Office of the NYCHA FEDERAL MONITOR

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PEST CONTROL AND WASTE MANAGEMENT REPORT

I. PEST MANAGEMENT

Overview

NYCHA's greatest obstacles to improving its pervasive pest infestation problems in its resident units, building common areas and surrounding grounds are i) having staff and vendors consistently perform proper and thorough levels of pest extermination and related remediation work, and ii) overcoming excessive clutter and other resident unit conditions that inhibit workers from being able to effectively perform of this work. This is because pest control measures work only if they are thoroughly and properly completed. Partial work will only temporarily reduce pest populations and they will soon return in full force. This Monitor report on NYCHA's pest management efforts largely focuses on both these issues, which NYCHA's Pest Management Department ("PMD"), with assistance from the Monitor team, are actively addressing. We also note the



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collaborative efforts of the Monitor team and PMD to reach agreement on the methodology for estimating current pest population levels at developments which will enable more informative reporting on the progress of NYCHA's pest control efforts. Lastly, we are beginning to see a decline in the number of open pest complaints, which if sustained (particularly through the summer months), indicates that recent strategies described in the report are working.

A. THE RESIDENT AMBASSADOR PROGRAM

Ensuring that units are properly cleared out and prepared for extermination and pest maintenance work has been a challenge. From the beginning of the monitorship both NYCHA and the Monitor saw the necessity for establishing a program to better educate and assist residents with scheduled in-unit pest work to have them properly ready. The result has been the creation of NYCHA's Resident Ambassador Program which started this past February with a pilot at Baruch Houses. The pilot got off to a slow start, mainly

because it was not yet sufficiently resourced, but is now improving. We are seeing that a greater number of units are being prepared for scheduled work. The PMD has also been providing additional training for program staff and has implemented some recommendations made by the Monitor team. Given the importance of this effort, we will continue to push for greater program resources and expansion of the program's scope of work, and also that PMD train and use resident leaders in the program instead of solely relying on NYCHA staff.

The Origins of the Program

The HUD Agreement requires that NYCHA use modern Integrated Pest Management ("IPM") techniques in residential pest remediation to reduce the infestation levels of cockroaches, rats, mice and bedbugs over a 5-year period. Thorough remediation is necessary because the pests, drawn by the odor and remains of their former habitat, will rebound quickly if conditions are not fully treated. Proper treatment entails thorough cleaning and removal of all pest detritus; proper sealing of all points of ingress; and proper baiting for all pest types apparent in the unit.

When the monitorship began, we noted that pest remediations throughout NYCHA were not consistently done in a proper and thorough manner. First, IPM methodology was not being uniformly applied. Second, residents often refused entry to personnel or were not home, frustrating orderly remediation in many units. Third, even when entry was allowed, most units were not adequately prepared for the remediations. Proper preparation of a unit for pest remediation provides the exterminator with full access to all areas where one or more of these pest types gather. That means generally removing all items from all kitchen and bathroom surfaces and cabinets; emptying closets; and moving large appliances and furniture away from the baseboards. Proper apartment preparation is critical in order for treatments to be effective. If staff are only able to conduct partial work, pests will soon likely return if they are not fully treated.

Early in the monitorship, NYCHA recognized that to improve the quality and quantity of remediations, it needed to increase the rate of access to units and the level of preparation of those units for remediation. NYCHA sought to implement a plan called the Resident Ambassador Program, whereby resident leaders ("RAs" or "Ambassadors") would confirm the availability of residents for scheduled remediations (or negotiate other dates to accommodate the residents), and then guide them in preparing their units. That plan initially did not get off the ground, in part because NYCHA lacked the funds for stipends for the residents who would participate in the program.

Then, in 2022, the Pest Control Department (now PMD) was able to pull from its existing staff to inaugurate the program as a pilot at Baruch Houses, scheduled to run from February to July. The pilot included suggestions from the Monitor team. Two members of the Monitor team observed the program from March 21 to April 14, 2023, and provided feedback and suggestions for improvement to PMD. Through the first few months, the rate of unit access in the pilot steadily rose to above 50% from a rate of approximately 22% for units overall, and unit preparedness jumped from 17% to 54% (based on figures

provided by NYCHA). The pilot has shown that a larger scale program like this would provide improvements to NYCHA's pest control efforts. We will continue to encourage that PMD increases the resources for the program so that it can reach a greater number of residents with scheduled appointments. Our findings and conclusions follow.

1. The Contrast Between our Proposal and NYCHA's Model

The major difference between the two programs is that the Monitor proposes that the RAs should come from the ranks of resident leadership. That is based on our belief that resident leaders are likely more adept in communicating effectively and empathically with residents, and resident leaders are better known in their developments. NYCHA's plan, by contrast, calls for two NYCHA employees to act as RAs.

Otherwise, both NYCHA and the Montor team agree that RAs do not need special training as pest management professionals to participate in the program. Rather, effective RAs would provide attentive service as well as guidance to residents in preparatory activities and good housekeeping skills. We also agree that RA training should include a script that explains the program's primary objectives; namely, to (1) call to confirm the date and time when the resident will be at home to admit the exterminators into their unit; and (2) assist the resident in preparing the unit for remediation by taking all of the steps identified above. Further, the RA should be trained to communicate with residents who present additional needs, *e.g.*, language barriers; cluttered units or hoarding; areas with significant pest harborage; and confused or hostile behavior requiring application of de-escalation techniques or social services needs. In all these respects, NYCHA's model for its RA Program, and ours, are in accord.

Other Monitor team recommendations are that PMD should 1) work to improve the effectiveness of their telephone notifications to residents as it appears that many of the numbers being used are not correct and therefore notifications don't reach residents, and 2) increase the number of RAs in the program so that more residents with scheduled appointments can be reached and RAs have more time to engage with each resident prior to their appointment to provide sufficient information and guidance.

2. NYCHA's Implementation of its Model as Observed by the Monitor Team

As noted above, having only a few RAs available to conduct outreach has limited the program's effectiveness. Currently, NYCHA's RAs asked only those residents whom the RAs believed were disabled, pregnant or elderly whether they wanted the service. During our audit from the early results of the pilot, we found that RAs prepared only 5 units for remediation out of 26 that were unprepared. The main purpose of the program is to ensure that units are properly prepared for pest treatment work by informing, educating and empowering NYCHA residents to be active, effective partners in pest control efforts. As such, the primary work of the RAs is to remind residents of their scheduled appointments and inform (and in appropriate circumstances assist) residents in properly preparing their units for the work. Without additional RA assistance, the program will struggle to fully meet these objectives.

The purpose of the pilot at Baruch Houses is to try out various strategies for the program - assess what works and areas where modifications are needed – and look to see how the program can be expanded going forward to extend its reach. In our inspections, we observed in some instances that not all RAs knew the script that NYCHA had prepared for their interactions with residents, and certain important information was omitted. There were also examples of insufficient training in the use of de-escalation techniques with some residents who responded with hostility to the RA. These circumstances can be a real challenge and we know that PMD has since increased training in this and other pertinent areas (classroom and in-field).

We also saw substantive deficiencies in the RAs' inspections, which at times appeared to be rushed. The RAs missed certain areas infested with pests, including hallways, closets and utilities and were inconsistent in looking for holes and other means of pest ingress. The RAs also did not enter units that were slated for bedbug remediation, and thus did not inspect for signs of other pests, nor did they give guidance on other measures that the resident might use to contain the bedbugs (which could be infesting clothing, furniture, *etc.* throughout the unit, not just in the bedroom).

Further, in keeping with the overall objectives of the program, we suggest that when speaking with residents in preparation for their scheduled appointments, they take the opportunity to additionally provide counsel on good housekeeping skills, that if consistently used, should greatly assist in deterring pests from returning. Instead, we generally found that some RAs simply distributed literature to the residents, which they may or may not have read, and which did not cover all aspects of good housekeeping regarding pests.

Also, we found a few instances where the RA's limited their scope of work to preparation of units for initial work orders for roaches, mice or rats. However, during the course of our audit, we noted that 60 work orders issued to the RAs pertained to follow-up, bedbug, and move-out situations which, according to NYCHA's protocol, were outside the purview of the RAs' function. Indeed, we found that the RAs and exterminators were visiting the same units repeatedly (and at that, often the residents either were not home, or would refuse service). In sum, there were a couple instances where the correct work orders were not being consistently pulled and serviced, diminishing the effectiveness of the program. Our understanding is that PMD has corrected this.

3. Conclusions and Recommendations

As NYCHA's pilot continues, PMD and the RAs will learn from their experiences and improve. As stated, PMD has been making various adjustments to the program as it progresses at Baruch based on some of our suggestions listed above and other areas where PMD itself found that modifications were needed. Ensuring that the program is sufficiently resourced remains our top consideration. To be sure, NYCHA is rightly concerned about the "scalability" of the program, as a massive effort portfolio-wide would be a much greater challenge than a controlled pilot. But absent a more broad-based

program to ensure that *all* units are properly prepared (through more education and more direct assistance to residents where needed), the underlying problem will remain, that is, the limited effectiveness of pest remediations due to unprepared units. A properly conceived and executed RA program seems to be the best option for improving the quality of remediations overall.

Regarding additional program resources, NYCHA has advised that it will enlist its nineperson burrow collapsing team to provide RA services to residents for up to several hours in the afternoon, which is a positive step. We would also recommend that NYCHA explore options to update resident contact information if it chooses to use text messaging to alert residents to upcoming appointments. Finally, the RAs should be better trained and equipped to deal with the challenged NYCHA population that requires assistance in preparing for pest remediations.

B. THE QUALITY OF NYCHA PEST REMEDIATIONS

The challenge in having performance metric goals is that it can become a numbers game, where there is a greater focus on closing work orders at the expense of doing quality work. From the start, the Monitor team highlighted this concern and has been working with the PMD to both provide more training to staff (and even for its vendors) to ensure they know how to properly do the work, and also conduct field inspections coupled with more effective supervisor guidance and correction to address shortfalls in work quality found. The Monitor's pest SME team conducts many of the inspections, provides detailed reports of findings (some of which are summarized below) and assists with training. The PMD has made some important improvements, among which is to stress that its exterminators slow down their in-unit work to be more thorough. Monitor inspectors are seeing the results in better work performance.

Dr. Rick Cooper, one of the Monitor's consulting entomologists since 2021, has been regularly auditing exterminators' field work to assess the quality of their remediations. Extermination work at NYCHA is conducted by both trained PMD staff and vendors. Between February and April 2023, he made eight sets of observations – five from his visits to nine developments to observe exterminator and SOE (Supervisor of Exterminators) activities, and three from visits to support PMD training activities. His overall assessment is that NYCHA's exterminations work, especially since restructuring PMD earlier this year, continues to improve and be more effective. As one management strategy that appears to be effective, PMD has been conducting in-person bi-monthly meetings with the head of PMD and her upper-level field supervisors for the last few months to review pest field data analytics, discuss continuing challenges and areas where they see success. A more detailed summary of Dr. Cooper's findings is below, the focus being on where modifications are still needed.

Dr. Cooper encountered a number of recurring issues during his site visits which negatively affected the quality of the remediations. First, he observed that some exterminators and their SOE allowed the residents to dictate where to inspect and what areas to treat. As pest control professionals, exterminators and SOEs need to inspect the entire apartment for roaches, bed bugs, mice, and rats to determine what areas require

treatment. Failure to gain access to all areas of the apartment results in the inability to identify the full extent of pest activity and treat it properly. That necessitates further visits that might have been avoidable and could cause infestations to spread to other apartments.

Dr. Cooper also observed that the exterminators' approach to roaches, and that of the SOEs, remained "kitchen-centric". Mice treatments were almost always limited to the kitchen, and service for roaches rarely extended beyond the kitchen, bathrooms and occasionally hall closets. Even within the kitchen, inspection and treatments were predominately aimed at the cabinetry and countertops, and were not expanded to the rest of the kitchen. On repeated occasions, Dr. Cooper saw roach and mouse activity in other areas of the kitchen, the living room, and bedrooms, that exterminators failed to inspect. Some exterminators did not bring appropriate equipment. On multiple occasions, Dr. Cooper observed exterminators who lacked inspection mirrors and/or did not have adequate stepladders, which are essential for reaching surfaces and crevices that are high up in the kitchen and elsewhere.

The quality of service provided by exterminators was sometimes inconsistent. For example, one exterminator did not interview residents about pest activity in their units prior to starting service, did not routinely ask to inspect the entire unit, and did not routinely perform complete inspections on his own. Some lacked certain basic equipment, namely, an inspection mirror, an appropriate flashlight (he used his cell phone light), and a stepladder. He exhausted his supplies of cockroach bait, rodent bait stations and silicone caulk during the servicing. Other exterminators similarly failed to provide complete and thorough inspections. On one occasion, the exterminator had an inspection mirror but did not know how to use it. Dr. Cooper then showed the exterminator how to use it. In Dr. Cooper's view, these deficiencies were likely attributable to gaps in training, particularly as the exterminators responded positively to Dr. Cooper's feedback on-site. PMD recognizes these concerns and is working with Dr. Cooper to improve the quality of the inspection and remediation work.

It must be noted that other exterminators performed their services in a professional and thorough manner. Their inspections were methodical and thorough, as were their subsequent treatments. They counseled the residents on how to reduce pest activity and gave the residents pest information sheets. Their performance of the standard procedure for roach abatement was proper (excepting the lack of a ladder, which prevented them from inspecting, vacuuming and applying bait above the kitchen cabinets). One exterminator had researched each of his work orders in advance, so that he knew the previous history of pest remediations in his assigned apartments. Dr. Cooper recommends that all exterminators adopt this practice.

Dr. Cooper also noted variations in how the SOEs performed their duties. One SOE directed his exterminators to certain areas that required servicing (e.g., active mouse entry points needing sealing; sites requiring cockroach bait; overlooked areas warranting inspection) but did not guide them in other respects (e.g., the importance of obtaining specific information from residents about their pest problem; advising the residents on

how to mitigate pest activity; advising that they would like to inspect the entire apartment, rather than asking the residents what areas they wanted the exterminators to inspect; correcting deviations in the exterminators' performance of the standard procedures). In contrast, another SOE used effective teaching techniques and was supportive of the exterminators. When asked a question by the exterminators, he first asked them what they thought, helping them to think through the problem and consider alternative solutions. He also asked them questions throughout their exterminations to gauge the extent of their knowledge. He focused heavily on proper documentation on the handheld device as well as the processes for closing and creating work orders. His primary omission was the failure to guide the exterminators in seeking access to the entire apartment, as discussed above. He also could have spent more time coaching his exterminators on various treatment methods. Dr. Cooper concluded that most of these deficiencies could be rectified with adequate training, which PMD is now working on.

During our observations earlier this year, we encountered one apartment with a severe cockroach infestation. Below are some photographs documenting the conditions:



Litter boxes in living room





Poor Kitchen Sanitation

Pet food dishes in living room







Missing kitchen cabinets or counter, and visible evidence of severe cockroach infestation in apartment.

The challenge, given the high infestation level, was to perform a thorough extermination throughout the entire unit within the span of the single appointment. The SOE immediately pitched in, effectively guiding the exterminator in maximizing their effectiveness and determining next steps to be taken in follow-up visits. The exterminator generated follow-up tickets for that unit and the neighboring units. It was a perfect teaching opportunity which the SOE and the exterminator used well.

In sum, the overall quality of NYCHA pest remediations has improved steadily in the past year but lacks consistency in the quality of service from one exterminator to the next, and quality of supervision among the SOEs. Most of the deficiencies seem to be due to inadequate training rather than a lack of willingness or desire to follow procedure. There are common elements among recent remediations that warrant improvement: (1) the exterminators seem inadequately trained in IPM, and further training in that regard is now taking place; (2) the exterminators could use more training in how to communicate with residents about the pesticides being used and the precautions to be taken, especially regarding residents with sensitive health conditions; (3) exterminators should always be equipped with the right tools and a sufficient amount of materials to perform their jobs fully; and (4) the SOEs should provide hands-on training and education to reinforce exterminators' good habits and improve their skills. Finally, there should be greater clarity concerning the remediation protocols for "root cause apartments" that have severe infestations and abhorrent living conditions affecting surrounding apartments. Dr. Cooper recommends that these apartments be flagged as soon as they are identified, and placed in a program that provides periodic inspections and treatment. Agency intervention may be needed to address the behavioral and social components associated with residents living in these units.

C. NYCHA PEST INFESTATION INDEX (NPII)

One of the significant hurdles that NYCHA and the Monitor have confronted in trying to determine existing pest levels is the impracticability, if not impossibility, of taking a pest census. There is simply no practical and cost-effective means of directly calculating a reliable estimate of the number of cockroaches, rats, bedbugs or mice in NYCHA units throughout the five boroughs of New York City. The parties attempted to count the number of pests in a carefully selected sample of units, and then estimate the whole from those

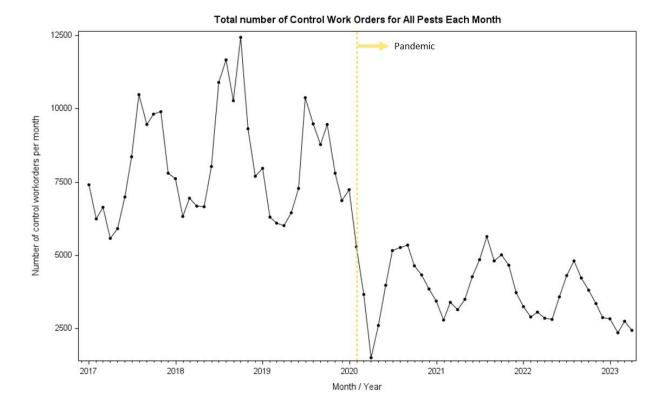
numbers, but the count in each apartment was a subjective exercise, putting the totals in question.

The HUD Agreement ("Agreement") requires that NYCHA estimate the populations of cockroaches, mice, rats and bedbugs portfolio-wide and publish those results quarterly by development and pest type. NYCHA must reduce those pest levels by stated percentages over 5 years from the onset of the Agreement. In prior Quarterly Reports we have detailed the efforts by NYCHA and the Monitor to develop an agreed-upon protocol for estimating pest levels, and the difficulties and delays in doing so. In this Report we describe recent collaborative efforts to reach a consensus on a methodology for satisfying the Agreement's requirements, which should soon be completed.

Following those frustrated efforts, however, the parties have made progress in reaching a consensus on how to estimate pest levels and their fluctuations going forward. While absolute pest levels cannot be reliably determined, relative pest levels, and their fluctuation over time, can be measured as a function of: (1) the number of outstanding (aged) pest complaints that have not yet been resolved; (2) the rate of new complaints; and (3) a carefully calculated numerical adjustment upwards to account for the fact that there are always more infestations than reflected by reported complaints ("the undercount").

The "undercount" adjustment is made by inspecting a selected sample of units that have not reported pest complaints in the previous 12 months; identifying the pest types, if any (without the need to count them), that are actually present in those units; estimating the whole from that data; and then making the appropriate adjustment. Because the data necessary to count the number of outstanding and new complaints is readily available in Maximo (NYCHA's electronic data collection system), the exercise is fairly easy and enables quarterly reporting as required by the Agreement, to determine whether the pest levels are falling over time as a function of improved pest remediations.

To be sure, the Monitor and NYCHA are still discussing the relative weight to give aged work orders versus new work orders in calculating the total in any given timeframe, but those discussions have been productive, and we believe that agreement will soon be reached. Nevertheless, there is disagreement on what the current data shows. The Monitor's consulting entomologist Dr. Kells provided the graph below showing the combined incidence of new pest control workorders for all pest types:



He reads the underlying pest-specific data to show that: (a) bed bug complaints continued to decline (a nationwide trend, probably aided by COVID); (b) cockroach and mice complaints have continued to decline after the big pandemic drop; and (c) though rat complaints have declined, they are back at their pre-pandemic levels, with no signs of improvement on the horizon. NYCHA maintains, in part by timing its assessments to natural seasonal declines in pest types, that the levels of pest infestation are declining across the board as measured by the incidence of new pest complaints.

One of the most significant components in applying this methodology is identifying those sample units with no pest complaints that should be inspected in order to adjust for the undercount reflected in reported complaints. To do this, the Monitor retained a statistical expert who is identifying representative complaint-free units, the data from which inspections can be used to calculate the necessary upward adjustment. This will provide a more reliable portrait of the relative size of the pest populations at any given time.

Both the training and the inspections have begun with the understanding that the Monitor's entomological experts will train the inspectors on the protocol for inspection of the units that report as pest-free. The second remaining element is reaching agreement on a schedule for inspections of the additional units to be inspected (910 in total) so as to produce reliable numbers that can be applied to the whole. NYCHA and the Monitor are now aligned that 75 inspections will be conducted a month, which means that the full set of 910 inspections should be completed by June 2024, and that the "census" requirement in the Agreement will be fulfilled in an ordered manner thereafter.

D. RAT CONTROL

1. The Need

Norway rats love New York, as most New Yorkers can attest, because of the nourishment opportunities afforded. Since inception of the Monitorship, NYCHA has had in place an outdoor Neighborhood Rat Reduction program emphasizing active baiting and burrow collapsing, bait stations, and electronic monitoring of rodent devices. Even though this program has collapsed a significant number of burrows, the rats still abound. In response, the Monitor has proposed a plan to elevate NYCHA's rat prevention and control through a more active and aggressive approach towards indoor rats. NYCHA has indicated that it is amenable to addressing the indoor rat issue more substantially in September.

2. The Tools

Rat control is a specialized function. Not all exterminators have the skill or willingness to confront live rats inside living quarters. The specialized drive for this kind of work includes:

- A strong desire to eliminate rats inside NYCHA buildings;
- An interest in finding the root cause for rats' presence and determining the means to eliminate or mitigate the factors promoting them to the greatest extent possible;
- Going beyond the single rat complaint to find and assess the habitat that brought the rat there;
- The ability to effectively report a situation, generating appropriate follow-up work orders that others can use to prevent rats from gaining access to or using that space;
- A strong, independent work ethic motivating the exterminator, if time permits, to perform additional inspection work and generate new work orders beyond the assigned tasks;
- The willingness and ability to confront a live rat without panic and calmly determine the course of action to eliminate the threat.

The specialized knowledge necessary to effectively perform this function includes: (a) an advanced understanding of rat behavior, enabling the exterminator to assess the contours of an area infestation; (b) the ability to evaluate the level of pressure caused by rat infestation and area ecology; (c) recognizing and ameliorating rat-conducive areas and elements in a building that facilitate rat infestations; and (d) facility in communicating instructions to others for follow-up prevention and control visits to the building.

The specialized training includes training in: (a) rat biology, habitat use and movement patterns; (b) identifying rat pressure, and how to report it; (c) setting traps and devices to capture rats with the least risk to bystanders and residents; (d) removing live rats from an apartment; (e) assessing when a control device is less effective, and the ability to reset the device locationally (or situationally) to increase acceptance by rats in the area; (f) troubleshooting the root cause for rats' ongoing presence and using the most effective

solutions to eliminate them; and (g) calmly controlling and communicating with bystanders.

The specialized tools include deployment and assessment of: (a) rat traps and bait items best used in sited areas; (b) electronic sensors (and effective deployment); (c) rat bait stations (with follow-up inspections); (d) tools to corral and remove live rats from living spaces; and (e) materials to stop rats from transiting through different areas of a building.

Our entomologists report that throughout their work at NYCHA, they have met numerous exterminators who qualify for this specialized work. We want to identify those personnel and invite them to join the rat team; provide specialized training; and focus their work assignments so as to maximize the effectiveness of indoor rat remediation at NYCHA.

3. The Plan

Once a rat complaint has been made, the presence of one or more live rats in that living space must be verified, either by the regular extermination team or by the rat team (we are in active discussions with NYCHA concerning this response method). Then the rat team will proceed to trap/eliminate the rat(s), collect any dead rats, set/reset traps, and take preventive measures. Ideally, live rats should be addressed in the morning and early afternoon, with standing follow-up and prevention workorders (that are now autogenerated by NYCHA) for other rat-related measures performed during the remainder of the day, including (a) property inspections for assessment of rat presence and pressure, as well as building vulnerabilities; (b) servicing bait stations and adjusting their placement as needed; (c) examining door sweeps; and (d) plugging holes and screening vents.

An ancillary part of the plan (which is part of existing NYCHA procedures) entails ensuring that the Call Center operators ask pertinent questions when a resident complains of "rats" to confirm that it is indeed a rat issue and not mice or another pest. Assuming the former, the operator should then advise the resident as to the rat team's schedule for remediation. An authorized script should be provided for that purpose.

Periodically, the Plan's execution should be reviewed to ascertain whether: (a) the team is properly executing its assignments; (b) the turn-around time is optimal; (c) the crews are properly sized; (d) equipment and materials are being properly deployed; (e) total complaints and repeat complaints are being reduced; and (f) other appropriate metrics are satisfactory. Adjustments should be made where needed. If properly performed, this innovative program – if adopted by NYCHA – should have a substantial impact on reducing the incidence of rat infestation inside NYCHA developments.

E. Response Times and Overall Number of Open Pest Complaints

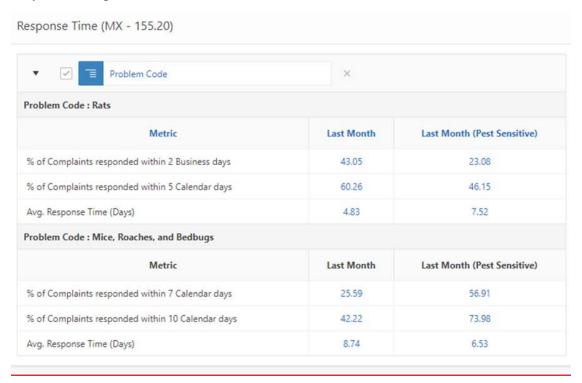
The Agreement requires that NYCHA meet certain deadlines in responding to pest complaints:

- 1. By 1/30/21, respond to 75% of all rat complaints within 2 business days, and to all rat complaints within 5 days;
- 2. By 1/30/21, respond to 75% of all other pest complaints within 7 days, and to all other pest complaints within 10 days;
- 3. By 1/30/24, respond to 90% of all rat complaints within 2 business days, and to all rat complaints within 5 days; and
- 4. By 1/30/24, respond to 90% of all other pest complaints within 7 days, and to all other pest complaints within 10 days.

The term "respond" in the Agreement does not mean "fully address" or "close," as large infestations of any of the four pest types can require multiple visits over an extended period of time. Still, even the requirement to respond in the first instance places a burden on NYCHA's finite resources. The emphasis on meeting these deadlines without regard to the quality of the remediations prioritizes quantity over quality, which in the short and long run can undermine PMD's mission. As discussed above, incomplete remediations have little value, as the pests will quickly return, drawn by the odor and remaining elements of their prior habitat. To its credit, PMD recognizes this issue, and is making a concerted effort to improve the quality of its remediations, including underscoring the need for staff and vendors to be thorough during their in-unit work rather than completing the jobs quickly. But this inevitably has inhibited its ability to meet the benchmarks set forth in the Agreement.

For May 2023, PMD's response times were as follows:

May 2023 Response Times



In addition to improving metrics for response times to complaints, we are seeing a decline in the number of NYCHA's open pest complaints generally. While these figures do not yet satisfy Agreement performance requirements, they do indicate that recent strategies are having a positive effect. From the beginning of March 2023 to June 12, 2023, NYCHA reports that its count of open pest work orders decreased from over 13,000 to approximately 8,000. The next few months will be crucial to assess the sustainability of this downward trend as pest populations tend to increase during the summer. The challenge is to improve the data while simultaneously improving the quality of the remediations. That will reduce response times effectively in the long run, as thorough and complete remediations should cause a fall-off in new work orders. During this fifth year of the monitorship, we will collaborate with NYCHA to develop strategies such as those discussed above, including the RA program, adequate training for the exterminators and SOEs, and provision of adequate supplies and equipment to exterminators. If all three programs are implemented, the exterminators should be able to perform effective remediations in less time.

II. WASTE MANAGEMENT

The Agreement requires that NYCHA, at least once daily, inspect and clean the grounds at each development, and collect and remove, or securely store for removal, the collected trash. Implicit in these requirements are two goals: (1) clean grounds at each development at all times; and (2) the means to properly collect, store and remove the

trash from each development. Achievement of these goals requires the combined efforts of the Waste Management Department ("WMD"), the Asset and Capital Management Division ("A&CM"), and each development's staff. Below we discuss the considerable progress made through the combined efforts of these teams. Our report is by no means a complete review of all of WMD's initiatives to improve waste management at NYCHA. Rather, we have chosen to highlight some of the most dramatic reforms, improvements, and upgrades that demonstrate continued improvement in waste management throughout the NYCHA portfolio.

A. Waste Management Measurement App (WAMMA)

WAMMA is an inspectional tool designed by the Monitor and the WMD to measure cleanliness at each development. It has been in place since 2020, and to date, well over 2000 waste management inspections have been conducted and WAMMA reports drafted by the Monitor's field examiners for almost all NYCHA's almost 300 developments. The Monitor has also developed a search capability to locate reports more easily by borough, development, date, subject matter and other criteria. All the reports are provided to NYCHA and the WMD both as a means of understanding specific development waste management conditions and as a management and accountability tool for property management supervisors to work with their staffs to drive improvements.

In the WAMMA reports, the exterior and interior facets of each building are graded 1-5, with 5 indicating total cleanliness and 1 indicating dramatically substandard conditions. Exterior facets include grounds, waste yards, entrance ways, roofs, and sidewalks. Interior facets include lobby, mailroom, elevators, stairwells, hallways, compactor room, all common areas, and basement. The grades are weighted according to WMD's assessment of their relative importance in the overall condition of the building. Inspections have been made regularly by members of the Monitor team at a selection of developments deemed representative of the whole. The inspectors record their scores on a handheld device, which also allows for photographs and comments to illustrate and explain the grades given. At the program's inception in 2020-21, average overall scores were in the 2.5 - 2.9 range. Conditions throughout the developments have improved significantly since then, and continue to rise on a monthly basis. Below are the boroughwide WAMMA scores for March and April 2023:

Overall Average Submission Score - March				
Borough	Average Total Score	Inspections		
THE BRONX	3.10	11		
BROOKLYN	3.45	16		
MANHATTAN	3.26	10		
QUEENS	3.54	3		
STATEN ISLAND	4.40	4		
Total	3.41	44		

Overall Average Submission Score - April				
Borough	Average Total Score	Inspections		
THE BRONX	3.32	9		
BROOKLYN	3.36	15		
MANHATTAN	3.15	10		
QUEENS	3.90	5		
STATEN ISLAND	4.13	3		
Total	3.42	42		

The WAMMA program has been a great success and significant motivator in elevating waste management conditions throughout the portfolio. The scores are communicated to property management staff at the developments, and WMD leadership pays special attention to those developments that are scoring poorly. Indeed, over the past several

years, some of the developments that were scoring worst among all developments at the outset have improved their waste conditions dramatically, and now score among the cleanest developments throughout the city. At present, the program is run by the Monitor, but we anticipate that WMD or another NYCHA department such as Compliance will assume control of the program in late 2023 or early 2024.

B. Caretaker Guide and Recycling First

To improve NYCHA's recycling program, WMD is preparing a comprehensive Caretaker Guide to instruct caretakers, on a step-by-step basis, how to collect, separate, and stow the various types of trash intended for special treatment or recycling. Simultaneously, WMD is preparing a checklist for caretakers on how to manage recycling, including collection and transport of recyclable items; storage and set-out for collection; form completion; and treatment of organics, mattresses, electronics and paint. These standardized instructions should make a positive difference in at least two respects. First, it will result in concentrated clean-up of these items, contributing to the cleanliness of development sites overall. Second, it will result in efficient, uniform treatment of these items in accordance with the high priority New York places on recycling, for the benefit of residents citywide.

C. Garbage Collection Rear Loader Pilot in East New York

Although the trash at most developments is stored in waste yard containers prior to removal by the Sanitation Department ("DSNY"), a minority of developments rely on curbside pickup. That presents several challenges, primarily because the longer the trash bags sit on the curb, the greater the likelihood that they will be ripped open (by the elements, animals, or people) and the trash scattered. As DSNY collects the trash only 2 or 3 days a week depending on location, the trash bag buildup between collections, and the attendant risks of dispersal, are significant. To combat this problem, WMD decided to purchase its own garbage trucks to collect the trash from curbside sites on the days when DSNY does not. Initially, WMD bought two six-yard rear-loading garbage trucks and employed them in a pilot program in seven developments in East New York. Below is a photograph of one of the trucks picking up NYCHA trash that will then be taken and unloaded at a transfer station:



The pilot has been a resounding success, resulting in trash pickups 5 and 6 days per week in neighborhoods that formerly were serviced only 2 or 3 days per week. In consequence, there has been marked improvement in trash conditions in these neighborhoods. Since November 2021, NYCHA's WMD trucks have run over 936 shifts for 68,376 hours, removing 2,787 tons of material from 5,247 stops, driving over 18,460 miles navigating thousands of narrow streets, double-parked vehicles, *etc.* Exemplary driving skills by the 6 Caretaker X's trained on these trucks have resulted in *zero* injuries or accidents. That, alone, is a remarkable, unprecedented achievement. Based on the program's great success, WMD ordered 12 new state-of-the-art 6-yard rear-loading garbage trucks to dramatically expand the program. Further, WMD has purchased a much larger, 25-yard truck, to further augment the service, shown below:



Although the six-yard trucks are highly effective in navigating the crowded, narrow streets in intensively settled neighborhoods in Brooklyn and elsewhere, their capacity is limited by their size. The 25-yard truck is ideal for wider thoroughfares, with a much greater capacity. In combination, these two sets of trucks will continue to improve the trash situation at urban curbside-pickup sites throughout the portfolio.

D. Mechanical Collection Pilot

WMD and A&CM have also initiated a pilot for mechanical collection of trash at Coney Island curbside collection sites, in specially designed vermin-proof containers. This will speed the collection of trash while protecting it from the elements, animals and people. Below is a photograph showing the mechanical collection in progress showing new vermin-proof receptacles similar to what is part of the pilot project:



This pilot will remove the manual collection of trash and recycling from the curb and supplement the WMD rear-loader pilot. Material will be stored in the containers until pickup, providing the WMD fleet with more flexibility on pickup times. The containers will be deployed in sets of three, providing storage for both recycling streams and garbage. This pilot is expected to begin in early 2024.

E. Trash Chute Door Repairs

Damaged or missing interior trash chute doors can be hazardous. If combustion occurs inside the chute, the smoke will rise and escape through any chute door that is not fully closed, potentially injuring persons and damaging property. Tragically, such incidents have occurred at NYCHA.

To address this problem, last year WMD undertook an ambitious program of trash chute door repairs and upgrades, starting with inspection of NYCHA's full portfolio of over 22,000 trash chute doors. All missing doors were immediately secured, with plans to perform repairs as follows: (a) replacement of 11 missing doors; (b) repair of 1,333 chute doors; (c) cleaning 2,934 chute doors; (d) repair or replacement of 636 chute door handles; (e) repair of 586 interior pans; and (f) signage improvement above 3,085 chute doors. That remedial program is underway. Further, WMD is working with the IT Department to build into Maximo a monthly hopper door inspection program that should aid in quickly identifying, and scheduling for repair, faulty trash chute doors.

Below is a photograph of a properly functioning, fully shut, trash chute door:



F. Rat-Proof Collection Bins

WMD is also piloting rat-proof outdoor trash and recycling collection bins for placement throughout NYCHA's developments. Trash deposit sites which formerly looked like this:



... now looks like this:



This pilot has been operational since April 2023 and has received positive feedback from staff and residents. Staff collection is more efficient with larger containers stored inside and residents have recycling bins that are more conveniently placed with adequate capacity. NYCHA is collecting data on this pilot to demonstrate the cleanliness of the pilot locations as well as recycling diversion and contamination.

G. Pneumatic Collection System at Polo Grounds and Upgrades from Hydraulic Ram to Auger-Type Compaction Systems

In June 2022, NYCHA selected a design-build team to design and construct a pneumatic waste collection system at the Polo Grounds Houses. Construction of the new terminal building for the system began in January 2023. The project is slated for completion, and should be in use, by the end of the summer 2024.

Simultaneously, WMD and A&CM are redesigning waste yards throughout the portfolio. These redesigns include storage for all material streams, including recycling, mattresses, e-waste, organics, and will be replacing exterior hydraulic ram trash compactors. The auger-type compactors accommodate both household garbage and bulk trash, providing containerized storage for this material. The yard redesigns fit within existing yard footprints and allow for much greater collection and storage capacity.

H. Interior Trash Compactor Conditions

Properly maintaining operational compactor rooms in development building basements is essential for every building's waste management conditions. A big part of this is keeping interior compactors in good repair and replacing them when necessary. NYCHA maintains

an aggressive program of ongoing maintenance of interior compactors: 5 to 6 Compactor Division maintenance worker teams are dispatched throughout the portfolio during the workweek and often on Saturdays to respond, investigate, diagnose and either repair directly or seek quotes from vendors for major repairs. These workers have the capacity to perform a variety of direct repairs, including pump replacement; hydraulic hose replacement; relays; switches; photocell replacement and light welding.

Expedited repairs that exceed the Compactor Division's direct capabilities, such as welding, fixing or replacing the compactor ram, cylinder, side plate, power pack, chassis, harness, fittings, and security gate, are performed by outside vendors pursuant to contracts with NYCHA.

During the monitorship, NYCHA has made considerable progress in repairing and replacing, where necessary, interior compactors throughout the portfolio. Data for calendar year 2022 through mid-June 2023, is reflective of that improvement. NYCHA's goal for repair of interior compactors is seven days from notification of the need for repair. The current rolling 12-month average is under that goal at 5.97 days. From January 1 through December 31, 2022, 4,248 work orders were created; 4,115 were closed, 21 were cancelled; and 112 were carried over into 2023. From January 1 through June 13, 2023, 2,509 work orders were created; 2,551 were closed, 12 were cancelled; and 58 remain open as of this report.

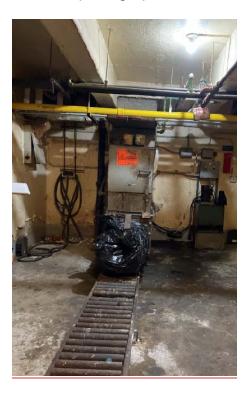
In addition to repair, considerable investment is being made in replacing worn-out compactor units that cannot be repaired in a cost-efficient way. Of course, both compactor repair and compactor replacement often require repair or replacement of ancillary equipment in the compactor room, embracing rollers, floors, upgraded wall paint, lighting fixtures, and floor strainer baskets to prevent clogs and stoppages.

In FY 2021, 23 developments were scheduled for interior compactor replacements, including 830 Amsterdam Avenue, Chelsea, Claremont Parkway-Franklin Avenue, De Hostos Apartments, Eagle Avenue-East 163rd Street, Elliott, Fulton, International Tower, Metro North Plaza, Monroe, Morris Park Senior Citizens Home, Mott Haven, Ravenswood, Saint Nicholas, South Jamaica I, Straus, Taft, Vandalia Avenue, West Brighton I, WSUR (Site A) 120 West 94th Street, WSUR (Site B) 74 West 92nd Street, WSUR (Site C) 589 Amsterdam Avenue, and Wyckoff Gardens. In FY 2022, compactor replacements were slated for 15 developments, including Adams, Amsterdam, Baisley Park, Berry, Glenwood, Gravesend, Haber, Hughes Apartments, Lincoln, Marble Hill, Mill Brook Extension, Mitchel, Shelton House, South Jamaica II and Vladeck II. In FY 2023, 11 developments are scheduled for interior compactor replacements, including Bay View, Brevoort, Cooper Park, Corsi Houses, Douglass I, Douglass II, Glenmore Plaza, Gowanus, Ingersoll, Jackson and Jefferson.

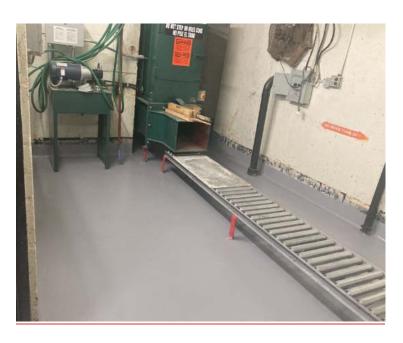
The completion rates for these projects as of June 1st are as follows:

CCAP FUNDING INTERIOR COMPACTOR REPLACEMENTS Key Milestones/Deliverables	Planned Complete Date	Projected/ Actual Complete Date	Current % Complete
City Capital Action Plan: FY21	12/31/2023	8/5/2024	61%
Interior Compactor Replacements			
City Capital Action Plan: FY22	12/31/2024	6/22/2024	64%
Interior Compactor Replacements			
City Capital Action Plan: FY23	12/31/2025	12/31/2025	0%
Interior Compactor Replacements			

Here are photographs of "before" and "after":







New Compactor Installation