



New York State Office of the State Comptroller
Thomas P. DiNapoli

Division of State Government Accountability

Drug Management and Disposal

Department of Environmental Conservation



Report 2016-S-82

April 2018

Executive Summary

Purpose

To determine whether the Department of Environmental Conservation (Department) developed and implemented a public information program on the proper storage and disposal of medications (drugs), and publicly disseminated a notice to pharmacies, retailers, and consumers on the proper storage and disposal of drugs. We also sought to determine whether registered pharmacies and retailers of drugs properly display this notice. Additionally, we sought to gather and assess information on the extent of availability and usage of drug collection and disposal options across the State in order to examine ways to improve the efficacy of the Department's voluntary initiatives. This audit covers the period January 1, 2015 through May 19, 2017.

Background

Unused pharmaceuticals present a range of harmful environmental and societal consequences. In the past, pharmaceuticals were typically disposed of by throwing them in the trash or flushing them down drains, where they ultimately flow into wastewater treatment plants, which are not equipped to remove them. The resultant pharmaceuticals in the environment and water resources have had biological consequences (e.g., mutations of fish). On the other hand, unused drugs that are not disposed of have been linked to drug abuse and addiction. Both conditions factor into the need for safe drug disposal practices. Drug disposal options for the public include permanent collection boxes, where unwanted drugs can be dropped off in a secure box; take-back events, which are generally held at locations across the State twice a year; and mail-back programs, which provide envelopes to consumers to securely mail unwanted drugs to a drug disposal site for destruction.

Key Findings

- We found that the Department developed and implemented a public information program on the proper storage and disposal of drugs, and created a notice regarding the proper storage and disposal of drugs for display in pharmacies and other drug retailers. Our visits to 106 pharmacies found that 82 (77 percent) displayed the notice, albeit generally inconspicuously. However, there is no way to know how effective its public information program has been because the Department has not measured public awareness, nor is it mandated to do so.
- The Department has engaged in other initiatives, beyond those mandated, to promote proper drug collection and disposal. For instance, the Department frequently partners with other government agencies and advocacy groups to advance research on pharmaceuticals in the environment and to develop drug collection programs.
- U.S. Drug Enforcement Administration-sponsored take-back events have collected large sums of drugs in New York since 2010, peaking at over 96,000 pounds in 2013.
- As of March 2017, there were at least 346 collection box locations in the State, of which over 65 percent were operated by law enforcement agencies. The availability of the boxes varies widely, with some areas of the State having a relatively significant number and other areas having very few or none, as shown in [Map 2](#) on page 12 of the report. The quantity of drugs collected in the boxes statewide is not known. Likewise, information on mail-back program availability and usage is limited. For example, there is no information on participation in the mail-back program

or amounts of drugs collected.

- Additionally, the Department has initiated its Pilot Pharmaceutical Take-Back Program, which it expects 400 pharmacies to participate in. Department officials state that the boxes cost \$1,250 each, including delivery.
- There are significant disincentives that likely discourage some entities from voluntarily operating a drug collection box and some citizens from properly disposing of drugs. Common reasons why entities do not operate collection boxes include the cost of the box (approximately \$800), drug disposal charges, and personnel and the need to provide space and security for it. The main disincentive to mail-back envelopes is the cost to customers to buy them.

Key Recommendations

- Assess additional strategies to continue raising public awareness of proper drug disposal, such as the use of various media, and implement those deemed to be optimal.
- To improve the efficacy of its voluntary initiatives for the proper collection and disposal of drugs in the State, the Department should work with stakeholders to identify and attempt to reduce barriers or disincentives to collectors and consumers.

**State of New York
Office of the State Comptroller**

Division of State Government Accountability

April 27, 2018

Mr. Basil B. Seggos
Commissioner
Department of Environmental Conservation
625 Broadway
Albany, NY 12233

Dear Commissioner Seggos:

The Office of the State Comptroller is committed to helping State agencies, public authorities, and local government agencies manage government resources efficiently and effectively and, by doing so, providing accountability for tax dollars spent to support government operations. The Comptroller oversees the fiscal affairs of State agencies, public authorities, and local government agencies, as well as their compliance with relevant statutes and their observance of good business practices. This fiscal oversight is accomplished, in part, through our audits, which identify opportunities for improving operations. Audits can also identify strategies for reducing costs and strengthening controls that are intended to safeguard assets.

Following is a report of our audit entitled *Drug Management and Disposal*. This audit was performed pursuant to the State Comptroller's authority under Article V, Section 1 of the State Constitution and Article II, Section 8 of the State Finance Law.

This audit's results and recommendations are resources for you to use in effectively managing your operations and in meeting the expectations of taxpayers. If you have any questions about this report, please feel free to contact us.

Respectfully submitted,

*Office of the State Comptroller
Division of State Government Accountability*

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Background

Unused, unwanted, and expired pharmaceuticals present a range of potentially harmful environmental and societal consequences. In the past, unused or unwanted pharmaceuticals have been disposed of by throwing them in the trash or flushing them down the drain, where they end up in water systems and, in some cases, wastewater treatment plants, which are not equipped to remove them. As a result, national studies began finding pharmaceuticals in the environment and water resources. Pharmaceuticals, including controlled and non-controlled substances such as pain medications, antibiotics, contraceptives, and antidepressants, have been found in New York State's rivers, lakes, and streams and drinking water, and have been linked to mutations in fish, amphibians, and other aquatic species living in the contaminated water. The ultimate effect of these disposal methods on humans is unknown. Nonetheless, concerns about environmentally unsound methods of disposal have risen.

The rising rate of prescription drug abuse and addiction also has factored into the need for safe drug disposal practices. Unused controlled substances are particularly at risk for diversion for illicit use, misuse, and abuse, and can lead to addiction and overdose. Unused and expired non-controlled substances as well as over-the-counter medicines are also at risk of misuse, accidental ingestion, and poisoning.

Since 2008, the Department of Environmental Conservation (Department) has recommended that, in most instances, drugs not be flushed, and has supported pharmaceutical collection as a best management practice alternative. In New York State, some law enforcement agencies have been supporting pharmaceutical collection as a way to help get unwanted drugs off the street and ensure they are safely and securely disposed of.

The disposal of unused and unwanted controlled substances in New York is regulated at the federal level primarily by the U.S. Drug Enforcement Administration (DEA). Institutional dispensers (e.g., hospitals, pharmacies, veterinary care facilities) must therefore comply with DEA regulations when disposing of unused, expired, or otherwise unwanted drugs. In contrast, once drugs are dispensed to consumers throughout the State, it is much more difficult to regulate and enforce their proper disposal.

Partially due to DEA restrictions, until 2014 there were limited options available for consumers to safely and securely dispose of unused or unwanted drugs, particularly controlled substances. Before 2014, generally the only environmentally safe option available to consumers with unwanted controlled or non-controlled substances was to bring them to a law enforcement agency with a collection box or a DEA-sponsored bi-annual National Drug Take-Back Day event. However, in support of the Secure and Responsible Drug Disposal Act of 2010, the DEA issued a revised rule that expanded disposal options, effective October 2014, for both institutions and consumers with unused or unwanted drugs.

The changes broadened the range of authorized collectors to include certain DEA-registered entities such as drug manufacturers, retail pharmacies, and hospitals/clinics with on-site

pharmacies. The regulations also allowed authorized hospitals/clinics and retail pharmacies to voluntarily maintain collection receptacles at certain residential care facilities without an on-site pharmacy (Class 3A), such as nursing homes, which are not authorized dispensers of controlled substances. Otherwise, such facilities have limited options for drug disposal because they are not authorized to return the drugs to the pharmacy of origin or dispose of them as solid waste, but are required to render them unrecoverable and beyond reclamation, according to Title 10, Part 80 of the New York Codes, Rules and Regulations.

To encourage voluntary participation by consumers, the changes also expanded the methods of collection available to include drop-off and mail-back programs. With the drop-off model, consumers can now turn in unwanted drugs to other authorized collectors such as pharmacies and hospitals via on-site collection boxes, in addition to law enforcement agencies. The mail-back program allows consumers to mail their unused drugs in envelopes obtained from pharmacies directly to an authorized facility for destruction.

Whether offering drop-off or mail-back collection options, authorized collectors must comply with certain DEA requirements covering collection box design, placement, and security to ensure proper handling of the pharmaceuticals and to prevent diversion. Requirements vary depending on the collection site and type of drug collected (controlled or non-controlled substances).

To foster public awareness of the State's policy on proper drug disposal, the State Drug Management and Disposal Act of 2008 (Act) formally required the Department, in consultation with the Department of Health (DOH), to develop and maintain a public information program on the proper disposal of drugs. In addition, the Department, in consultation with the State Education Department, must establish a notice containing information on the proper storage and disposal of drugs. The notice is to be displayed in every pharmacy and in every retail business authorized to sell drugs. The Act, however, did not assign the Department any monitoring or enforcement responsibility to ensure compliance with this latter requirement.

We gathered information on the extent of drug collection programs available to the State's citizens as well as ways to improve their effectiveness. However, our objective excluded drug collection and disposal programs available to institutions.

Audit Findings and Recommendations

The Department fulfilled its two-part obligation under the Act: to disseminate information and increase public awareness of the State's current drug disposal policy. We found that the Department developed and implemented a public information program on the proper storage and disposal of drugs, and created a notice containing information on the proper storage and disposal of drugs for display in pharmacies and other drug retailers. We also noted that the Department engaged in other initiatives, beyond those mandated, to promote proper drug collection and disposal. For instance, the Department frequently partners with other government agencies and advocacy groups to advance research on pharmaceuticals in the environment and to develop drug collection programs. The Department has also launched several grassroots efforts to increase collection options and opportunities.

Although the Department implemented a public information program, it is unclear how effective its efforts have been because it has not measured public awareness – nor is it required to do so. Nevertheless, we found indications of public awareness. For example, DEA take-back events have collected large sums of drugs in New York, peaking at over 96,000 pounds in 2013. Although this is not a direct measure of public awareness, it does provide evidence of at least some level of public awareness of the need to dispose of drugs safely.

The drug collection program in the State is not a formal program, administered and coordinated by any one agency. Rather, it is a series of efforts by numerous discrete public and private entities that act either as collectors or in support of collection efforts. As a result, there is no single source of comprehensive drug collection information (e.g., collection locations and hours of operation or collection types) readily available for consumers that could help increase public awareness and the likelihood of their participation. Nor is there comprehensive information on the amount of drugs properly disposed of through collection boxes and mail-back programs.

We found significant disincentives within the drug collection initiative itself that are more likely to discourage – rather than encourage – some entities from voluntarily operating a drug collection box and some citizens from properly disposing of drugs. Common reasons why some law enforcement entities do not voluntarily operate a collection box include the cost of the collection box (approximately \$800), drug disposal charges and personnel, and the need to provide space and security for it. Of the 346 drug collection boxes we identified in the State, about 66 percent are operated by law enforcement agencies.

Pharmacies can also be key to robust drug collection at the community level. As pharmacies are a familiar resource rooted within the community, they are a logical hub for proper drug collection and disposal, offering the public both convenience and trust. While some pharmacies participate in drug collection options such as take-back events or mail-back programs, or distribute drug collection boxes to other entities, very few actually collect drugs themselves despite becoming eligible to do so in 2014. They too face significant disincentives, including costs, which may constrain their participation. The main disincentive to mail-back envelopes appears to be their cost to customers.

In February 2017, the Department implemented its Pilot Pharmaceutical Take-Back Program to increase pharmacies' participation as permanent drug collectors by subsidizing the initial costs. Funded by \$2 million in grants, the program will pay for drug collection boxes and drug disposal costs for two years. Department officials expect 400 pharmacies to participate in the program.

The Department's Drug Disposal Awareness Initiative and Advocacy

Public Information Program

Pursuant to the Act of 2008, the Department was required to:

- In consultation with the DOH, develop and implement a public information program on the proper disposal of drugs. The public information program is to include information on the proper storage and disposal of drugs and on drug disposal sites.
- In consultation with the State Education Department, establish a notice containing information on the proper storage and disposal of drugs, to be conspicuously displayed in every pharmacy and other retail businesses authorized to sell drugs.

We found the Department fulfilled its mandate. In August 2008, the Department announced its "Do Not Flush" campaign and, with the State Education Department, developed educational materials (including a "Don't Flush" poster) for display in pharmacies to inform the public about the danger of flushing unwanted drugs and proper disposal methods. The poster is available on the Department's website for download.

The Department also maintains drug disposal information on its website for households, pharmacies, and institutions, and directs the public to other relevant websites that identify authorized collectors, such as pharmacies and law enforcement agencies. The Department's initiative also included presentations to groups across the State, displays and information at the State Fair, and "Don't Flush" posters displayed in rest areas on the State Thruway, at the Five Rivers Environmental Education Center near Albany, and throughout the New York City (NYC) mass transit system. The Department has also published numerous articles on the topic.

Despite these efforts, based on available information, we cannot draw conclusions on the level of penetration of the Department's public information program with the public, either statewide or regionally. Such an assessment could help the Department direct future education initiatives and media campaigns to target specific geographic areas and/or demographic groups where awareness is shown to be lacking. Our visits to 106 pharmacies found that 82 (77 percent) displayed the letter-sized notice, but it was inconspicuously located in some cases.

The Department has, in more recent months, taken additional action to enhance the information it provides to the public. For example:

- In February 2017, the Department posted on its website a more comprehensive map of medication drop box locations in the State, using data from other websites such as the

DOH's Bureau of Narcotic Enforcement (BNE) and the DEA. (Currently, its website lists a total of 279 drop boxes at law enforcement sites and pharmacies.)

- On May 2, 2017, the Department issued its Policy on Guidance for Proper Pharmaceutical Disposal, which reiterates the proper disposal of unused, expired, or unwanted pharmaceuticals, and encourages pharmacies and other qualified entities to become authorized collectors and comply with the posting requirements of the Act.
- On May 12, 2017, the Department issued Guidance to Keep Drugs Out of New York's Waters, which reiterates the Department's emphasis on the proper disposal of drugs and urges all pharmacies to voluntarily become authorized collectors of unwanted drugs, either by installing drug collection boxes or providing free or low-cost mail-back services to the public.

Drug Disposal Advocacy

Since 2008, the Department has advocated for safe drug disposal and, toward this end, has taken actions to improve the collection of drugs in the State for proper disposal. The Department has provided guidance on local pharmaceutical collection events, has been a voluntary participant in drug take-back days, and has assisted communities in organizing such events.

One prominent example of the Department's drug disposal advocacy efforts involves the NYC Watershed, which provides approximately 1.2 billion gallons of drinking water to New Yorkers every day. From 1998 to 2016, the Department operated a drug collection program to help certain medical facilities without an on-site pharmacy in the Watershed area that lacked access to proper drug disposal options, after it was found they had been flushing unused drugs, which ended up in the drinking water supply. In 2016, DEA National Drug Take-Back Day events became available to the facilities to properly dispose of their drugs, ending the need for the Department's collection program.

Since 2015, the Department has operated an annual collection program for certain medical facilities without an on-site pharmacy in Nassau and Suffolk counties that also lacked access to proper drug disposal options. The program, funded through a \$150,000 State Legislative Appropriation, was designed to reduce the amount of pharmaceuticals that are flushed and can end up in Long Island's groundwater, bays, and estuaries. According to the Department, its efforts resulted in the following collections: in 2015, 52 boxes of drugs of unknown weight were collected from 25 facilities; in 2016, 720 pounds of drugs were collected from 27 facilities; and in 2017, 660 pounds were collected from 24 facilities.

In February 2017, the Department implemented its Pilot Pharmaceutical Take-Back Program to increase pharmacies' participation as permanent drug collectors by subsidizing their initial costs. Funded by \$2 million in grants, the program will pay for drug collection boxes and drug disposal costs for two years. Selection of pharmacies is based on their willingness to continue the program, whether they are located in an unserved area, and environmental considerations. If, after two years, a pharmacy decides to no longer participate, the Department can reacquire the collection box and place it with a willing pharmacy. The Department expects 400 pharmacies to be funded through the program. The Department announced that, as of December 2017, 80 pharmacies –

mostly independent businesses – had enrolled in the Program and will begin accepting unwanted drugs in April 2018. According to Department officials, the boxes cost \$1,250 each, including delivery.

Other Drug Disposal-Related Efforts

The Department partnered with other environmental groups to try to prevent drugs from entering the wastewater stream and ensure they are disposed of in a safe, legal, and environmentally sound manner. For instance, the Department:

- Formed a Pharmaceuticals Work Group, including representatives from its Water, Solid and Hazardous Materials, Pollution Prevention, Public Affairs, and Policy Units and DOH;
- Participated in the New England Interstate Water Pollution Control Commission’s pharmaceuticals working group;
- Combined research efforts with the U.S. Environmental Protection Agency, the U.S. Geologic Survey (USGS), the New England Interstate Water Pollution Control Commission, and DOH;
- Collaborated with the USGS since 2003 on a study of trace contaminants (including pharmaceuticals) in the NYC Watershed; and
- Joined the Product Stewardship Institute’s pharmaceuticals initiative, working with other states and stakeholders to develop a viable system for the return of unwanted drugs.

Recommendation

1. Assess additional strategies to continue raising public awareness on proper drug disposal, such as the use of various media, and implement those deemed to be optimal.

Statewide Drug Collection and Disposal Activity

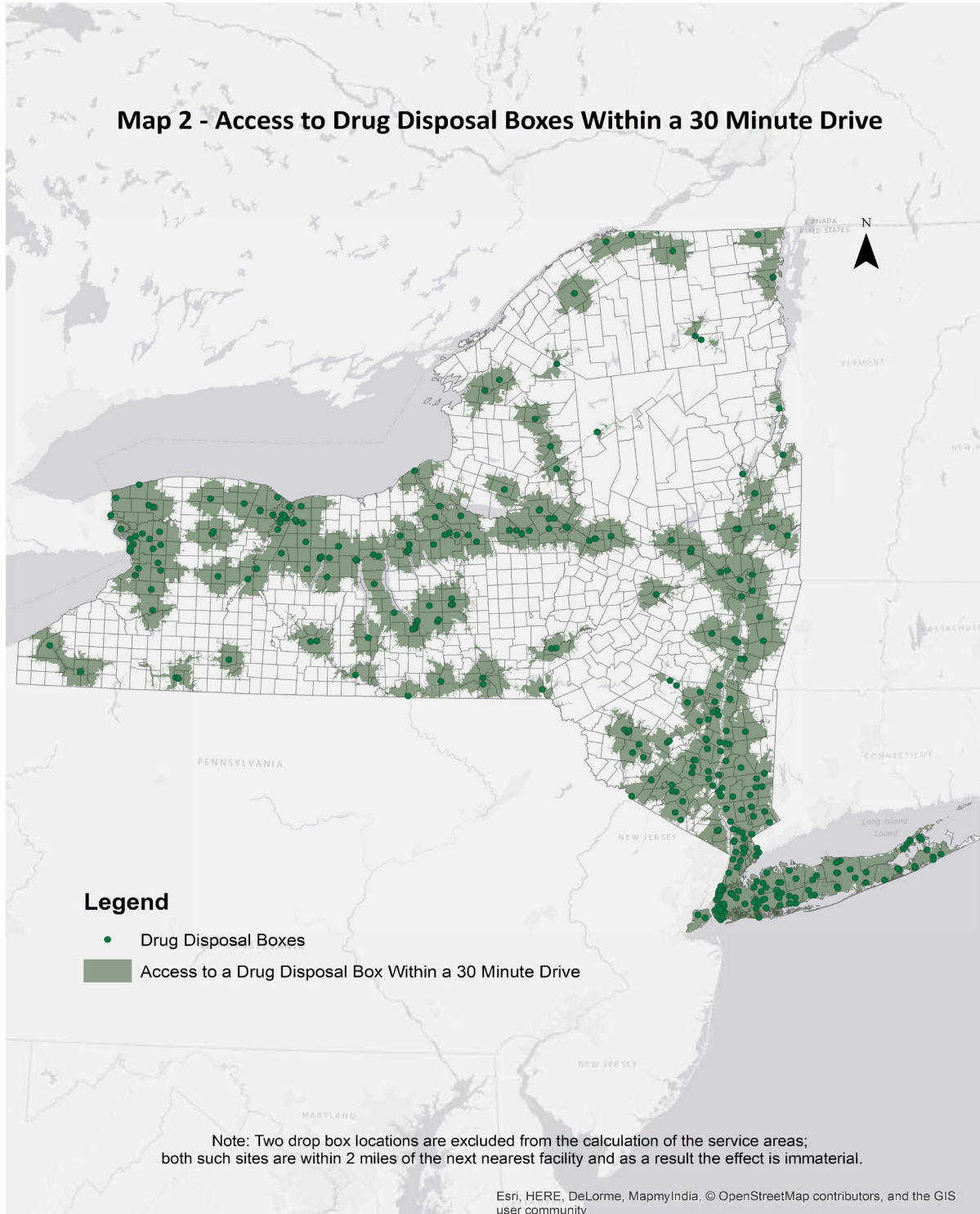
We found there was no single source of comprehensive information on drug collection and disposal activities in the State. Therefore, we gathered available information from many sources on the use of collections boxes, take-back events, and mail-back programs in the State. The information compiled from these sources forms the basis of the following discussion.

Drop-Off Collection Boxes

Overall, we noted that numerous programs distribute collection boxes to voluntary collectors and that many collection boxes are used by law enforcement agencies, but widespread areas of underservice remain.

Based on our review of drug disposal collection in New York, including a search of relevant websites, we determined that, as of March 2017, there were at least 346 unique locations with a collection box within the State, as shown in Map 1. (Note: Because there is no single source that maintains a complete list of all collection box sites, there may be more collection boxes than we identified.)

Gaps in access to drug collection box sites increase inconvenience, and require greater effort by those consumers who are aware of and motivated to participate in proper drug disposal. Map 2 illustrates these gaps and the effort needed by some citizens of the State to travel to one of the sites to properly dispose of their drugs. As can be seen, large geographic areas of the State don't have convenient and easy access to drug collection boxes.



Authorized Collector Entities

Law enforcement agencies are the principal voluntary drug collectors available to the public wishing to properly dispose of unwanted drugs. Law enforcement accounted for 230 of the permanent collection boxes, while pharmacies accounted for 81 and other types (e.g., town halls) accounted for the remaining 35.

Although law enforcement accounts for a significant number of permanent collection boxes, we found many law enforcement agencies do not participate. The New York State Police informed us that collection boxes are available to the public in the lobbies of nine Troop Headquarter locations. During 2015, the State Police collected more than 6,000 pounds of unwanted drugs statewide.

In total, voluntary participation in drug collection by pharmacies has been relatively insignificant in the State. As of March 2017, there were 5,354 DEA-registered pharmacies in the State, of which only 81 (1.5 percent) were authorized to collect medications through disposal boxes. In November 2014, supermarket chain King Kullen launched its Medication Disposal Program, with collection boxes available in the pharmacy departments at ten stores on Long Island. In November 2016, Walgreens launched its safe medication disposal kiosk program in NYC and, as of March 2017, had 19 disposal kiosks in the State. Similarly, Duane Reade had 16 collection boxes at its locations in NYC. However, most other large-chain pharmacies and grocery stores with pharmacies have no medication disposal boxes. Instead, their activities, if any, have been in the areas of mail-back programs or take-back events, as discussed in subsequent sections of this report.

The sources of collection boxes available to collectors vary. We identified the following sources:

- The U.S. Department of Justice provided a grant of \$30,000 in October 2013 to BNE to provide collection boxes to various law enforcement agencies. According to the DOH website, as of December 2016, BNE has provided a total of 154 collection boxes: 147 to law enforcement in 41 counties and seven to other organizations, such as town halls. Approximately \$18,623 of the grant was available for further use as of March 2017.
- CVS has distributed 81 drug collection boxes to police departments and municipalities throughout the State through its Medication Disposal for Safer Communities Program. Final disposal costs are borne by the collection entity.
- The Lloyd Magothy Water Trust, a not-for-profit entity primarily supported by private donations, designed a collection box (called the Big Red Box) specifically to protect Long Island aquifers, the area's primary source of drinking water. The Trust distributed 18 boxes to pharmacies and law enforcement offices on Long Island.
- The Product Stewardship Institute and the New York Product Stewardship Council co-piloted a pharmacy-based drug take-back program, which provided medication collection boxes and prepaid mail-back envelopes to four retail pharmacies and one hospital pharmacy in Oneida and Lewis counties. In September 2016, these two groups also issued the "How-to Guide for Drug Take-Back: Managing a Pharmacy-Based Collection Program for Leftover Household Pharmaceuticals" to encourage drug collection by pharmacies.
- The Onondaga County District Attorney's Office and County Health Department co-administered a Sharps Needles and Drug Disposal Program, which has provided collection

boxes to seven local police departments.

- The National Association of Drug Diversion Investigators (NADDI) provided 24 free or subsidized collection boxes to law enforcement.

The amount collected from all these collection boxes is unknown, as this data is usually not maintained by collectors, nor is there a designated entity to report the data to.

Disincentives of Collection Boxes

We found aspects of the State's disposal initiative where both cost and inconvenience may work to deter participation not only by authorized collectors but ultimately by the public as well. We interviewed officials at both pharmacies and law enforcement agencies that do not have a collection box, and found they cite common reasons for their non-participation, including the cost of a collection box (approximately \$800), the need to provide space and security for a collection box, the cost of staff effort related to the collection effort, the cost to dispose of the drugs, and any potential associated liability.

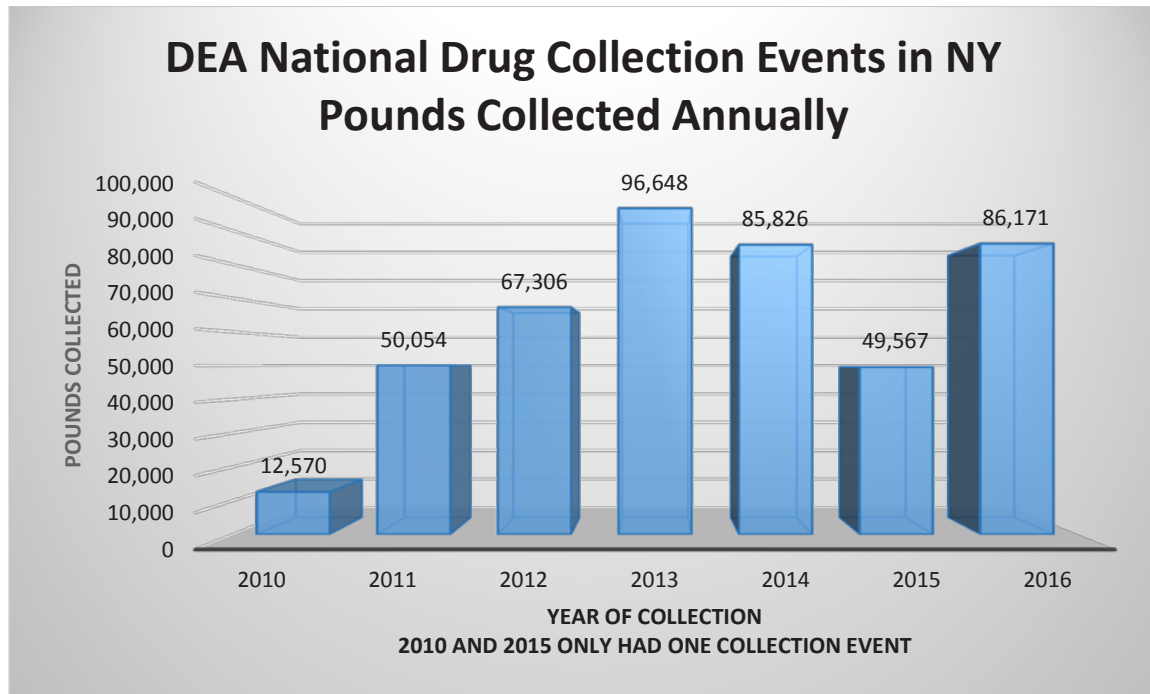
While many entities receive free collection boxes through grants, unless the collected drugs are brought to a DEA take-back event, there are additional costs involved that may be economically burdensome. According to State Police officials, in addition to both staff and vehicle costs associated with transporting the drugs to a waste combustor facility for destruction, the facility charges a disposal fee of approximately \$85 per ton as well as a \$400 fee for facility staff to observe and attest to the destruction of the drugs each time. According to officials at seven police departments that have collection boxes, disposal fees – estimated at about \$500 – themselves can be prohibitive, not to mention the cost of a police officer's time for round-trip travel to a municipal waste combustor facility. Officials at five of the seven police departments told us they bring their collected drugs to DEA's collection days to avoid the disposal costs. While these police departments generally consider their collection boxes to be an asset to the community and have had positive experiences with them, officials concede it would be difficult to sustain collection if they had to pay the costs of disposal.

According to Department officials, in addition to the associated costs, storage space, and security and liability concerns, chain pharmacies are reluctant to participate because of the challenges of meeting each state's various collection policies. Department officials told us that chain pharmacies would prefer a single nationwide program as opposed to piecemeal programs that vary from state to state. This may be the main reason why the majority of the 80 pharmacies that signed up to participate in the Department's Pilot Pharmaceutical Take-Back Program are independent pharmacies.

We contacted the National Association of Chain Drug Stores and the Pharmacist Society of the State of New York for additional information. Those officials stated they support drug collection boxes, the mail-back program, and take-back events as well as better education all around. They explained that pharmacies are primarily focused on the mail-back collection option, which is more convenient for the general public, because they can mail unwanted medications from home rather than having to travel to a collection box location.

Take-Back Events

The DEA has partnered with law enforcement agencies in the State to hold local National Prescription Take-Back Day events since fall 2010. Past events, generally held twice yearly, have included 299 collection sites across the State. Law enforcement entities are responsible for running the events, and DEA agents are responsible for collecting the drugs from these events and taking them to an EPA-approved municipal waste combustor facility for destruction. Since fall 2010, the DEA take-back events have collected a total of 448,142 pounds of pharmaceuticals in the State, as shown in the following chart.



It is not clear why DEA's collections generally increased over time and peaked in spring 2013, followed by smaller collections thereafter. However, the decrease could be attributable to the DEA's fall 2014 policy changes, with ultimate users taking advantage of the expanded collection and disposal options available in their communities year-round.

In addition to the DEA's National Prescription Take-Back Days, CVS pharmacy locations have hosted more than 800 take-back events nationally. As with pharmacies' collection box services, the amounts collected are unknown as data is usually not maintained by collectors, nor is there a designated entity to report the data to.

Mail-Back Program

As mentioned, pharmacies are primarily focused on the mail-back disposal option. Rite Aid and CVS both use this as their primary method of drug disposal, although there is no comprehensive data on the volume of mail-back envelope usage. While mail-back envelopes are convenient, one disincentive to their use is the cost to the consumer. Since August 2011, CVS stores began

offering the Sharps Compliance Corp.'s Environmental Return System, which provides customers with the ability to safely dispose of unused medication from home. Under the system, unwanted prescriptions and over-the-counter medications are sealed in a prepaid envelope, which is mailed through the U.S. Postal Service to a licensed, secure facility for safe destruction. CVS charges \$3.99 per envelope, which places the cost of transporting and destroying the drugs on the consumer. While the fee for each individual mailing is a relatively minor amount, it is unclear how it affects consumer behavior and the extent to which some individuals are willing to pay the fee, versus those who may instead opt for a more convenient method of disposal, such as flushing.

In addition to pharmacies with brick-and-mortar stores, mail-order pharmacies also supply a portion of drugs to the State's citizens. We are not aware of any mail-back programs that mail-order pharmacies may or may not provide to customers in the State. However, some brick-and-mortar pharmacies may be unwilling to participate in collection boxes unless there is a sense of fairness that all pharmacies will be participating. As one independent pharmacist who operated a collection box expressed to us, although mail-order pharmacies also sell drugs, the pharmacies within the communities would be expected to collect them and pay for their disposal.

As an alternative to the mail-back envelopes with fees, we found that the Albany County Opioid Task Force launched a program in May 2017 that provides free mail-back envelopes to participating pharmacies. This is an approach that could be effective for consumers who are unwilling or unable to pay a fee to dispose of their drugs.

Product Stewardship Efforts

Product Stewardship is the act of minimizing health, safety, environmental, and social impacts and maximizing economic benefits of a product and its packaging throughout all life cycle stages. By placing the responsibility for end-of-life management on the manufacturer, these programs ensure that end-of-life impacts of the product or package are considered during the earliest stages of design. Product stewardship programs create incentives for manufacturers to redesign products and packaging to be less toxic, less bulky, and lighter as well as more recyclable. Following actions in California and Massachusetts, in spring 2017, Rockland County became the first county in the State to require the safe disposal of unwanted medications through a take-back program funded and managed by drug companies, referred to as product stewardship. This drug take-back program will provide over 300,000 residents with convenient access to safe drug disposal, according to organizers.

Availability of Statewide Drug Collection Information

Need for Centralized Data

At the time of our fieldwork, there wasn't a single comprehensive listing of all authorized collectors and opportunities for proper disposal in the State as a resource for interested consumers. Our review of available information on authorized collectors and opportunities for property disposal in the State resulted in information that may be useful to the Department in its efforts related to drug disposal programs. For instance:

- The Department's website listed 279 collection boxes as of September 2017. However, our search of various sites identified 346. We shared our listing with Department officials to assist them in updating their listing.
- The Department's website includes 14 of the 24 collection boxes that NADDI provided to law enforcement, but not the remaining 10.
- Our search of the website of collection box manufacturer MedReturn showed 129 collection boxes in the State, 79 of which are unique to MedReturn, while 50 are also listed on other websites.
- The 18 boxes that Lloyd Magothy Water Trust provided to pharmacies and law enforcement on Long Island are only listed on its website.

Although the Department's website is fairly comprehensive, it is quite large and has a tremendous amount of information for a large number of program areas. As such, it can be difficult for citizens to easily find drug disposal information. Perhaps a separate website with an easily remembered name or a quick link on the Department homepage could be more useful.

We noted that the Vermont Department of Health coordinates a centralized prescription drug disposal system to connect citizens with permanent disposal sites near them, and posts an interactive map identifying the location of prescription drug disposal sites and the options available at each. The Vermont Department of Health's website has information on the dates and locations of DEA Drug Take-Back Days and locations of drug disposal boxes in Vermont. It does not mention mail-back program services. A similar system for New York State may help enhance participation by the public.

Further Development of Drug Collection and Disposal in New York State

The Department has fulfilled its obligations under the Act, and we acknowledge the actions the Department has already taken to voluntarily provide guidance and assistance to parties involved in drug disposal efforts across the State.

Recommendation

2. To improve the efficacy of the Department's voluntary initiatives for the proper collection and disposal of drugs in the State, it should:
 - Take steps to assess the level of public awareness of proper drug disposal methods across the State to identify areas that may benefit from additional effort.
 - Take steps to develop a single comprehensive source for drug collection and disposal information for the State's citizens, including: drug disposal guidance; a comprehensive list of all drug collection options for consumers, including: mail-back programs, drug collection sites, and periodic drug collection events, by geographic area; and final disposal locations for collectors.
 - Work with stakeholders to identify and attempt to reduce barriers or disincentives to collectors and consumers.

Audit Scope, Objectives, and Methodology

The objectives of our audit were to determine whether the Department of Environmental Conservation (Department) developed and implemented a public information program on the proper storage and disposal of medications (drugs), and publicly disseminated a notice to pharmacies, retailers, and consumers on the proper storage and disposal of drugs. We also sought to determine whether registered pharmacies and retailers of drugs properly displayed this notice. Additionally, we sought to gather and assess information on the extent of availability and usage of drug collection and disposal options across the State in order to examine ways to improve the efficacy of the Department's voluntary initiatives. The audit covered the period January 1, 2015 through May 19, 2017.

To accomplish our objectives, we interviewed Department and DOH officials, and reviewed their websites as related to drug management and disposal as well as State and federal laws. We also became familiar with and assessed the Department's internal controls as they relate to the fulfillment of its drug management responsibilities. We directly contacted 13 police departments and met with the Albany County Sheriff, and obtained information from the New York State Police. Using a survey document, we contacted 78 law enforcement officials consisting of 57 sheriffs, 20 local law enforcement agencies, and one New York City official representing the five New York City county sheriff offices. We also searched the Internet to locate entities that provide disposal boxes to organizations and, from the Internet searches, compiled a list of the locations of all known disposal boxes in the State. This data was used to map the number of disposal boxes by county and the approximate driving distance to collection drop boxes. In addition, we visited a judgmental sample of 106 stand-alone and in-grocery store pharmacies in 16 counties, selected based on their proximity to where our auditors live or work, to determine if the required posters were displayed; interviewed two pharmacists and representatives from the National Association of Chain Drug Stores and the Pharmacist Society of the State of New York; and reviewed the websites of major and independent pharmacies. We also contacted and obtained information from the DEA. Subsequent to the end of our on-site audit work, the Department continued to expand its efforts in this area. Department officials informed us in September and December 2017 of their pilot projects awarded to pharmacies and of their listing of disposal box sites throughout the State.

We conducted our performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

In addition to being the State Auditor, the Comptroller performs certain other constitutionally and statutorily mandated duties as the chief fiscal officer of New York State. These include operating the State's accounting system; preparing the State's financial statements; and approving State contracts, refunds, and other payments. In addition, the Comptroller appoints members to certain boards, commissions, and public authorities, some of whom have minority voting rights.

These duties may be considered management functions for purposes of evaluating threats to organizational independence under generally accepted government auditing standards. In our opinion, these functions do not affect our ability to conduct independent audits of program performance.

Authority

The audit was performed pursuant to the State Comptroller's authority under Article V, Section 1 of the State Constitution and Article II, Section 8 of the State Finance Law.

Reporting Requirements

A draft copy of this report was provided to Department officials for their review and formal comment. Their comments were considered in preparing this final report and are attached at the end in their entirety, along with our State Comptroller's Comments that address some of their specific statements. In general, the Department stated that it exceeded its mandate under the law. We concur. Our recommendations encourage actions that could further improve the efficacy of the program.

Within 90 days of the final release of this report, as required by Section 170 of the Executive Law, the Commissioner of Environmental Conservation shall report to the Governor, the State Comptroller, and the leaders of the Legislature and fiscal committees, advising what steps were taken to implement the recommendations contained herein, and where the recommendations were not implemented, the reasons why.

Contributors to This Report

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Vision

A team of accountability experts respected for providing information that decision makers value.

Mission

To improve government operations by conducting independent audits, reviews, and evaluations of New York State and New York City taxpayer-financed programs.

Agency Comments

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FEB 12 2018

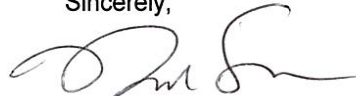
Mr. Stephen Goss
Office of the State Comptroller
Division of State Accountability
110 State Street 11th Floor
Albany, New York 12236-0001

Dear Mr. Goss:

This is in response to the Office of the State Comptroller's Draft Audit of the Department of Environmental Conservation (DEC) with respect to Drug Management and Disposal. The DEC response to the Draft Audit is contained in the enclosed document.

Please call Ann Lapinski, Director, Office of Internal Audit and Investigation at (518) 402-9218 if you have any questions.

Sincerely,



Basil Seggos
Commissioner

Encl.

bc:
Commissioner
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**Department of Environmental Conservation
Drug Management and Disposal
2016-S-82
Response to OSC Draft Report**

The Department of Environmental Conservation (DEC or Department) has reviewed the draft report dated January 16, 2018 containing the findings and recommendations of the Office of the State Comptroller (OSC) in connection with OSC's Audit of Drug Management and Disposal. DEC's response to the draft report contains three sections. The first section provides DEC's general comments regarding this report. The second section provides DEC's comments regarding certain factual inaccuracies and/or areas needing further explanation in the report. The third section is DEC's specific comments on report recommendations.

1) General Comments

Under the State Drug Management and Disposal Act of 2008 (Act), DEC is required to do the following: educate the public about proper drug disposal and create a notice to display in pharmacies about proper drug disposal. DEC has gone well beyond its mandate and continues to make efforts such as a new Pilot Pharmaceutical Take Back Program.

2) Comments on Specific Report Content

DEC identified factual inaccuracies and/or areas needing further explanation in the report shown in **bold** type by page number:

Page #1, Key Findings third bullet- "U.S Drug Agency". Correct name is "U.S. Drug Administration".

Page #1, Key Findings third bullet. DEC has initiated its Pilot Pharmaceutical Take Back Program.

Page #2, second sentence- "the cost of the box (approximately \$800)". Boxes for the Pilot Program cost \$1,250.

Page #9, last paragraph, last sentence- "The Department expects 200 pharmacies to be funded through the program."- The Department expects over 400 pharmacies to be funded through the program.

Page #9 last paragraph- Add that the Pharmaceutical Pilot Take-Back Program will track and monitor the amount of drugs being collected at each location.

Page #11 last bullet- There is no connection between DEC law enforcement pickups from medical facilities with publicly available drop boxes. One does not drive the other.

* Comment 1

*See State Comptroller's Comments, Page 25.

3) Comment on Recommendations

The following is DEC's response to the recommendations provided in the draft report:

Recommendation 1 – Assess additional strategies to continue to raise public awareness on proper drug disposal, such as the use of various media, implement those deemed to be optimal.

Department Response – DEC has fully complied with the Act by developing a public information program to raise public awareness on proper drug disposal through the information placed on our website, issuance of the Guidance Policy on proper drug disposal (Commissioner's Policy #66) and various press releases about initiatives concerning drug collection. The recommendation to implement additional strategies therefore goes beyond the requirements of the Act. DEC will continue to educate the public on proper drug disposal to the extent possible,

*
Comment
2

Recommendation 2 – To improve the efficacy of the Department's voluntary initiatives for the proper collection and disposal of drugs in the State, it should:

- Take steps to assess the level of public awareness of proper drug disposal methods across the State to identify areas that may benefit from additional effort.
- Take steps to develop a single comprehensive source for drug collection and disposal information for the State's citizens, including: drug disposal guidance; a comprehensive list of all drug collection options for consumers, including: mail-back programs, drug collection sites, and periodic drug collection events, by geographic area; and final disposal locations for collectors.
- Work with stakeholders to identify and attempt to reduce barriers or disincentives to collectors and consumers.

Department Response– DEC has done a remarkable amount of work protecting the environment from improper drug disposal. DEC maintains a webpage that contains drop box locations and updates that site when we obtain new information. The page also provides a link to information about National Prescription Drug Take-Back Day.

*
Comment
2

DEC voluntarily started the Pilot Pharmaceutical Take Back Program and the Environmental Audit Incentive Program. The Pilot Pharmaceutical Take Back Program administered by DEC, provides facilities with a free collection box and collects valuable information such as the amount of drugs collected and the location where they were collected. This program has already enrolled several hundred pharmacies, hospitals and long-term care facilities. This program is an example of how DEC is working with stakeholders to reduce barriers and disincentives to collectors and consumers.

State Comptroller's Comments

1. We have revised the final report to reflect information in the Department's response.
2. As we state on page 17, we agree that the Department has taken significant steps to develop the drug disposal program. The intent of our recommendations is to point out certain actions that could further improve the efficacy of the program.