesticides purchased by private applicators and quantities of restricted use pesticides sold by manufacturers in New York State.

The following objectives for developing, maintaining and refining the database will be undertaken by the Pesticide Management Education Program (PMEP) at Cornell.

1. Work closely with the Department on the continued design, implementation and refinement of a pesticides sales and use computerized database system (database) for pesticide use information submitted on reporting forms. This system will utilize a data entry firm contracted by the Department. Develop and maintain related databases, such as the pesticide report tracking database, that the Department needs to fulfill the requirements of the Pesticide Reporting Law.

2. Work closely with the Department on the continued design, implementation and refinement of a pesticide sales and use computerized database system (database) for pesticide use information submitted electronically. Develop electronic file specifications for those contracted firms selected by the Department that will be processing pesticide application and sales reporting forms, including electronic submissions.

3. Provide technical expertise to the Department and act in an advisory capacity relating to the development, implementation and refinement of the database and related information systems. Assist the Department in reviewing/evaluating contracts, requests for proposals, etc., relating to the development of the Database and related information systems (i.e., ParTest/ParScore).

4. Work with the data entry vendor to load each year's report data into the database. Cornell will validate the report data in accordance with the Department's requirements. Cornell will produce all the data summaries required by the legislation and any additional statistical summaries requested by the Department.

5. The database is dependent on related pesticide information from other satellite computer systems. Cornell will work closely with the Department in designing/ redesigning, developing and implementing these satellite databases (business registration, certification, recertification course calendar, commercial permits, product registration/label images, enforcement, and a pesticide reporting interface with the certification system) as a function of the database. The systems will be redesigned to better accommodate the administrative and regulatory activities of the Department and to improve the quality of the data stored. The improvements will enhance the Department's and Cornell's ability to make use of these information resources. Access will include internal Department and Cornell use and management of the information/data so that confidentiality is maintained.

6. Maintain and enhance on-line mechanisms available through the program's website for querying of pesticide use information, product registration data, certification information, etc., by the Department, the New York State Department of Health (NYSDOH), Cornell, qualified researchers, and members of the public as mandated by the pesticide reporting legislation. Any information provided by Cornell from the database will only be as directed by the Department.

7. Provide/assist the Department with data report requests from the Health Research Science Board, Department personnel, the NYSDOH, the New York State legislature, other state and federal agencies and the public.

8. Develop and maintain a database of pesticide product label images. This database enables the Department to retrieve label images on-line and thus improve their product registration review capability. Cornell will scan and load newly registered label images into the database on a regular basis. Cornell will develop a mechanism for Department regional staff and members of the public to access the label images through the Internet. Access to label information will be contingent on the DEC's approval.

Procedures

In order to accomplish the objectives, a Cornell project team consisting of a Project Leader, two Senior Program Analysts, three System Analysts/Programmers and an Office System Specialist was formed. The titles and the number of team members can be altered by agreement of both the Department and Cornell. This team will implement the system design as specified by the Project Leader.

In order to specify the design, the Project Leader and lead programmer will work with DEC to determine the system requirements. They will consult with the regulated community and other end users of the system in order to clarify their requirements for the system. They will analyze these requirements and present system design alternatives to the Department. They will also research and choose the software and hardware components that will best implement the system requirements. The lead programmer, under the supervision of the Project Leader, will oversee the day-to-day data processing and system development responsibilities of the team.

Cornell will consult with the Division of Information Services (DIS) within the Department concerning any activities that impact the data, applications, or infrastructure maintained by DIS.

All final decisions on the design and implementation of the pesticide reporting system reside with the Department.

Project Activities

The preliminary system design and database have been specified and delivered to the Department. Cornell is continually in the process of refining this design and database in conjunction with the Department. The initial development phase, now completed, is being followed by further system enhancements, reevaluations based on years of reporting, and maintenance and operations of the system.

Cornell has developed a New York State database of currently registered and archived (registered since 1987) pesticide products that can be queried by various indexes, including active ingredient, product label name, EPA registration number and registrant/manufacturer/payer. Also, a recertification course calendar database has been developed for those certified pesticide applicators who need to attend courses that provide recertification credits in their appropriate category(ies). It can be queried by category, course name, and by states offering certification reciprocity.

An offshoot of the pesticide sales and use reporting database has been the enhancement of an existing database that tracks pesticide product registrations in New York State. The Product, Ingredient, and Manufacturer System (PIMS) located at http://pmep.cce.cornell.edu/pims/ provides access to information relative to those products registered in New York, including label images. Label images are now accessible for those products registered (or previously registered) in New York and access is also available to primary labels registered by the Environmental Protection Agency (EPA).

To view label images from PIMS and from EPA, the user will need to use a multiple page TIFF viewer. If you are using a PC with a Microsoft Windows platform, you already have the necessary viewer (Imaging, Wang Imaging, or Windows Picture and Fax viewer) installed. If you are using the Macintosh platform with earlier versions than OSX, you will need to obtain a viewer program. For Macintosh computers running operating system (OS)8 or (OS)9, we suggest a program such as "Graphic Converter" from Lemke Software. Macintosh computers running (OS)X have a program called "Preview" already installed that will display multiple TIFF pages.

F. New York State Department of Health (NYSDOH) and Health Research Science Board (HRSB)

The HRSB was established within NYSDOH by legislation in 1996 (Chapter 279 of the Laws of 1996), with amendments in 1997 (Chapter 219 of the Laws of 1997). The Board's major responsibilities include awarding grants for research and education projects financed by the Breast Cancer Research and Education Fund, and advising on issues related to the Pesticide Sales and Use Database. NYSDOH assisted the Board in producing several documents in fulfillment of its duties.

Evaluation of Pesticide Reporting and Board Recommendations - One of the duties of the Board is to report to the Legislature in the biennial report on "an evaluation of the basis, efficiency and scientific utility of the information derived from pesticide reporting" and to make recommendations as to "whether such system should be modified or continued." In May 2000, the Board surveyed interested parties and prepared the document "Survey Results and Recommendations: Pesticide Reporting Law." The report contains eight specific recommendations and was finalized in February 2001. A copy of the report and a summary of the status of agency actions on the recommendations can be requested by calling the NYSDOH toll-free at 1-800-458-1158, extension 2-7950.

In preparation for the 2003 biennial report, the Board has mailed a short survey form to interested parties. The survey asks about how the pesticide data are being used,

whether or not the data are helpful and how the data could be made more helpful or easier to use. The survey form is also available at the Department and Cornell websites. A survey form or more information can be obtained by calling NYSDOH toll-free, at 1-800-458-1158, extension 2-7950.

Information for Researchers - The 2000 survey of interested parties found that, although the pesticide data have not been used in health-related studies, the data have been used in other ways that contribute to public health, such as the development of programs related to farmworker safety and health and to water quality assessment. One of the recommendations in the report was "to continue to inform researchers…of the availability of the pesticide data for research." Previous mailings to academic institutions about the pesticide data had been addressed to the president of the institution, with the request that the letter be forwarded to any researcher who may have an interest in the database. The Board decided to target researchers more specifically by mailing directly to the department heads of undergraduate and graduate departments of biology, chemistry, environmental science, environmental health, epidemiology, toxicology, public health and preventive and environmental medicine. The mailing was also sent to breast cancer advocacy groups and the sponsored program offices of colleges and universities in New York State.

The mailing included a small poster publicizing the database with tear-off sheets containing information on the website where the data are found and the phone number and mailing address of HRSB staff, an information sheet for researchers and a brochure describing the duties of the Board. The packet was mailed to 605 groups in October/November 2001.

Another of the Board's responsibilities is to review requests by researchers engaged in human health-related projects for access to confidential Pesticide Sales and Use Database information maintained by Cornell and the Department. No requests for confidential information were received by the Board as of December 31, 2002.

Breast Cancer Research and Education Fund - Breast cancer research and education grant awards are supported by voluntary donations made through a check-off on New York State Income Tax Returns. In addition, proceeds generated by the Department of Motor Vehicles from the "Drive for the Cure" specialty license plates, as well as direct donations to the Fund, help to support breast cancer research through the Fund. Through December 2001, donations totaled more than $3.1 million through the check-off. In October 2000, Governor George E. Pataki signed legislation authorizing the State to match dollar-for-dollar donations made on the income tax check-off as well as proceeds from the "Drive for the Cure" specialty license plate. This legislation will

double the resources available to support meritorious research and education projects. Currently, the Breast Cancer Research and Education Fund is supporting 27 groundbreaking research and education projects that are designed to help educate New Yorkers about, and find a cure for, breast cancer.

Update from Grant Awardees and Second Request for Proposals - All 1998 Empowerment through Innovative Research for Proposals (EMPIRE) pilot grant awards and all Postdoctoral Fellowship awards have been completed. Project summaries can be obtained from the Board's executive director at (518) 473-6961.

In 2000, the Board developed its second Request for Proposals (RFP). The Board solicited proposals for EMPIRE grants and for Postdoctoral Fellowship awards. In March 2001, the RFP was distributed to over 600 individuals, hospitals and universities, research institutions and community-based organizations throughout New York State. The Board is providing $2.7 million to support 27 awards of $50,000 per year for two years.

In June 2002, the HRSB issued a request for applications for breast cancer education, community-based demonstration projects. The HRSB is particularly interested in funding projects concerning the significance of exposure to environmental contaminants, dietary factors and genetic predispositions. The collaborations between community-based organizations and academic institutions fostered by this funding program should lead to education that is appropriate to communities, medically and scientifically accurate and demonstrably effective in increasing knowledge and promoting healthy behaviors. The funding of four education projects was announced in Buffalo on October 30, 2002, by Lt. Governor Mary Donahue. The Board authorized $300,000 to support the four awards of $75,000 for two years. Contracts are expected to start on or about June 1, 2003 and last through March 2005.

Information on the Pesticide Poisoning Registry

The NYSDOH Pesticide Poisoning Registry was established in 1990 as a surveillance system used to collect reports of pesticide poisoning incidents and to help prevent overexposure to pesticides through outreach and intervention. The Registry is also used to help increase the medical community's awareness of pesticide-related health effects. Clinical laboratories, physicians and health facilities are mandated to report suspected or confirmed pesticide poisonings to NYSDOH under Part 22 of the New York State Sanitary Code. NYSDOH staff investigate and intervene in any situation with a continued risk of pesticide poisoning. Intervention is structured around individual cases. Environmental sampling and investigations, industrial hygiene consultation, and medical consultation are available, if needed. In cases of occupational

exposure, intervention is coordinated with the employer if possible. Patients may be referred to one of the clinics of the New York State Occupational Health Clinic Network or to another qualified provider.

G. Breast Cancer Environmental Risk Factors

The Cornell University Program on Breast Cancer and Environmental Risk Factors (BCERF) is now part of the Isidor I. and Sylvia M. Sprecker Institute for Comparative Cancer Research at the College of Veterinary Medicine. BCERF was created in 1995 to respond to growing public concern regarding elevated breast cancer rates in certain counties in New York State. From its inception, BCERF has addressed the relationship between environmental risk factors and breast cancer through a variety of research and education strategies.

BCERF is critically evaluating the scientific information on pesticides, other chemicals, diet and the relationship of these factors to breast cancer risk. This translational research allows for the synthesis and interpretation of a wide range of research on these environmental factors, and whether they may affect breast cancer risk. The pesticides being evaluated include those used in agriculture, home, lawn and garden pest control and on recreational sites. These critical evaluations identify existing knowledge gaps, which are the basis of recommendations to state and federal agencies for needed research.

BCERF translates these scientific findings and data into understandable and accessible information. Educational products include:

- A set of five *Tip Sheets* offering the very basics
- 48 *Fact Sheets* covering environmental risk factors and related information in greater detail
- A quarterly newsletter, *The Ribbon*, with a symposium-like format addressing current themes in related research and policy areas
- A *Tool Kit* of educational curricula, field-tested in 58 sites across the state
- PALS, the Pesticide Applicator Learning Series, is a set of interactive modules on current issues important to pesticide educators.

In addition, BCERF continuously supports diverse community efforts to use what is known about breast cancer risk factors for risk reduction.

The *Ad Hoc Discussion Group* meetings, held three times per year, continue to provide an interactive forum where activists, educators, researchers and other

stakeholders can express their concerns and learn from one another. BCERF has recently been encouraged by members of the Senate to broadly publicize these important education events in the communities in which they take place, and is now doing so.

BCERF maintains a website (http://envirocancer.cornell.edu/) with this science-based information and links to other information sources. The BCERF website includes a searchable bibliography with over 7,650 references on breast cancer and environmental risk factors. Recent evaluation efforts show that in addition to providing critical links to information needed by researchers and health professionals, the website also reaches students and those personally touched by cancer, in great numbers.

BCERF may be contacted by e-mail at *breastcancer@cornell.edu* or by telephone at (607) 254-2893. The BCERF Program Office is located at 112 Rice Hall, Cornell University, Ithaca, New York 14853.

H. Water Monitoring Program

The Pesticide Reporting Law (§33-0714) requires the Department to conduct a water quality monitoring program on Long Island and throughout the State to provide an adequate understanding of the health and environmental impacts of pesticide use in the State. The Department uses this program to make pesticide registration decisions, review suspensions and cancellations of State pesticide registrations and assess the status, trends and health impacts of any pesticide contamination in the ground and surface water of New York State. The Department works with the United States Geological Survey (USGS), the NYS Water Resources Institute (NYSWRI) and any other parties necessary to accomplish these goals.

Given the very broad mandate in the PRL and the large area of New York State to be investigated, the Department decided to first investigate the impacts of long-term pesticide use in several areas with high groundwater usage. These areas generally include current and past agricultural use areas, golf courses, vineyards and urban areas with high pesticide use. To that end, the Department contracted with the USGS, the Suffolk County Department of Health Services (SCDOHS) and the NYSWRI to perform various ground and surface water studies. Once adequate information has been gathered from these areas, the focus of the program will move toward other areas of the State to determine impacts from pesticide use to ground and surface water.

The USGS has primarily been investigating the impact of pesticide use on surface water used for drinking water in upstate New York. For the USGS reports, go to http://ny.usgs.gov/ for information.

The SCDOHS has been investigating the impact of pesticide use on groundwater in Suffolk County, Long Island. It has also analyzed a limited number of samples of groundwater from Nassau County, Long Island. For the most recent report by the Suffolk County Department of Health Services, e-mail ppr@gw.dec.state.ny.us or call 1-518-402-8768.

The NYSWRI is assessing the status, trends and health impacts of any pesticide contamination in the groundwater of aquifers in upstate New York. It is also developing a five-year plan for evaluating the health and environmental impacts of groundwater in upstate New York.

I. Enforcement Activities

2001 Reporting Year Enforcement

The Department used a variety of methods in 2001 to bring regulated entities into compliance with reporting as required under the Pesticide Reporting Law. Reporting forms and information were available through the internet, toll-free telephone, e-mail and direct mailings from the Department. A reminder notice stating the annual report was due by February 1 was direct mailed to all applicators, technicians, and commercial permit holders in order to maximize the number of reports submitted. Reporting by technicians and applicators, including electronic reporting, were also featured topics at the nine Statewide workshops conducted by the Department.

As a supplement to the education and outreach efforts, the Department took enforcement actions against those entities who failed to report for 2001. An Order on Consent was sent to approximately 1,680 certified commercial pesticide applicators and technicians and commercial permit holders who did not report for 2001. As a result of this action, many of those entities were assessed a civil penalty. Total civil penalties assessed for not reporting in the year 2001 were approximately $46,000. Many applicators and technicians elected to voluntarily surrender their certification instead of paying a penalty. The result of this surrender is they are no longer certified to make commercial pesticide applications. Those entities who did not settle the violation will not be granted renewal privileges until their violation is resolved.

In addition, the Department also addressed other areas of concern regarding pesticide activities discovered while reviewing annual reports (i.e., expired or unregistered businesses; application of unregistered pesticide products; applications of pesticides by noncertified applicators; etc.).

III. REPORTING DATA

A. Reports Received

For the 2001 report year, the total number of applicators, technicians and permittees reporting was:

19,365 Commercial Applicators and Technicians
351 Commercial Permittees (Sales)

These figures indicate that 95.8 percent of the 20,217 certified applicators and technicians, and 92 percent of the 382 commercial permittees reported for 2001. Despite direct mailings, discussions at Statewide workshops and meetings, and other attempts by the Department to notify the regulated community of the reporting requirement, many are still unaware they are required to report, even if they make no applications during that year. The Department will continue to provide outreach and education to the regulated community in an attempt to achieve maximum compliance with the reporting requirement.

B. General Synopsis of Data

The following tables provide an overview of major data categories:

Table 1
Calendar Year 2001
Final Summary of Total Quantities Statewide

Category	Number of Pesticide Products	Amount	
Applied by Commercial Applicators	3,245	2,270,744.77 gal.	16,933,247.04 lbs.
Sold for Resale*	356	284,158.84 gal.	3,196,046.03 lbs.
Sold for End Use*	329	159,316.71 gal.	1,878,873.11 lbs.
Sold to Private Applicators	1091	1,005,461.36 gal.	5,414,188.06 lbs.

*Note: Restricted use pesticide only

Table 2
Summary of Commercial Pesticide Applications by County
for Calendar Year 2001

County	Amount**	
Albany	42,802.25 gal.	739,979.07 lbs.
Allegany	2,638.09 gal.	9,976.67 lbs.
Bronx	10,910.62 gal.	74,676.61 lbs.
Broome	8,223.27 gal.	184,848.21 lbs.
Cattaraugus	6,499.52 gal.	66,788.58 lbs.
Cayuga	30,366.04 gal.	53,170.43 lbs.
Chautauqua	10,136.29 gal.	151,888.96 lbs.
Chemung	4,378.21 gal.	105,518.58 lbs.
Chenango	5,854.61 gal.	112,603.74 lbs.
Clinton	26,639.43 gal.	56,454.75 lbs.
Columbia	9,468.95 gal.	40,836.99 lbs.
Cortland	45,792.90 gal.	35,894.96 lbs.
Delaware	8,089.21 gal.	19,613.15 lbs.
Dutchess	15,785.14 gal.	326,108.88 lbs.
Erie	116,022.97 gal.	888,175.74 lbs.
Essex	105,759.26 gal.	411,706.72 lbs.
Franklin	5,692.57 gal.	39,662.51 lbs.
Fulton	1,088.29 gal.	28,324.80 lbs.
Genesee	29,802.17 gal.	60,501.09 lbs.
Greene	25,470.85 gal.	392,079.75 lbs.
Hamilton	296.12 gal.	15,747.57 lbs.
Herkimer	24,072.77 gal.	156,422.76 lbs.
Jefferson	15,816.35 gal.	61,536.01 lbs.
Kings	24,524.11 gal.	181,916.42 lbs.
Lewis	8,035.46 gal.	4,777.82 lbs.
Livingston	13,186.36 gal.	28,602.61 lbs.
Madison	12,281.42 gal.	64,620.52 lbs.
Monroe	68,724.43 gal.	1,382,923.24 lbs.
Montgomery	4,600.98 gal.	47,698.49 lbs.
Nassau	178,470.34 gal.	1,469,187.25 lbs.
New York	93,733.06 gal.	488,797.89 lbs.
Niagara	50,302.55 gal.	218,857.93 lbs.
Oneida	10,218.62 gal.	143,312.15 lbs.
Onondaga	28,603.13 gal.	697,073.94 lbs.
Ontario	11,871.82 gal.	122,332.55 lbs.

County	Amount**	
Orange	11,194.45 gal.	358,942.90 lbs.
Orleans	8,073.78 gal.	22,446.49 lbs.
Oswego	65,680.93 gal.	89,110.25 lbs.
Otsego	9,084.07 gal.	28,699.69 lbs.
Putnam	4,150.85 gal.	79,823.05 lbs.
Queens	123,630.82 gal.	241,796.20 lbs.
Rensselaer	11,893.27 gal.	101,385.32 lbs.
Richmond	6,800.56 gal.	108,320.70 lbs.
Rockland	51,713.50 gal.	466,234.92 lbs.
Saratoga	108,337.00 gal.	448,694.12 lbs.
Schenectady	14,539.73 gal.	237,912.30 lbs.
Schoharie	3,123.99 gal.	7,328.60 lbs.
Schuyler	1,777.70 gal.	14,219.31 lbs.
Seneca	4,897.15 gal.	20,444.96 lbs.
St. Lawrence	31,898.22 gal.	81,102.40 lbs.
Steuben	7,627.01 gal.	84,957.62 lbs.
Suffolk	383,656.35 gal.	3,046,320.30 lbs.
Sullivan	4,275.57 gal.	75,647.76 lbs.
Tioga	2,648.99 gal.	33,556.12 lbs.
Tompkins	6,363.58 gal.	59,011.32 lbs.
Ulster	8,748.08 gal.	94,931.92 lbs.
Warren	9,783.14 gal.	145,379.39 lbs.
Washington	37,134.75 gal.	56,467.21 lbs.
Wayne	72,761.73 gal.	129,150.77 lbs.
Westchester	190,292.90 gal.	1,805,069.80 lbs.
Wyoming	16,421.62 gal.	45,816.04 lbs.
Yates	1,288.22 gal.	12,573.67 lbs.

**Note: The quantity of pesticides commercially applied in a county is the sum of the gallons and pounds reported above. In other words, the gallons and pounds in the chart do not reflect two ways of speaking about a single volume of pesticides.

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

C. Data Summaries Overview

In conjunction with Cornell University, the Department has summarized final data for calendar year 2001 pesticide sales, the quantity of pesticides used, the category of applicator and region of application. Detailed information is provided in eight data summaries. These final summaries can be found at www.dec.state.ny.us/website/dshm/prl/index.htm

Sales Data (Commercial Permit holders)

< Commercial Permittees Sales of Restricted Use Pesticides and General Use Agricultural Pesticides to Private Applicators (summarized by product). These are data summaries of sales to certified private applicators, of restricted use pesticides and general use pesticides used in agricultural crop production. These sales were made by pesticide distributors that are licensed to sell both restricted use pesticides and general use pesticide products identified as being used in agricultural crop production. The data are summarized by pesticide product.

< Commercial Permittees Sales of Restricted Use Pesticides and General Use Agricultural Pesticides to Private Applicators (summarized by county).

< Commercial Permittees Sales of Restricted Use Pesticides and General Use Agricultural Pesticides to Private Applicators (summarized by zip code).

Manufacturers, Compounders, and Importers Sales Data

< Commercial Permittees (Including Importers, Manufacturers and Compounders) Restricted Use Pesticide Sales to Commercial Permit Holders for Resale (summarized by product). These are data summaries of sales made by pesticide distributors that are licensed to sell restricted use pesticides to other pesticide sales distributors, who are also licensed to sell restricted use pesticides. The data are summarized by pesticide product.

< Commercial Permittees (Including Importers, Manufacturers and Compounders) Restricted Use Pesticide Sales to Commercial Applicators for End Use (summarized by product). These are data summaries of sales made by pesticide distributors that are licensed to sell restricted use pesticides to commercial pesticide applicators, who are licensed to purchase and apply restricted use pesticides. The data are summarized by pesticide product.

Usage Data

< Commercial Applicator pesticide applications in New York State (summarized by product).

< Commercial Applicator pesticide applications in New York State (summarized by county).

< Commercial Applicator pesticide applications in New York State (summarized by zip code).

Product Name Data

< List of Pesticide Products by Name and EPA Registration Number.

As required by law, these final summaries exclude the name, address or any other information that would otherwise identify a commercial or private applicator, any person who sells or offers for sale restricted use or general use pesticides to a private applicator, or any person who received the services of a commercial applicator.

D. Data Qualifications

The reporting community, the Department, its computer consultants and Cornell University work together to provide the best information possible for health researchers. However, the data is neither perfect nor complete. In addition, the Department and Cornell attempt to provide the users with best data available and, therefore, occasional revisions to the data are required. Users are advised to go to the website, www.dec.state.ny.us/website/dshm/prl/index.htm for the most up-to-date data. Users of the data are cautioned about limitations of the data, including the following:

1) The information, as reported by the applicators and distributors, is accepted by the Department. Neither the Department nor Cornell can attest to the accuracy of the data provided. However, the data are reviewed for obvious or likely errors and follow-up with the applicators and distributors is conducted and corrections are made where possible.

2) The PRL requires the Department to accept data from the regulated community on handwritten forms. Some of the data on these forms were difficult for the data-entry operators to decipher. The quality of these data are not as reliable as data submitted on typed or computer-generated forms. Data that are unreadable are stored in the database as "Illegible" (see Data Management Methodology section).

3) Use of zip code to define application and sales locations creates a number of problems. Zip codes are postal delivery locations. Large wilderness areas or farmland may have few, if any, delivery points. Since mail is not delivered to these locations, they are technically not located in a zip code. Determination of what zip code to report for an application or intended application in one of these locations is problematic for the businesses and applicators.

4) Some zip codes contain more than one contiguous location. Without more accurate address data than are currently collected, there is no way to divide application or intended application quantities between the separate locations included in these zip codes.

5) Data reported for selected zip codes have deliberately not been reported under that zip code. These selected zip codes are unique to a location and could be used to identify where an application or intended application occurred. Identification of the specific location of a pesticide application is not allowed by the PRL. In these instances, these data have been reported under the "Private" zip code. Note that this manipulation was not necessary for the data reported by county. All the data have been reported under the county that was submitted on the report form by the business or applicator.

6) Quantities for some pesticides were reported using both weight- and volume-based units of measure. The information to determine which type of measurement unit should be used to report those pesticides is not currently available. Therefore, the reports list both measurements, as they were reported to the Department. Rather than reject quantities reported under a unit of measure inappropriate for a particular product, the reports list both measurements as they were reported to the Department.

7) Products with a quantity of zero reflect that applications or intended applications of the product were made, but that the quantity was indecipherable on the report form.

8) The database may contain an overestimate of the volume of pesticides actually used or sold. Several factors contribute to this potential overestimate. Data are not available to indicate the quantity of pesticides that may be involved in the factors identified below.

- It is fairly common for private applicators to return unused pesticides. They may even do so in a different year than the one in which they made the initial purchase. The current reporting system does not account for returns. Only the original sale is reported.

- Commercial permittees report sales of restricted pesticides to other distributors. These distributors sell the same pesticide a second time, possibly to another distributor, who may sell it yet a third time. Each sale is reported. There is no way of identifying reports of multiple sales of a single volume of pesticide.

- Many products are routinely diluted with an inert material prior to application. Some applicators report the diluted amount of material applied, not the undiluted amount as required by the Department. The Department and Cornell review reports in an attempt to identify obvious occurrences of this error, however, not all occurrences are obvious. This error can inflate the estimates of total pesticides applied in a given year.

9) Data are not reported by active ingredient. This makes the database different from most other pesticide use tracking databases, which may cause difficulties in comparing these data with data from other states. The Department is working toward reporting by active ingredient.

10) Commercial Permit Holders (sellers of restricted pesticides), under the PRL, must record and report sales of general use agricultural pesticides to certified private applicators. However, certified private applicators can purchase general use agricultural pesticides from noncommercial permit holders. Those sales, and the associated use information, would not be captured by the PRL in those situations.

E. Data Management Methodology

The following statements summarize the methodology that was used to produce the Pesticide Annual Report data for 2001:

< Pesticide products were summarized using the EPA registration number, not the product name.

< It is not uncommon for a pesticide product to be registered with one EPA number, but multiple product names. All registered product names are listed in a separate report. (Supplement to Data Summaries - Pesticide Products by Name and EPA Registration Number).

< Reported EPA registration numbers that contained alphabetic characters were processed as California EPA registration numbers. This was done by removing the revision code that California incorporates in the number and then processing the EPA company, product, and distributor (if present) numbers in the same manner as the Federal EPA registration number.

< All quantities are rounded to two decimal positions before the values are used for the Annual Report.

< The Data Summaries include data that were reported incompletely or incorrectly. These data have been identified by using a set of standard descriptions. The reason for including the data is that partial data may still have some informational value. The descriptions used are:

"Unreported"	–	no value reported for this field
"Illegible"	–	unreadable value reported for this field
"Invalid"	–	an invalid EPA Registration Number is a number that did not match those EPA Registration Numbers for pesticide products registered in New York State for a particular reporting year. An invalid county or zip code is a county or zip code that does not exist in New York State
"Irregular"	–	two values reported for one field on the report form or a value that could not be mapped to the report form field for any reason

IV. APPENDICES

A. Glossary
B. Contact List

Appendix A

Glossary

(From ECL and 6NYCRR Parts 325 and 326)

"Business registration" means the requirement of each person or business providing services of commercial application of pesticides, either entirely or as a part of the business, to register with the Department.

"Commercial application" means any application of any pesticide except as defined in private or residential application of pesticides.

"Certified commercial pesticide applicator" means a certified applicator who is certified by the Department to use or supervise the use of any commercial application of pesticides or to sell or supervise the sale of a restricted use pesticide as described in subdivision 325.16(l).

"Certified commercial pesticide technician" means an individual who is at least 17 years of age and is certified to engage in the following:

(1) commercial use of any general use or unclassified pesticide without supervision; or

(2) use of any pesticide when working under the direct supervision of a certified commercial pesticide applicator.

"Commercial permit" means the permit issued by the Commissioner, pursuant to the Environmental Conservation Law, Section 33-0901, for the distribution, sale, offer for sale, purchase for the purpose of resale, or possession for the purpose of resale, of a restricted pesticide.

"General use pesticide" means a pesticide which does not meet the State criteria for a restricted pesticide as established under authority of Section 33-0303 of Article 33 of the New York State Environmental Conservation Law.

"Pesticide" means:

a. Any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest; and

b. Any substance or mixture of substances intended for use as a plant regulator, defoliant or desiccant.

"Private application" means any application of any pesticide for the purpose of producing an agricultural commodity

a. On property owned or rented by the applicator or the applicator's employer, or

b. If applied without compensation other than the barter of personal services between producers of agricultural commodities, on property owned or rented by a party to such a barter transaction.

"Restricted use pesticide" means a pesticide that is classified for restricted use under the provisions of Article 33 of the Environmental Conservation Law or under Section 3(d)(1)(C) of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended.

Appendix B

Contact List for More Information on Pesticides

New York State Department of Environmental Conservation

Pesticide Certification, Registration, Permits . . . . . (518) 402-8748

Pesticide Annual Reporting . . . . . (518) 402-8765

Pesticide Product Registration . . . . . (518) 402-8768

Pesticide Compliance and Integrated Pest Management . . . . . (518) 402-8781

New York State Department of Health

Environmental Health Information 1-800-458-1158

Health Research Science Board . . . . . (518) 402-7511

Breast Cancer and Environmental Risk Factors . . . . . (607) 254-2893

Pesticide Management Education Program (Cornell University)

Pesticide Management Education . . . . . George Good, Director - (607) 255-1866

Pesticide Reporting Law Database . . . . . William Smith, Project Leader - (607) 255-1865

Figure 1
Pesticide Applications by Weight (in Pounds) for New York State by County During 2001

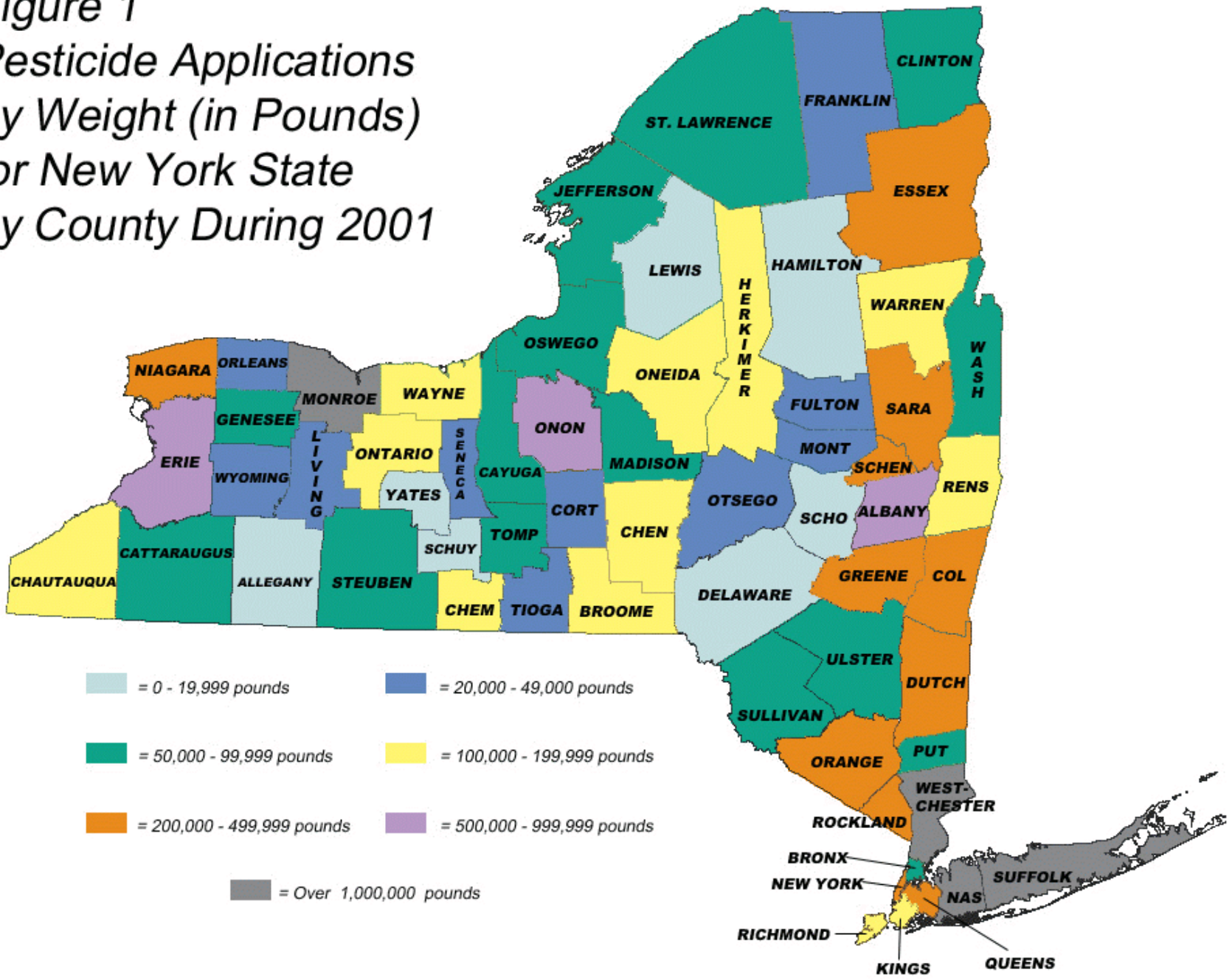

Figure 2
Pesticide Applications by Volume (in Gallons) for New York State by County During 2001

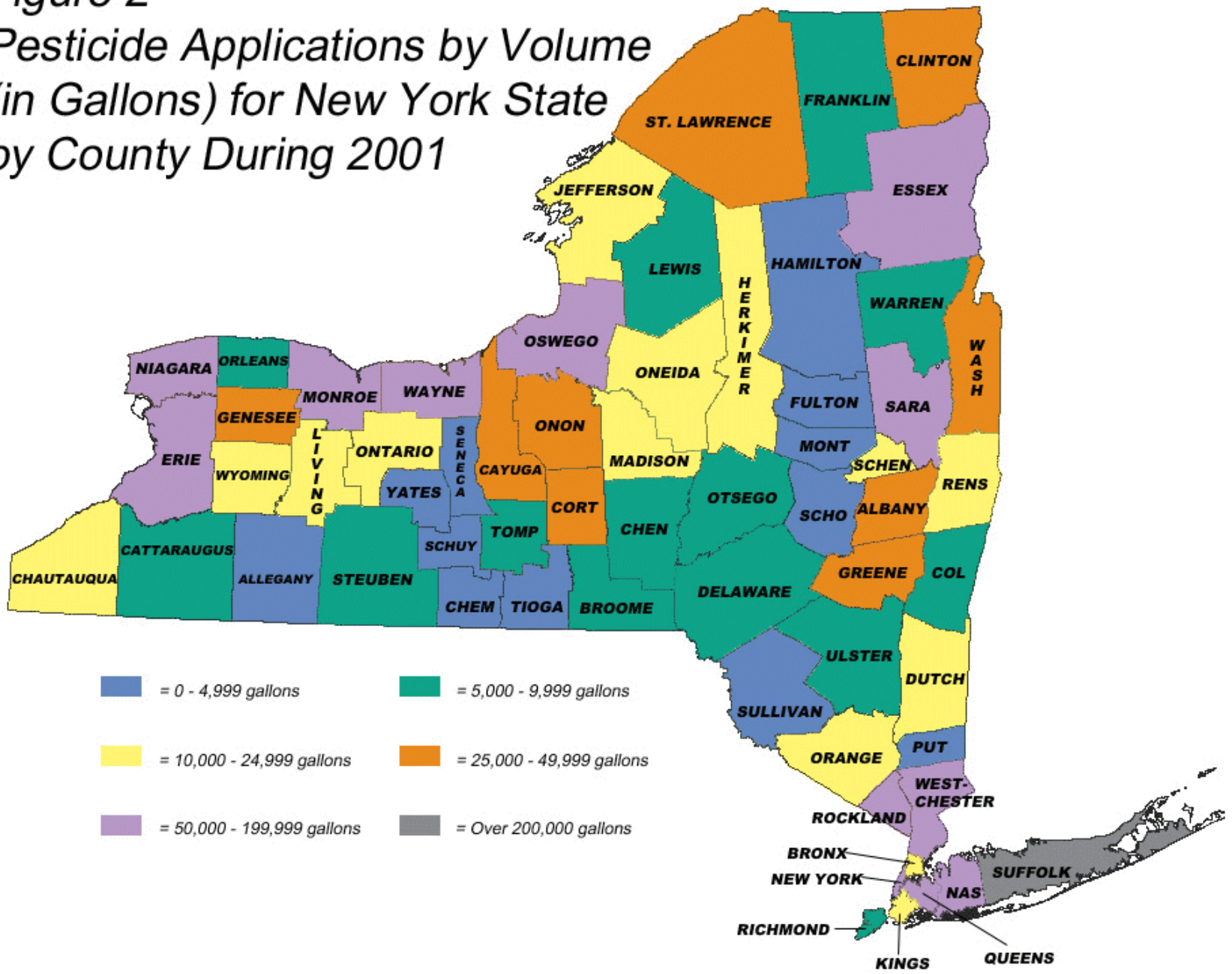

Figure 3
Pesticide Sales by Weight (in Pounds) for New York State by County During 2001

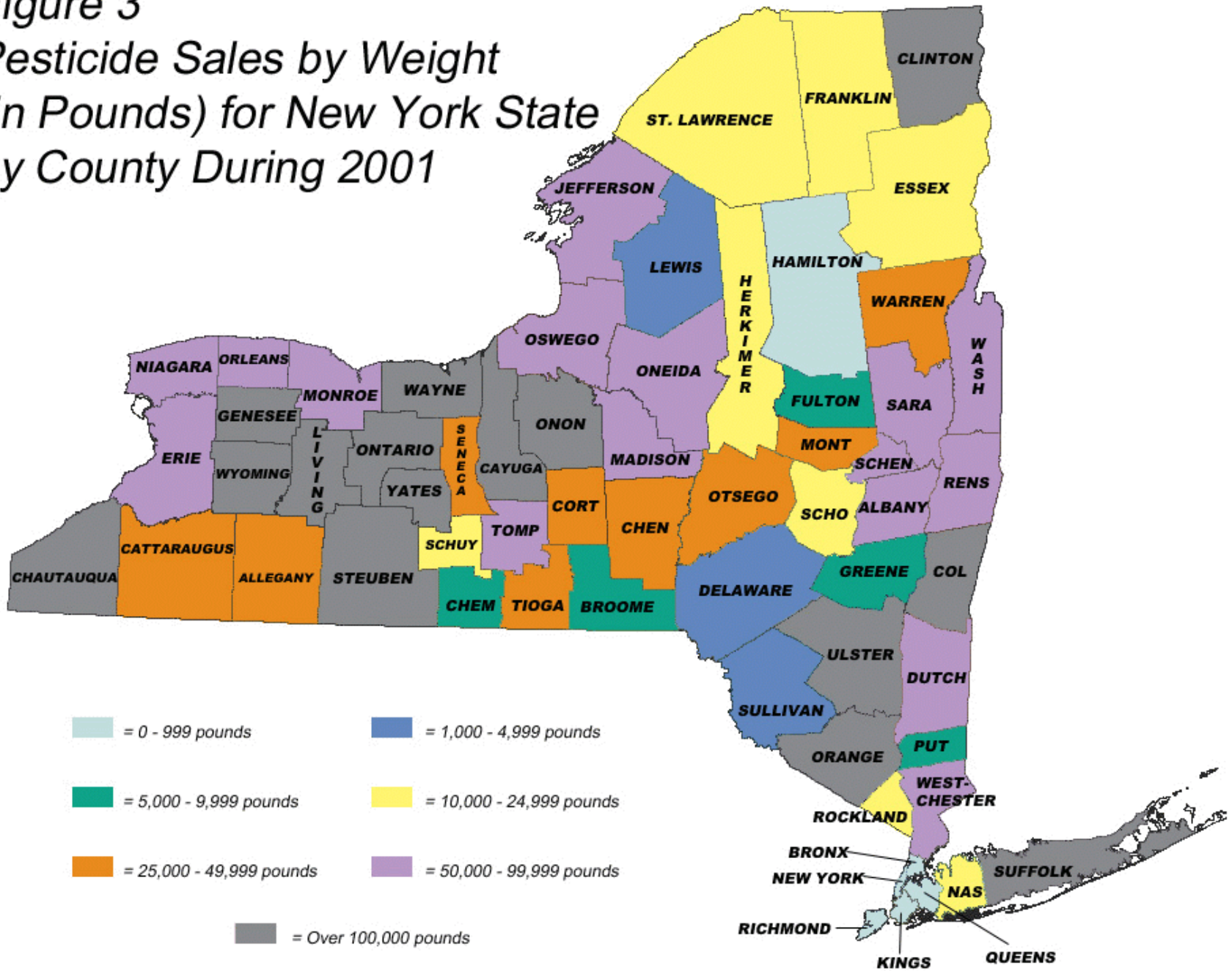

Figure 4
Pesticide Sales by Volume (in Gallons) for New York State by County During 2001

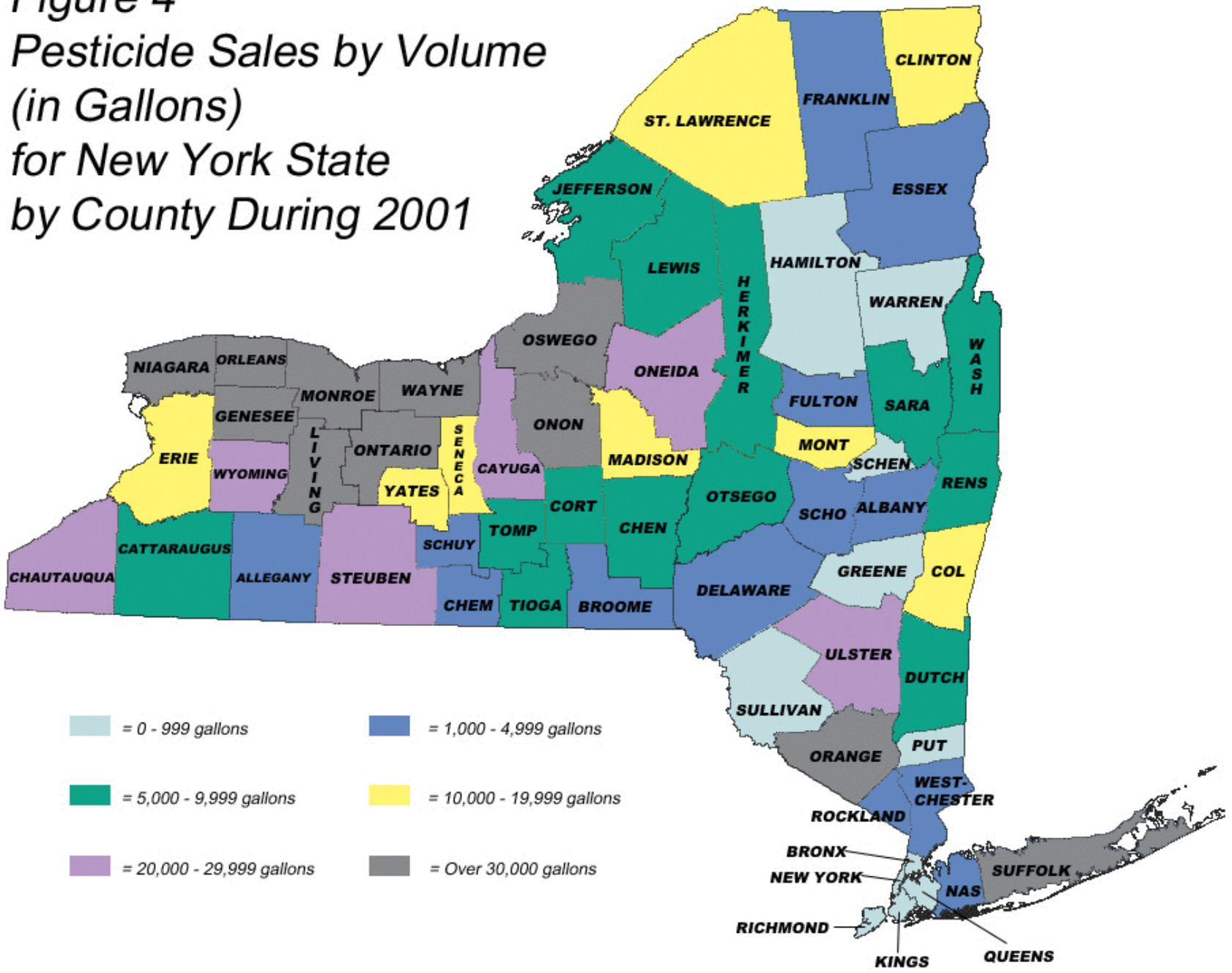

Figure 5

Relative Use (in Pounds) of the Reported Top Ten Pesticide Products Applied by Certified Commercial Applicators - 2001*

EPA Registration Number	Product Name	Weight Quantity (pounds)	Percentage of All Products
10404-82 **	Lesco Pre-M Plus Fertilizer	2,248,149.89	13.28%
3125-474-9198 **	Fertilizer with Merit	692,693.48	4.09%
3125-474-10404 **	Merit 0.2 Plus Fertilizer	676,232.18	3.99%
538-213 **	Turf Fertilizer & Pre-emergent Weed Control	608,375.73	3.59%
2217-795-9198 **	Fertilizer Weed & Feed with Trimec	415,370.59	2.45%
62190-9	Dricon Fire Retardant	352,000.00	2.08%
538-214-10404**	Fertilizer plus Pre-emergent	341,564.60	2.02%
10404-85 **	Dimension 0.10% plus Fertilizer	304,286.53	1.80%
228-281-10404	Weed & Feed	236,576.32	1.40%
3125-451	Merit 0.5 G Insecticide	236,525.32	1.40%
Top 10 Products - Total Quantity (Pounds) Used:		6,111,774.64	Pounds
All Products - Total Quantity (Pounds) Used:		16,933,246.20	Pounds
Top 10 Products as a Percentage of Total Quantity (Pounds) Used:			36.09%

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* Excluding Illegible, Invalid, Irregular, and Unreported Categories (See Page 21 for Definitions)

** These products consist of small amounts of pesticides combined with large amounts of fertilizer. The weight reported here is the weight of all ingredients not just pesticides.

Figure 6

Relative Use (in Gallons) of the Reported Top Ten Pesticide Products Applied by Certified Commercial Applicators - 2001*

EPA Registration Number	Product Name	Weight Quantity (gallons)	Percentage of All Products
1744-20001	Sunnysol 150 Disinfectant	138,283.56	6.09%
9359-2	Surchlor Plus	132,925.74	5.85%
10404-82	Lesco Pre-m + Fertilizer	131,684.51	5.80%
52483-1	Hypochlorite Solution Disinfectant	101,799.00	4.48%
9359-8	Surchlor (10.5%) Disinfectant	90,091.00	3.97%
9613-20001	Chlorinating Solution	72,623.55	3.20%
19713-123	Damoil Dormant and Summer Spray Oil Insecticide/Miticide	69,493.36	3.06%
241-337	Prowl 3.3 EC Herbicide	66,952.22	2.95%
10465-28	CCA Type C Wood Preservative	56,697.56	2.50%
279-3062	Dragnet FT Termiticide/Insecticide	47,997.15	2.11%
Top 10 Products - Total Quantity (Gallons) Used:		908,547.65	Gallons
All Products - Total Quantity (Gallons) Used:		2,270,743.76	Gallons
Top 10 Products as a Percentage of Total Quantity (Gallons) Used:			40.01%

* Excluding Illegible, Invalid, Irregular, and Unreported Categories (See Page 21 for Definitions)

Figure 7

Relative Amount (in Pounds) of Reported Top Ten Restricted and General Use Agricultural Pesticide Products Sold by Commercial Permit Holders to Certified Private Applicators - 2001*

EPA Registration Number	Product Name	Weight Quantity (pounds)	Percentage of All Products
62719-34	Lorsban Insecticide	580,418.13	10.72%
10182-373	Force 3G Insecticide	532,421.25	9.83%
707-180	Dithane DF Agricultural Fungicide	320,935.50	5.93%
4581-370	Penncozeb 75 DF Fungicide	219,625.00	4.06%
51036-166	Captan 50 Wettable Powder	215,877.00	3.99%
7969-105-34704	Clean Crop Polyram 80DF	164,991.00	3.05%
49832-3-34704	Microfine Sulfur Fungicide	154,980.00	2.86%
524-403	Partner Custom Blend WDG Herbicide	151,741.00	2.80%
1812-414	Manzate 75DF Fungicide/Pentathlon DF	111,579.50	2.06%
2393-521	Zinc Phosphide Pellets	103,950.00	1.92%
Top 10 Products - Total Quantity (Pounds) Sold:		2,556,518.38	Pounds
All Products - Total Quantity (Pounds) Sold:		5,414,187.87	Pounds
Top 10 Products as a Percentage of Total Quantity (Pounds) Sold:			47.22%

* Excluding Illegible, Invalid, Irregular, and Unreported Categories (See Page 21 for Definitions)

Figure 8

Relative Amount (in Gallons) of Reported Top Ten Restricted and General Use Agricultural Pesticide Products Sold by Commercial Permit Holders to Certified Private Applicators - 2001*

EPA Registration Number	Product Name	Weight Quantity (gallons)	Percentage of All Products
241-337	Prowl 3.3 EC Herbicide	107,136.17	10.66%
100-827	Bicep Lite II Magnum Herbicide	52,461.08	5.22%
524-512	Roundup Ultramax	45,500.69	4.53%
19713-123	Damoil Dormant and Summer Spray Oil Insecticide/Miticide	37,234.93	3.70%
100-497	Aatrex 4L and Atrazine 4L Herbicides	32,793.83	3.26%
862-11-34704	Clean Crop Spray Oil 6E Insecticide/Miticide	32,055.00	3.19%
100-766	Bicep Lite II Herbicide	30,886.60	3.07%
524-475	Roundup Ultra/Roundup Pro	23,646.71	2.35%
51036-166	Captan 50 Wettable Powder	19,963.48	1.99%
1812-416	Manex II	19,809.50	1.97%
Top 10 Products - Total Quantity (Gallons) Sold:		401,487.99	Gallons
All Products - Total Quantity (Gallons) Sold:		1,005,461.32	Gallons
Top 10 Products as a Percentage of Total Quantity (Gallons) Sold:			39.93%

* Excluding Illegible, Invalid, Irregular, and Unreported Categories (See Page 21 for Definitions)