



**Department
of Health**

Assessment of New York City Housing Authority (NYCHA) Properties

March 2018

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Executive Summary

At the request of Governor Andrew M. Cuomo, Commissioner of Health Dr. Howard Zucker and New York State Department of Health (NYSDOH) staff completed more than 300 environmental quality and lead assessments in New York City Housing Authority (NYCHA) developments across all five New York City (NYC) boroughs in March 2018. The deteriorated living conditions reported by many NYCHA tenants for years have been witnessed first-hand by the Governor and the Commissioner, and have been documented by NYSDOH inspection teams.

In 83 percent (212 out of 255) of the apartment units inspected, NYSDOH observed at least one severe condition – characterized as a condition that could pose a health hazard to the tenant(s). NYSDOH also observed severe hazards in 75 percent (48 out of 64) of common areas, which included lobbies, elevators, hallways, and stairways that tenants use multiple times each day. In the majority of these apartments and common areas, more than one environmental quality issue was observed. These included:

- Active and recent water intrusion damage,
- Significant chipping and peeling paint,
- Damaged plaster,
- Mold growth,
- Insect and/or rodent infestations,
- Inoperable appliances,
- Malfunctioning or missing smoke and carbon monoxide detectors

NYSDOH's mission is to protect, improve, and promote the health, productivity, and well-being of all New Yorkers. As such, NYSDOH promotes the concept of healthy housing as a means for preventing disease, injury, and poor health outcomes associated with lead poisoning, asthma, allergies, and unintentional injuries to people of all ages. The environmental conditions observed by NYSDOH in NYCHA developments represent unacceptable public health hazards.

In addition to the poor environmental quality conditions described above, the NYSDOH team also received numerous accounts describing a NYCHA repair ticket system that is inefficient, frustrating for tenants and NYCHA employees. The system was described as dysfunctional, as that the process incentivizes short-term, ineffective cosmetic repair in response to each complaint rather than identifying, addressing, and resolving the root cause. NYSDOH inspectors also observed that NYCHA does not have an effective, proactive process to assess and prioritize efforts needed to address building and apartment conditions or identify interconnected problems. The inability of NYCHA to conduct timely repairs in rapidly deteriorating buildings results in long delays in abatement and remediation, and lengthens the duration of exposure to potentially harmful and worsening conditions.

Overview

On March 12, 2018, the Governor Andrew M. Cuomo required the New York State Commissioner of Health to examine the reportedly hazardous conditions within New York City Housing Authority (NYCHA) run housing developments to protect New Yorkers. This announcement was made after Governor Cuomo toured the Jackson Houses, a NYCHA development located in the Bronx, with Commissioner Zucker.

At the direction of the Commissioner, the New York State Department of Health (NYSDOH) immediately began to assess NYCHA developments across New York City. The goals were to:

- Assess environmental health conditions in NYCHA developments in all five boroughs across New York City,
- Determine the extent to which conditions or questions affecting the security of life and health are present in NYCHA apartment buildings.

The NYSDOH developed a housing assessment protocol based, in part, on in-home assessments performed in the New York State Healthy Neighborhood Program (HNP). The housing assessment protocol used in NYCHA developments included a review for a variety of potential environmental health hazards including mold, insects, rodents, lead paint, lack of heat and hot water, and additional concerns. A complete list of the environmental quality hazards is provided in the *Overall Findings* section of this report. In order to assess the overall living conditions of NYCHA tenants, both individual apartment units and building common areas were inspected. Building common areas consist of lobbies, elevators, hallways and stairwells as well as some community rooms and senior centers. The intent of this examination was not to inspect every unit in every building, but to generally assess living conditions in a range of properties reported to be problematic across the NYCHA system. Each environmental quality condition examined in both units and common areas was classified according to a three-category scale:

- **Low Severity** – A minor issue is present.
- **Moderate Severity** – An issue is present that warrants a timely repair but does not constitute an immediate hazard to the occupant(s).
- **High Severity** – An issue is present that may be a hazard to the occupant(s).

In addition to a general environmental health assessment, a Lead Risk Assessment (LRA) was conducted in buildings built prior to 1978. The LRA, conducted pursuant to the U.S. Department of Housing and Urban Development (HUD) standard, assessed the overall condition of paint in the apartment unit. In these older buildings, lead dust wipe samples were also collected and analyzed for the presence of lead dust. While the sale of lead paint was banned in New York City in 1960 and was later banned nationally in 1978, NYSDOH performed LRAs on all units built prior to 1978 since some housing built between 1960 and 1978 has still been found to contain lead paint.

In an effort to complete the overall examination in an expedited manner, the NYSDOH engaged a certified contractor, Environmental Management Solutions of New York, (EMS of NY) to assist NYSDOH with inspections. Contracted inspection staff possessed appropriate U.S. Environmental Protection Agency (EPA) certifications to perform LRAs and received additional training from NYSDOH subject matter experts on the NYCHA housing assessment protocol and on a software application that NYSDOH and NYS Office of Information Technology Services (ITS) developed to document these inspections. Assessments were completed jointly by inspection teams consisting of NYSDOH staff and certified EMS of NY inspectors.

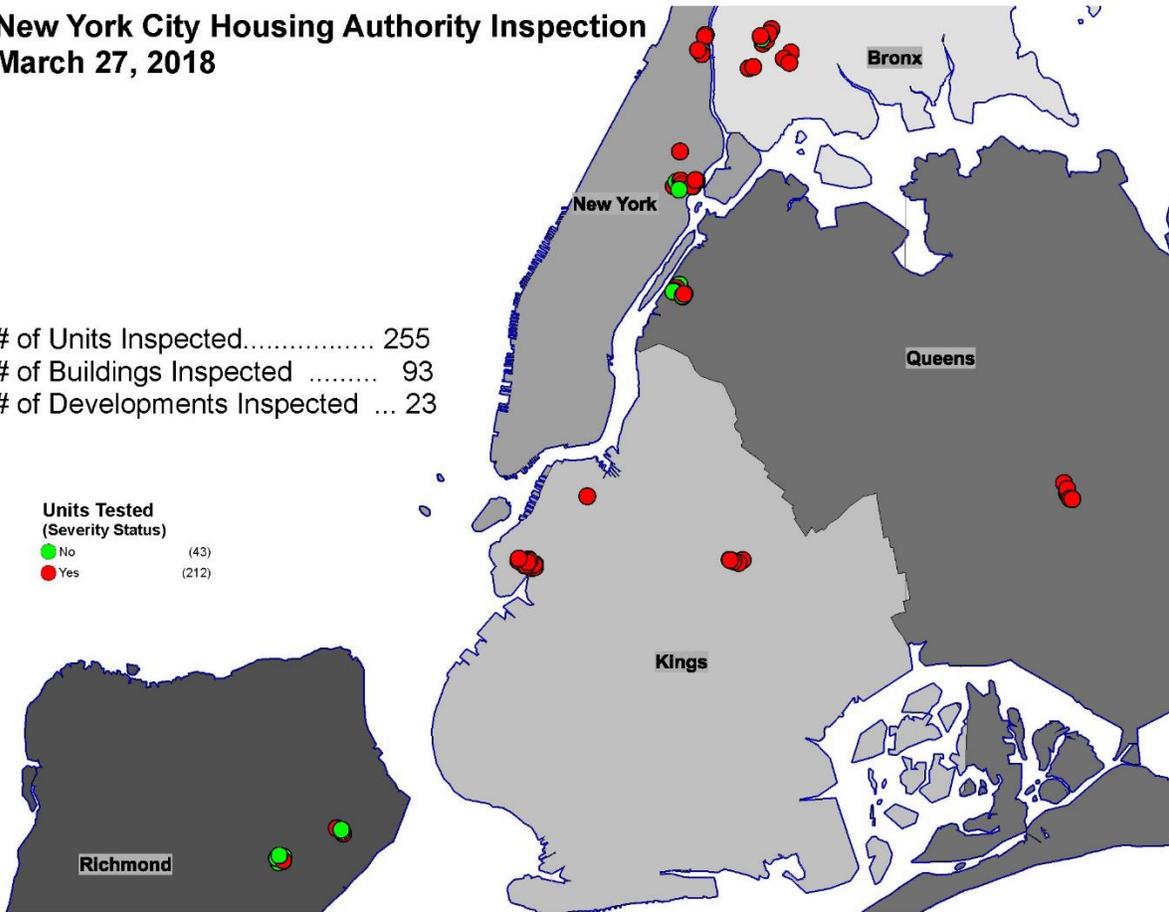
Through March 27, 2018, the inspection teams completed assessments of apartment units and common areas in 93 buildings at 23 NYCHA developments across all five boroughs. In total, 255 units and 64 common areas were inspected. In addition, 191 of lead dust wipe samples were collected from units and common areas across the NYCHA system and analyzed for the presence of lead dust.

**Map of Inspections Completed by DOH Inspection Teams
New York City Housing Authority Inspection
March 27, 2018**

**New York City Housing Authority Inspection
March 27, 2018**

of Units Inspected..... 255
of Buildings Inspected 93
of Developments Inspected ... 23

**Units Tested
(Severity Status)**
● No (43)
● Yes (212)



Potential Health Effects

The concept of healthy housing is a century-old idea that promotes safe, decent, and sanitary housing as a means for preventing disease and injury. Unhealthy conditions found in hazardous housing can lead to lead poisoning, asthma, respiratory illness, cancer, and unintentional injuries, resulting in missed school days and poor school performance for children, as well as missed work days for parents.

Housing stock that is both safe and affordable is attainable through proper maintenance. The following is a list of seven healthy homes principles of the National Center for Healthy Housing and the related health effects:

Dry

Damp houses provide an environment that encourages mites, roaches, rodents, and molds, all of which are associated with asthma.

Clean

Clean housing helps reduce pest infestations and exposure to contaminants. Proper trash disposal throughout the entire property is key to reducing pests and rodents.

Pest-free

Recent studies show a causal relationship between exposure to mice and cockroaches and asthma episodes in children; yet inappropriate treatment for pest infestations can exacerbate health problems, since pesticide residues in homes pose risks for neurological damage and cancer.

Safe

The majority of injuries among children and older adults occur in the home. Falls are the most frequent cause of residential injuries to children, followed by injuries from objects in the home, burns, and poisonings.

Contaminant-free

Chemical exposures include lead, radon, pesticides, volatile organic compounds, and environmental tobacco smoke. Exposures to asbestos particles, radon gas, carbon monoxide, and secondhand tobacco smoke are far higher indoors than outside. Tobacco smoke can travel between units and into common areas.

Ventilated

Studies show that increasing the fresh air supply in a home improves respiratory health.

Maintained

Poorly maintained homes are at risk for moisture and pest problems. Deteriorated lead-based paint in older housing is the primary cause of lead poisoning.



Crumbling wall caused by previous water intrusion in the Forest Development – Bronx

Overall Findings

By Hazardous Condition

Overall, the NYSDOH inspection teams found hazardous environmental and health conditions throughout the NYCHA system. Approximately 83 percent (212 out of 255) of all units inspected contained at least one high severity environmental quality hazard. Inspection teams found similar issues in building common areas with 75 percent (48 out of 64) containing at least one high severity hazard. The top three high severity issues found in NYCHA units were insect infestation (mostly cockroach infestations), issues with walls and/or floors and the presence of mold growth. A breakdown of environmental quality results is shown in Table 1.

Table 1. Environmental Quality Results in 255 NYCHA Units

Environmental Quality Criteria	High Severity	Moderate Severity	Low Severity
Inadequate Smoke / CO detector?	31	8	11
Exits not functioning properly?	10	9	13
Exposed electrical hazards?	16	14	15
Malfunctioning kitchen appliances?	17	22	24
Evidence of rodents?	43	10	14
Evidence of insect infestation?	121	28	37
Walls and floors in disrepair?	78	41	28
Windows or entry door in disrepair?	30	20	37
Water intrusion or plumbing, water, or sewage leaks present?	51	28	20
Lack of potable/hot water?	13	10	14
Inadequate sanitary facilities?	4	2	12
Presence of visible mold growth?	77	19	17
Inadequate temperature?	15	8	13
Paint condition in unit? (pre-1978)	144		

Smoke/Carbon Monoxide Detectors

After inspecting 255 units, 31 units were found to be without a working smoke or carbon monoxide (CO) alarm. In addition, 8 units were found to have detectors that were improperly located and an additional 11 units had detectors that were signaling a low battery. NYC Building Code requires placement of at least one functioning smoke/CO alarm in each unit. Smoke and CO alarms are critical to ensure tenants are properly notified of an emergency situation in their unit.

Exits/Doors/Windows

In general, most units that were inspected had exit doors and routes of egress that were unobstructed and functioning. However, 10 units contained exit doors that were either broken, blocked or missing. An additional noted hazard in multiple buildings was inoperable exit doors to stairwells. If a fire were to occur these exits could potentially be the only route of egress for tenants. Some elderly tenants reported to the NYSDOH inspectors that it was impossible for them to open the stairwell doors on their floors. These hazards were documented and reported to NYCHA development managers as an immediate hazard.

Many tenants reported that their windows were old and not functioning properly. Reported window issues included problems with opening/closing, bad seals, and broken glass.

Heat

Tenants in NYCHA-managed properties are unable to control the temperature in their units. Although generally, the units that were inspected had adequate heat, 15 of the units inspected were currently

without heat and many tenants reported that heat was sporadic during the winter months. Tenants reported that they were often without heat for days. When tenants are without heat during the winter months, they are often forced to find an alternative source of heat such as using an oven to heat the unit. These alternative heating methods can be hazardous, not only for the apartment unit tenant but other building tenants as well. When building boilers are functioning, many tenants are forced to open their windows to help regulate the temperature in their unit.

Exposed Electrical Hazards

Tenants commonly reported that electrical outlets in their units were inoperable. In over 17 percent (45 out of 255) of inspected units, tenants complained of electrical issues. DOH inspectors found severe electrical hazards in 16 of the inspected units across the NYCHA system. A severe electrical hazard was classified as actively arcing wires, blackened outlets or wiring indicating previous arcing/fire, and/or widespread minor issues. Although these issues were not seen widespread throughout the units inspected, any electrical hazard must be addressed immediately as they present a fire hazard for not just the unit but the entire building and potentially the entire development.

Kitchen Appliances

Tenants in 17 units reported that both their oven/stove and refrigerator were not functioning. An additional 22 tenants reported that either their oven/stove or refrigerator were not functioning at the time of inspection. Many tenants reported that they purchased their own appliances because the ones provided by NYCHA were not functioning. One tenant reported an injury caused by a stove malfunction when the top of his stove became dislodged during use and burned his stomach. In another unit, the stove was placed directly against the wall and charring was evident.

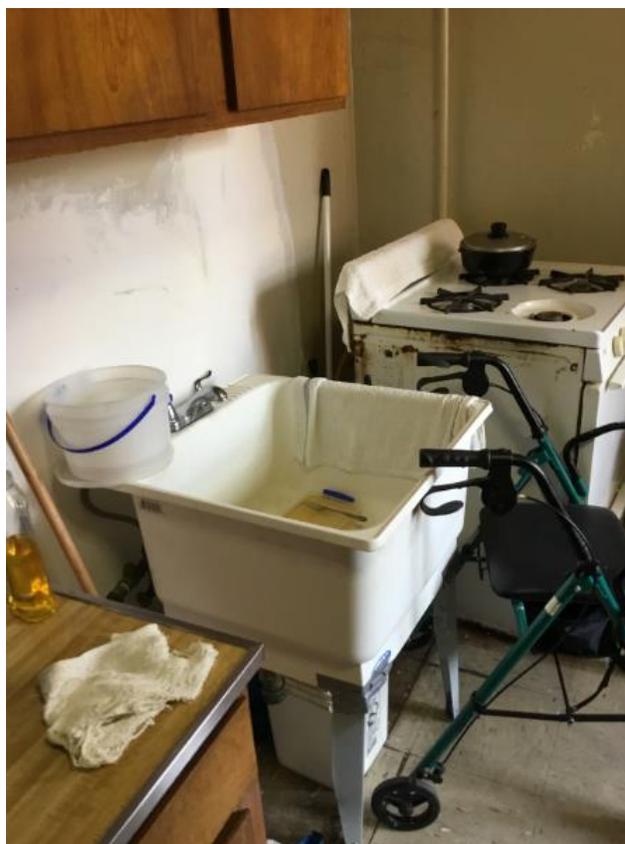
Evidence of Rodents

Approximately 17 percent (43 out of 255) of units inspected contained evidence of rodents. The inspection of some building common areas and outdoor areas around developments showed extensive rodent issues. Common problem areas included space near trash compactors and building foundations. According to the Centers for Disease Control and Prevention, "rodent-associated diseases affecting humans include plague, murine typhus, leptospirosis, rickettsialpox, and rat-bite fever." A high severity issue in this category was defined as live or dead rodents observed by an inspector.

Evidence of Insect Infestation

The most commonly found high severity environmental quality issue was insect infestations, often caused by cockroaches. A high severity insect infestation is defined as observed cockroaches, bedbugs and/or fleas. An insect infestation was found in approximately 47 percent (121 out of 255) of units inspected across the NYCHA system. Many tenants reported asthma issues to inspectors and cockroaches are an allergen source and an asthma trigger for tenants.

In addition to cockroaches, bedbugs were reported in multiple areas throughout the NYCHA system. In one instance, a homeless person living in the stairway at the roof level of a building may have caused a

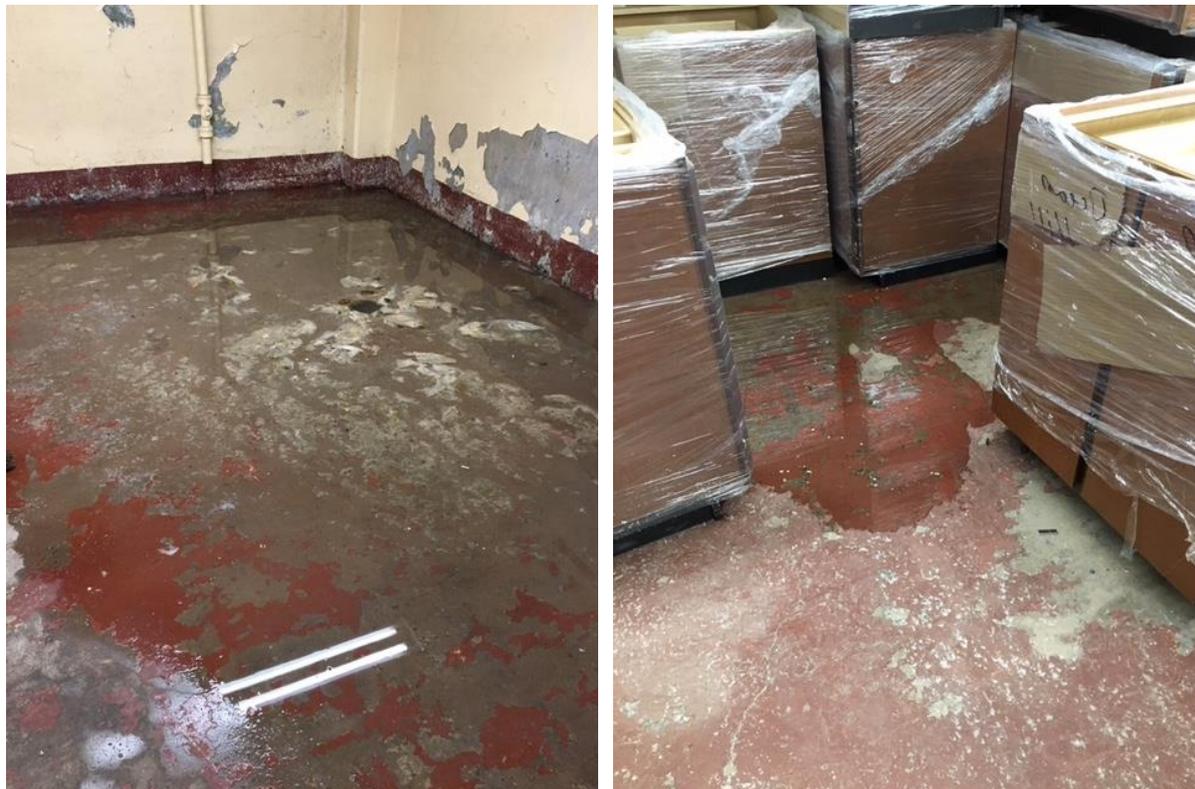


A wheelchair bound individual's kitchen consisted of a utility sink and a malfunctioning stove in the East River Development – Manhattan

bedbug infestation in a unit. A different tenant reported that a previous tenant had a bedbug infestation and she was forced to pay an exterminator to clear the unit before she began her lease. NYCHA was unsuccessful at clearing the apartment before leasing the unit again.

Walls and Floors in Disrepair

The walls and floors in many of the units inspected across the NYCHA system were found to be in disrepair. Over 30 percent (78 out of 255) of units inspected contained severe issues with walls or flooring. An additional 41 units contained walls with holes greater than 4"x 4". Large holes and structural issues can be an immediate hazard if structural integrity is compromised. In many cases, holes were created by water intrusion into the unit. Large holes can also be a potential route of entry for insect and rodents. About 58 percent (147 out of 255) of all units inspected contained some wall or flooring damage.



An ongoing sewage leak in the basement of a building in the Kingsborough Development – Brooklyn

Water Intrusion/Plumbing/Sewage Links

Widespread issues were seen throughout NYCHA developments with water intrusion and plumbing or sewage leaks. Twenty percent (51 out of 255) of all units inspected contained a severe issue with water intrusion. A high severity water intrusion issue is defined as any active flowing leak, a leak that has caused structural damage, or any sewage leak. In one instance, a tenant has been “forced to use an umbrella” in her bathroom because of an ongoing leak. Inspectors evaluating the unit directly above found no issues coming from this unit. The leak was occurring in the ceiling above the lower unit. In many units, potential structural issues appear to be caused by previous leaks that were never properly addressed by NYCHA maintenance staff.

Potable/Hot Water

Generally, inspected units had functioning cold and hot water. Tenants did report to inspectors that when the building lost heat, they also lost hot water as the systems are connected. A tenant living on the top

floor of a building described limited to no water pressure that was reported to NYCHA but not fixed for months. A high severity issue in this category was defined as a lack of hot or cold water in the unit.

Sanitary Facilities

Generally, sanitary facilities were operational throughout the NYCHA system. In 4 units, the sanitary facilities were inoperable. A high severity issue in this category was defined as multiple clogs or an inoperable toilet.

Mold Growth

Evidence of mold growth was seen throughout the NYCHA system. Mold problems appear to be most prevalent in unit bathrooms but evidence of mold growth was seen throughout some units. Mold growth can occur when sufficient moisture is present on a surface. It was apparent throughout the NYCHA system that bathrooms lacked adequate ventilation to properly remove moisture. Over 30 percent (77 out of 255) of units inspected contained some mold growth. In many cases the mold growth was severe in the bathroom of the unit. Tenants report that when they complained about mold growth in their units, NYCHA maintenance staff would only treat the mold once or paint over the issue and not address the root cause of the mold. Therefore, mold would often reoccur after a short period of time. Mold is another potential trigger for asthma.

Paint Conditions

Widespread chipping and peeling paint was found throughout the NYCHA system. Units in buildings built before 1978 received a LRA which looked at paint conditions throughout the unit. This inspection was based on HUD's de minimis threshold which triggers lead activities. A severe lead paint issue was noted when more than 10 percent of the fixture (wall, window sill, etc.) was chipping or missing. NYSDOH inspection staff noted poor paint conditions in 144 units. In many instances, tenants reported that years had gone by since their unit was painted by NYCHA. Multiple tenants reported that they were forced to paint their own apartments because NYCHA refused. Many issues with chipping and peeling paint appeared to be caused by water intrusion from outside of the unit. To assess any lead dust that may be present in the unit, dust wipe samples were collected from units built before 1978. Further explanation of the dust wipe samples is available in each borough description below.

Lead Dust Wipe Samples

In an effort to assess the issues with chipping and peeling paint in older buildings that could potentially contain lead paint, DOH inspectors collected lead dust wipe samples from units constructed before 1978. DOH inspectors collected 191 samples from unit floors throughout the NYCHA system. These samples were then analyzed in a laboratory for the presence of lead dust. Results indicated that 4 units contained levels of lead dust higher than the EPA's lead hazard level of 40 $\mu\text{g Pb}/\text{ft}^2$ and additional units had detectable levels of lead dust below the EPA standard. All units with lead dust levels over the EPA lead hazard threshold were immediately documented and reported to NYCHA management for action. Units were found with lead dust results over the EPA threshold where minors were currently living. The highest lead dust wipe sample was found with levels of 320 $\mu\text{g Pb}/\text{ft}^2$ in a bedroom in the South Jamaica II NYCHA development.



Unit Bathroom in Forest Development – Bronx

By Borough

Bronx

NYSDOH inspection teams assessed the housing conditions in six NYCHA developments in the Bronx:

- Claremont Rehab (Group 2), construction completed in 1987
- Claremont Rehab (Group 3), construction completed in 1985
- Claremont Rehab (Group 4), construction completed in 1986
- Claremont Rehab (Group 5), construction completed in 1985
- Forest, construction completed in 1956
- Jackson, construction completed in 1963

Although NYCHA acquired the Claremont Rehab group houses in the mid-1980s, these buildings were reportedly constructed many years before that time. Most of the environmental quality hazards identified in the Claremont Groups consisted of chipping and peeling paint, mold, insect infestations, and inoperable appliances. In the Jackson and Forest Houses, significant water intrusion damage was observed, which had caused major damage to ceilings, walls, and floors, and appeared to exacerbate the observed roach infestations. Large portions of apartment surfaces had significant plaster damage and older layers of paint were exposed. In one apartment in Jackson houses, neither the individual or combined smoke and carbon monoxide detectors were operable, which was brought to NYCHA's attention for immediate action.

Manhattan

NYSDOH inspection teams assessed the housing conditions in five NYCHA developments in Manhattan:

- East River, construction completed in 1941
- Harlem River, construction completed in 1937
- Harlem River II, construction completed in 1965
- Polo Ground Towers, construction completed in 1968
- Washington, construction completed in 1957

The inspection teams observed environmental conditions in apartments in developments in Manhattan that consisted of chipping and peeling paint, mold, broken plaster, insect infestations, inoperable stoves, and faulty construction by NYCHA, including a slop sink installed for a person with disability instead of a normal sink, or wheelchair accessible sink. Common areas in the East River Houses had excessive peeling paint and evidence of recent fires (charred areas). Four units were identified to have inadequate smoke/CO detectors, which was brought to NYCHA's attention for immediate action. In the Washington Development, Building 7 had one dust wipe sample detection of 44 µg Pb/ft². This sample was taken from the floor of a child's bedroom.

Brooklyn

NYSDOH inspection teams assessed the housing conditions in four NYCHA developments in Brooklyn:

- Kingsborough, construction completed in 1941
- Kingsborough Extension, construction completed in 1966
- Red Hook East, construction completed in 1939
- Red Hook West, construction completed in 1955
- Ingersoll Houses, construction completed in 1944

The primary environmental concerns observed by the inspection teams included water intrusion, mold, chipping and peeling paint, insect infestations, and inoperable appliances/facilities. Additionally, two issues were brought to NYCHA's attention for immediate action. The first: significant water leaks had caused damage in an apartment at 414 Columbia Street in which a tenant with physical disabilities is living. This apartment did not have a shower or bathroom sink; a toilet had recently been installed after a

reportedly long delay. The second item requiring NYCHA's immediate action was lights in a common area to a building at 831 Hicks Ave that were not working, causing a fire safety concern.

Queens

NYSDOH inspection teams assessed the housing conditions in four NYCHA developments in Queens:

- South Jamaica I, construction completed in 1940
- South Jamaica II, construction completed in 1954
- Queensbridge North, construction completed in 1940
- Queensbridge South, construction completed in 1940

Environmental conditions in Queens that were observed by the inspection team consisted of chipping and peeling paint, mold, broken plaster, insect infestations, including bed bugs in one apartment. The team noted excessive water damage and mold issues in many of the top floor apartments in South Jamaica I and II. In Queensbridge North and South missing smoke/carbon monoxide detectors was also an observation. A dust wipe sample that was collected from a floor a bedroom in South Jamaica II Building 12 was found to have 320 $\mu\text{g Pb}/\text{ft}^2$.

Staten Island

NYSDOH inspection teams assessed the housing conditions in two NYCHA developments on Staten Island:

- Berry, construction completed in 1950
- South Beach, construction completed in 1950

The team observed conditions in these two developments in Staten Island that consisted of chipping and peeling paint, roach and rodent infestations, inoperable doors and appliances, and mold. The team identified one immediate issue that was brought to NYCHA management for an inoperable smoke/CO detector.



Chipping paint in bedroom in the South Jamaica Development. Lead dust sample of 320 $\mu\text{g Pb}/\text{ft}^2$ – Queens

Recommendations

The New York State Department of Health recommends the following actions:

- NYSDOH observed at least one severe condition in 83 percent of the units and 75 percent of the common areas inspected within NYCHA housing. Given these findings, **NYCHA should conduct a comprehensive assessment of all NYCHA apartments.**
- Repairs performed by NYCHA maintenance staff are often made without addressing the root cause of the condition, for example by painting over mold or repairing water damaged walls without addressing the fundamental water intrusion. **NYCHA must take a holistic approach to making permanent repairs.**
- The NYCHA ticketing system for the identification and tracking of needed repairs for reported conditions is ineffective. Tenant confidence in the ticket process is low, and in many observed cases abandoned. Tenants reported to NYSDOH inspectors that repair tickets were preemptively closed without any actual or effective repair occurring. **NYCHA should conduct a thorough review of its repair ticket system and should institute a new process for identifying, tracking repairs that includes a secondary review to assure that root causes are identified, tracked and addressed.**
- NYSDOH inspectors noted widespread issues with chipping/peeling paint and deteriorated plaster. Dust wipe samples for lead were collected as part of this examination; results indicated the presence of lead in some units. **NYCHA must complete the assessment of lead paint conditions as required by HUD, including the use of certified lead inspectors.**
- Building heating system lack tenant control and tenants routinely open windows to regulate the temperature of their units. **NYCHA should adopt policies to implement energy efficient methods of heating properties.**
- NYSDOH promptly informed NYCHA of hazards that warranted urgent attention and will be transmitting a comprehensive report of findings of its inspections to NYCHA. **NYSDOH will require NYCHA to report on its activities to address all issues of high severity as they represent a potential hazard to tenants.**