



Environmental Enforcement in Connecticut, Part 1: Pesticides

Is the Department of Energy and Environmental Protection Equipped to Protect Residents and the Environment?

A Special Report of the Council on Environmental Quality

December 6, 2017

When someone uses pesticides contrary to the law, it is not likely that the Department of Energy and Environmental Protection (DEEP) will detect the violation or assess a penalty.

The correct application of pesticides, most of which are toxic by nature, depends on careful attention to detail. When pesticides are applied correctly, environmental and health impacts can be avoided or at least kept to a minimum. DEEP is charged with protecting residents and the environment from pesticides’ most harmful effects. DEEP employs many tactics, from registration of each pesticide product that may be sold in Connecticut to education and certification of professional applicators. Not everyone follows instructions or the law, and DEEP conducts inspections in order to monitor and enforce compliance.

The task of protecting Connecticut’s people, air and water from misuse of poisonous pesticides is broad in scope and challenging in scale. The six staff positions allocated to DEEP’s Pesticides Management Program are insufficient to fulfill this responsibility.

The Council recommends adoption of an industry-funded approach to pesticide regulation that will bring Connecticut back to adequate enforcement levels. No new fees are required. Other recommendations of this report address efficiency and transparency.

Pesticides are everywhere in Connecticut. Tons are applied every year, indoors and out, and chemical pesticides have been found to be present in most streams and rivers in Connecticut, occasionally at levels considered by federal criteria to be harmful to aquatic life.

Monitoring Compliance: the Scale of the Job

All companies that apply pesticides for payment, and some agricultural enterprises, must comply with examination, certification and recordkeeping requirements. DEEP must ensure compliance related to:

- More than 12,000 pesticide products registered for use in Connecticut.
- About 10,000 people who are certified to apply pesticides commercially (that is, apply pesticides for payment).
- About 500 private applicators (people, mostly farmers, who use restricted-use pesticides on their own or their employer’s properties).
- More than 100 registered dealers of restricted-use pesticides.

A pesticide is...

...almost any substance intended to destroy or repel “pests.” People tend to think immediately (and correctly) of insecticides, which kill insects and ticks, but the term “pesticide” covers much more, including

- Herbicides (kill plants)
- Rodenticides (rodents)
- Avicides (birds)
- Piscicides (fish)
- Fungicides (mold)
- Antimicrobial cleaners
- Deer and rabbit repellents
- And more

The paperwork is weighty. Thousands of the certified applicators renew their credentials each year. Before a supervisory certificate is renewed, DEEP reviews and checks the supervisor’s list of certified applicators operating under his or her supervision. About one-fifth of the pesticide product registrations also are renewed each year.

Each pesticide product is registered for either general or restricted use. General-use products can be bought by anyone at any store. To purchase restricted-use products, a person must be certified as a commercial supervisor or a private applicator; to sell them, a business must be registered. There also are pesticide uses that require a permit from DEEP for each use; these include application of herbicides to lakes and aerial spraying.

Certified commercial applicators must keep records and submit reports annually that summarize the name and amount of each pesticide used. Private applicators report all applications of restricted-use products at the end of each year. Merchants of restricted-use pesticides submit annual records of sales. These reports are filed at DEEP, where they are available to the public. The information pertaining to quantities sold and used generally are not analyzed. (The Council had intended to explore the reports to develop indicators of trends in pesticide use in Connecticut, but was thwarted by the large volume of paper reports.)

In addition to the thousands of certified applicators and hundreds of registered distributors, there are uncounted thousands of sellers of general use pesticides and hundreds of thousands (if not millions) of individuals using general-use pesticides who are subject to the detailed requirements of pesticide laws. Those requirements extend from use of the products to the proper disposal of the container or unused contents. (See sidebar, “Most People Who Apply Pesticides Have No Training.”) DEEP is responsible for protecting the public and environment from their illegal actions as well.

Most People Who Apply Pesticides Have No Training

Who applies pesticides with no training? You, probably. You are applying pesticides – and subject to detailed federal and state legal requirements – when you spread weed killer on your lawn, deploy mothballs, kill the mildew in your shower or spray yourself with tick repellent. Pesticide products carry instructions and warnings that are legal mandates. Unless you happen to be a farmer or a professional pesticide applicator, you probably have no training to use pesticides. Pesticide products marketed to consumers might not be the most serious challenge confronting DEEP (though some products certainly have environmental consequences), but the fact that millions of Connecticut residents are buying and using regulated products routinely illuminates the very broad scope of DEEP’s responsibilities.

Monitoring Compliance: Who Breaks the Law, and What Happens to Them?

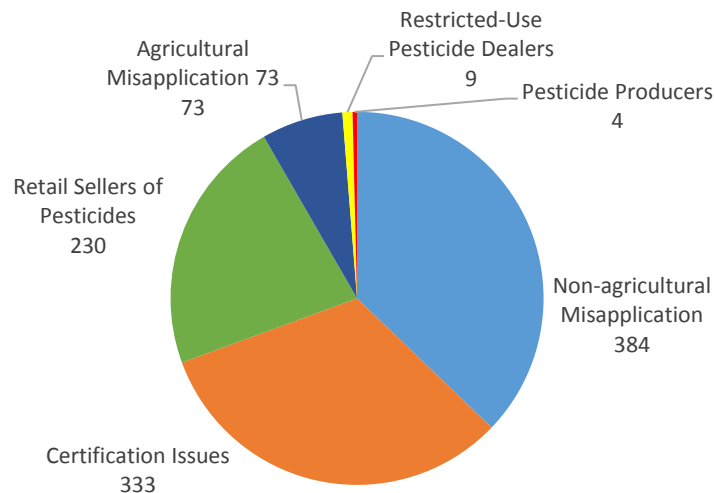
Violations are commonplace. Penalties are rare.

Pesticides are applied millions of times a week in Connecticut. Only certified applicators and sellers of pesticides are likely to be inspected for compliance (though occasionally a homeowner, such as the one who spread mothballs to repel wildlife, is cited).

Figure 1 shows that most violations are found in nonagricultural settings, including residential neighborhoods, pesticide business premises, and stores where pesticides are sold. Common violations in stores include offering unregistered pesticides for sale and improper labeling and storage, sometimes involving damaged packaging. (See Footnote 1 for more detail.)

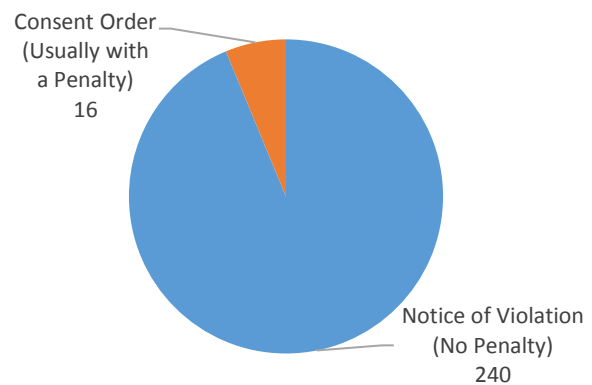
As in other DEEP enforcement programs, the most commonly-used enforcement tool is, by far, the **Notice of Violation (NOV)**. An NOV is described legally as an informal enforcement tool. NOV's do not carry penalties. When someone receives an NOV from DEEP, he or she has 30 days to respond and explain how the violation will be corrected or that the NOV was issued in error.

Figure 1: Total Pesticide Enforcement Actions by Category, 2004 - 2016¹



A small percentage of violations are deemed serious enough to receive an order. The percentage of alleged violators who pay a penalty is, in the pesticide program, about six (Figure 2). There are other possible outcomes, including agreements to undergo retraining, and payment for a Supplemental Environmental Project (SEP) whereby funds are used (usually) for a project that is considered to be environmentally beneficial.

Figure 2: Total Number of Pesticide Enforcement Actions by Type of Enforcement, 2013-2017



(In this report, all years are federal fiscal years, which begin on October 1 and end on September 30 of the nominal year.)

Most orders are negotiated Consent Orders, to which DEEP and the violator agree. (Unilateral orders, issued by DEEP with no agreement by the violator, are rare: the annual average number is less than one. Usually they do not include penalties directly, but may lead to consent orders with penalties later.)

In extreme cases, certification can be revoked, but such action is rare. In 2012, after multiple pesticides were found to be used in a “faulty, careless and negligent manner” at a residence, the applicator agreed, through a consent order, to surrender his certification as a supervisor; he maintained his other certification.

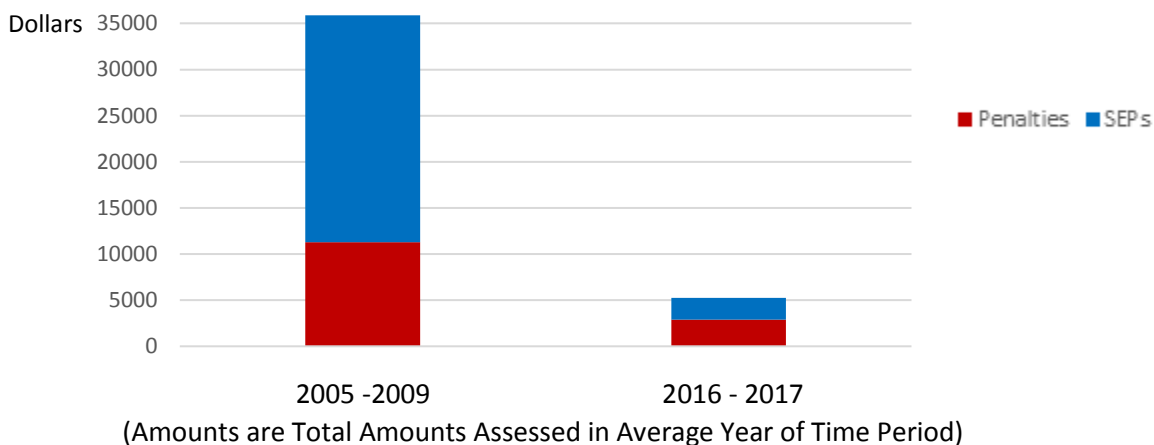
Figure 3 shows that the number of violators paying penalties, which over a period of 15 years never exceeded 15 in any one year, currently is one or two per year.

Figure 3: Enforcement Actions and Staffing Levels, DEEP Pesticide Management Program



While the amounts of financial penalties and SEPS have not been large in any recent year, the amounts collected in 2016 barely register (Figure 4). (Looking back to a few years before the time period covered by the chart, penalties occasionally were much larger, including a million dollars from one company.) If a person violates pesticides laws in Connecticut and is discovered – an unlikely outcome – then the probable consequence will be an NOV, which carries no financial penalty. Financial penalties and revocation of certification are possible but not likely.

Figure 4: Penalties and SEPs Assessed Annually in 2016 and 2017 Compared to Previous Years



Monitoring Compliance: What Percentage of Violations are Detected?

Each year, DEEP signs a cooperative agreement with the United States Environmental Protection Agency (USEPA) that projects pesticide enforcement activity. In 2016, DEEP devoted fewer than half of the projected hours to enforcement, took fewer samples, and conducted about half of the projected inspections.

Inspections have declined by about 60 percent in just three years. As inspections have become less frequent, the number of detected violations has declined at an even greater rate (Figure 5).

There are three possible explanations for the sharp decline in violations: 1) there has been a surge in compliance, 2) there has been an overall decline in pesticide applications, or 3) more violations are going undetected as inspections diminish.

There is no evidence that compliance is improving, nor have there been substantial reductions in pesticide use.

Figure 6 shows that, across many years, 20 to 40 percent of inspections of certain activities found violations. The fairly constant ratio of violations to inspections leads to the conclusion that, as inspections decline in number, a substantial and growing number of violations are not detected. (Without more random inspections, there is no way to estimate the total number of undetected violations.) The USEPA has determined that “Inspections are the core of the [pesticide] compliance monitoring program.”² Absent inspections, the number of undetected violations must be inferred to be substantial.

There are other data that suggest many violations go undetected. The number of illnesses caused by pesticides in Connecticut, as reported by the national Centers for Disease Control and Prevention,³ far exceeds the number of violations detected by DEEP. If even 20 percent of the reported pesticide-related illnesses were caused by improper storage or use, then the number of NOVs issued by DEEP does not even equal the number of illegal events that caused illness. Many additional exposures would not necessarily be expected to produce evidence of illness, and would not be reported, yet could involve violations.

Figure 5: Inspections and Enforcement Actions, DEEP Pesticide Management Program

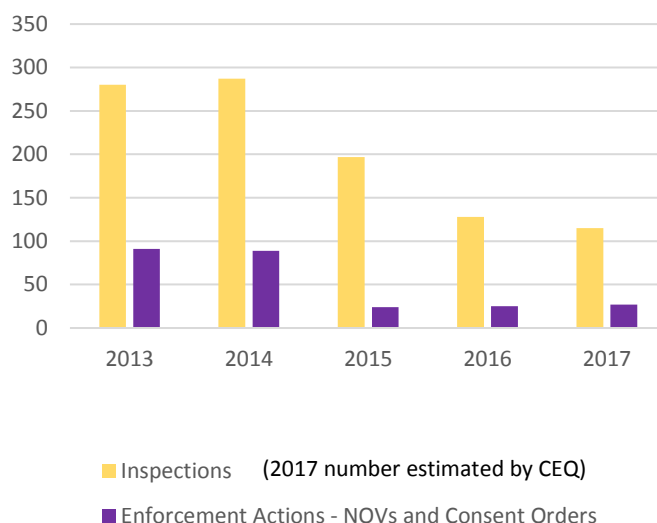
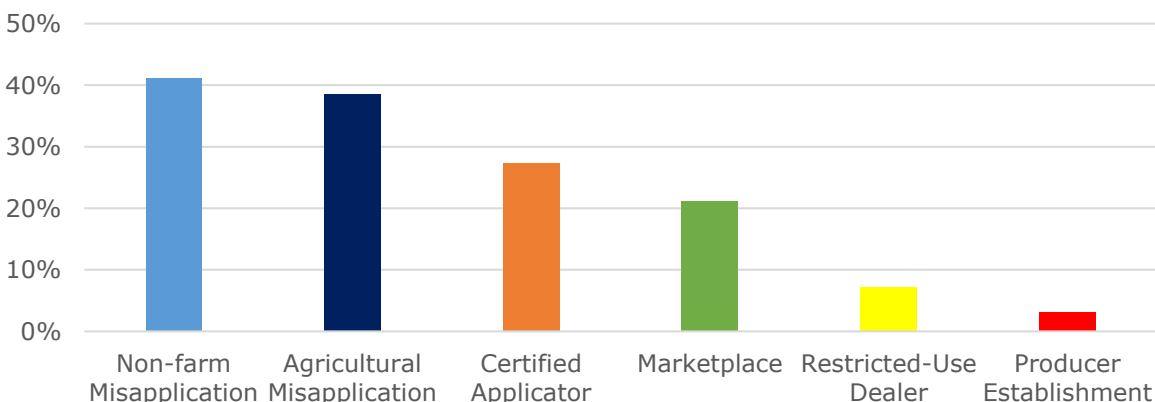


Figure 6: Percent of Inspections, by Category, Resulting in Enforcement Actions, 2004-2016¹



Monitoring Compliance: Mountains of Paper

The many thousand certified commercial and private applicators noted on page one must submit annual reports to DEEP. Private applicators report each application of restricted-use pesticides, while commercial applicators submit summary reports of pesticide use. In addition, distributors of restricted-use and permit-use pesticides submit annual lists of sales.

Submittal of these annual reports is a condition for renewing one's certification, and so DEEP records incoming reports. After that, the reports go into file cabinets, where most lie unused. They cannot even be used realistically for research – say for analysis of statewide trends in pesticide sales or use – without a substantial research budget to pay people to sift usable data from many cabinets of paper reports.

It does not have to be this way. In some other states (Minnesota being a good example), anyone can find out how much of a particular pesticide was sold in a given year. The information is available online.

Enactment in 2016 of An Act Concerning Pollinator Health ([P.A. 16-17](#)) led to the reclassification of a common class of insecticide, neonicotinoids, from general-use to restricted-use. If the products containing neonicotinoids remain popular, the paperwork is likely to increase.

Monitoring Compliance: Why It Matters

“It is foreseeable that overall pesticide uses in the society will only be increasing.”⁴

From 2015 [report](#) on pesticides and pollinators funded by DEEP

Most Connecticut residents probably would not be surprised to learn that there are pesticides or pesticide residues⁵ in the soils of many lawns and agricultural croplands, but they might be surprised to learn that pesticides also are found in most Connecticut streams, rivers and lakes⁶ as well as in groundwater,⁷ trees,⁸ buildings⁴ and flower pollen.⁹

It is DEEP's responsibility to keep undesired health and environmental effects to a minimum. Every pesticide product registered in Connecticut has a label, approved by the USEPA, which prescribes the specific amounts, frequency, technique, weather conditions, protective gear and other requirements for applying the pesticide. If the person applying the pesticide adheres to all label instructions, the impact to humans and the environment is presumed to be minimal.

The federally-approved label is just one line of regulatory protection. As noted above, DEEP requires commercial applicators to be certified, along with private applicators who use restricted-use pesticides. Certification requires passing an exam, which depends on knowledge and ability to comprehend labels. Knowledge requirements for supervisors are considerably greater.

If all people applying pesticides were certified and followed all labels strictly, many potential problems could be avoided. Unfortunately, many are not. Violations occur at a substantial rate in several sectors (Figure 6). Employees of state and local agencies, golf courses, and other large facilities may apply general-use pesticides with no training or certification. And as noted above, the same is true for the vast majority of pesticide applicators: the individuals using them on their lawns, gardens, and homes.

The extent to which everyone follows the labels is unknowable. DEEP conducts a small number of inspections of commercial and private (restricted-use) applicators; some amount of noncompliance is known to occur, but that amount cannot be quantified.

This much is known: pesticides are applied frequently and they end up in waterways, bee hives and other places where they are not wanted, sometimes at harmful levels. But it is not known if this contamination is inevitable or if it is caused, at least in part, by people applying pesticides improperly, such as applying them (with relevant label instructions in quotes):

- in places where they are prohibited (“Do not apply...to areas where surface water is present”¹⁰).
- in concentrations or amounts that are too high.
- at prohibited times (“Do not apply this product until flowering is complete...”¹¹).
- under prohibited conditions (“Do not apply at wind speeds greater than 10 mph”¹²).
- in violation of other requirements that are even more demanding (“If applying at wind speeds less than 3 mph, the applicator must determine if: a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height.”¹³).

It would be helpful to know the extent to which pesticides in the air, water, soils and vegetation of Connecticut are there because of incorrect (and therefore illegal) pesticide use, but under current program limitations we do not know.

Bifenthrin...

...is a restricted-use pesticide when formulated in high concentrations. It is one of the most [commonly used](#) insecticides. Products with high concentrations have been classified as restricted-use because of bifenthrin’s solubility in water and its toxicity.

A Council review of pesticide sales in CT last year revealed that sales of just one brand of restricted-use products containing bifenthrin totaled about 1,500 pounds. Many other products, having lower concentrations of bifenthrin, are sold over-the-counter with no restrictions.

A 21st-Century Loophole

Federal law requires any purchaser of a restricted-use pesticide to be a certified applicator in the state where the pesticide will be used. It also is a federal requirement that the business selling the restricted-use pesticide be registered in the state where it sells them.

While Connecticut confines sales of restricted-use pesticides to certified supervisors and certified private applicators, it is possible to purchase such pesticides over the internet without certification. Some sites that sell online go by names that suggest “do-it-yourself” pesticide application.

In July, informed by a concerned citizen that such purchases were possible, Council staff conducted a cursory survey of online sellers of products containing bifenthrin, the active ingredient in some restricted-use pesticides (see box at left). Staff found that it was available from many sellers and in many concentrations, including products listed as restricted-use in Connecticut. Some sellers posted notices that a particular product was not available for sale to Connecticut. One site posted the qualification that sale of a product was not allowed to New York and Arkansas; the product is also restricted in Connecticut, but that was not stated.

One site cautioned that a product “is non-selective and will kill the good guys such as bees and butterflies so avoid spraying any flowering parts because that is where the bees go. We need to save the bees!!!”

Staff was able to complete purchase of a restricted-use pesticide from a large internet retailer. The “ship to” address clearly was in Connecticut. No proof of certification was requested. (Staff canceled the purchase prior to delivery.)

Without knowing whether the pesticides present in every part of Connecticut's environment are from legal or illegal use, there are two major concerns about their ubiquity.

First, some of the pesticides were found to be present in streams in concentrations greater than the levels determined by the USEPA to be detrimental to aquatic life. (See sidebar, *Why Don't We Know...* for a discussion of results from DEEP's 17 years of sampling.)

Second, many pesticides are known to be harmful to children, bees, and other beings at levels known as "sub-lethal" concentrations. Chronic exposure to low levels of these chemicals has been associated with numerous problems. Some of these problems are assessed in two recent reports commissioned by DEEP. Available on DEEP's [website](#), they contain policy recommendations for minimizing harm (including restrictions on the use of neonicotinoids, which have been enacted).

Pest Control in Ponds and Lakes

The pesticides found in streams and rivers (and discussed in the section to the left) are believed by DEEP to have entered those waters when rainfall carried them from the land. DEEP also issues permits for direct application of chemical pesticides to water to control weeds, algae, insects and fish. In 2017, DEEP reviewed applications for more than 600 such permits. In most years, the number is closer to 500. As most of the applications occur during the warmer months, the activity is concentrated. With one staff person to administer the program, it is obvious that compliance depends on the skill and good intentions of the people applying the chemicals. The law requires the applicant to notify the municipal inland wetlands and watercourses agency. Few municipalities get involved in these activities. The CEQ intends to review, at a later date, the potential for a greater municipal role.

When Penalties Are Due *Cases from the Pesticide Enforcement Files*

As this report explains, few violators are penalized. The collection of a penalty requires considerable staff time and is reserved for egregious violations. Figure 4 shows that very few penalties were assessed in 2016. Below are five examples of violations that were considered serious enough to warrant penalties several years ago, when penalties were more common. All penalties and SEPs in these cases were agreed to by DEP and the alleged violators in consent orders:

A company sprayed a third-floor deck in Vernon with insecticide in 2009, using four times the allowable pressure, without covering surfaces beneath and without closing doors and windows, all of which were contrary to label requirements. Penalty: \$2,900 Value of SEP: \$8,700 (to fund an educational video about bedbugs)

An algaecide/herbicide was applied to a pond in Darien in 2010 without a valid permit and in more of the pond at one time than was allowed by the label. Penalty: \$788 Value of SEP: \$2362

The label of a pesticide requires the user to mop up spills and puddles, but in 2010 that was not done at a residence in Woodstock. Penalty: \$2,000. Value of SEP: \$6,000 (in termite and bedbug treatments for a non-profit organization)

After a home in Norwalk was treated by an exterminator, there was rodenticide and insecticide on the floor and in containers that were accessible to children and pets. Unused pesticide liquid was left in a beverage bottle inside the home. The violator agreed to surrender his supervisory certificate for three years; he maintained his certificate as a pesticide operator with another business.

An unregistered company in Massachusetts sold restricted-use pesticides to uncertified applicators on numerous occasions from 2004 through 2009. Penalty: \$13,750 Value of SEPs (2): \$41,250 (for bedbug research and habitat restoration at a natural area preserve).

Why Don't We Know...

... the types and quantities of pesticides that end up in places where they were not applied and not desired? For the most part, nobody is looking. Some narrow studies have documented specific occurrences of chemicals, such as the common presence of pesticides in pollen collected by bees.⁹ More broadly, from 1998 through 2014, a DEEP staff person, while in the field, took samples from waterbodies around the state to assess the levels of pesticides in them. Testing varied over time as to the pesticides analyzed and where the samples were taken, so the data are not useful for analyzing trends. The majority of samples were found to contain pesticides. In most cases, the concentrations were not at levels judged by federal criteria to be harmful to human health or aquatic life, but this was not universally true: a significant number of samples contained the herbicide atrazine at levels exceeding the USEPA benchmark for some aquatic plant life. Some samples found the herbicide alachlor in similarly excessive levels. It is not possible to determine when the pesticides were applied or whether or not they were applied correctly.

Such data are not collected anymore.

Other environmental data, collected sporadically, reveal the presence of pesticides in Connecticut' waters, fish and humans:

- Atrazine is present in many public drinking water supplies and private wells, generally at levels below standards set to protect human health.¹⁴
- Fish accumulate pesticides, sometimes at levels considered potentially dangerous. The Department of Public Health advises residents to not eat fish from two ponds because of the level of chlordane in the fish.¹⁵ Chlordane was banned 30 years ago, but it is persistent and illustrates the way in which fish accumulate chemicals through the food chain.
- The national Centers for Disease Control and Prevention, through its National Environmental Public Health Tracking Network, keeps records of exposures and illnesses caused by pesticides.³ In 2014 (the most recent year of available data), Connecticut recorded hundreds of such exposures and illnesses. Note that this exceeds considerably the number of violations detected in that year (85, per Figure 3). The rate (i.e., cases per capita) of exposures and illnesses in Connecticut exceeds that of surrounding states.

Reducing the Environmental and Regulatory Burden

Pesticides often are used when and where they are not needed. The two recent DEEP-commissioned studies mentioned in this report conclude that human exposure and pollinator exposure to pesticides are greater than necessary because many pesticides are applied needlessly.^{4,9} Where pests actually are present, methods of control which require less or no pesticide often are available, but evidently many people do not take advantage of them. DEEP advocates integrated pest management (IPM), "a systematic method of managing pests using non-chemical pest management methods and the judicious use of pesticides when pest populations exceed acceptable levels."¹⁶ The University of Connecticut conducts research and offers extensive training in IPM. If more Connecticut residents could receive and use such information, two things would happen: human and environmental risks from pesticide use would be reduced, and the enormous challenge of ensuring compliance with pesticide laws would be more manageable and less costly.

Conclusion

DEEP is charged with protecting residents and the environment from pesticides' harmful effects, but is not equipped to do so fully. In the short term, DEEP clearly requires more resources to ensure compliance. Fees collected from pesticide-related businesses could provide DEEP with adequate financial resources; DEEP currently collects far more revenue from pesticide-related businesses than it spends on monitoring pesticide compliance. It also is true that DEEP's job of monitoring compliance is bigger than it should be because many residents use pesticides when and where they are not needed.

Recommendations

1. Provide DEEP's Pesticide Management Program with adequate resources to enforce pesticide laws and protect public health and the environment, using existing fee revenue.

Using as a model the manner in which banking firms pay the cost of regulating banking, and utilities pay the cost of regulating utilities, pesticide manufacturers, applicators and distributors should be expected to pay the costs of regulating non-agricultural pesticides. And in fact, they already do pay more than enough to cover DEEP's costs. However, the fee revenue flows to the General Fund and is not available to DEEP. Currently, the fee revenue collected by DEEP from pesticide businesses (up to \$3,000,000 annually) would be sufficient to cover the costs of a properly-staffed Pesticide Management program, including payroll, benefits, supervision, fixed costs and travel. The Council recommends establishing a special fund for receiving and expending pesticide revenue.

2. Implement electronic reporting and recordkeeping.

The amount of every restricted-use pesticide sold or used in Connecticut each year is "known" only in theory. DEEP collects annual summary reports from distributors and certified applicators, but the information, often on paper forms, is not digitized or useful. Establishing an electronic platform for collecting and tabulating the sales and use data would fulfill three objectives:

- allow scientific analysis of trends in pesticide use in Connecticut, which now is nearly impossible,
- enable DEEP staff to spend more time on essential field work instead of file work,
- inform the public about the amounts of specific pesticides being used in Connecticut, and
- enable DEEP to analyze the relative volumes and risks of the many pesticide products in order to focus enforcement attention on the greatest risks.

3. Reinstigate annual environmental monitoring to determine levels of pesticides in Connecticut's air, water, land and wildlife.

To begin, perhaps pesticide-related Supplemental Environmental Projects (SEPs), if there are any, could be directed to environmental monitoring. (SEPs are funds paid by violators, in addition to any penalties paid, for projects that (in most cases) are intended to improve the environment.) Over the long term, SEPs are not a reliable source of funds for ongoing programs.

4. Close all loopholes, including the one described on page 7 that that enables internet retailers to sell restricted-use pesticides to uncertified Connecticut residents.

5. DEEP should spend some portion of its budget (when adequate) to help residents control pests without using as much chemical pesticides. There are systems already well-developed, such as integrated pest management (IPM), that could help more residents control pests with less pesticide, if educational efforts were financed adequately.¹⁷

Footnotes

1. Data for the charts in Figure 1 and Figure 6 are from tables prepared annually by DEEP titled “Pesticides Program Compliance Rates” (until 2015 and after, when DEEP-prepared tables titled “Pesticides Enforcement Cooperative Agreement Projections and Accomplishment Summary Reports” were used). Data for all other charts in this report, unless stated otherwise, are from internal DEEP enforcement files.

Here is more information on categories listed in Figure 1 that might not be self-explanatory:

- **Stores** include all retail sellers of pesticides, including hardware stores, grocery stores, department stores, paint stores, beauty supply stores, pool supply stores, garden centers, veterinarian offices, and others.
- **Certification issues** reflect violations by people who apply pesticides without proper certification, plus violations detected during inspections of certified pesticide applicators; inspectors check the business’s required records of pesticide applications as well as their equipment, storage facilities and other legal requirements.
- **Nonagricultural misapplication** is improper use of pesticides in places other than farms, such as lawns, building interiors, trees, ponds, etc. The violation could be application inconsistent with the label or a violation of a safety requirement.

2. United States Environmental Protection Agency website, <https://www.epa.gov/compliance/inspections-under-federal-insecticide-fungicide-and-rodenticide-act> (accessed November 8, 2017)

3. Centers for Disease Control and Prevention, National Environmental Public Health Tracking website, <https://ephtracking.cdc.gov/showPesticidesExposuresLanding.action> (accessed November 8, 2017)

4. Lu, Chensung. 2015. A Meta-analysis of Sub-lethal Pesticide Exposure and Effects on Sensitive Receptors: Children. Study funded by DEEP; available on DEEP website at http://www.ct.gov/deep/lib/deep/pesticides/Dr_Lu_Final_Children_Pesticide_Literature_Review_Report_01192015.pdf

5. A pesticide residue is defined by the USEPA as “a film of pesticide left on the plant, soil, container, equipment, handler, etc. after application of the pesticide.”

6. Connecticut DEEP, Pesticide Cooperative Agreement, End of Year Report, December 2013.

7. United States Geological Survey, The Quality of Our Nation’s Waters (Nutrients and Pesticides), 1999, available at <https://pubs.usgs.gov/circ/circ1225/pdf/> (accessed November 22, 2017)

8. Fruit and ornamental trees have been sprayed routinely for many decades, but a growing environmental problem – the spread of invasive insect species – has resulted in another environmental problem: more pesticide applications to trees. For example, the relatively recent introduction of the Emerald Ash Borer has prompted many landowners to treat their ash trees annually to save them. http://www.ct.gov/caes/lib/caes/documents/publications/fact_sheets/valley_laboratory/eab_fact_sheet_2012_cowles_locked.pdf (accessed November 22, 2017)
9. Lu, Chensung. 2015. A Review of Sub-lethal Systemic Neonicotinoid Insecticides Exposure and Effects on Sensitive Receptors: Pollinators. Study funded by DEEP; available on DEEP website at http://www.ct.gov/deep/lib/deep/pesticides/Dr_Lu_Final_Pollinator_Pesticide_Literature_Review_Report_01222015.pdf (accessed November 8, 2017)
10. From DoubleTake insecticide label (EPA Reg. No. 400-593) available at https://www3.epa.gov/pesticides/chem_search/ppls/000400-00593-20140422.pdf (accessed November 8, 2017)
11. USEPA website, information on labels for neonicotinoids, available at <https://www.epa.gov/pollinator-protection/new-labeling-neonicotinoid-pesticides> (accessed November 8, 2017)
12. From Strike 3 herbicide label (EPA Reg. No. 14774-2) available at https://www3.epa.gov/pesticides/chem_search/ppls/014774-00002-20140911.pdf (accessed November 28, 2017)
13. From Trimec herbicide label (EPA Reg. No. 2217-543) available at https://www3.epa.gov/pesticides/chem_search/ppls/002217-00543-20140402.pdf (accessed November 8, 2017)
14. Connecticut Environmental Public Health Tracking Portal, <https://stateofhealth.ct.gov/WaterQuality>,
15. Connecticut Department of Public Health, If I Catch It, Can I Eat It?: 2017 Connecticut Fish Consumption Advisory, available at http://www.ct.gov/dph/lib/dph/environmental_health/eoha/fish_/2017_if_i_catch_it_english.pdf (accessed November 8, 2017)
16. Connecticut DEEP website, available at http://www.ct.gov/deep/cwp/view.asp?a=2710&q=417604&deepNav_GID=1712%20 (accessed November 22, 2017)
17. In this context, “much” does not mean only quantity, but some measure of quantity adjusted for pesticides’ relative toxicity; a greater amount of one pesticide might be preferable to a smaller amount of a more toxic one.

About the Council on Environmental Quality

The duties of the Council on Environmental Quality (CEQ) are described in Sections [22a-11 through 22a-13](#) of the Connecticut General Statutes.

The Council is a nine-member board that works independently of the Department of Energy and Environmental Protection (except for administrative functions). The Chairman and four other members are appointed by the Governor, two members by the President Pro Tempore of the Senate and two by the Speaker of the House. The Council's primary responsibilities include:

- Submittal to the Governor of an annual report on the status of Connecticut's environment, including progress toward goals of the statewide environmental plan, with recommendations for remedying deficiencies of state programs.
- Review of state agencies' construction projects.
- Investigation of citizens' complaints and allegations of violations of environmental laws.

In addition, under the Connecticut Environmental Policy Act (CEPA) and its attendant regulations, the Council on Environmental Quality reviews Environmental Impact Evaluations that state agencies develop for major projects. The Council publishes the *Environmental Monitor*, the official publication for scoping notices and environmental impact evaluations for state projects under CEPA. The *Environmental Monitor* also is the official publication for notice of intent by state agencies to sell or transfer state lands.

Council Members

Susan D. Merrow, Chair
Janet P. Brooks
Alicea Charamut

Lee E. Dunbar
Karyl Lee Hall
Alison Hilding

Kip Kolesinskas
Matthew Reiser
Charles Vidich

Additional information about the Council members is available on the CEQ's [website](#).

Contact the CEQ

Website: www.ct.gov/ceq (for this and all Council publications)

Mail: 79 Elm Street Hartford, CT 06106

Phone: 860-424-4000 (messages can be left 24 hours a day)

E-mail the Council's Executive Director: karl.wagener@ct.gov

