



An Update on Integrated Pest Management in New York City for 2014

Prepared by the NYC Department of Health and Mental Hygiene (DOHMH),
Bureau of Veterinary and Pest Control Services

In May 2005, Local Law 37 (introduced by the New York City Council as Intro 329) was signed into law. Local Law 37 (LL37) established a number of requirements related to the use of pesticides on New York City-owned or leased properties with the overall goal of reducing the City's use of hazardous pesticides and promoting the use of safer and more effective pest control practices; an approach, known as Integrated Pest Management (IPM). One of LL37's requirements is that City Agencies through the DOHMH submit an IPM report in January of each year to the Mayor and New York City Council. This report for calendar year 2014 is the ninth annual report submitted to fulfill this requirement and to describe compliance with LL37 and the evolving pest control practices of several agencies.

BACKGROUND

Local law 37 requires that the City of New York discontinue the use of pesticides with active ingredients that EPA and the State of California consider to be potential carcinogens or reproductive hazards. Certain pesticides are exempted due to their low potential for exposure or harm or because of public health necessity. A waiver procedure was established that allows the Health Department to grant further individual exemptions under certain conditions. Posting notices to building occupants twenty-four hours prior to pesticide applications is required as well as new, more detailed record keeping and reporting provisions. The passage of LL37 prompted city agencies to critically review pest management and pesticide use on city-owned and leased properties. Since LL37's enactment there have been a number of major reforms to citywide pest control practices and the local law has encouraged agencies to make pesticide use reduction an ongoing pursuit.

New York City agencies address a wide variety of pest control issues in a large number of settings – residential units, institutional settings, parks, schools, offices, highway medians, hospitals, and vacant lots. Agencies continue to develop pest management strategies around IPM, which focuses primarily on eliminating or controlling the underlying conditions that are conducive to pest infestation. IPM approaches include structural and behavioral modification to deny pests the necessities- food, water, means of entry and harborage – that they need to survive. At the same time, “pest-proofing” upgrades the overall structural conditions of housing and workplaces. When physical improvements alone are not enough to address infestation, IPM also encompasses the judicious use of least hazardous pesticides –

such as newer gels and baits, and old standbys like boric acid deployed in new ways. IPM is both more effective and safer than pest control that relies primarily on pesticide use.

The Health Department will continue to encourage agencies to critically examine and seek all other options prior to using pesticides, which should only be employed as a last resort.. The Health Department issues an annual report on pesticide use by city agencies every year. As IPM implementation expands, the use of hazardous pesticides should decrease.

IPM COORDINATION AND PESTICIDE USE MONITORING

Inter-Agency Pest Management Committee

Local Law 37 established the Pest Management Committee (PMC) as a forum for agencies to share pest management information and strategies and to plan future reductions in pesticide use. The PMC is convened by the Health Department and meets twice a year. This group, which is made up of representatives from more than 15 municipal agencies and public authorities, serves as the city's pesticide and pest management advisory committee.

In 2014 emphasis continued to be placed on providing guidance to agencies on how to better respond to pest complaints by utilizing established pest management protocols and working more closely with the citywide integrated pest management contractor. The PMC will continue to assess ways to reduce pesticide exposures and to better communicate with employees and the general public about safe and effective pest control.

Agency Pesticide Use Reporting

Local Law 54 (LL54) of 2007 requires agencies to report their pesticide use to the Health Department to enable the Department to issue a summary report to the City Council by May of each year for pesticides used in the previous calendar year. The New York City Pesticide Use Reporting System (NYCPURS), created by the Health Department, has been used by agencies to facilitate this process. For 2014, 28 agencies reported pesticide use data electronically, an increase from the three in 2006 when we began collecting data. The Department will continue to provide guidance to agencies and their contractors for electronic submission of pesticide use data. In May 2014, the Department issued, in accordance with LL54 of 2007, the seventh public report quantifying municipal agency pesticide use covering calendar year 2013.

LL37 Waiver Review Committee

The Waiver Review Committee evaluates city agency requests for exemptions from pesticide prohibitions. The committee consists of individuals from across the Health Department, including licensed exterminators, health educators, environmental

epidemiologists, risk assessors, and entomologists. Each person is trained in IPM principles and practices and on the requirements of LL37.

In 2014, one new waiver request and eight waiver renewals were granted as well as the renewal of a blanket waiver for baits and gels containing the prohibited active ingredients fipronil and hydramethylnon for the coming year. These gel insecticide baits are non-volatile and are more targeted than broad application pesticides. They contain some of the same active ingredients and work in a similar manner to already exempted containerized insect baits, and in the right circumstances they can be used in a manner that limits the likelihood of human exposure, consistent with the principles of IPM. A list of waivers granted through 2014 is available on our website (<http://nyc.gov/health/ll37>).

IPM Training and Education offered by the Department of Health

The Department of Health and Mental Hygiene offers a wide array of free IPM training to other city agencies and to the public. Within the Bureau of Veterinary and Pest Control Services, both the Pest Control Services (PCS) program and the Office of Vector Surveillance and Control (OVSC) offered numerous training events throughout 2014 as follows:

PCS offers free training on rodent prevention to city agencies, community boards and organizations, day cares, neighborhood associations, community gardens and Business Improvement Districts. In 2014, twenty half-day training events were conducted with over 300 total participants, mostly representing homeowners, multi-family buildings, neighborhood organizations, urban gardeners and composters, and city agencies. Over 115 rodent-resistant trash cans were distributed to training participants in the community as incentives for attending the training. The intensive 3-day Rodent Control Academy conducted two training events in 2014 with 97 attendees representing city agencies such as NYCHA, DOHMH, DOE, Parks, MTA, DCAS and DHS.

In 2014, PCS partnered with the New York City Housing Authority (NYCHA) to offer two two-day Rodent control academies to address rodent issues typically associated with large-scale housing authority apartment complexes (exterior rats; interior mice). A strong emphasis was placed on maximizing IPM tools and techniques for both species of rodent pests (sanitation tips for dumpsters and new exclusion approaches for basements) and updates were provided on the latest technology in tamper-resistant bait stations and safe burrow baiting operations that are critical to public housing environments. PCS continues the partnership with NYCHA's Resident Engagement Department to offer training to resident green committees on rat prevention in community gardens. In this new program, residents, NYCHA gardening consultants, green committees and NYCHA pest control staff come together to discuss rat prevention for their housing development.

IPM Training

The Office of Vector Surveillance and Control (OVSC) provides classroom and field training to exterminators and other employees who are involved with mosquito control in the

City. The following courses are repeatedly offered at the beginning of mosquito season (April – May):

1. Integrated Mosquito Management in New York City
2. Larval Mosquito Control (including calibration of backpack larvicide applicator)
3. Adult Mosquito Control (including calibration of truck-mounted sprayer)
4. Safety and Health Training for Field Staff
5. Mosquito Surveillance – larval dipping and adult trapping

In 2014, these trainings were provided to 112 participants from five city agencies and the New York State Department of Environmental Conservation.

OVSC has implemented proactive training for preventing and dealing with bed bugs in the home, office and field. The primary focus of this effort is to train staff. Better education about bed bugs reduces the concern and stress regarding the risk of getting bed bugs. Bed bugs are a very emotional issue, more so than other more serious pests such as mosquitoes, ticks, rodents, cockroaches and flies.

OVSC conducted IPM training for ticks and honeybees in addition to pesticide registration, labeling, and material safety data sheets. These trainings included 4 presentations to 93 individuals.

Ticks are a significant public health concern because of the dangerous diseases they can transmit including Lyme disease, babesiosis, and Rocky Mountain spotted fever. Education is necessary to help persons avoid ticks and understand how to prevent the diseases that ticks transmit. Two tick IPM presentations were provided to 56 individuals.

Honeybees are vital to food and flower production because of their important function in pollination and their production of honey. Beekeeping is legal in New York City, but if not properly handled or wild, beehives can be a problem. It is important for OVSC staff and others to know and understand honeybees and proper beekeeping. One honeybee IPM presentation to 23 individuals was provided.

Knowing and understanding pesticide registration, labeling, and material safety data sheets are vital to a successful IPM program. One IPM training was provided to better educate staff about the registration process, the anatomy of a pesticide label, the importance of each part and the bases, and how to read and understand a MSDS. One training session was provided with a total of 14 attendees.

Information Dissemination

The NYC Bed Bug Web Portal (www.nyc.gov/bedbugs) provides easily accessible information about bed bugs to the public and links to other useful websites. A variety of guidance documents are available which enable residents, businesses, and institutions to anticipate, discover, and respond rapidly and safely to the presence of bed bugs.

The Rat Information Portal (RIP) (<http://nyc.gov/rats>) provides access to detailed information on rat management for tenants, property owners, pest management professionals, community organizations, and policymakers. Resources for communities and businesses on rat management are updated annually to reflect new knowledge and practices.

The Health Department's NYC Environment and Health Data Portal (www.nyc.gov/health/trackingportal) allows the public to explore neighborhood-level data on a variety of public health topics including pests and pesticide use in NYC. The portal can be used to create reports, tables, charts, and maps of the prevalence of cockroaches or bed bugs in the home, mice or rats inside or outside the home, personal use of pesticides, and the frequency with which a pest control professional visits the home.

OFFICE OF PEST CONTROL SERVICES

Pest Control Services (PCS) conducts rodent management activities throughout the five boroughs of NYC. In 2014, PCS performed over 98,000 initial rodent inspections in response to complaints and through the proactive neighborhood-based 'indexing' program in Manhattan, the Bronx, Queens and Brooklyn. Over 22,000 orders to abate rat activity were mailed to property owners along with brochures on "Preventing Rats Safely." Almost 10,000 violations were issued to private property owners that failed to abate rats and the conditions conducive to rats. In addition, 1,177 city agency referrals were sent to agencies that had either rat activity or conditions conducive to rats on their property. In 2015 the proactive rat indexing initiative will continue in areas of the Bronx, Manhattan, Brooklyn and Queens with the goal of reducing rats in every neighborhood indexed.

In 2014 PCS received funding for a pilot program addressing recalcitrant rat infestation in select neighborhoods of Manhattan and the Bronx, such as improper garbage management or severely infested sewers or parks. This holistic, neighborhood based strategy for rat management is being implemented in the East Village, Manhattan Valley, and East Harlem neighborhoods of Manhattan and in the Grand Concourse, Mount Hope, and Belmont sections of the Bronx. The pilot was given the name "Attacking Rat Reservoirs" and preliminary results indicate that the program has been successful in reducing rat activity in the pilot neighborhoods.

Intra-agency Rat Management Collaborations

The Rodent Task Force (RTF) continued to meet in 2014 with representation from the Health Department, Homeless Services, DCAS, HPD, NYCHA, Department of Sanitation, the MTA, the Parks Department, and the Department of Education. A number of inter-agency rat management collaborations were launched out of DOHMH's Pest Control Services Program and the RTF including:

DOHMH's Pest Control Services and the **Department of Citywide Administrative Services (DCAS)** continued to work with the RTF to install a Roll-off trash compactor (ROTC) at 100 Centre Street. By installing a ROTC, garbage produced by 100 Centre and other nearby city owned and occupied buildings would be containerized rather than sitting on

the curb attracting and feeding rats. The project was transferred to the Department of Design and Construction (DDC) and construction is expected to begin in 2015. Upon completion of the project, DCAS expects a significant reduction in the rodent population surrounding the ROTC as trash will no longer be placed in bags on the sidewalk.

In 2014, this group was also able to gain approval for the installation of a ROTC at City Hall. In April 2015, DCAS will replace the existing compacting container at City Hall Park with a new rodent proof Marathon Signature Series container. DCAS purchased the container because of a persistent rodent population in the park and around 52 Chambers and City Hall. After inspection, DCAS, with assistance from DSNY and DOHMH, determined that the rodent population was supported by the existing container, which was over ten years old, did not properly secure the trash, and was no longer rodent resistant. DCAS anticipates little to no rodents in City Hall Park this summer and thereafter.

Department of Parks and Recreation (DPR) and Department of Health's Pest Control Services (PCS) program have an ongoing collaboration to remediate rat conditions in NYC parks, green streets and tree pits. PCS has been proactively inspecting and treating a number of DPR properties in the Rat Reservoir Pilot areas in the East Village, Manhattan Valley, East Harlem, and in the Grand Concourse, Mount Hope, and Belmont sections of the Bronx. The Rat Reservoir Pilot neighborhoods also encompass 50 Green Thumb gardens. DOHMH and DPR/Green Thumb have worked together to train community gardeners and green thumb staff and gain access to these gardens for joint inspection and treatment when necessary.

PCS is partnering with the **Metropolitan Transportation Authority (MTA)** Maintenance of Way/Infrastructure Division and the MTA Strategic Initiatives Division on an on-going pilot IPM Project to reduce rats in MTA's refuse rooms. By using new door sweep technology, maintenance repairs, and replacement of refuse room doors and penetrations, the MTA is better able to deny rats food. The IPM pilot involves approximately 30 subway stations. The worst infested stations have been addressed first but the project will eventually include all stations. Currently, about 11 stations have implemented the DOHMH-recommended IPM plan. Thus far, three of the worst stations have been made 100% rat free via IPM recommendations and the intensive sealing of doors and walls. The chronically infested Grand Central Terminal Refuse Room (one of city's worst rat infested subway areas for 50+ years) is now rat-free – a major success story for the IPM project. Two other stations remain status quo.

The **Second Ave Subway Rat IPM project** remains on-going since its inception in 2007. Several area specific IPM inspections have been conducted by PCS to monitor construction stage yards for rat harborage and refuse conducive to rat populations along the 2nd Ave construction zone. Residential streets from E. 96th to 83rd are monitored for residential impact surrounding the 2nd Ave area. IPM recommendations focus on the timely removal of trash rather than ongoing use of rodenticides. As of late 2014, the Senestech Fertility Study (female rats) was ongoing.

PCS also worked with the **New York City Housing Authority's (NYCHA)** Technical Resources Unit and Cornell University's IPM Program on an IPM Refuse Room Pilot to

address rodent reservoir issues within NYCHA housing complexes. Baruch Houses and Lillian Wald Houses were visited by Cornell University for evaluations on December 18 and 19th, 2014 to estimate the amount of pest proofing and doors needed. Overhead repairs within refuse rooms may be more of a priority than the doors as mice and rats are accessing these rooms via ceiling utility conduits.

PCS partnered with the **Administration for Children's Services (ACS)** Office of Facilities (OOF) and the **Occupational Safety and Health Administration (OSHA)** on a project to complete IPM inspections in ACS headquarters. The major emphasis in late 2014-2015 was to provide IPM trainings to the private contractor servicing the ACS buildings with a focus on applying baits to office buildings. Complete IPM inspections were conducted in 2014 and repeated in February of 2015 at ACS headquarters.

OFFICE OF VECTOR SURVEILLANCE AND CONTROL

West Nile virus Prevention and Control

The DOHMH Office of Vector Surveillance and Control (OVSC) oversees the city's West Nile virus control program. Its goal is to prevent or reduce human cases of West Nile virus in the city. WN virus is a serious or even fatal disease. The virus is carried and spread by mosquitoes that mainly breed in stagnant water. Since its initial discovery in New York City in 1999, West Nile virus has reemerged in New York City each year during the adult mosquito season (April through October). From 1999 through 2014, a total of 317 human cases of West Nile virus, including 38 deaths, have occurred in New York City.

The prevention and control efforts of OVSC for mosquitoes and West Nile virus are based on IPM principles. Key components of the IPM program include community outreach and education, prevention (responding to standing water complaints to reduce mosquito breeding areas), surveillance, and control. Non-chemical controls are employed first, and if a chemical pesticide is used, it is the lowest toxicity pesticide that is effective on mosquitoes. OVSC routinely analyzes surveillance and control data from previous years in order to better prepare for the upcoming mosquito season.

To ensure a coordinated approach in managing mosquito-borne disease outbreaks in the city, DOHMH works closely with the following entities: New York State Departments of Health (NYSDOH), New York State Department of Environmental Conservation (NYSDEC), U.S. Centers for Disease Control and Prevention (CDC), and other state, federal, and local agencies such as the Mayor's Offices of Operations (MOO) and Environmental Coordination, the New York City Office of Emergency Management (OEM), Departments of Environmental Protection (DEP), Parks and Recreation (Parks, DPR), Sanitation (DSNY), Police (NYPD), and Citywide Administrative Services (DCAS), Information Technology and Telecommunications (DITT), and the New York City Housing Authority (NYCHA).

Additional information on New York City's WN virus IPM program can be found at <http://www.nyc.gov/html/doh/html/wnv/wnvhome.shtml>.

Bed Bug Management

In 2014, the Office of Vector Surveillance and Control (OVSC) provided bed bug identification to city agencies, advice and assistance in the mitigation of bed bugs in city agency offices, and training to prevent and deal with bed bugs in the home, office and field. OVSC identifies specimens for city agencies that are suspected to be bed bugs. The specimen or photo of the specimen is submitted to OVSC, and following identification, the submitting agency is notified with the result. A specimen or photo of the specimen is submitted to OVSC and is identified. The submitting agency is notified of the determination. About 66% of the specimens submitted are confirmed as bed bugs. The following table provides details of the specimens submitted in 2014. During this time, 267 specimens were submitted and 175 were confirmed as bed bugs. The identification result(s) are transmitted to the submitter usually within an hour of receipt of the specimen.

OVSC works on an “as needed basis,” with city agencies to assist them in dealing with the presence of a confirmed bed bug(s). Involvement normally includes meeting with key agency staff and the pest management profession to determine the area of the office to address, best practices for mitigation, and if a pesticide is justified, the selection of that pesticide to insure that it is efficacious and is compliant with LL37. OVSC also meets with agency staff to discuss the situation and how it is being handled.

HEALTHY HOMES PROGRAM

DOHMH’s Healthy Homes Program in the Bureau of Environmental Disease and Injury Prevention worked on a number of IPM initiatives throughout 2014. An ongoing collaboration with the Department of Housing Preservation and Development (HPD) on the Alternative Enforcement Program was designed to address NYC buildings that have several outstanding violations. DOHMH provides educational materials, information on the best practices to address pest problems using IPM, and technical support by reviewing submitted AEP IPM plans. The Healthy Homes Program also works with affordable housing on a green and healthy homes initiative known as “Two Shades of Green” in which IPM promotion is a key focus area. Technical support and training is provided to community development corporations to assist them with incorporating IPM into the general maintenance plan as well as any rehab opportunities they may be planning. Finally, this program works with the Bureau of Environmental Surveillance and Policy to oversee the IPM and pest study in the homes of children with uncontrolled asthma.

AGENCY IPM REPORTS

Department of Citywide Administrative Services (DCAS)

In June of 2012, DCAS launched a citywide IPM contract with Verrazano to service the DCAS's 55 facilities. DCAS has also been implementing IPM practices throughout all five boroughs. Building Services Maintenance staff is an integral part of this effort; they have closed many of the entry points in their buildings, as well as the many areas that are under construction.

Department of Education (DOE)

The Department of Education has been working with schools to reinforce IPM procedures to remediate rats on school properties. DOE provided over 1,200 exterior inspections to schools that have high rodent activity and worked with sanitation to discard the school's refuse as close to garbage pick up as possible and keeping the area where the garbage is collected as clean. In some schools, the area where the refuse is picked up by the department of sanitation was moved to a location where no visible rodents were observed. The DOE provided over 10,000 routine IPM inspections inside schools and responded to over 700 emergency requests by school personnel.

In 2014 the DOE received and identified over 2,500 insect specimens and provided remediation in over 2,300 schools citywide. The DOE is currently using a database to manage all of its IPM and Bed Bug contracts. The DOE employs a combination of internal city employees and private companies for pest management services including Verrazano, Superior Pest Elimination, and Guardian.

Central Park Conservancy (CPC)

The CPC continues to implement a park-wide IPM program for its grounds and facilities. For CPC's rodent IPM strategy the focus is on trash management and sanitation practices to limit food reserves. CPC focuses on a program to place receptacles in strategic locations, which decreased rodent activity at most receptacle locations but increased rodent activity at some centralized pickup locations. CPC also employs extensive trimming and clearing of vegetation to disrupt harborage sites. The CPC continued the use of mint scented bags during 2014 with mixed results. There are 50 monitoring/trapping stations throughout the park. In 2014, a total of 635 rodents were trapped. The park staff has made the transition to burrow baiting as the best management practice and used 29.06 pounds of Contrace bulk meal and 44 pounds of Contrace blox in 2014.

For horticulture and turf care, CPC employs the use of Bioherbicides including a successful trial of ammoniated pelargonic salt-based herbicide on cobblestones, curbs, and landscapes. The Bio herbicide (Burnout II) use remains consistent at approximately 140 gallons. The use of synthetic herbicide increased from 16.4 GL (2013) to 26.2 GL (2014) due to the addition of AXXE herbicide, an EPA registered product. Subsequently, the use of Glyphosate decreased from 16.5 GL (2013) to 2.8 GL (2014). Biofungicides used in

2014 include roots, EcoGuard, Companion, Rhapsody, and Regalia PTO. Other Fungicides include Compass, Heritage, and Insignia SC. Bio fungicide use remains consistent at 600 GL. Synthetic fungicide remains consistent. Insecticide use remains consistent at 2.9 GL, products used includes Compost Tea, Thermx70, BlackEarth. In 2014, 950 gallons were applied to 37 acres of lawn.

Department of Housing Preservation and Development (HPD)

For the last four years HPD's Alternative Enforcement Program has required an IPM plan for properties with a vermin infestation. A template indicating steps needed for a successful IPM plan was developed jointly with the Health Department's Healthy Homes program. Both HPD and Health staff have been involved in educational sessions for owners/managing agents, pest management companies, and tenants concerning IPM.

When visiting properties owned and managed by HPD for treatment, facility managers and the HPD-contracted exterminator emphasize for all tenants the importance of cleaning and infestation stoppage methods such as filling and/or repairing cracks. HPD also employs a bed bug sniffing dog that is used to locate problems when bed bugs are reported to ensure proper control and elimination.

New York City Housing Authority (NYCHA)

NYCHA continues to promote Community Service Aids (CSAs) to Full Time Exterminators. Twelve more candidates were upgraded in 2014, making the total 58 since the beginning of the program, and increasing the number exterminators agency wide to 150. All newly appointed CSAs are required to attend a two day rodent seminar given by the Department of Health's Dr. Robert Corrigan. All that attended the class receive 12 credits to be applied to their Exterminating license. NYCHA will again treat all of its Catch Basins during the summer months with a larvicide as a West Nile Virus Preventative Measure.

NYCHA continued its joint IPM Inspections with DOHMH in 2014 in apartments identified as having asthmatic children in an effort to provide initial IPM treatment and set up Point of Contact Appointments for follow up actions as required. The agency successfully completed 30 of these Joint Inspections in 2014.

The agency continues to address its bed bug complaints using the recommended IPM treatment Format. Bed bugs are addressed both by in-house staff and via contractors as necessary.

Department of Parks and Recreation (DPR)

The DPR continues to develop a weed and invasive control program. In 2014 DPR's Director of Central Horticulture met with landscape maintenance staff and weed control specialists at CPC, NYBG, and BBG to investigate IPM methodologies and their strengths and weaknesses in the larger urban landscape.

DPR investigated glyphosate usage citywide by city agencies and other entities from 1997 through 2013. DPR concluded that overall pesticide usage has declined in the past 10 years, and glyphosate usage has remained moderate despite decreases in use of other herbicides in accordance with Local Law 37. In 2014, DPR responded to an increasing number of public inquiries about herbicide usage in city parks. In 2015, DPR will be meeting with staff across divisions who are engaged with such correspondence to ensure that we are offering a unified response to public inquiries.

All herbicide applications are provided by in-house Pest Management Professionals (City employees). In 2014 DPR increased in-house training for DPR pesticide applicators, including classes on weed ID and control, entomology, and soil health. DPR also offered cut-stump and basal bark treatment training to staff for woody and herbaceous species such as ailanthus and mugwort to reduce chemical usage and limit exposure of other plants within the treatment zone. In 2014, as in other years, the Parks Academy offered the 30-hour DEC pesticide applicator training to our staff.

In 2015, DPR will add a horticulture coordinator to Central Horticulture staff. That individual's primary role at the outset will be to coordinate pesticide usage, training, and protocols citywide. In the meantime DPR will convene a working group of DPR staff to refine agency-wide pesticide protocols.

DPR's Green Thumb/Land Restoration Project (LRP)

GreenThumb (GT) oversees over 1,100 community and school gardens across the City, managing them for food production, safety, green space, and more. The LRP crew handles all of the field operations for the community gardens including the IPM program (plants, insects and rats). This group works with the gardeners on site cleanliness and overall management for rodent reduction/exclusion following IPM procedures, as well as baiting when needed. Land Restoration also works with the gardens on insect ID and damage containment followed by treatment as needed. LRP also works with the gardeners on fungus control (by both spray techniques and via mechanical and cultural aspects of IPM) and weed management and poison ivy eradication. The LRP staff consists of trained and licensed applicators/technicians in multiple categories. They, along with a few of the GT staff, are also well versed in a variety of IPM methods to help the community and school gardeners manage their sites as best as possible.

As the community garden program continues to grow and expand GT will educate the gardeners in the IPM techniques applicable to their locations and enforce the practices as part of the garden licensing and registration process.

Department of Health and Mental Hygiene, Bureau of Operations

District Operations has continued to implement the Division of Administration Integrated Pest Management Policy. Operations has continued the administration of bed bug protocols and in concert with the Office of Health and Safety, ensures compliance with Local Law 37. District Ops has provided containers for the storage of garbage at various District Health Center sites to minimize providing food sources for rodents. DOHMH employs the Citywide IPM Contract (Verrazano Exterminating Corp.) Future IPM plans include the evaluation of the feasibility to expand the use of storage containers for garbage and to expand training for staff on Integrated Pest Management.

The DOHMH's Office of Health and Safety Services (OSH) is committed to the safety and security of all employees. The use of Integrated Pest Management (IPM) is intended to provide a safe and effective method to prevent and control insects, rodents, and other pests that pose a potential hazard of injury, illness, or property damage. The Bureau of Operations has the overall responsibility for implementation of an IPM program, including the promotion of preventive measures among building occupants and notification of pest management activity.

Department of Environmental Protection (DEP)

The Bureau of Wastewater Treatment, Division of Requirement Contracts, Biosolids and Building Maintenance Contracts at DEP sits on the Inter-agency pest management committee. In 2014, DEP worked with DOH, NYS Parks, and Kingsway to proactively apply larvicides and use adulticides to minimize mosquito problems in and around the North River WPCP and the NYS Riverside Park Facility. Superior Pest Elimination, the contract exterminator, is working to proactively control spider infestations at the facilities. At DEP insects, rodents, and wildlife are also managed by Superior Pest Elimination.

Department of Correction (DOC)

DOC employs in-house Pest Management Professionals (City employees). The DOC utilizes Directive 4000R (Environmental Health: Control of Vermin/Pest) that covers how pest issues should be handled. The elements of the IPM program are included in this Directive. The agency adopted IPM a few years ago. One of the main challenges is the expectation from staff and the inmate population that unless an exterminator applies chemicals, the pest issues won't be resolved. Staff exterminators are often encouraged to treat for pests although there are no visible pest activities. The exterminators have done a good job explaining to staff and inmates that the practice is not allowed. This gives the exterminator an excellent opportunity to talk about the IPM program. The exterminators are sent to training whenever they are available. Getting staff and inmates to do their part to eliminate or reduce vermin-related problems continue to be a challenge. For example, although there are vermin-proof commissary buckets in the housing areas, the inmates sometimes do not store their foods in them.

The exterminators, Public Health Sanitarians, and staff assigned to the Environmental Health Unit will continue to inform staff and inmates that applying chemicals is the last resort.

The Environmental Health Unit will continue to place a strong emphasis on sanitation, sealing vermin entry points, and reducing/preventing harborage conditions.

Queens Library

The Queens Public Library sent out an IPM solicitation package in 2014 and bids were received and evaluated. Recommendations were subsequently made for award. Currently, Parkway Pest and Ability Pest Management provide non-contractual services for elimination of common pests.

Department of Sanitation

DSNY uses staff pest management professionals (City employees) for all pest management work. DSNY has established a route system that staff must follow to ensure all 59 districts and all support facilities are inspected within 30 days. Inspections primarily focus on eliminating or controlling underlying conditions that may cause pest infestation. All measures are taken before the application of any pesticides as per the IPM guidelines in junction with Local Law 37 and Local Law 54.