



**Center for Buildings, Infrastructure and Public Space**

## **Housing and Sustainability**

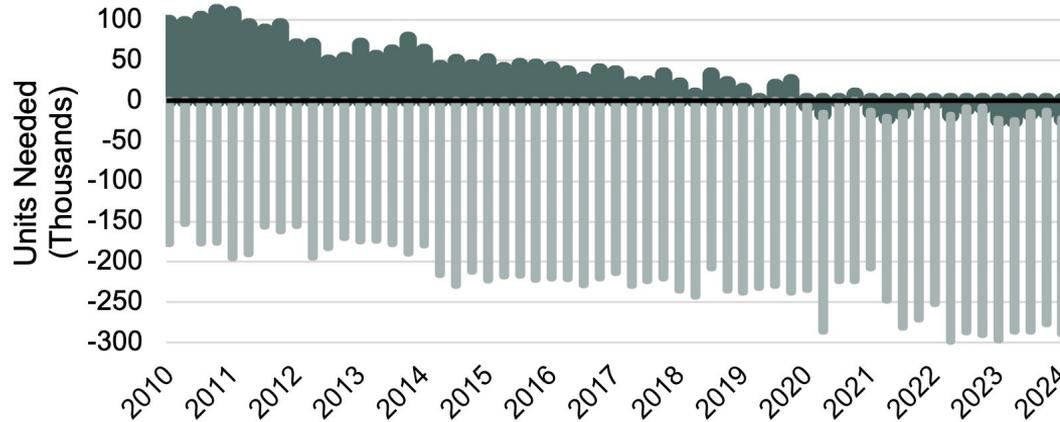
By: Prakeerth Ammisetty, Aarti Dasari, Shivani Venugopal, Saitejasvi Deshmukh

1. New York's Housing Market
2. NYCHA- The Five Boroughs
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4. Key Statistics on NYCHA's P3 Initiatives
5. Willets Point Phase 2
6. Resilient and Equitable Decarbonization Initiative (REDi)
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## New York State Housing Shortage

Source: Dodge Construction Network

■ For-Sale Units ■ For-Rent Units

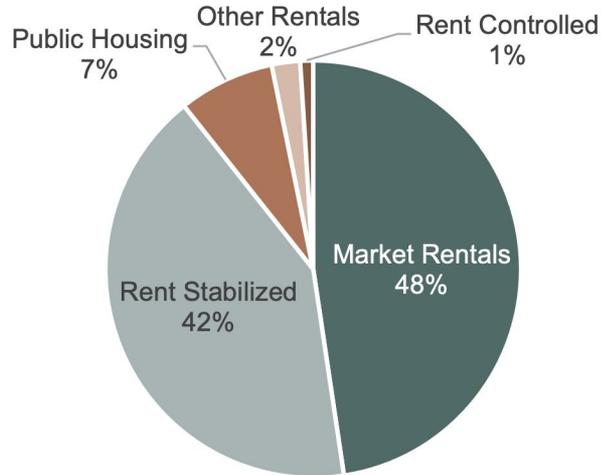


- Consistent **decline** in housing supply from 2010 to 2024, especially for-rent units.
- Severe rental unit shortage exceeding 200,000 units by 2024.
- Policy interventions needed to boost rental housing and affordable units.
- For-sale units show stability, but rental shortages dominate the market.
- Focus on sustainable construction practices to address the growing gap.

Resource: <https://www.construction.com/blog/2024-new-york-housing-market/>

## Rental Units by Type of Housing

Source: New York City Housing and Vacancy Survey 2023



Resource: <https://www.construction.com/blog/2024-new-york-housing-market/>

- 42% of units are Rent Stabilized, offering tenant protections.
- Public Housing and Rent-Controlled units account for only 8% combined.
- Other Rentals make up a small 2%, indicating limited diversity in housing types.
- **Highlights the need for policies to expand affordable housing options.**



Founded: 1935

Mission: Provide affordable housing for low- and moderate-income New Yorkers

Home to 1 in 17 New Yorkers (~528,105 residents)

Housing Programs:

- Public housing (Section 9)
- Permanent Affordability Commitment Together (PACT)
- Section 8 housing

Key Statistics:

- Residents Served: 360,970
- Developments: 335 conventional public housing & PACT developments
- Apartments: 177,569
- Section 9: 330,118 residents in 161,585 apartments across 274 developments
- PACT: 30,852 residents in 15,984 apartments across 61 developments

## PACT (Permanent Affordability Commitment Together) to Preserve Program

**Goal:** Convert 62,000 apartments over 10 years

**Mechanism:** Uses HUD (Housing & Urban Development) Section 8 programs, including RAD (Rental Assistance Demonstration)

**Progress:** 37,851 units in PACT process as of 2024

**Financial Impact:** \$13.2 billion in renovations facilitated



## Key Benefits of P3 Approach

- Unlocks more federal funding
- Allows access to private capital for repairs
- Improves management efficiency
- Maintains permanent affordability



# Key Statistics on NYCHA's P3 Initiatives:

- Progress as of **January 2024**: **36,103 apartments across 137 developments** have undergone or are in the process of conversion
- In **2023 alone**, RAD-PACT projects accounted for **\$2 billion in renovations** for over 8,500 apartments in 17 developments
- Total estimated renovations facilitated through PACT: **\$13.2 billion**
- NYCHA's current 5-year capital need: **\$32 billion**
- NYCHA 2.0 plan aims to address **\$24 billion in capital repairs** over 10 years through various initiatives including PACT
- Conversion from **Section 9 to Project-Based Section 8** unlocks nearly twice as much federal funding



PACT Overview



PACT Projects & News



Resources for Residents



Resources for Partners & Vendors



PACT Progress and Oversight

## PACT Investment & Improvement

### Building Systems



New and improved building systems and facades at Ocean Bay (Bayside) and Baychester



### Common Areas



Building improvements at Ocean Bay (Bayside)

### Sites and Grounds



Site improvements at Baychester and Bantock



### Apartments



Newly renovated apartments at Twin Parks West



The New York City Council has approved Phase 2 of the Willets Point transformation, marking a significant advancement in one of the city's most ambitious redevelopment projects.

## Key Components:

- **Affordable Housing:** Introduction of 1,400 affordable housing units, contributing to a total of 2,500 units—the largest 100% affordable housing project in NYC in 40 years.
- **Public Amenities:** Development includes over 150,000 square feet of public open space, a new public school, and retail spaces, enhancing community infrastructure.
- **Sports Facility:** Construction of NYC's first soccer-specific stadium, a 25,000-seat venue for the New York City Football Club, privately financed and expected to open by 2027.

**Mayor Adams, Councilmember Moya, New York City Football Club Break Ground on New Soccer Stadium, Etihad Park, in Willets Point**

## Economic Benefits:

- The project is projected to generate over 14,000 construction jobs and more than 1,500 permanent jobs, boosting local employment.
- Anticipated to add over \$6 billion in economic impact over the next 30 years, revitalizing the local economy.

## Community Enhancements:

- Transformation of previously underutilized land into a vibrant, sustainable neighborhood, addressing historical contamination issues.
- Provision of new public spaces, educational facilities, and affordable housing aims to improve quality of life for residents and foster community engagement.



## Funding

- \$16.5 million available for existing affordable housing
- Collaboration between NYSERDA and NYC Department of Housing Preservation and Development

## Objectives

- Decarbonize and improve existing affordable housing
- Provide electrification and energy efficiency retrofit upgrades



Resources: <https://www.governor.ny.gov/news/governor-hochul-announces-165-million-now-available-decarbonize-affordable-housing-new-york>

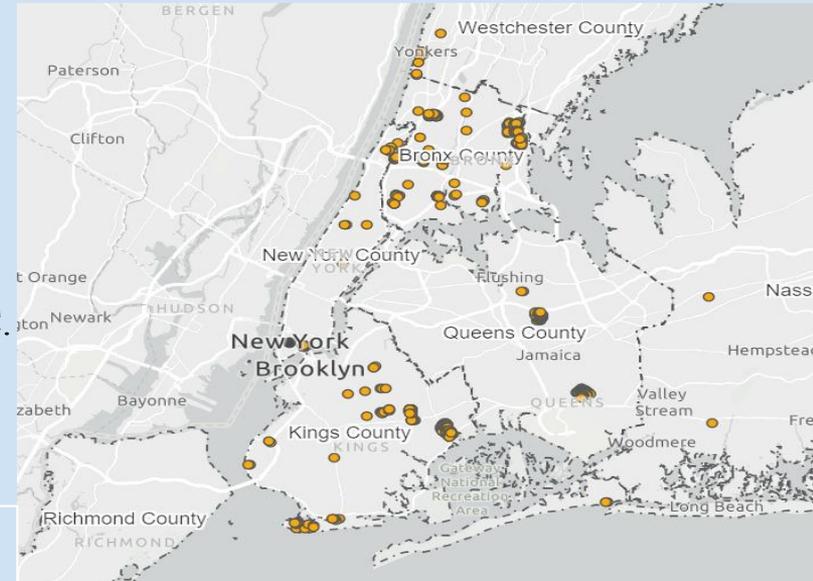
## Overview

- **Established:** 1955
- **Purpose:** Provide affordable rental and cooperative housing to middle-income families.
- **Management:** Supervised by the NYC Department of Housing Preservation and Development (HPD).
- **Developments:**
  - 93 city-supervised developments
  - 46,902 units (as of February 2024)

## Key Insights

- **Affordable Housing Impact:**
  - Balances low- and middle-income housing needs in NYC.
- **Challenges:**
  - Maintenance and operational inefficiencies.
  - Aging infrastructure demands significant investment.

Resources: [HCR Multifamily Asset Map](#) | [Homes and Community Renewal](#)



## Audit Insights

- **Safety Concerns:**  
Hazardous conditions like mold, collapsed ceilings, and faulty fire doors in 3 developments.
- **Financial Oversight:**
  - \$1.6 million in unsupported transactions.
  - Loss of \$1.5 million in rental revenue from prolonged vacancies.
- **Management Issues:**
  - Poor handling of vacant units and arrears collection.

## Key Recommendations

- Improve monitoring and timely repairs.
- Strengthen fiscal management with competitive bidding and clear policies.
- Expedite filling vacant units to mitigate revenue loss.

Resources: [Office of the New York City Comptroller Brad Lander](#)



Missing Steps in North Shore



Collapsed ceiling in a bathroom of Arverne Unit

NYCHA Sustainability Agenda - Key goals to create healthier, safer, and more comfortable homes for residents while ensuring long-term sustainability:

1. Reduce greenhouse gas emissions by 80% by 2050
2. Cultivate healthy and resilient communities based on design excellence
3. Empower residents and communities
4. Ensure efficient building operations
5. Leverage all funding and finances towards healthier and decarbonised buildings

NYCHA's sustainability efforts have gained recognition, with New York City being selected as a finalist for the C40 Cities Bloomberg Philanthropies Award in 2022 for NYCHA Sustainability Agenda

To achieve these goals, NYCHA has implemented various strategies:

## Waste Management

- Expanding recycling efforts and piloted food waste composting initiatives to align with zero-waste goals.
- Smart Waste Systems such as automated trash compactors.

## Community Engagement and Empowerment

- Mobilize community activation through resident-led sustainability programming
- Expand NYCHA farms, gardens, and urban agriculture programs

## Resource Management

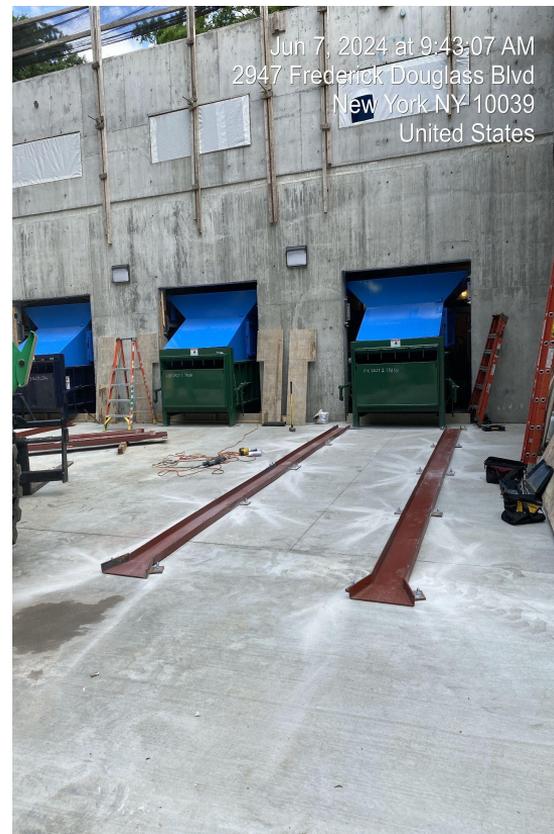
- Implement recycling programs across all developments
- Execute Energy Performance Contracts (EPCs) to lower energy consumption

# Case Study: Pneumatic Waste Collection System

NYCHA's Polo ground towers stand tall in place of the famous Polo ground stadium, once home to the New York Giants.

- Waste collection through pressurised vacuum suction.
- The \$32 Million design-build job:
  - Serving 1600+ Apartments and 3500 residents
  - Saves 12000+ hours of labour
- First pneumatic waste system in the US to automate recyclables collection.
- 3 waste collection Compactors, and 1 recyclables compactor
- **Future Expansion:** Connect adjacent Rangel Houses.
- 100+ successful transactions in just over 10 days.





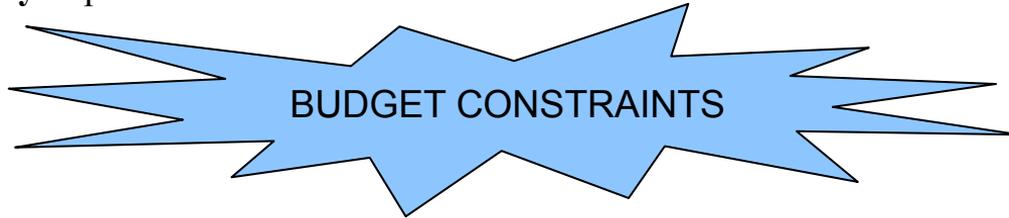
**BUT!!!...**

# CASE STUDY: LEAD HAZARD REDUCTION PROGRAM

In 2020 NYCHA pledged the abatement of lead based paint from all their developments to tackle the crisis that affected 1,100 children since 2012

**AIM:** Identify & mitigate lead-based paint hazards in NYCHA's pre-1978 buildings to protect residents, particularly young children, from lead poisoning.

**Priority:** Apartments with Children under 6 Years



- The funding allocated to the program is often insufficient to address all the units requiring lead hazard remediation.
- Though NYCHA sought additional funding from federal and state sources, Delays in securing grants and funding often push back the timeline



- <https://cbcny.org/research/nycha-20-progress-risk>
- <https://citylimits.org/2023/04/04/nycha-plan-to-put-units-under-private-management-is-more-than-halfway-done-but-skepticism-persists/>
- <https://citylimits.org/2024/10/04/in-one-day-four-nycha-developments-convert-to-pact-private-management/>
- <https://www.nyc.gov/site/nycha/about/sustainability.page>
- <https://www.nyserda.ny.gov/About/Newsroom/2022-Announcements/2022-08-02-Governor-Hochul-and-Mayor-Adams-Announce-Clean-Heat-for-All>
- <https://www.nyc.gov/assets/nycha/downloads/pdf/nextgen-nycha-web.pdf>
- Image Source: <https://nychanow.nyc/progress-on-nychas-pact-program/>, <https://www.nyc.gov/site/nycha/about/pact.page>
- Image Source: <https://www.gilbaneco.com/projects/manhattanville-pact/>
- [https://www.google.com/url?sa=i&url=https%3A%2F%2Fon.nyc.gov%2Fnycha-pact&psig=AOvVaw31OBm7EacV-zjWanjgJvVx&ust=1732260493892000&source=images&cd=vfe&opi=89978449&ved=0CBOQjRxqFwoTCPCaqK\\_z7IkDFOAAAAAdAAAAABAE](https://www.google.com/url?sa=i&url=https%3A%2F%2Fon.nyc.gov%2Fnycha-pact&psig=AOvVaw31OBm7EacV-zjWanjgJvVx&ust=1732260493892000&source=images&cd=vfe&opi=89978449&ved=0CBOQjRxqFwoTCPCaqK_z7IkDFOAAAAAdAAAAABAE)
- **Resources:** [New York YIMBY](#), [Associated Press](#), [NYC.gov](#), [EDC](#)

# THANK YOU