NEW YORK CITY HOUSING AUTHORITY

NEW YORK, NEW YORK

A Component Unit of The City of New York

COMPREHENSIVE
ANNUAL FINANCIAL REPORT
FOR THE
YEARS ENDED
DECEMBER 31, 2018 AND 2017

Kathryn Garcia
Interim Chair & Chief Executive Officer

Vito Mustaciuolo
General Manager

Plachikkat V. Anantharam
EVP and CFO of Finance

Daniel Frydberg
Controller

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

New York City Housing Authority

New York

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

December 31, 2017

Christopher P. Morrill

Executive Director/CEO

New York City Housing Authority

New York, New York

Comprehensive Annual Financial Report

For the Years Ended December 31, 2018 and 2017

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Kingsborough Houses, Brooklyn

Pomonok Houses, Queens

RIIS Houses, Manhattan

South Beach, Staten Island

NEW YORK CITY HOUSING AUTHORITY
250 BROADWAY • NEW YORK, NY 10007
TEL: (212) 306-3000 • http://nyc.gov/nycha

KATHRYN GARCIA
INTERIM CHAIR & CHIEF EXECUTIVE OFFICER

May 17, 2019

Members of the Authority
New York City Housing Authority
250 Broadway – 12th Floor
New York, New York 10007

The Real Estate Assessment Center ("REAC") of the U.S. Department of Housing and Urban Development ("HUD") requires that all public housing authorities publish, within nine months of the close of each fiscal year, a complete set of financial statements presented in conformity with accounting principles generally accepted in the United States of America ("GAAP") and audited in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* by a firm of independent certified public accountants. Pursuant to that requirement, we hereby issue the Comprehensive Annual Financial Report ("CAFR") of the New York City Housing Authority (the "Authority" or "NYCHA") for the year ended December 31, 2018.

This report consists of management's representations concerning the finances of the Authority. Consequently, management is responsible for the completeness and reliability of all the information presented in this report. To provide for a reasonable basis for making these representations, management of the Authority has established a comprehensive internal control framework that is designed both to protect its assets from loss, theft, or misuse and to compile sufficient reliable information for the preparation of the Authority's financial statements in conformity with GAAP. Because the cost of internal controls should not outweigh its benefits, the Authority's comprehensive framework of internal controls has been designed to provide reasonable rather than absolute assurance that the financial statements will be free of material misstatement. As management, we assert that to the best of our knowledge and belief, this financial report is complete and reliable in all material respects.

The Authority's 2018 financial statements have been audited by independent public accountants, Deloitte & Touche, LLP. The purpose of the independent audit is to provide reasonable assurance that the financial statements of the Authority present fairly, in all material respects, the financial position of the Authority.

The independent audit involved performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Authority's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

The independent auditors issued an unmodified opinion on the Authority's financial statements for the years ended December 31, 2018, and December 31, 2017, indicating that they were fairly presented, in all material respects, and in conformity with GAAP. The independent auditors' report is presented as the first component of the financial section of this CAFR.

GAAP requires that management provide a narrative introduction, overview, and analysis to accompany the basic financial statements in the form of Management's Discussion and Analysis ("MD&A"). This letter of transmittal is designed to complement MD&A and should be read in conjunction with it. The Authority's MD&A can be found immediately following the independent auditors' report.

Profile of the Authority

The Authority, created in 1934, is a public benefit corporation chartered under New York State Public Housing Law. The Authority is a component unit of the City of New York.

The Authority provides affordable housing to approximately 371,000 low- and moderate-income New York City residents in 316 housing developments with approximately 174,000 apartments in the five boroughs. Through the Section 8 Housing Choice Voucher Program, the Authority assists approximately 86,000 families in locating and renting housing in privately owned buildings, housing approximately 193,000 residents.

The Authority's basic financial statements consist of a single enterprise fund, which includes the following programs:

- Low Rent Housing Program
- Public Housing Capital Fund Program
- Section 8 Housing Choice Voucher Program
- Section 8 Rental New Construction Program
- Other Grant Programs

Please refer to Note 1 to the financial statements for a description of Authority programs. For further analysis, we have also included supplemental financial schedules for the programs individually, which can be found following the notes to the basic financial statements.

The Authority's basic financial statements also include the following blended component units:

- NYCHA Public Housing Preservation I, LLC
- NYCHA Public Housing Preservation II, LLC

Please refer to Note 23 to the financial statements for a description of these component units.

Factors Affecting Financial Condition

To assess the Authority's overall financial condition, the following information contained within the Authority's financial statements should be considered in connection with an understanding of the following major factors affecting its financial condition:

Congressional Budget and HUD Policy. As a public housing authority ("PHA"), the Authority's primary source of funding is HUD. The amount of funding received from HUD is affected by Congressional housing legislation and federal appropriations. The Authority continually monitors changes and trends in the Congressional bills and HUD policy and adjusts its strategy and financial planning accordingly.

Operating Fund Rule. HUD's operating fund rule became effective on November 18, 2005. The rule amended the Public Housing Operating Fund Program's regulations and provided a new formula for the distribution of operating subsidies to PHAs. This rule converted public housing to a development-based system of management, accounting, and funding. It also required PHAs to convert within five years of the effective date. The change was driven by the real property concept of asset management, in which a property manager considers both the short-term needs and the long-term positioning of real estate assets.

The rule was estimated to reduce the Authority's annual funding by over $60 million. For PHAs that would not benefit from the new formula funding, HUD provided additional incentive funding for early conversion on a sliding scale over a five-year period. On December 21, 2008, HUD approved the Authority's Year 2 "Stop-Loss" package, which has the effect of increasing NYCHA's subsidy eligibility by about $46 million annually.

Capital Fund Program. The Capital Fund Program provides financial assistance in the form of grants to public housing authorities to carry out capital and management activities, including those listed in Section 9(d)(1) of the United States Housing Act of 1937. Congress provides Capital Funds through annual appropriations. The Capital Fund formula factors modernization backlog (existing modernization needs) and accrual needs in the calculation. The Capital Fund Rule became effective on November 25, 2013, and combined the exiting Capital Fund and development regulations into a consolidated regulation.

Section 8 Housing Choice Voucher Program. The Housing Choice Voucher (HCV) Program is a federally funded program that provides rental assistance to eligible low-income families to fund affordable housing in the private rental market. The Authority's HCV program is the largest in the United States. Nearly 30,000 property owners currently participate in the program.

2018 Subsidy. During 2018, the Authority received $937 million, or 94.7 percent of its eligible operating subsidy from HUD, and $346 million in in funding from HUD for the Public Housing Capital Fund Program. The Authority's 2018 Capital Fund allocation was $528 million. Also, during 2018, the Authority received $1,141 million in subsidies from HUD for the Section 8 Housing Voucher Programs.

HUD's Public Housing Operating Fund provides subsidies to PHAs nationwide to operate and maintain public housing in local communities. However, appropriations have generally fallen short of the funding levels required to fully fund public housing operations in accordance with HUD's eligibility formula. It is also important to note that while HUD's formula takes location into account, New York City has long advocated that the system is inequitable when one considers the city's uniquely high construction and employment costs in comparison to authorities across the US. In FY 2018, PHAs nationwide were eligible to receive $4.66 billion. However, the final appropriation was $4.4 billion, which translates to 94.7 cents for every dollar PHAs were eligible for based on operating formula (effective proration at 94.7 percent). The 2019 plan assumes an effective proration at 92.5 percent based on projected eligibility of the previous three years (2016-2018). Owing to intervention from Congress, 2019 appropriations are higher than anticipated; with an expected proration of 97 percent, NYCHA will receive approximately an additional $50 million than was budgeted.

Federalization of New York State and City of New York Developments. Subsidy funding for 21 developments originally built by the State of New York and the City of New York was eliminated by the State in 1998 and by the City in 2003. A first step in addressing the funding shortfall for these 21 State- and City-built developments was taken on September 21, 2008, when the Authority received approval of its management plan for its Section 8 Voluntary Conversion Program. Through the end of 2017, the Authority converted 4,700 units in the State- and City-built developments to Section 8 funding. The American Recovery and Reinvestment Act of 2009 (ARRA) presented PHAs across the country with an opportunity to re-invest in and develop public housing units. NYCHA capitalized on this opportunity to seek funding for the 21 State- and City-built developments. NYCHA became eligible to receive approximately $65 million in recurring annual operating and capital subsidies for nearly 12,000 units at these developments. During 2018, 2017, and 2016, the Authority received $67 million, $61 million, and $62 million, respectively, in operating subsidies for these units.

Financial Results. The Authority's *Loss before capital contributions* for 2018 was $268 million, compared to a loss of $331 million for 2017. The decrease in the loss for 2018 was mainly the result of increases in non-operating revenues and expenses totaling $361 million, partially offset by increases in operating expenses of $296 million. While the Federalization of the State- and City-built developments has helped to reduce the Authority's historical budget deficits, ongoing structural operating deficits are projected to continue, primarily attributable to federal underfunding of public housing and increased employee entitlement costs. NYCHA's 2019-2023 Five-Year Operating Plan includes initiatives to increase revenue, contain costs, and operate as a more efficient landlord. These include:

Strategic Priorities

With new initiatives underway, the Authority is working to strengthen our organization and our delivery of services to residents – and ensure the longevity of public housing in New York City.

Physical Needs Assessment. In 2016, NYCHA engaged a consulting firm to perform a Physical Needs Assessment (PNA) of the complete NYCHA portfolio of buildings. The goal was to get a sound and thorough understanding of the existing conditions of NYCHA buildings and grounds. The PNA concluded that the total projected cost of all needs – repair and replacement – over the next five years is $31.8 billion. The bulk of this need is due to the aging NYCHA portfolio; the average age of a NYCHA building is roughly 60 years, and 70 percent of the portfolio was built prior to 1970.

In December 2018, the Authority unveiled NYCHA 2.0, a comprehensive plan to preserve public housing. This plan will resolve $24 billion, or up to 75 percent, of NYCHA's estimated $31.8 billion overall capital need, primarily through the Permanent Affordability Commitment Together (PACT) initiative. PACT centers on the conversion of public housing funding to Section 8 project-based vouchers and the creation of public-private partnerships to address the needs of NYCHA's developments. Under PACT, NYCHA seeks to identify resources and opportunities to make major physical and operational improvements while preserving long-term affordability, maintaining strong resident rights, and stabilizing developments by providing them with a more stable flow of federal subsidy.

Rental Income. Rent provides a significant portion of the Authority's income. In accordance with HUD requirements and changes in federal law, NYCHA increased flat rent to 80 percent of Fair Market Rent (FMR). The flat rent is increased based on increases in the FMR. Flat rents are the maximum rents charged for rent and are based on rent charged for similar units in the private, non-subsidized rental market.

Improve Resident Safety. In conjunction with the Mayor's Office of Criminal Justice (MOCJ) and the NYC Office of Management and Budget (OMB), in March 2016 NYCHA initiated a study to assess the impact of lighting on crime in NYCHA developments. NYCHA installed and continues to maintain 400 temporary light towers at 40 developments, and it submits relevant data on these light towers to the Crime Lab at the University of Chicago. Additionally, MOCJ provided $443,000 for upgrades to the permanent lighting fixtures at two developments: Jefferson and Whitman Houses. Due to the success of this pilot program, MOCJ and the City have allocated both Operating funding ($3.9 million) and Capital funding ($44.7 million) to upgrade 42 additional developments over the next three years. Most of the selected developments are part of the light study program, where the temporary light towers will be replaced by permanent upgrades to the existing fixtures.

Alternative Work Schedule (AWS). In February 2019, NYCHA announced the launch of Alternative Work Schedule (AWS), a new way of scheduling certain front-line staff that ensures greater coverage at its developments. Under this program, NYCHA will have caretakers, their supervisors, assistant resident building superintendents, and resident building superintendents working at developments from 6 a.m. to 7 p.m., seven days a week, through five staggered schedules.

The rollout of AWS began on April 1, 2019, at 13 consolidated developments: Farragut, Ingersoll, Marcy, Stuyvesant, Tompkins, and Whitman Houses in Brooklyn and Clinton, Dyckman, Harlem River, Polo Grounds Towers, Rangel, Riis, and Saint Nicholas Houses in Manhattan. It will be rolled out to all developments across the city by early 2020.

Compliance. The position of Executive Vice President (EVP) of Compliance was created in late 2017 to help NYCHA ensure compliance with federal, state, and local obligations and the accuracy of external reporting and statements. The following are five functional units under the EVP of Compliance:

- Regulations and Procedures,
- Communications and Training,

- Compliance Assessment and Monitoring,
- Issue and Complaint Management, and
- Compliance and Reporting.

Each unit under the Compliance Department will be focused on compliance risk management, implementation of corrective actions, monitoring compliance with regulations and procedures, and providing guidance and training to minimize lapses in compliance while ensuring the effectiveness of NYCHA's operations.

Creation of New Departments. Pursuant to its agreement with HUD, NYCHA created two new departments**:** Environmental Health and Safety and Quality Assurance.

The Environmental Health and Safety Department will assist NYCHA in its work to ensure decent, safe, and sanitary environments for NYCHA's residents and employees. There are four sub-units under Environmental Health and Safety: Analysis and Reporting; Building Systems Safety; Environmental Hazards; and Employee Safety.

The Quality Assurance Unit will provide objective assurance to management, regulators, and the Monitor appointed under the HUD agreement that work orders are completed and meet the applicable standard of quality from both staff and vendors.

NYCHA Cares. NYCHA Cares launched in July 2018 as an initiative targeting three developments with the largest backlogs for specialized repairs requests: Manhattanville Houses in West Harlem, Queensbridge South Houses in Queens, and Kingsborough Houses in Brooklyn. In all, 13,225 work orders were completed in Round 1 of the program. Round 2 of NYCHA Cares addressed 14,265 work orders at Baruch Houses in Manhattan, Parkside Houses in the Bronx, and Pink Houses in Brooklyn. As part of Round 3, NYCHA Cares is underway at Wagner Houses in Manhattan, Castle Hill Houses in the Bronx, and Pomonok Houses in Queens. So far, 1,920 work order requests have been closed at the three newly targeted developments. NYCHA Cares is committed to closing 75,000 backlogged skilled trades work orders by 2021.

Office Space Consolidation. As part of NYCHA's efforts to stabilize its finances, the Authority is creating significant cost savings by consolidating its central office locations, most notably by moving all staff from 250 Broadway. Throughout 2019, staff from 250 Broadway, and a few other locations, are moving into upgraded spaces at NYCHA's 90 Church Street, Long Island City, and 787 Atlantic Avenue offices. In addition, Leased Housing staff currently located at 470 Vanderbilt Avenue are moving to 1 Fordham Plaza.

NYCHA will continue to seek opportunities to streamline its operations. It is important to note that changes implemented in this plan will have no service-level impact, ensuring that quality service to residents is maintained.

Energy Conservation. As part of the Authority's strategic capital plan to preserve the NYCHA portfolio, and in support of the Authority's comprehensive sustainability agenda, the Authority is actively pursuing an ambitious, multi-phase energy-conservation program. A key component of the agenda is NYCHA's partnership with HUD and the United States Department of Energy on the Better Buildings Challenge – a commitment to reduce per-square-foot energy use by 20 percent by 2025, resulting in avoided emissions of 247,000 tons of carbon dioxide, equivalent to taking 52,500 cars off the road daily. To achieve this ambitious goal, the Authority plans to perform energy and sustainability retrofits throughout its portfolio via public-private partnerships, including $300 million through Energy Performance Contracts and $30 million through other public-private subsidy programs by 2025.

Information Technology. In 2018, NYCHA's Information Technology (IT) Department continued to make significant service improvements for both internal and external customers through the implementation of advanced technologies, including mobile and self-service technologies. NYCHA continues to be recognized as a technology leader. 2018 accomplishments were made in the following areas:

- Providing staff with better technology tools,
- Self-service,
- Customer relationship management,
- Maintenance operations management,
- Transparency, reporting, and compliance,
- Finance and procurement, and
- Infrastructure and information security.

In 2019 to 2022, the Authority will continue to leverage its investments in advanced technologies in support of NYCHA's business vision and regulatory and compliance obligations. Major information technology initiatives that the Authority will undertake over the next three years will improve service to customers and stakeholders and support NYCHA's mission of providing safe, clean, and affordable housing and facilitating access to social and community services.

Awards and Acknowledgements

GFOA. The Government Finance Officers Association of the United States and Canada (GFOA) awarded a *Certificate of Achievement for Excellence in Financial Reporting* to the Authority for its comprehensive annual financial report for the fiscal year ended December 31, 2017. This was the 15th consecutive year that the Authority received this prestigious award. To be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized comprehensive annual financial report that demonstrates a constructive "spirit of full disclosure." This report must satisfy both generally accepted accounting principles and applicable legal requirements. A copy of the 2017 *Certificate of Achievement for Excellence in Financial Reporting* can be found at the front of this CAFR.

The Authority issued its audited financial statements for the year ended December 31, 2018, and accompanying Single Audit Report three months earlier than required by HUD. This timely issuance has once again afforded the Authority the opportunity to compete for the Government Finance Officers Association's *Certificate of Achievement for Excellence in Financial Reporting.* We believe that the current comprehensive annual financial report continues to meet the Certificate of Achievement Program's rigorous requirements. NYCHA will submit the CAFR for the year ending December 31, 2018, to the GFOA for award consideration.

Government Experience Award in the City Government-to-Citizen Experience category. The MyNYCHA portal and mobile app was recognized again with the 2018 Government Experience Award in the City Government-to-Citizen Experience category. By 2018, the app has over 80,000 users and a 37 percent usage rate, created more than one million work tickets, and generated over $3 million in cumulative savings to the Authority since deployment.

Respectfully submitted,

Plachikkat V. Anantharam
Executive Vice President and Chief Financial Officer

Wagner Houses, Manhattan

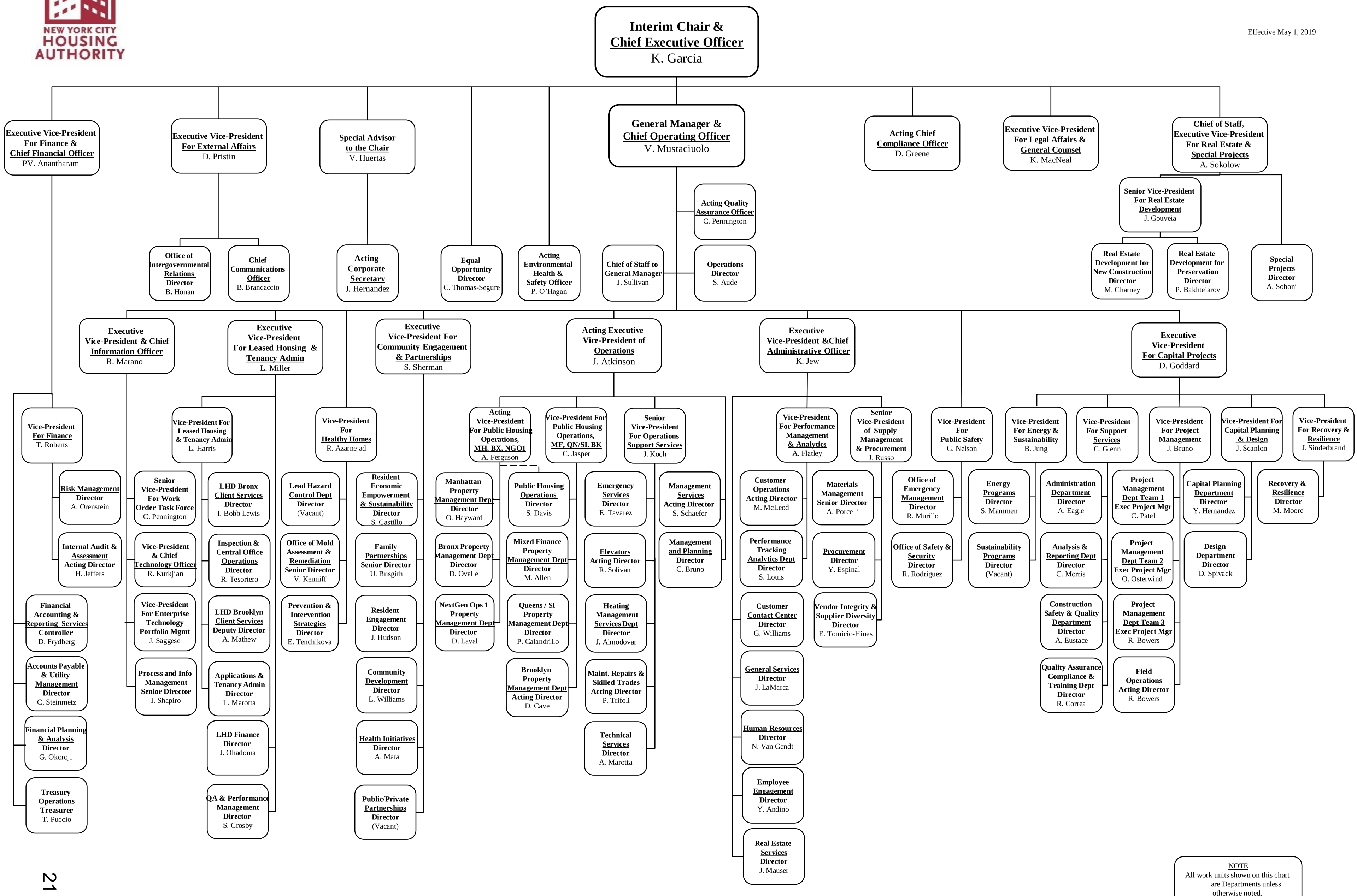
Eastchester Gardens, Bronx

Castle Hill Houses, Bronx

Douglas Houses, Manhattan

NEW YORK CITY HOUSING AUTHORITY ORGANIZATION CHART

Effective May 1, 2019



NOTE
All work units shown on this chart are Departments unless otherwise noted.

NEW YORK CITY HOUSING AUTHORITY
LIST OF PRINCIPAL OFFICIALS
May 17, 2019

NAME	TITLE
NYCHA BOARD	
Kathryn Garcia……………………………………..	Interim Chair & Chief Executive Officer
Vacant……………………………………………….	Resident Board Member
Vacant……………………………………………….	Board Member
Vacant…………………………….......................	Board Member
Victor A. Gonzalez……………………………….	Resident Board Member
Matt Gewolb………………………………..........	Board Member
Jacqueline Young………………………………...	Resident Board Member
SENIOR MANAGEMENT	
Vito Mustaciuolo………………………………...	General Manager & Chief Operating Officer
Deborah Goddard………………………………...	Executive Vice-President for Capital Projects
Kerri Jew……………………………………………	Executive Vice-President & Chief Administrative Officer
Kelly MacNeal……………………………………...	Executive Vice-President for Legal Affairs & General Counsel Executive
Robert Marano……………………………………...	Vice-President & Chief Information Officer
Lakesha Miller……………………………………...	Executive-Vice President for Leased Housing
Jose Atkinson……………………………………….	Acting Executive Vice-President for Operations
David Pristin………………………………………..	Executive Vice-President for External Affairs
Sideya Sherman…………………………………….	Executive Vice-President Community Engagement & Partnerships
Daniel Greene……………………………………….	Acting Chief Compliance Officer
Arden Sokolow……………………………………...	Chief of Staff, Executive Vice-President for Real Estate & Special Projects
Plachikkat V. Anantharam………………………….	Executive Vice-President for Finance & Chief Financial Officer
Tricia Roberts………………………………………	Vice-President for Finance
Daniel Frydberg…………………………………….	Controller

FINANCIAL SECTION

REPORT OF INDEPENDENT AUDITORS

Deloitte.

Deloitte & Touche LLP
30 Rockefeller Plaza
New York, NY 10112
USA
Tel: +1-212-492-4000
Fax: +1-212-489-1687
www.deloitte.com

INDEPENDENT AUDITORS' REPORT

Board of Directors and the Audit Committee of the
New York City Housing Authority

Report on the Financial Statements

We have audited the accompanying statements of net position of the New York City Housing Authority (the "Authority"), a component unit of The City of New York, as of December 31, 2018 and 2017, and the related statements of revenues, expenses and changes in net position and cash flows for the years then ended, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Authority's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Authority as of December 31, 2018 and 2017, and the changes in financial position and cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note 2 to the financial statements, the Authority restated its beginning net position as of January 1, 2017, to reflect the impact of implementation of Governmental Accounting Standards Board Statement No. 83, *Certain Asset Retirement Obligations*. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, Schedule of Changes in NYCHA's Total OPEB Liability and Related Ratios, Schedule of the Authority's Contributions to the New York City Employees' Retirement System (NYCERS), and Schedule of the Authority's Proportionate Share of the Net Pension Liability of NYCERS, as listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audits were conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Authority's basic financial statements. The Introductory Section and Statistical Section, listed in the foregoing table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The Introductory Section and Statistical Section have not been subjected to the auditing procedures applied in the audits of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

Deloitte & Touche LLP

May 17, 2019

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

The following is a narrative overview and analysis of the Authority's financial activities for the years ended December 31, 2018 and 2017. Please read it in conjunction with the transmittal letter at the beginning of this report, the Authority's financial statements following this section and the notes to the financial statements.

OVERVIEW OF THE BASIC FINANCIAL STATEMENTS

The **Statements of Net Position** present the Authority's *assets, deferred outflows, liabilities,* and *deferred inflows* at the end of the year. *Net position* is the difference between (a) assets and deferred outflows and (b) liabilities and deferred inflows. Over time, increases or decreases in *Net Position* is a useful indicator as to whether the Authority's financial health is improving or deteriorating.

The **Statements of Revenues, Expenses, and Changes in Net Position** report the Authority's operating results and how its Net Position changed during the year. All Revenues, Expenses, and Changes in Net Position are reported on an *accrual basis* of accounting, which reports events as they occur, rather than when cash changes hands (*cash basis* of accounting).

The **Statements of Cash Flows** report how the Authority's cash and cash equivalents increased or decreased during the year. The statements report how cash and cash equivalents were provided by and used in the Authority's operating, non-capital financing, capital and related financing, and investing activities. The Authority uses the direct method of presenting cash flows, which includes a reconciliation of operating income or loss to cash flows related to operating activities.

The **Notes to the Financial Statements** are an integral part of the financial statements, disclosing information which is essential to a full understanding of the statements.

REQUIRED SUPPLEMENTARY AND STATISTICAL INFORMATION

The **Required Supplementary Information** presents information regarding: (1) the Authority's changes in total OPEB Liability and related ratios; (2) the Authority's contributions to the New York City Employees' Retirement System ("NYCERS"), and (3) the Authority's proportionate share of the Net Pension Liability of NYCERS.

The **Statistical Section** provides information on the Authority's overall economic condition. The major categories presented are: (1) financial trends; (2) revenue capacity; (3) debt capacity; (4) demographic and economic information; and (5) operating information.

FINANCIAL HIGHLIGHTS AND ANALYSIS

The Authority's *Loss before capital contributions* for 2018 was $268 million, compared to a loss of $331 million for 2017. This favorable variance of $63 million is comprised of a favorable variance of $361 million in *Non-operating revenues, net* partially offset by unfavorable variances of $296 million in *Operating Expenses* and $2 million in *Operating Revenues.*

The Authority implemented GASB Statement No. 83 ("GASB 83") *Certain Asset Retirement Obligations* during 2018 (see Note 1). The financial impact of implementing GASB 83 was a restatement decreasing Beginning Net Position as of January 1, 2017 by $53 million (see Note 2).

The $2 million decrease in *Operating Revenues* is comprised of a decrease of $20 million in Other income partially offset by an increase of $18 million in tenant revenue, net, due to an increase in the average monthly rent. The decrease of $20 million in Other income primarily consists of an $8 million reduction of contract retention liabilities in 2017 not repeated in 2018, an $7 million reduction in Developer Fees recognized in connection with the Section 8 Recap transaction, and $4 million reduction in Insurance and benefits reimbursements.

The increase of $296 million in *Operating Expenses* is led by $202 million in *Maintenance and operations*, primarily for increased pollution remediation costs, other contracts and materials, followed by $52 million in *General and administrative,* primarily for claims and insurance, $28 million for Utilities, primarily for fuel and electricity, and $20 million in *Rent for leased dwellings,* due to an increase in the average per unit voucher cost.

The $361 million increase in *Non-operating revenues and expenses, net,* is primarily comprised of $131 million in insurance recoveries related to Superstorm Sandy and $233 million in *Subsidies and grants,* led by increases of $86 million for City of New York Subsidy, $66 million in Capital Funds used for operating purposes, $47 million in Federal Operating Subsidy due to an increase in the eligible amount due from Housing and Urban Development ("HUD") and an increase in the proration factor from 93.1% to 94.74% and $40 million in Section 8 Housing Assistance Program ("HAP") subsidy to cover the increased costs in the Leased Housing Program. These increases in subsidy are partially offset by a decrease of $6 million in subsidy from FEMA.

In August 2018, the Authority entered into a 20-year Equipment Lease/Purchase Agreement with Banc of America Public Capital Corp ("BAPCC") in the amount of $79 million to finance an Energy Performance Contract ("EPC"). This financing agreement and EPC have enabled the Authority to fund energy conservation work to upgrade common area and apartment lighting, and apartment heating controls at fifteen (15) developments. The Equipment Lease/Purchase Agreement with BAPCC will mature in July 2038. This EPC plan provides HUD-sponsored EPC funding at these developments, thereby enabling the Authority to use its Federal Capital funds for other capital improvements pursuant to the Authority's Five-Year Capital Plan.

Summary of Net Position ($ in thousands)

	2018	2017 Restated	2016
Current and other assets	$ 2,902,022	$ 2,577,292	$ 2,406,787
Capital assets, net	7,040,782	6,581,745	6,286,574
Total Assets	**9,942,804**	**9,159,037**	**8,693,361**
Deferred Outflows of Resources	**176,125**	**186,564**	**247,616**
Current liabilities	1,187,976	1,051,354	923,574
Non-current liabilities	5,069,063	5,156,744	5,158,165
Total Liabilities	**6,257,039**	**6,208,098**	**6,081,739**
Deferred Inflows of Resources	**431,108**	**259,180**	**283,875**
Net investment in capital assets	6,450,404	5,995,349	5,692,787
Unrestricted deficit	(3,019,622)	(3,117,026)	(3,117,424)
Total Net Position	**$ 3,430,782**	**$ 2,878,323**	**$ 2,575,363**

December 31, 2018 vs. December 31, 2017 Restated ($ in thousands)

- The Authority's *Net Position* increased by $552,459 from the prior year, comprised of *Capital contributions* of $820,368, net of a *Loss before capital contributions* of $267,909.

- The $324,730 increase in *Current and other assets* is due primarily to increases of $240,684 in Accounts Receivable, net and Notes and Loans Receivable, net and $82,475 in Deposits and investments (see Note 3). The Account Receivable, net increase includes additional amounts due from HUD, The City or New York and from Insurance carriers. The increase in Notes Receivable, net reflects the recognition of additional amounts due relating to the 2018 Rental Assistance Demonstration ("RAD") Program conversion.

- The increase of $459,037 in *Capital assets, net* is comprised of the current year additions of $829,919 less Depreciation expense of $366,632, less the net book value of the capital assets sold or retired of $4,250 (see Note 8).

- The decrease of $10,439 in *Deferred Outflows of Resources* from $186,564 to $176,125 is primarily comprised of a decrease of $39,899 in deferred amount on pensions, due primarily to certain changes in pension assumptions This is partially offset by an increase of $32,505 in deferred amount on OPEB due differences between expected and actual experience.

- The increase of $136,622 in *Current liabilities* is primarily comprised of an increase of $116,861 in pollution remediation obligations, primarily for lead based paint (see Note 11).

- The $87,681 decrease in *Non-current liabilities* primarily represents a decrease of $137,907 in the Net pension liability due primarily to (1) favorable variances between projected and actual investment earnings on pension plan investments; (2) favorable variances between expected and actual experience, due to changes in demographic data; and (3) a decrease in the Authority's employer allocation percentage in fiscal year 2018 (see Note 17). This decrease is partially offset by increases of $37,779 in Long-term debt, due primarily to the issuance of new equipment purchase agreements to finance energy performance contracts (see Note 15), and $16,882 in Claims payable (see Note 13).

- The *Deferred Inflows of Resources* increase of $171,928 is due to increases in deferred inflow amounts of $100,550 on OPEB, due primarily to changes in assumptions and $71,378 on pensions differences between expected and actual experience.

<u>December 31, 2017 Restated vs. December 31, 2016 ($ in thousands)</u>

- The Authority's *Net Position* increased by $302,960 from the prior year, which includes a decrease of $52, 725, representing the cumulative effect of implementing GASB 83. Excluding this adjustment, the Authority's *Net Position* increased by $355,685, comprised of *Capital contributions* of $686,619, net of a *Loss before capital contributions* of $330,934.

- The $170,505 increase in *Current and other assets* is due primarily to increases of $215,930 in Accounts receivable, net and $27,784 in deposits and investments, partially offset by a decrease of $71,102 in Notes and loans receivable, net. The increase in Accounts receivable, net primarily represents $237,053 due from FEMA, based on a certain funding agreement. The decrease in Notes and loans receivable, net primarily consists of $103,834 from the Section 8 Transaction partially offset by an increase of $41,762 for the Ocean Bay Rental Assistance Demonstration ("RAD") program.

- The increase of $295,171 in *Capital assets, net* is comprised of the current year additions of $671,262 less Depreciation expense of $370,938, and the net book value of the capital assets sold or retired (see Note 8).

- The decrease of $61,052 in *Deferred Outflows of Resources* from $247,616 to $186,564 is primarily comprised of a decrease of $108,148 in deferred amount on pensions, due primarily to the favorable difference between projected and actual investment earnings on pension plan investments during fiscal year 2017. This is partially offset by an increase of $34,735 in deferred amount on OPEB due primarily to changes in assumptions and an increase of $13,637 representing a deferred amount on asset retirement obligations.

- The increase of $127,780 in *Current liabilities* primarily represents $185,518 in funds received from or amounts billed to FEMA for costs not yet incurred, in accordance with the funding agreement, partially offset by a decrease of $51,349 in Accounts Payable.

- The $1,421 decrease in *Non-current liabilities* primarily represents a decrease of $181,387 in the Net pension liability due primarily to (1) favorable variances between projected and actual investment earnings on pension plan investments; (2) favorable variances between expected and actual experience, due to changes in demographic data; and (3) a decrease in the Authority's employer allocation percentage in fiscal year 2017. Unearned Revenue from the Development transactions also decreased $19,783. These decreases are partially offset by increases of $78,536 in the unfunded OPEB liability, $68,425 in asset retirement obligations, and $63,323 in Long-term debt, due primarily to the issuance of new equipment purchase agreements to finance energy performance contracts (see Note 15).

- The *Deferred Inflows of Resources* decrease of $24,695 is due to a decrease of $83,317 in deferred inflow amounts on housing assistance payments, partially offset by increases in deferred inflow amounts of $34,620 on pensions, due to the 2017 difference between projected and actual earnings on the New York City Employees' Retirement System ("NYCERS") pension investment portfolio and $24,002 on OPEB due primarily to differences between expected and actual experience.

Summary of Revenues, Expenses, and Changes in Net Position ($ in thousands)

	2018	2017 Restated	2016
OPERATING REVENUES:			
Tenant revenue, net	$ 1,070,022	$ 1,051,628	$ 1,041,574
Other income	36,751	56,766	45,744
Total Operating Revenues	**1,106,773**	**1,108,394**	**1,087,318**
OPERATING EXPENSES:			
Rent for leased dwellings	1,006,991	987,017	940,722
General and administrative	890,679	838,400	847,573
Maintenance and operations	875,431	673,678	707,929
Utilities	582,405	554,542	534,797
Depreciation	366,632	370,938	357,611
OPEB expense	129,110	136,767	168,061
Protective services	29,833	22,353	24,640
Tenant services	17,389	18,164	19,307
Total Operating Expenses	**3,898,470**	**3,601,859**	**3,600,640**
OPERATING LOSS	**(2,791,697)**	**(2,493,465)**	**(2,513,322)**
NON-OPERATING REVENUES (EXPENSES):			
Subsidies and grants	2,387,205	2,154,174	2,124,415
Insurance recoveries	131,972	809	6,701
Investment income	25,811	16,080	25,231
Gain on the sales of capital assets	14,898	22,397	28,730
Interest expense	(32,622)	(30,005)	(29,169)
Change in fair value of investments	(3,304)	(745)	(3,131)
Debt financing costs	(172)	(179)	(185)
Total Non-Operating Revenues, Net	**2,523,788**	**2,162,531**	**2,152,592**
LOSS BEFORE CAPITAL CONTRIBUTIONS	**(267,909)**	**(330,934)**	**(360,730)**
CAPITAL CONTRIBUTIONS	820,368	686,619	640,887
CHANGE IN NET POSITION	**552,459**	**355,685**	**280,157**
NET POSITION, BEGINNING OF YEAR, as previously stated	2,878,323	2,575,363	2,151,090
Cumulative effect of implementing GASB 75	-	-	144,116
Cumulative effect of implementing GASB 83	-	(52,725)	-
NET POSITION, BEGINNING OF YEAR, as restated	2,878,323	2,522,638	2,295,206
NET POSITION, END OF YEAR	**$ 3,430,782**	**$ 2,878,323**	**$ 2,575,363**

2018 vs. 2017 Restated ($ in thousands)

- The *Operating Loss* for the Authority increased $298,232 from $2,493,465 in 2017 to $2,791,697 in 2018, due to an increase of $296,611 in *Operating Expense* and a decrease of $1,621 in *Operating Revenues.*

- The $1,621 decrease in *Operating Revenues* is comprised of a decrease $20,015 in Other income, partially offset by an increase of $18,394 in Tenant revenue, net. The decrease in Other income primarily represents $8,077 in contract retention liabilities in 2017 not repeated in 2018, $6,579 in Developer Fees recognized primarily in connection with the Section 8 Recap transaction, and $4,296 in Insurance and benefits reimbursements. The increase in Tenant revenue is due to an increase in the average monthly rent including households required to pay 30 percent of family income towards rent.

- The $296,611 increase in *Operating Expenses* is led by an increase of $201,753 in *Maintenance and operations*, of which $100 million represents pollution remediation costs for lead based paint and mold, $64,293 represents increases in other contract costs and $15,620 represents an increase in the cost of materials. Other increases are $52,279 in *General and administrative*, of which $32,332 is for claims and insurance, $27,863 in *Utilities*, primarily for electricity, heating gas, and fuel oil, and $19,974 in *Rent for leased dwellings*, due to an increase in the average per unit voucher cost.

- *Non-operating revenues and expenses, net,* increased by $361,257, primarily representing $131,163 in insurance recoveries related to Superstorm Sandy and $233,031 in *Subsidies and grants.* This latter increase in subsidies is primarily comprised of increases of $85,769 from the City of New York, $66,495 in Federal Capital Fund drawdowns for operating costs, $46,980 in Federal Operating Subsidy, due to an increase in the eligible amount due from HUD and to an increase in the proration factor from 93.1% to 94.74%, and $40,029 in Section 8 HAP subsidy to cover the increased costs in the Leased Housing Program. These increases are partially offset by a decrease of $5,717 in subsidy from FEMA, mainly for the excess fuel costs for the mobile boilers related to Superstorm Sandy.

- *Capital Contributions* increased $133,749 to $820,368. The current year contributions are primarily comprised of $370,839 from FEMA, $225,026 for the Capital Fund Program, and $100,436 for CDBG-DR grant relating to Superstorm Sandy.

2017 Restated vs. 2016 ($ in thousands)

- The *Operating Loss* for the Authority decreased $19,857, from $2,513,322 in 2016 to $2,493,465 in 2017, due to a $21,076 increase in *Operating Revenues*, partially offset by a $1,219 increase in *Operating Expenses.*

- The $21,076 increase in *Operating Revenues* is comprised of $10,054 in tenant revenue, net, due to an increase in the average monthly rent including households required to pay 30 percent of family income towards rent, plus $11,022 in Other income, primarily representing an $8,077 reduction of contract retention liabilities and $5,309 in Developer Fees recognized primarily in connection with the Section 8 Recap transaction.

- The $1,219 increase in *Operating Expenses* is led by decreases of $34,251 in *Maintenance and operations*, primarily current year pollution and remediation costs (see Note 11), and $31,294 in OPEB, comprised primarily of a decrease in interest of $10,854 due to a decrease in the discount rate from 3.71% to 3.16%. These decreases were mostly offset by an increase of $46,295 in *Rent for leased dwellings* due to an increase in the average per unit voucher costs and additional units arising from the Oceanside-Bayside Rental Assistance Demonstration mixed finance transaction, plus an increase of $19,745 in *Utilities*, primarily representing higher costs for electricity and heating gas.

- *Non-operating revenues and expenses, net,* increased by $9,939, primarily representing an increase of $29,759 in *Subsidies and grants,* partially offset by decreases of $9,151 in investment income, primarily representing interest income on the Section 8 Recap Note, received in March 2017, but fully recognized as income in 2016, and $5,892 in insurance recoveries. The increase in subsidies is primarily comprised of increases of $28,180 in subsidy from FEMA mainly for the excess fuel costs for the mobile boilers related to Superstorm Sandy, and $28,266 in Section 8 HAP subsidy to cover the increased costs in the Leased Housing Program (see above bullet), partially offset by a decrease of $22,454 in Federal Operating Subsidy, due to a reduction in subsidy eligibility, and $5,282 in The City of New York Subsidies.

- *Capital Contributions* increased $45,732 to $686,619. The current year contributions are primarily comprised of $289,068 from FEMA, $193,278 for the Capital Fund Program, and $51,040 for CDBG-DR relating to Superstorm Sandy.

Revenues and Expenses on a Gross Basis ($ in thousands)

The following table shows revenues and expenses on a gross basis. Non-operating revenues are included in total program revenues and non-operating expenses are included in total program expenses. The components of this table are explained in the commentary following the Summary of Revenues, Expenses, and Changes in Net Position.

	2018	**2017 Restated**	**2016**
Program Revenues:			
Subsidies and grants	$ 2,387,205	$ 2,154,174	$ 2,124,415
Operating revenues	1,106,773	1,108,394	1,087,318
Insurance recoveries	131,972	809	6,701
Investment income	25,811	16,080	25,231
Gain on the sales of capital assets	14,898	22,397	28,730
Total Program Revenues	**3,666,659**	**3,301,854**	**3,272,395**
Program Expenses:			
Operating expenses	3,898,470	3,601,859	3,600,640
Interest expense	32,622	30,005	29,169
Change in fair value of investments	3,304	745	3,131
Debt financing costs	172	179	185
Total Program Expenses	**3,934,568**	**3,632,788**	**3,633,125**
Loss before Capital Contributions	**(267,909)**	**(330,934)**	**(360,730)**
Capital Contributions	**820,368**	**686,619**	**640,887**
Change in Net Position	**552,459**	**355,685**	**280,157**
Net Position, Beginning of Year, as previously stated	2,878,323	2,575,363	2,151,090
Cumulative effect of implementing GASB 75	-	-	144,116
Cumulative effect of implementing GASB 83	-	(52,725)	-
Net Position, Beginning of Year, as restated	2,878,323	2,522,638	2,295,206
Net Position, End of Year	**$ 3,430,782**	**$ 2,878,323**	**$ 2,575,363**

CAPITAL ASSETS AND DEBT ADMINISTRATION

Capital Assets, net and the debt related to capital assets for the three years ended December 31 are as follows:

Net Investment in Capital Assets ($ in thousands)

	2018	2017	2016
Land	$ 687,507	$ 689,847	$ 689,847
Construction in progress	1,833,799	1,235,972	1,050,432
Buildings	3,146,465	3,173,239	3,178,487
Building improvements	9,313,734	9,170,548	8,757,216
Facilities and other improvements	492,910	489,879	477,498
Furniture and equipment	877,827	829,440	797,444
Leasehold improvements	113,185	112,994	112,994
Total Capital Assets	**16,465,427**	**15,701,919**	**15,063,918**
Less accumulated depreciation	9,424,645	9,120,174	8,777,344
Capital Assets, net	**7,040,782**	**6,581,745**	**6,286,574**
Less related debt	590,378	586,396	593,787
Net Investment in Capital Assets	**$ 6,450,404**	**$ 5,995,349**	**$ 5,692,787**

For additional information on Capital Assets and Long-Term Debt see Note 8 and Note 14, respectively.

BASIC FINANCIAL STATEMENTS

NEW YORK CITY HOUSING AUTHORITY

STATEMENTS OF NET POSITION
DECEMBER 31, 2018 AND 2017

	2018	2017 Restated
	($ in Thousands)	
CURRENT ASSETS:		
Cash and cash equivalents	$ 460,678	$ 505,796
Accounts receivable, net	814,264	634,988
Notes and loans receivable, net	169,227	107,819
Investments	203,046	276,907
Prepaid expenses	104,611	101,963
Inventories, net	11,498	12,575
Total current assets	1,763,324	1,640,048
NON-CURRENT ASSETS:		
Land and construction in progress	2,521,306	1,925,819
Other capital assets, net of depreciation	4,519,476	4,655,926
Cash for claims payable	69,521	66,698
Investments for claims payable	330,051	315,992
Restricted cash and cash equivalents	707,791	523,203
Restricted investments	31,335	31,351
Total non-current assets	8,179,480	7,518,989
Total assets	9,942,804	9,159,037
DEFERRED OUTFLOWS OF RESOURCES:		
Deferred amount on refunding	2,463	3,491
Deferred amount on asset retirement obligations	11,620	13,637
Deferred amount on OPEB	67,240	34,735
Deferred amount on pensions	94,802	134,701
Total deferred outflows of resources	176,125	186,564
CURRENT LIABILITIES:		
Accounts payable	137,249	125,893
Accrued liabilities	334,384	293,489
Claims payable	80,000	82,980
Current portion of long-term debt	39,130	36,647
Accrued leave time	73,987	75,770
Pollution remediation obligations	136,962	20,101
Unearned revenues and other current liabilities	386,264	416,474
Total current liabilities	1,187,976	1,051,354
NON-CURRENT LIABILITIES:		
Long-term debt	801,299	763,520
Claims payable	399,572	382,690
Unearned revenue	222,359	222,889
Accrued leave time	106,532	112,122
Net pension liability	894,818	1,032,725
OPEB liability	2,562,230	2,562,879
Asset retirement obligations	69,965	68,425
Pollution remediation obligations	1,978	1,798
Other liabilities	10,310	9,696
Total non-current liabilities	5,069,063	5,156,744
Total liabilities	6,257,039	6,208,098
DEFERRED INFLOWS OF RESOURCES:		
Deferred amount on OPEB	279,037	178,487
Deferred amount on pensions	152,071	80,693
Total deferred inflows of resources	431,108	259,180
NET POSITION:		
Net investment in capital assets	6,450,404	5,995,349
Unrestricted deficit	(3,019,622)	(3,117,026)
TOTAL NET POSITION	$ 3,430,782	$ 2,878,323

See notes to the financial statements.

NEW YORK CITY HOUSING AUTHORITY

STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

	2018	2017 Restated
	($ in Thousands)	
OPERATING REVENUES:		
Tenant revenue, net	$ 1,070,022	$ 1,051,628
Other income	36,751	56,766
Total operating revenues	1,106,773	1,108,394
OPERATING EXPENSES:		
Rent for leased dwellings	1,006,991	987,017
General and administrative	890,679	838,400
Maintenance and operations	875,431	673,678
Utilities	582,405	554,542
Depreciation	366,632	370,938
OPEB	129,110	136,767
Protective services	29,833	22,353
Tenant services	17,389	18,164
Total operating expenses	3,898,470	3,601,859
OPERATING LOSS	(2,791,697)	(2,493,465)
NON-OPERATING REVENUES (EXPENSES):		
Subsidies and grants	2,387,205	2,154,174
Insurance recoveries	131,972	809
Investment income	25,811	16,080
Gain on the sales of capital assets	14,898	22,397
Interest expense	(32,622)	(30,005)
Change in fair value of investments	(3,304)	(745)
Debt financing costs	(172)	(179)
Total non-operating revenues, net	2,523,788	2,162,531
LOSS BEFORE CAPITAL CONTRIBUTIONS	(267,909)	(330,934)
CAPITAL CONTRIBUTIONS	820,368	686,619
CHANGE IN NET POSITION	552,459	355,685
NET POSITION, BEGINNING OF YEAR, as previously stated	2,878,323	2,575,363
Cumulative effect of implementing GASB 83	-	(52,725)
NET POSITION, BEGINNING OF YEAR, as restated	2,878,323	2,522,638
NET POSITION, END OF YEAR	$ 3,430,782	$ 2,878,323

See notes to the financial statements.

NEW YORK CITY HOUSING AUTHORITY

STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

	2018	2017 Restated
	($ in Thousands)	
CASH FLOWS FROM OPERATING ACTIVITIES:		
Cash received from tenants	$ 1,066,907	$ 1,044,198
Other operating receipts	33,029	62,220
Cash payments to employees	(1,198,084)	(1,213,753)
Cash payments for other operating expenses	(2,125,067)	(2,068,283)
Net cash used in operating activities	(2,223,215)	(2,175,618)
CASH FLOWS FROM NON-CAPITAL FINANCING ACTIVITIES:		
Subsidies and grants received	2,322,346	2,050,990
Insurance recoveries	74,367	4,275
Net cash provided by non-capital financing activities	2,396,713	2,055,265
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:		
Contributions for capital	739,651	619,509
Proceeds from the sale of long term debt	84,098	115,738
Proceeds from development transactions	18,407	95,311
Sale of capital assets	211	7,767
Development and modernization costs	(817,498)	(600,127)
Payments on long-term debt	(39,773)	(46,050)
Interest payments on bonds and mortgages	(36,450)	(34,368)
Notes and Loans Receivable	(61,408)	(24,209)
Debt financing costs	(172)	(179)
Net cash (used in) provided by capital and related financing activities	(112,934)	133,392
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchase of investment securities	(39,982)	(153,770)
Proceeds from sale and maturities of investment securities	96,496	252,659
Interest on investments	25,215	15,490
Net cash provided by investing activities	81,729	114,379
NET INCREASE IN CASH AND CASH EQUIVALENTS	142,293	127,418
CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR:		
Cash and cash equivalents, including cash for claims payable	572,494	476,432
Restricted cash and cash equivalents	523,203	491,847
Total cash and cash equivalents, beginning of year	1,095,697	968,279
CASH AND CASH EQUIVALENTS, END OF YEAR:		
Cash and cash equivalents, including cash for claim payable	530,199	572,494
Restricted cash and cash equivalents	707,791	523,203
Total cash and cash equivalents, end of year	$ 1,237,990	$ 1,095,697

See notes to the financial statements.

(continued on the following page)

NEW YORK CITY HOUSING AUTHORITY

STATEMENTS OF CASH FLOWS (continued)
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

	2018	2017 Restated
	(in Thousands)	
RECONCILIATION OF OPERATING LOSS TO NET CASH USED IN OPERATING ACTIVITIES:		
OPERATING LOSS	$ (2,791,697)	$ (2,493,465)
Adjustments to reconcile operating loss to net cash used in operating activities:		
Depreciation	366,632	370,938
Cumulative effect of implementing GASB 83	-	(52,725)
(Increase) decrease in assets and deferred outflows:		
Tenants accounts receivable	(15,402)	(21,554)
Accounts receivable - other	(3,940)	(1,295)
Prepaid expenses	(2,648)	1,621
Inventories, net	1,077	486
Deferred outflows on pensions	39,899	108,148
Deferred outflows on OPEB	(32,505)	(34,735)
Deferred outflows on asset retirement obligations	2,017	(13,637)
Increase (decrease) in allowance for doubtful accounts - tenants	11,460	12,080
Increase (decrease) in allowance for doubtful accounts - other, net of non-capital financing activities	1,284	1,282
Increase (decrease) in liabilities and deferred inflows:		
Accounts payable	11,356	(51,349)
Accrued liabilities, net of interest and capital items	29,267	(19,865)
Claims payable	13,902	936
Accrued leave time	(7,373)	(3,168)
Unearned revenues and other current liabilities, net of prepaid subsidy and current portion of Section 8 Recap unearned revenue	889	1,659
Net pension liability	(137,907)	(181,387)
OPEB liability	(649)	78,536
Asset retirement obligation	1,540	68,425
Pollution remediation obligations	117,041	(2,973)
Other non-current liabilities	614	(2,198)
Deferred inflows on OPEB	100,550	24,002
Deferred inflows on pensions	71,378	34,620
Total adjustments	568,482	317,847
NET CASH USED IN OPERATING ACTIVITIES	$ (2,223,215)	$ (2,175,618)
SUPPLEMENTAL DISCLOSURES OF NON CASH ACTIVITIES:		
Investing activities:		
Unrealized loss on investments	$ (3,304)	$ (745)
Capital and related financing activities:		
Amortization of deferred amount on refunding	(1,028)	(1,276)
Amortization of bond premium	4,063	4,683
Capital Contributions	14,515	41,142

See notes to the financial statements.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A. Organization

The New York City Housing Authority (the "Authority"), created in 1934, is a public benefit corporation chartered under New York State Public Housing Law. The Authority develops, constructs, manages and maintains affordable housing for eligible low-income families in the five boroughs of New York City. At December 31, 2018, the Authority maintained 316 housing developments encompassing approximately 174,000 total units, including 167,000 federally funded units, housing approximately 371,000 residents. The Authority also operates a leased housing program, which provides housing assistance payments to approximately 86,000 families, housing approximately 193,000 residents.

Substantial operating losses result from the costs of essential services that the Authority provides exceeding revenues. To meet the funding requirements of these operating losses, the Authority receives subsidies from: (a) the federal government, primarily the U.S. Department of Housing and Urban Development ("HUD"), in the form of annual grants for operating assistance, debt service payments, contributions for capital and reimbursement of expenditures incurred for certain federal housing programs; (b) New York State in the form of debt service and capital payments; and (c) The City of New York in the form of subsidies and capital payments. Subsidies are established through budgetary procedures, which establish amounts to be funded by the grantor agencies.

The Authority maintains its accounting records by program. The following programs are operated by the Authority:

***Federal Programs* -** The Authority receives federal financial assistance from HUD in the form of annual contributions for debt service and operating subsidies for public housing developments, as well as rent subsidies for the Section 8 Housing Choice Voucher Program ("HCVP"). In addition, assistance is received under HUD's Public and Indian Housing Development Programs, Capital Fund Program, and other programs.

Funds received are used to provide maintenance, operating, and administrative services to federally aided low rent public housing developments. HCVP funds are used to reimburse private landlords for their participation in providing housing for low-income families at reduced rents. The funds cover the differential between the reduced rents charged to tenants and prevailing fair market rates based on rent reasonableness. Debt service fund contributions provide for the payment of principal and interest on outstanding debt as it matures. Contributions for capital provide for modernization and development costs.

New York State and The City of New York Programams - The Authority receives financial assistance from New York State (the "State") in the form of annual contributions for debt service and capital. The Authority also receives financial assistance from the City in the form of subsidies and contributions for capital.

Other Programs - The Authority receives funding for other programs, including Federal assistance from the U.S. Department of Agriculture for child and adult care food and summer food service programs, and from HUD, the State, and the City for several other grant programs.

B. Reporting Entity

The Authority is a component unit of the City, based upon criteria for defining the *reporting entity* as identified and described in the Governmental Accounting Standards Board's ("GASB") *Codification of Governmental Accounting and Financial Reporting Standards, Sections 2100 and 2600*.

The Authority's operations include two blended component units which are included in the Authority's basic financial statements, in compliance with GASB 61 *The Financial Reporting Entity: Omnibus – an amendment of GASB Statement No. 14 and No. 34*. These are legally separate entities with the same governing body as the Authority for which the Authority has operational responsibility and are controlled by the Authority. There is a financial benefit/burden relationship between the Authority and the component units since the Authority is responsible for providing operating and capital subsidies to the component units. The blended component units include:

- NYCHA Public Housing Preservation I, LLC
- NYCHA Public Housing Preservation II, LLC

Additional information relating to these blended component units can be found in Note 25 to the financial statements. NYCHA Public Housing Preservation I, LLC ("LLC I") and NYCHA Public Housing Preservation II, LLC ("LLC II") both issue stand-alone financial reports. These reports can be obtained from The New York City Housing Authority, 250 Broadway, New York, New York, 10007.

C. Basis of Accounting

The Authority's financial statements are prepared in accordance with generally accepted accounting principles as prescribed by the GASB, using the economic resources measurement focus and the accrual basis of accounting wherein revenues are recognized when earned, and expenses are recognized when the liability is incurred.

The Authority's primary source of nonexchange revenue relates to subsidies and grants. Subsidies and grants revenue is recognized at the time eligible program expenditures occur and/or the Authority has complied with the grant and subsidy requirements, in accordance with GASB Statement No. 33, *Accounting and Financial Reporting for Nonexchange Transactions.*

The Authority applies Governmental Accounting Standards Board ("GASB") Codification of Governmental Accounting and Financial Reporting Standards ("GASB Codification") Section P80, *Proprietary Accounting and Financial Reporting.*

Recently Adopted Accounting Standards

GASB Statement No. 83 ("GASB 83"), *Certain Asset Retirement Obligations*. The Statement addresses accounting and financial reporting for certain asset retirement obligations (AROs). An ARO is a legally enforceable liability associated with the retirement of a tangible capital asset. A government that has legal obligations to perform future asset retirement activities related to its tangible capital assets should recognize a liability based on the guidance in this Statement.

This Statement establishes criteria for determining the timing and pattern of recognition of a liability and a corresponding deferred outflow of resources for AROs. This Statement requires that recognition occur when the liability is both incurred and reasonably estimable. The determination of when the liability is incurred should be based on the occurrence of external laws, regulations, contracts, or court judgments, together with the occurrence of an internal event that obligates a government to perform asset retirement activities. Laws and regulations may require governments to take specific actions to retire certain tangible capital assets at the end of the useful lives of those capital assets, such as decommissioning nuclear reactors and dismantling and removing sewage treatment plants. Other obligations to retire tangible capital assets may arise from contracts or court judgments. Internal obligating events include the occurrence of contamination, placing into operation a tangible capital asset that is required to be retired, abandoning a tangible capital asset before it is placed into operation, or acquiring a tangible capital asset that has an existing ARO.

The requirements of this Statement are effective for reporting periods beginning after June 15, 2018. Earlier application is encouraged. The Authority early adopted this Statement in December of 2018. Accordingly, the Authority recognized an Asset Retirement obligation of $68,425,000 as of January 1, 2017.

GASB Statement No. 85 ("GASB 85"), *Omnibus 2017 (various).* The objective of this Statement is to address practice issues that have been identified during implementation and application of certain GASB Statements. This Statement addresses a variety of topics including issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (pensions and other postemployment benefits [OPEB]).

Specifically, this Statement addresses the following topics:

- Blending a component unit in circumstances in which the primary government is a business-type activity that reports in a single column for financial statement presentation

- Reporting amounts previously reported as goodwill and "negative" goodwill

- Classifying real estate held by insurance entities

- Measuring certain money market investments and participating interest-earning investment contracts at amortized cost

- Timing of the measurement of pension or OPEB liabilities and expenditures recognized in financial statements prepared using the current financial resources measurement focus

- Recognizing on-behalf payments for pensions or OPEB in employer financial statements

- Presenting payroll-related measures in required supplementary information for purposes of reporting by OPEB plans and employers that provide OPEB

- Classifying employer-paid member contributions for OPEB

- Simplifying certain aspects of the alternative measurement method for OPEB

- Accounting and financial reporting for OPEB provided through certain multiple-employer defined benefit OPEB plans.

The requirements of this Statement are effective for reporting periods beginning after June 15, 2017. Earlier application is encouraged. The Authority adopted this Statement in December of 2018. The implementation of this standard did not have a material impact on the Authority's financial statements.

GASB Statement No. 88 ("GASB 88"), *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements.* The primary objective of this Statement is to improve the information that is disclosed in notes to government financial statements related to debt, including direct borrowings and direct placements. It also clarifies which liabilities governments should include when disclosing information related to debt.

This Statement requires that additional essential information related to debt be disclosed in notes to financial statements, including unused lines of credit; assets pledged as collateral for the debt; and terms specified in debt agreements related to significant events of default with finance-related consequences, significant termination events with finance-related consequences, and significant subjective acceleration clauses. For notes to financial statements related to debt, this Statement also requires that existing and additional information be provided for direct borrowings and direct placements of debt separately from other debt.

The requirements of this Statement are effective for reporting periods beginning after June 15, 2018. The Authority early adopted this Statement in December of 2018. The implementation of this GASB required additional debt disclosures in 2018, such as those relating to events of default and assets pledged as collateral for debt. The implementation of this standard did not have a material impact on the Authority's financial statements.

GASB Statement No. 89 ("GASB 89"), *Accounting for Interest Cost before the end of a Construction Period.* The objectives of this Statement are (1) to enhance the relevance and comparability of information about capital assets and the cost of borrowing for a reporting period and (2) to simplify accounting for interest cost incurred before the end of a construction period. This Statement requires that interest cost incurred before the end of a construction period be recognized as an expense in the period in which the cost is incurred.

The requirements of this Statement are effective for reporting periods beginning after December 15, 2019. The Authority early adopted this Statement in December of 2018. The implementation of this standard did not have a significant impact on the Authority's financial statements.

GASB Statement No. 90 ("GASB 90"), *Majority Equity Interests.* The primary objectives of this Statement are to improve the consistency and comparability of reporting a government's majority equity interest in a legally separate organization and to improve the relevance of financial statement information for certain component units. It defines a majority equity interest and specifies that a majority equity interest in a legally separate organization should be reported as an investment if a government's holding of the equity interest meets the definition of an investment.

For all other holdings of a majority equity interest in a legally separate organization, a government should report the legally separate organization as a component unit, and the government or fund that holds the equity interest should report an asset related to the majority equity interest using the equity method. This Statement also requires that a component unit in which a government has a 100 percent equity interest account for its assets, deferred outflows of resources, liabilities, and deferred inflows of resources at acquisition value at the date the government acquired a 100 percent equity interest in the component unit.

The requirements of this Statement are effective for reporting periods beginning after December 15, 2018. The Authority early adopted this Statement in December of 2018. The implementation of this standard did not have a significant impact on the Authority's financial statements.

Accounting Standards Issued But Not Yet Adopted

GASB has issued the following pronouncements that may affect future financial position, results of operations, cash flows, or financial presentation of the Authority upon implementation. Management has not yet evaluated the effect of implementation of these standards.

GASB Statement No.	GASB Accounting Standard	Effective Calendar Year
87	*Leases*	2020

D. Cash and Cash Equivalents

Cash includes amounts on deposit with financial institutions, including bank accounts and certificates of deposit. The Authority considers investments in repurchase agreements and investments with a maturity of less than 90 days of purchase date as cash equivalents. The Authority considers cash and cash equivalents held for the repayment of the non-current portion of Claims payable to be non-current assets.

E. Accounts Receivable

Rents are due from tenants on the first day of each month. As a result, tenants receivable balances primarily consist of rents past due and due from vacated tenants. An allowance for uncollectable accounts is established to provide for accounts which may not be collected in the future for any reason.

The Authority recognizes receivables from HUD and other governmental agencies for amounts earned and billed but not received and for amounts earned but unbilled as of year-end.

F. Notes Receivable

Notes receivable are recorded based on the principal amount indicated in the underlying note agreement. An allowance is established where there is uncertainty regarding the collection of the note.

G. Investments

Investments with maturities of less than twelve months from the time of acquisition are carried at cost. Investments in guaranteed investment contracts are reported at an amount equal to principal and accrued interest. All other investments are recorded at fair value, which are based on quoted market prices. Income from investments is recognized on the accrual basis. Realized gains or losses on sales of investment securities are accounted for using the *specific identification* method. The Authority combines realized and unrealized gains and losses on investments.

H. Prepaid Expenses

Prepaid expenses represent amounts paid as of year-end which will benefit future operations.

I. Inventories

Inventories consist of materials and supplies at the central warehouses, and fuel oil. Materials and supplies are valued using the *average moving cost* method on a first in – first out basis. Fuel oil is valued using *weighted average cost.* Materials and supplies are expensed when shipped from central warehouses to the developments. The Authority maintains an allowance for obsolete inventory.

J. Capital Assets

Capital assets include land, structures and equipment recorded at cost and is comprised of initial development costs, property betterments and additions, and modernization program costs. The Authority depreciates these assets over their estimated useful lives, under normal operating conditions, using the straight-line method of depreciation. The Capitalization Policy is as follows:

Capital Asset Category	Capitalization Threshold	Useful Life-Years
Buildings	$50,000	**40**
Building Improvements	$50,000	**25**
Leasehold Improvements	$50,000	**Up to 15**
Facilities & Other Improvements	$50,000	**10**
Computer Software	$50,000	**5**
Telecommunication Equipment	$50,000	**5**
Computer Hardware	$5,000	**5**
Furniture and Equipment	$5,000	**5 to 10**
Ranges and Refrigerators	All	**10**

K. Accrued Liabilities

The Authority recognizes a liability for goods and services received but not paid for as of year-end. The Authority recognizes a liability for wages and fringe benefits relating to expired collective bargaining agreements based on its best estimate of such future payments. These estimates are based on prior patterns and the current status of negotiations among other factors.

L. Claims Payable

The Authority recognizes a liability for general liability and workers' compensation claims based upon an estimate of all probable losses incurred, both reported and not reported. The liability for these claims is reported in the Statement of Net Position at a discounted amount.

M. Accrued Leave Time

Accumulated unpaid leave time is accrued at the estimated amounts of future benefits attributable to services already rendered.

N. Unearned Revenue

The Authority's unearned revenue consists of the prepayment of rent by residents and the receipt of governmental program funding where certain eligibility requirements have not been met. Unearned revenue relating to the Section 8 Transaction and the Ocean Bayside RAD transaction are being recognized over the fifteen year low income housing tax credit compliance period.

O. Premium Amortization

The Authority amortizes debt premium amounts over the life of the bonds using the *effective interest rate through maturity* methodology.

P. Deferred Outflows and Inflows of Resources

In accordance with GASB 63, *Financial Reporting of Deferred Outflows of Resources, Deferred inflows of Resources, and Net Position,* the Authority reports deferred outflows of resources in the *Statement of Financial Position* in a separate section following Assets and deferred inflows of resources in a separate section following liabilities. Gains and losses in connection with advanced refunding of debt are recorded as either a deferred outflow (loss) or as a deferred inflow (gain) of resources and amortized as a component of interest expense over the shorter of the remaining life of the old or the new debt. Pension contributions made to NYCERS subsequent to the actuarial measurement date and prior to the Authority's fiscal year-end are reported as deferred outflows of resources. The net differences between projected and actual earnings on pension plan investments, changes in assumptions for pensions and OPEB, and differences in expected and actual experience for pensions and OPEB are recorded as either a deferred outflow or as a deferred inflow. Section 8 Housing Choice Voucher Subsidies received prior to the funding period are reported as deferred inflow of resources. Deferred outflows are recognized on asset retirement obligations.

Q. Use of Restricted Net Position

When both restricted and unrestricted resources are available for a particular restricted use, it is the Authority's policy to use restricted resources first, and then unrestricted resources as needed.

R. Operating Revenues and Expenses

The Authority defines its operating revenues as income derived from charges to residents and others for rent and services provided. Its operating expenses are costs incurred in the operation of its program activities to provide services to residents and others. The Authority classifies other revenues and expenses as non-operating.

S. Capital Contributions

Capital Contributions are recognized at the time eligible program expenditures occur and/or the Authority has complied with the grant requirements.

T. Taxes

The Authority is a public benefit corporation chartered under the New York State Public Housing Law and as such is exempt from income taxes and certain other Federal, state and local taxes.

U. Other Postemployment Benefits

The Authority's Total OPEB Liability is calculated based on an amount that is actuarially determined (see Note 17).

V. Net Pension Liability

The Authority's proportionate share of the net pension liability, deferred outflows of resources and deferred inflows of resources, and expense associated with the Authority's requirement to contribute to the New York City Employees' Retirement System ("NYCERS") have been determined on the same basis as they are reported by NYCERS.

2. IMPLEMENTATION OF GASB 83

In accordance with GASB Statement No. 83, *Certain Asset Retirement Obligations*, which was adopted during 2018, the Authority restated amounts previously reported for 2017, as follows ($ in thousands):

Description	As Previously Reported	Adjustments	As Restated
Asset Retirement Obligatons	$ -	$ 68,425	$ 68,425
Deferred Outflows of Resources	172,927	13,637	186,564
Maintenance and operations expense	671,615	2,063	673,678
Net Position, Beginning of the Year	2,575,363	(52,725)	2,522,638
Change in Net Position	357,748	(2,063)	355,685
Net Position, End of the Year	2,933,111	(54,788)	2,878,323

The following amounts were also restated on the Cash Flow Statement for 2017, due to the implementation of GASB 83 ($ in thousands):

Description	As Previously Reported	Adjustments	As Restated
Operating Loss	$ (2,491,402)	$ (2,063)	$ (2,493,465)
Adjustments to reconcile operating loss to net cash used in operating actvities:			
Cumulative effect of implementing GASB 83 for ARO Obligations	-	(52,725)	$ (52,725)
Increase in Asset Retirement Obligations	-	68,825	68,825
Increase in Deferred Outflows on Asset Retirement Obligations	-	(13,367)	(13,367)

3. DEPOSITS AND INVESTMENTS

Deposits

At December 31, 2018, the Authority's deposits had a carrying amount of $808,762,000 and a bank balance of $804,717,000. These deposits were insured up to $250,000 per bank by the Federal Deposit Insurance Corporation ("FDIC"). Deposits in excess of FDIC coverage were fully collateralized, with the collateral being held in segregated custodial accounts in the Authority's name. Collateral coverage is monitored and maintained on a daily basis.

Deposits were comprised of the following at December 31, 2018 and 2017 ($ in thousands):

	Bank Balance	
Unrestricted	**2018**	**2017**
FDIC insured	$ 1,127	$ 1,567
Collateralized	104,209	121,788
Subtotal	105,336	123,355
Restricted		
FDIC insured	43,534	42,888
Collateralized	655,847	472,382
Subtotal	699,381	515,270
Total Deposits	$ 804,717	$ 638,625

Unrestricted deposits totaling $105,336,000 were largely comprised of operating balances for both LLC I and LLC II and replacement reserves for LLC I, totaling $100,822,000. The remaining balances totaling $4,514,000 are eligible for working capital and funding future liabilities, including self-insurance programs. The Authority's unrestricted deposits are held at various banks in interest-bearing accounts and demand deposit accounts (DDA) without interest. The maximum exposure of deposits, represented by the highest daily cash balance held in all deposit accounts maintained by the Authority during the year, was $363,997,000.

At December 31, 2018, restricted deposits totaling $699,381,000 included funds held in depository accounts on behalf of Sandy Recovery, escrow funds for several Energy Performance Contracts, escrow funds for vendor retention, reserves supporting the 2010 mixed-finance transaction, Certificates of Deposit for tenant security, and tenant participation activity HUD subsidies for use by resident councils for residents. In addition, a small part of the total restricted deposits included funds held by NYC Housing Development Corporation ("HDC) relating to the 2010 mixed-finance transaction. The Certificates of Deposits for tenant security will be maturing on March 29, 2019 and will be reinvested for one year through March 31, 2020. The liability related to these deposits is included in unearned revenues and other current liabilities (see Note 14).

3. DEPOSITS AND INVESTMENTS (continued)

Investments

In accordance with GASB 72, NYCHA discloses its investments at fair value. The Authority invests only in securities that fall under GASB's Level 2 fair market valuation grouping (there are 3 levels in total), as there are comparable and observable traded securities that can be used to accurately value the Authority's portfolio of securities. The Authority uses the Bloomberg financial data system to determine the fair value of its entire portfolio of securities. As of December 31, 2018 and 2017, all of the Authority's long-term investment holdings were in U.S. Governmental agency securities and GASB 72 requires their fair value be based on similar bonds that are being traded.

Unrestricted Investments

The Authority's investment policies comply with HUD's guidelines. These policies restrict the Authority's investments to obligations of the U.S. Treasury, U.S. Government agencies, and their instrumentalities. All investments are held in a secured custody account in the name of the Authority. All investments are publicly traded, and the fair value was based on published quoted values. Accrued interest receivable on unrestricted investments was $2,580,000 and $2,293,000 at December 31, 2018 and 2017.

Unrestricted investments stated at fair value, consist of the following at December 31, 2018 and 2017 ($ in thousands):

Unrestricted	**2018**	**2017**
U.S. Government Agency Securities	$ 533,097	$ 592,899
Repurchase Agreements	420,870	447,000
Total Unrestricted investments, including cash equivalents	953,967	1,039,899
Less: amount reported as unrestricted cash equivalents	420,870	447,000
Total Unrestricted investments	$ 533,097	$ 592,899

Cash equivalents include investments in repurchase agreements. The maximum exposure of investments held in repurchase agreements during the year was $635,070,000. At December 31, 2018, the Authority held $420,870,000 in repurchase agreements yielding 2.70 percent. At December 31, 2017, the Authority held $447,000,000 in repurchase agreements yielding 1.65 percent.

The maturities of the Authority's unrestricted investments at December 31, 2018 and 2017 are as follows ($ in thousands):

	As of December 31, 2018				As of December 31, 2017			
Security Type	Total	<1 year	1 - 5 years	>5 years	Total	<1 year	1 - 5 years	>5 years
U.S. Govt Agency Securities	$ 533,097	$ 101,313	$ 318,694	$ 113,090	$ 592,899	$ 96,269	$ 337,908	$ 158,722

3. DEPOSITS AND INVESTMENTS

Unrestricted Investments (continued)

At December 31, 2018 and 2017, the Authority's weighted average term to maturity for unrestricted investments is 3.14 years and 3.33 years, respectively. The Authority determines maturity levels based upon current available interest rates, expectations for future rates and the appropriate amount of liquidity needed for operations. While HUD's policy limits the maturities of investments held by housing authorities to three years, the Authority has received a HUD waiver to invest long-term reserves up to seven years.

The U.S. Government Agency security balance is comprised of obligations issued by the Federal Home Loan Mortgage Corporation, the Federal Home Loan Bank, Federal Farm Credit Bank and the Federal National Mortgage Association. At December 31, 2018 and 2017, the fair value of the Authority's long-term investments was $533,097,000 and $592,900,000, respectively, and these amounts are designated to fund the Authority's self-insurance programs.

Restricted Investments

At December 31, 2018 and 2017, NYCHA's total restricted investments had a fair value of $39,693,000 and $38,768,000, respectively. These funds were held in Trust supporting loans from NYC HDC for the 2013 Capital Fund Financing Program Bonds and the 2010 mixed-finance transaction. The restricted total was comprised of $31,335,000 in restricted investments and $8,358,000 in restricted cash equivalents at December 31, 2018 and $31,351,000 in restricted investments and $7,417,000 in restricted cash equivalents at December 31, 2017.

Of the $31,335,000 in restricted investments, $29,824,000 represents debt service reserves for the 2013 Capital Fund Financing Program Bonds, and the remaining $1,511,000 represents debt service reserves for the 2010 mixed-finance transaction. Accrued interest receivable on restricted investments was $1,184,000 and $874,000 at December 31, 2018 and 2017.

3. DEPOSITS AND INVESTMENTS

Restricted Investments (continued)

Restricted investments stated at fair value, consisted of the following at December 31, 2018 and 2017 ($ in thousands):

Restricted		**2018**		**2017**
Forward Delivery Agreement (debt service reserves)	$	29,824	$	29,824
Repurchase Agreements		8,358		7,417
Municipal Bonds		1,511		1,527
Total Restricted investments, including cash equivalents		39,693		38,768
Less amount reported as restricted cash equivalents		8,358		7,417
Total Restricted investments (not including cash equivalents)	$	31,335	$	31,351

The maturities of the Authority restricted investments at December 31, 2018 and 2017 were as follows ($ in thousands):

	As of December 31, 2018				As of December 31, 2017			
Security Type	Total	<1 year	1 - 5 years	>5 years	Total	<1 year	1 - 5 years	>5 years
Forward Delivery Agreement	$ 29,824	$ -	$ -	$ 29,824	$ 29,824	$ -	$ -	$ 29,824
Municipal Bonds	$ 1,511	$ -	$ 1,511	$ -	$ 1,527	$ -	$ 1,527	$ -
Total	$ 31,335	$ -	$ 1,511	$ 29,824	$ 31,351	$ -	$ 1,527	$ 29,824

At December 31, 2018 and 2017, the Authority's weighted average term to maturity for restricted investments was 13.94 years and 14.94 years, respectively. The Fiscal Agents determine maturity levels based upon current available interest rates, expectations for future rates and the appropriate amount of liquidity needed for NYCHA's operations.

Policies governing investments: The Authority has adopted the HUD investment policy outlined in HUD Notice PIH-2002-13 (HA), as its formal investment policy. In accordance with its Annual Contributions Contract (the "ACC") with HUD, the Authority is required to comply with this HUD Notice. These guidelines require the Authority to deposit funds in accordance with the terms of a General Depository Agreement, which must be in a form approved by HUD and executed between the Authority and its depository institutions, and restricts the Authority's investments to HUD–authorized securities, such as those issued by the U.S. Treasury, U.S. Government agencies and their instrumentalities, and requires that all investments be held in a segregated custodial account in the name of the Authority.

The Authority's current investment strategy involves consideration of the basic risks of fixed-income investing, including interest rate risk, market risk, credit risk, and concentration risk. In managing these risks, the primary factors considered are safety of principal, yield, liquidity, maturity, and administrative costs.

3. DEPOSITS AND INVESTMENTS

Restricted Investments (continued)

Interest rate risk: Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of the Authority's investment portfolio. In accordance with the Authority's investment policy, interest rate risk is mitigated by holding the securities in the Authority's portfolio until maturity, except when a reinvestment strategy may be appropriate. As an additional manner of minimizing interest rate risk, the securities of the Authority's fixed income portfolio have historically only had fixed coupon rates, and therefore the cash flows will not fluctuate with changes in interest rates.

Credit Risk: It is the Authority's policy to limit its investments to HUD-authorized investments issued by the U.S. Government, by a U.S. Government agency, or by a Government-sponsored agency. The Authority's policy is to invest mostly in Governmental agency and U.S. Treasury securities which are AA+ and Aaa rated by Standard and Poor's ("S&P") or Moody's, or to place balances in fully collateralized money market deposit accounts and interest-bearing bank accounts at banks rated A or better by Moody's or S&P. As of December 31, 2018, each of the agency securities that were in the NYCHA investment portfolio had bond ratings as follows: Moody's Aaa and S&P AA+. Depository bank accounts maintaining federal funds are fully collateralized, in excess of FDIC insurance, with Treasury and/or Governmental agency securities.

Concentration Risk: The Authority strives to invest in only AA+ and Aaa rated Governmental Agency and/or U.S. Treasury securities. Therefore, the Authority's policy does not place a limit on investments with any one issuer. The Authority's cash deposits are maintained in fully collateralized money market deposit accounts and fully collateralized interest-bearing and non-interest bearing (if required) bank accounts. Consequently, the Authority does not limit deposits to any one bank. Nonetheless, the Authority strives to diversify holdings in investments, cash and cash equivalents, whenever possible, to further minimize any potential concentration risk.

Custodial credit risk: The Authority maintains a perfected security interest in the collateral held on its behalf by its custodial agents. Custodial credit risk is the risk that the Authority will not be able to recover its collateral held by a third-party custodian, in the event that the custodian defaults. The Authority has no custodial credit risk due to the Authority's perfected security interest in its collateral in a segregated custodian account, which is registered in the Authority's name. The Authority's policy requires that all securities shall be maintained in a third-party custodian account and the manner of collateralization shall provide the Authority with a continuing perfected security interest in the collateral for the full term of the deposit, in accordance with applicable laws and Federal regulations. Such collateral shall, at all times, have a market value at least equal to the amount of deposits so secured.

4. ACCOUNTS RECEIVABLE

Accounts receivable at December 31, 2018 and 2017 are comprised of the following ($ in thousands):

	2018	2017
U.S. Department of Housing and Urban Development	$ 186,786	$ 73,842
Federal Emergency Management Agency	284,452	352,698
Due from The City of New York	154,255	56,241
Due from other government agencies	80,764	110,160
Tenants accounts receivable	100,165	84,763
Insurance Receivable - Superstorm Sandy	57,605	-
Other	28,155	22,371
Total accounts receivable	892,182	700,075
Less allowance for uncollectable accounts	77,918	65,087
Accounts receivable, net	$ 814,264	$ 634,988

Accrued interest receivable on investments of $3,763,000 and $3,167,000 at December 31, 2018 and 2017, respectively, is included in Other.

The allowance for uncollectable accounts at December 31, 2018 and 2017 consists of the following ($ in thousands):

	2018	2017
Tenants accounts receivable	$ 64,937	$ 53,477
Other	12,981	11,610
Total allowance for uncollectable accounts	$ 77,918	$ 65,087

The provision for bad debts related to tenant revenue is $23,263,000 and $22,282,000 for 2018 and 2017, respectively.

5. NOTES AND LOANS RECEIVABLE

Notes and Loans Receivable at December 31, 2018 and 2017 are comprised of the following ($ in thousands):

	2018	2017
Ocean Bay - RAD	$ 177,044	$ 108,249
PACT Transactions (see Note 21)	160,625	-
Section 8 Transaction	54,404	54,404
Randolph	40,152	39,682
Prospect II	12,718	12,718
Prospect I	9,552	9,552
Multifamily Home Ownership Program	8,558	8,558
1070 Washington Avenue	5,064	5,064
Betances	2,654	-
Fulton	2,000	2,000
Other	17,265	17,137
Total Notes and Loans Receivable	490,036	257,364
Less allowance for uncollectable accounts	320,809	149,545
Notes and Loans Receivable, net	$ 169,227	$ 107,819

6. PREPAID EXPENSES

Prepaid expenses at December 31, 2018 and 2017 are comprised of the following ($ in thousands):

	2018	2017
Water charges	$ 86,473	$ 85,771
Insurance premiums	15,427	13,311
Rent, leases and other	2,711	2,881
Total prepaid expenses	$ 104,611	$ 101,963

7. INVENTORIES

Inventories at December 31, 2018 and 2017 are summarized as follows ($ in thousands):

	2018	2017
Supplies inventory	$ 6,573	$ 8,086
Allowance for obsolete inventory	(531)	(545)
Supplies inventory (net)	6,042	7,541
Fuel oil inventory	5,456	5,034
Total inventories	$ 11,498	$ 12,575

8. CAPITAL ASSETS, NET

A summary of the changes in capital assets, net, which is comprised of land, structures and equipment, is as follows:

Summary of Changes in Capital Assets, Net ($ in thousands)

Description	January 1, 2018	Additions/ Transfers In	Deletions/ Transfers Out	December 31, 2018
Capital Assets not being depreciated:				
Land	$ 689,847	$ -	$ (2,340)	$ 687,507
Construction in progress	1,235,972	829,919	(232,092)	1,833,799
Total Capital Assets not being depreciated	**1,925,819**	**829,919**	**(234,432)**	**2,521,306**
Capital Assets being depreciated:				
Buildings	3,173,239	-	(26,774)	3,146,465
Building improvements	9,170,548	175,642	(32,456)	9,313,734
Facilities and other improvements	489,879	3,031	-	492,910
Furniture and equipment	829,440	53,228	(4,841)	877,827
Leasehold improvements	112,994	191	-	113,185
Total Capital Assets being depreciated	**13,776,100**	**232,092**	**(64,071)**	**13,944,121**
Less Accumulated Depreciation:				
Buildings	2,930,106	22,851	(26,774)	2,926,183
Building improvements	4,914,618	299,973	(30,563)	5,184,028
Facilities and other improvements	448,081	6,961	-	455,042
Furniture and equipment	728,275	33,454	(4,824)	756,905
Leasehold improvements	99,094	3,393	-	102,487
Total Accumulated Depreciation	**9,120,174**	**366,632**	**(62,161)**	**9,424,645**
Total Capital Assets being depreciated, net	**4,655,926**	**(134,540)**	**(1,910)**	**4,519,476**
Capital Assets, Net	**$ 6,581,745**	**$ 695,379**	**$ (236,342)**	**$ 7,040,782**

8. CAPITAL ASSETS, NET (continued)

Summary of Changes in Capital Assets, Net ($ in thousands)

Description	January 1, 2017	Additions/ Transfers In	Deletions/ Transfers Out	December 31, 2017
Capital Assets not being depreciated:				
Land	$ 689,847	$ -	$ -	$ 689,847
Construction in progress	1,050,432	671,262	(485,722)	1,235,972
Total Capital Assets not being depreciated	**1,740,279**	**671,262**	**(485,722)**	**1,925,819**
Capital Assets being depreciated:				
Buildings	3,178,487	-	(5,248)	3,173,239
Building improvements	8,757,216	432,264	(18,932)	9,170,548
Facilities and other improvements	477,498	12,381	-	489,879
Furniture and equipment	797,444	41,077	(9,081)	829,440
Leasehold improvements	112,994	-	-	112,994
Total Capital Assets being depreciated	**13,323,639**	**485,722**	**(33,261)**	**13,776,100**
Less Accumulated Depreciation:				
Buildings	2,911,809	23,419	(5,122)	2,930,106
Building improvements	4,625,164	306,278	(16,824)	4,914,618
Facilities and other improvements	441,235	6,846	-	448,081
Furniture and equipment	703,388	31,049	(6,162)	728,275
Leasehold improvements	95,748	3,346	-	99,094
Total Accumulated Depreciation	**8,777,344**	**370,938**	**(28,108)**	**9,120,174**
Total Capital Assets being depreciated, net	**4,546,295**	**114,784**	**(5,153)**	**4,655,926**
Capital Assets, Net	**$ 6,286,574**	**$ 786,046**	**$ (490,875)**	**$ 6,581,745**

9. ACCOUNTS PAYABLE

Accounts payable at December 31, 2018 and 2017 consist of the following ($ in thousands):

	2018	2017
Contract retentions	$ 57,223	$ 39,980
Vouchers payable	28,704	23,010
Employee benefits	25,196	25,731
Other	26,126	37,172
Total accounts payable	$ 137,249	$ 125,893

10. ACCRUED LIABILITIES

Accrued liabilities at December 31, 2018 and 2017 consist of the following ($ in thousands):

	2018	2017
Capital programs	$ 137,420	$ 124,999
Operating Programs	101,706	68,838
Wages and payroll taxes	47,525	45,145
Utilities	26,524	34,018
Interest	13,125	13,918
Other	8,084	6,571
Total accrued liabilities	$ 334,384	$ 293,489

11. POLLUTION REMEDIATION OBLIGATIONS

The Authority accounts for its pollution remediation obligations ("PRO") in accordance with GASB Statement No. 49 ("GASB 49") *Accounting and Financial Reporting for Pollution Remediation Obligations.* As a result, the Authority has recorded in the statements of net position a PRO liability in the amount $138,940,000 and $21,899,000 as of December 31, 2018 and 2017, respectively. The Authority's PRO is measured based on the expected costs of future activities, estimating a reasonable range of potential outlays and multiplying these outlays by their probability of occurring. The estimate of the liability does not include cost components that are not yet reasonably measurable.

The Authority has separated its pollution remediation obligations into three groups: fuel storage tanks and oil spills, lead based paint and asbestos remediation, and mold.

11. POLLUTION REMEDIATION OBLIGATIONS (continued)

Fuel Storage Tanks and Oil Spills

To comply with NYS Department of Environmental Conservation ("DEC") rules and regulations, the Authority is continuing a program started in 1992 to remediate contaminated soil and to replace fuel storage tanks on the Authority property as required.

As of December 31, 2018 and 2017, the number of open active fuel oil spills on record with DEC was 42 and 56, respectively. The spills are categorized by the Authority as either Class A spills which are pending closure, Class B spills which require further investigation or Class C spills which have been investigated and have a remedial plan in place. The number of open active fuel oil spills is as follows:

Description of Oil Spills	2018	2017
Pending closure	9	10
Require further investigation	16	29
Have been investigated and have a remedial plan in place	17	17
Total number of spills on record with the DEC	**42**	**56**

In connection with petroleum bulk storage remediation, the Authority's liability was $4,178,000 and $4,798,000 as of December 31, 2018 and 2017, respectively, as shown below, which represents the remaining estimated cost to close the Class A spills, investigate the Class B spills, and remediate and re-investigate the Class C spills.

Liability to Remediate Oil Spills ($ in thousands)

Description of Oil Spills	2018	2017
Pending closure	$ 37	$ 43
Require further investigation	752	1,366
Have been investigated and have a remedial plan in place	3,389	3,389
Total Liability to Remediate Oil Spills	**$ 4,178**	**$ 4,798**

The Authority has estimated the remaining cost of outlays and time to remediate the Class C spills based on an evaluation of each oil spill. Using that data, the liability was measured using the expected cash flow technique. The Authority has not recognized any clean-up remediation activity liabilities for Class B spills since those costs are not reasonably estimable. The Authority does not expect any recoveries related to fuel oil spills.

The Authority has no liability to replace fuel storage tanks as of December 31, 2018 and 2017, respectively.

11. POLLUTION REMEDIATION OBLIGATIONS (continued)

Lead Based Paint and Asbestos Remediation

During the course of building rehabilitation and modernization, the exposure of lead based paint or asbestos presents a threat to the health of residents and workers. Upon commencement of the rehabilitation and modernization projects these hazards are identified and remediated, and the remediation costs are expensed. As of December 31, 2018 and 2017, commitments related to the remediation of lead based paint and asbestos portions of active contracts were $126,762,000 and $17,101,000, respectively. A portion of building rehabilitation and modernization outlays are reimbursable from HUD through its Capital Fund Program.

Per HUD Regulations, an annual lead paint inspection is required of all target housing built prior to January 1, 1978. For NYCHA, the target housing consists of approximately 135,000 units. Through 2018, NYCHA has completed visual inspections of all target units. The visual inspections identified areas with the possible presence of lead paint. To determine if lead paint is present in excess of legal thresholds NYCHA has entered into contracts totaling $92,000,000 to conduct x-ray fluorescence (XRF) testing at all units built prior to 1978. NYCHA cannot reasonably estimate the range of cleanup outlays because it has not completed the lead paint testing.

Mold Remediation

Based on a 2018 settlement agreement, the Authority is required to complete mold repairs in no more than fifteen (15) days after a mold or excessive moisture condition is detected or reported. As of December 31, 2018, there were approximately 3,500 open work orders for mold. The estimated cost to remediate these mold conditions is $8,000,000.

The Authority's total pollution remediation obligations for 2018 and 2017 are summarized as follows ($ in thousands):

Description	TOTAL	Oil Spills	Asbestos & Lead	Mold
Liability at December 31, 2016	**$ 24,872**	**$ 6,698**	**$ 18,174**	$ -
Current year costs	17,422	901	16,521	-
Payments made during the year	(20,395)	(2,801)	(17,594)	-
Liability at December 31, 2017	**21,899**	**4,798**	**17,101**	-
Current year costs	134,626	1,487	125,139	8,000
Payments made during the year	(17,585)	(2,107)	(15,478)	-
Liability at December 31, 2018	**$ 138,940**	**$ 4,178**	**$ 126,762**	**$ 8,000**

The above liability is subject to change due to price increases or reductions, changes in technology, or changes in applicable laws or regulations. The Authority classifies the total pollution remediation obligations as of December 31, 2018 and 2017 as follows ($ in thousands):

Description	**2018**	**2017**
Current portion	$ 136,962	$ 20,101
Long-term portion	1,978	1,798
Total pollution remediation obligations	$ 138,940	$ 21,899

12. ASSET RETIREMENT OBLIGATIONS

The Department of Environmental Protection ("DEP") regulations require certain activities to be followed in connection with the retirement of fuel oil tanks. As of December 31, 2018, the Authority has 334 fuel oil tanks that are expected to be retired within the next five years. The estimated cost to retire these tanks is $69,965,000 and $68,425,000 at December 31, 2018 and 2017, respectively. This expense is being recognized over the useful life of the assets. The remaining useful life of the fuel oil tanks range from 1 to 19 years.

Amounts reported as Deferred Outflows of Resources of $11,620,000 as of December 31, 2018 will be recognized in Repair and Maintenance expense as follows ($thousands):

Year	Total
2019	$ 1,916
2020	1,791
2021	1,650
2022	1,502
2023	1,301
2023-2028	2,975
2029-2033	446
2034-2038	39
Total	**$ 11,620**

13. CLAIMS PAYABLE

General Liability **-** The Authority maintains a self-insurance program to provide for all claims arising from injuries to persons other than employees. The Authority has insurance to cover all liabilities in excess of a self-insured retention. From January 1, 2017 through July 31, 2017, the Authority's insurance coverage was $100,000,000 per occurrence and $130,000,000 in the aggregate, with a self-insured retention of $1,000,000 per occurrence. From August 1, 2017 through July 31, 2018, the Authority's insurance coverage was $100,000,000 per occurrence and $130,000,000 in the aggregate, with a self-insured retention of $1,000,000 per occurrence. From August 1, 2018 through December 31, 2018, the Authority's insurance coverage was $100,000,000 per occurrence and $177,000,000 in the aggregate with a self-insured retention of $1,000,000 per occurrence. The self-insured retention for Employee Benefits Liability limit (a component of the General Liability program) is $500,000 per occurrence. In addition, contractors performing work for the Authority are required to carry liability insurance protecting the contractor and the Authority.

The general liability program is primarily funded based upon an amount which is actuarially determined and charged to individual developments. In addition, a liability is established based upon an estimate of all probable losses, including an estimate of losses incurred but not yet reported. At December 31, 2018 and 2017, the total undiscounted liability for such claims was $193,359,000 and $176,265,000, respectively.

At December 31, 2018 and 2017, the liability for these claims was reported at discounted amounts of $183,591,000 and $168,226,000 using a discount rate of 1.50 percent. Payments made for claims amounted to $53,912,000 and $34,083,000 for the years ended December 31, 2018 and 2017, respectively.

Workers' Compensation – The Authority maintains a self-insurance program for workers' compensation claims. The workers' compensation program is primarily funded based upon an amount which is actuarially determined and charged to individual developments. At December 31, 2018 and 2017, the total undiscounted liability for such claims was $350,674,000 and $356,645,000, respectively.

At December 31, 2018 and 2017, these amounts were reported at discounted amounts of $295,981,000 using a discount rate of 2.25% percent and $297,444,000 using a discount rate of 2.50 percent, respectively. Payments made for claims amounted to $41,098,000 and $39,176,000 for the years ended December 31, 2018 and 2017, respectively.

The Authority's total claims payable for 2018 and 2017 are summarized as follows ($ in thousands):

Summary of Claims Payable ($ in thousands)

Description	TOTAL	General Liability	Workers' Comp.
Claim Reserve at December 31, 2016	**$ 464,734**	**$ 157,358**	**$ 307,376**
Losses incurred during the year	74,195	44,951	29,244
Losses paid during the year	(73,259)	(34,083)	(39,176)
Claim Reserve at December 31, 2017	**465,670**	**168,226**	**297,444**
Losses incurred during the year	108,912	69,277	39,635
Losses paid during the year	(95,010)	(53,912)	(41,098)
Claim Reserve at December 31, 2018	**$ 479,572**	**$ 183,591**	**$ 295,981**

13. CLAIMS PAYABLE (continued)

The claim reserves are reported by management at the 75 percent confidence level for 2018 and 2017. The Authority classifies the estimated claims that will be paid out in the next year as a current liability and the balance as a non-current liability, as shown below for the years ended December 31, 2018 and 2017 ($ in thousands):

Description	Total 2018	Total 2017	General Liability 2018	General Liability 2017	Workers' Comp. 2018	Workers' Comp. 2017
Current	$ 80,000	$ 82,980	$ 37,723	$ 39,781	$ 42,277	$ 43,199
Non-current	399,572	382,690	145,868	128,445	253,704	254,245
Total	**$ 479,572**	**$ 465,670**	**$ 183,591**	**$ 168,226**	**$ 295,981**	**$ 297,444**

14. UNEARNED REVENUES AND OTHER CURRENT LIABILITIES

Unearned revenues and other current liabilities at December 31, 2018 and 2017 are comprised of the following ($ in thousands):

	2018	2017
FEMA - Superstorm Sandy	$ 273,633	$ 297,474
Tenant security deposits	42,327	42,462
Tenant prepaid rent	22,247	21,457
Development transactions	20,158	19,782
Dormitory Authority - State of New York	19,086	28,862
Prepaid subsidy	6,868	3,124
Other	1,945	3,313
Total unearned revenues and other current liabilities	$ 386,264	$ 416,474

15. LONG - TERM DEBT

HDC Loans

On September 10, 2013, the Authority entered into a Loan Agreement with New York City Housing Development Corporation ("HDC"), borrowing approximately $701 million of bond proceeds issued under the Capital Fund Grant Revenue Bond Program at a weighted average interest rate of 4.8%. The face amount of the bonds consisted of $185,785,000 of Series 2013 A bonds ("Series A bonds") and $470,300,000 of Series 2013 B ("Series B bonds"). The Series B bonds had two sub-series: Series 2013 B-1 $348,130,000 and Series 2013 B-2 $122,170,000. The bond premiums were $15,020,118 and $29,695,129 on the Series A bonds and Series B bonds, respectively. The proceeds of the face amount of these bonds were loaned to the Authority by HDC.

15. LONG-TERM DEBT

HDC Loans (continued)

The Series 2013 A bonds proceeds were issued at a weighted average rate of 4.4% and were used together with other available funds from the prior Series 2005 A bond issuance as an advance refund of the remaining balance of the pre-existing Series 2005 A bonds and to defease the existing debt. The bond proceeds of the new Series 2013 A bonds were deposited in an irrevocable trust with an escrow agent to provide for all remaining debt service payments on the Series 2005 A bonds. The 2005 A bonds were fully paid in July 2005. The advance refunding resulted in a difference between the reacquisition price and the net carrying amount of the old debt of $10,388,000. This difference, a deferred amount on refunding, is being amortized through the year 2025 using the effective-interest method. The Authority completed the advance refunding to reduce total debt service payments over 11 years by $7.0 million and to obtain an economic gain of $2.9 million.

The Series 2013 B bond proceeds were issued with a weighted average rate of 5.0% to fund acquisition, construction or rehabilitation, and to make capital improvement at 34 Authority developments. Capital improvements primarily include “building envelope” work on roofs, brickwork, and windows, etc. The proceeds of these bonds that have been loaned to the Authority by HDC were placed in escrow accounts with the Trustee banks. The capital improvements for this program was completed and on June 7, 2017, the Authority made its final draw of the loan proceeds.

Certificates of Indebtedness

The State of New York has loaned the Authority funds to finance the construction of State-aided developments from proceeds of State Housing Bonds. The Authority has acknowledged its indebtedness for such loans by issuance of Certificates of Indebtedness. Debt service payments are made from funds provided by the State of New York.

Mortgage Loans

As part of the Authority’s March 16, 2010 mixed-finance transaction (see Note 21), HDC issued bonds totaling $477,455,000. The bonds issued by HDC were comprised of seven different series as follows: $23,590,000 2009 Series L-1, $68,000,000 2009 Series L-2, $150,000,000 2010 Series B (Bridge Bonds), $140,000,000 2011 Series A (Bridge Bonds), $25,325,000 2010 Series A-1, $3,000,000 2010 Series A-2 (Fixed-Rate Taxable Bonds), and $67,540,000 2012 Series A (Index Floating Rate).

The bond proceeds were used to provide financing in the form of mortgage loans to LLC I and LLC II. Of the seven different series of bonds issued as part of the mixed-finance transaction, four series were paid in full in 2013, and three series were outstanding as of December 31, 2018. Specifically, 2009 Series L-2, 2010 Series B, 2011 Series A, and 2012 Series A were paid in full, while the three outstanding are 2009 Series L-1, 2010 Series A-1, and 2010 Series A-2. In September 2013, the three remaining loans were converted from construction to permanent loans, with principal and interest payable monthly.

15. LONG-TERM DEBT

Mortgage Loans (continued)

For LLC I, the proceeds from the mortgage issued in connection with the $23,590,000 2009 Series L-1 Bonds were used to finance the acquisition of the developments. These mortgage loans are secured by the net operating income of the respective development's Section 8 rental revenue.

The LLC II financing structure for rehabilitation provided private activity bond proceeds from a long-term bond issue of $25,325,000 2010 Series A-1 Bonds. Similarly, acquisition funds were provided from the proceeds of the $3,000,000 2010 Series A-2 Bonds. These mortgage loans are secured by the net operating income of the respective development's Section 8 rental revenue.

2013 Equipment Lease/Purchase Agreement

In January 2013, the Authority entered into a 13-year Equipment Lease/Purchase Agreement with Banc of America Public Capital Corp ("BAPCC") in the amount of $18,046,000 to finance an Energy Performance Contract ("EPC"). This financing agreement and EPC have enabled the Authority to upgrade boilers, instantaneous water heaters, apartment temperature sensors, and upgrade computerized heating automated systems at six developments, and upgrade apartment convectors at one of these six developments. The Equipment Lease/Purchase Agreement with BAPCC will mature in 2026. This EPC plan provides HUD-sponsored EPC funding for projects at these six developments, which were previously earmarked to be funded with Federal Capital subsidies, thereby enabling the Authority to use its Federal Capital funds for other critical capital improvements pursuant to the Authority's Five-Year Capital Plan.

2016 Equipment Lease/Purchase Agreement for Ameresco A

In December 2016, the Authority entered into a 20-year Equipment Lease/Purchase Agreement with Banc of America Public Capital Corp in the amount of $51,548,000 to finance an Energy Performance Contract. This financing agreement and EPC will enable the Authority to upgrade common area and apartment lighting at sixteen (16) developments and to replace a boiler plant and upgrade a comprehensive heating system at one development. The Equipment Lease/Purchase Agreement with BAPCC will mature in June 2036. This EPC plan provides HUD-sponsored EPC funding at these sixteen developments, thereby enabling the Authority to use its Federal Capital funds for other capital improvements pursuant to the Authority's Five-Year Capital Plan.

2016 Unsecured Line of Credit / Loan Agreement)

In December 2016, the Authority entered into a Loan Agreement with the NY Green Bank, a division of New York State Energy Research and Development Authority, providing the Authority with an $11 million unsecured line of credit. The term of the loan was 12 months, with cumulative draws totaling approximately $11 million, exclusive of interest and fees. The proceeds of this loan were used to partially finance energy efficiency upgrades at twenty-three (23) developments associated with a HUD approved EPC. This financing agreement enabled the Authority to complete lighting installations that reduce the Authority's electricity demand in the Brooklyn and Queens boroughs of New York. The installation and other associated work enabled the Authority to receive incentive funds from Con Edison in an amount ranging from $5.5 million up to $8 million in an ongoing ConEd demand reduction program. This loan was paid off prior to maturity in December 2017.

2017 Equipment Lease/Purchase Agreement for Sandy-A

In December 2017, the Authority entered into a 20-year Equipment Lease/Purchase Agreement with Banc of America Public Capital Corp ("BAPCC") in the amount of $43,000,000 to finance an Energy Performance Contract ("EPC"). This financing agreement and EPC will enable the Authority to upgrade common area and apartment lighting at eighteen (18) developments and heating controls at 17 developments. The Equipment Lease/Purchase Agreement with BAPCC will mature in December 2037. This EPC plan provides HUD-sponsored EPC funding at these 18 developments, thereby enabling the Authority to use its Federal Capital funds for other capital improvements pursuant to the Authority's Five-Year Capital Plan.

2017 Equipment Lease/Purchase Agreement for Brooklyn Queens Demand Management ("BQDM")

In December 2017, the Authority entered into a 20-year Equipment Lease/Purchase Agreement with Banc of America Public Capital Corp ("BAPCC") in the amount of $60,133,000 to finance an Energy Performance Contract ("EPC"). This financing agreement and EPC will enable the Authority to upgrade common area and apartment lighting, and apartment heating controls at twenty-three (23) developments. The Equipment Lease/Purchase Agreement with BAPCC will mature in December 2037. This EPC plan provides HUD-sponsored EPC funding at these developments, thereby enabling the Authority to use its Federal Capital funds for other capital improvements pursuant to the Authority's Five-Year Capital Plan.

2018 Equipment Lease/Purchase Agreement for Ameresco B (EPC007)

In August 2018, the Authority entered into a 20-year Equipment Lease/Purchase Agreement with Banc of America Public Capital Corp ("BAPCC") in the amount of $79,462,000 to finance an Energy Performance Contract ("EPC"). This financing agreement and EPC have enabled the Authority to fund energy conservation work to upgrade common area and apartment lighting, and apartment heating controls at fifteen (15) developments. The Equipment Lease/Purchase Agreement with BAPCC will mature in July 2038. This EPC plan provides HUD-sponsored EPC funding at these developments, thereby enabling the Authority to use its Federal Capital funds for other capital improvements pursuant to the Authority's Five-Year Capital Plan.

15. LONG - TERM DEBT (continued)

The tables that follow provide information about the change in long term debt over the past two years for the Authority and its blended component units ($ in thousands):

Description of Long Term Debt	Jan. 1, 2018	Proceeds	Payments & Amortization	Dec. 31, 2018	Due Within One Year
Bonds:					
State Guaranteed Certificates of Indebtedness Outstanding (State Program) three issues remaining bearing interest of 3.5% to 3.75% per annum maturing annually through July 2024.	$ 8,564	-	$ (1,462)	$ 7,102	$ 1,462
State Guaranteed Certificates of Indebtedness Outstanding (incorporated into the Federal Housing Program), three issues remaining bearing interest of 3.5% to 4.75% per annum, maturing annually through July 2024.	1,399	-	(244)	1,155	243
Loans Funded by:					
HDC Capital Fund Program Revenue Bonds, Series 2013 A ($185,785,000); Loan Agreement with an interest rate of 3.0% to 5.0% per annum, maturing annually through July 2025.	136,815	-	(14,415)	122,400	15,095
HDC Capital Fund Program Revenue Bonds, Series 2013 B-1 ($348,130,000); Loan Agreement with an interest rate of 5.0% to 5.25% per annum, maturing annually through July 2033.	293,535	-	(17,465)	276,070	18,345
HDC Capital Fund Program Revenue Bonds, Series 2013 B-2 ($122,170,000); Loan Agreement with an interest rate of 5.0% to 5.25% per annum, maturing annually through July 2032.	122,170	-	-	122,170	-
Loan Payable - 2013 Equipment Lease/Purchase Agreement; with BAPCC for Energy Performance Contract ($18,045,580) at an interest rate of 1.98% per annum, maturing January 19, 2026.	13,812	-	(1,392)	12,420	1,457
Loan Payable - 2016 Equipment Lease/Purchase Agreement; (Ameresco A) with BAPCC for Energy Performance Contract ($51,548,356) at an interest rate of 3.27% per annum, maturing June 28, 2036.	53,247	871	(729)	53,389	1,610
Loan Payable - 2016 Multi-draw term loan facility; with NY Green Bank ($11,000,000) at rate of 3.5% per annum on the used portion and at 0.50% per annum on the unused portion, paid off on December 18, 2017.	-	-	-	-	-
Loan Payable - 2017 Equipment Lease/Purchase Agreement; (BQDM); with BAPCC for Energy Performance Contract ($60,132,977.75) at an interest rate of 3.6178% per annum, maturing December 15, 2037.	60,133	2,195	-	62,328	-
Loan Payable - 2017 Equipment Lease/Purchase Agreement; (SANDY A); with BAPCC for Energy Performance Contract ($43,000,000) at an interest rate of 3.6178% per annum, maturing December 22, 2037.	43,000	1,570	-	44,570	-
Loan Payable - 2018 Equipment Lease/Purchase Agreement; (Ameresco B); with BAPCC for Energy Performance Contract ($79,461,775.81) at an interest rate of 4.75% per annum, maturing July 1, 2038.	-	79,462	-	79,462	-
HDC 2009 Series L-1 Bonds ($23,590,000); Permanent Mortgage Loan at an interest rate of 6.3% per annum, maturing November 2043; secured by mortgage.	22,298	-	(358)	21,940	381
HDC 2010 Series A-1 Bonds ($25,325,000); Permanent Mortgage Loan at an interest rate of 5.1% per annum, maturing November 2041; secured by mortgage.	23,389	-	(3,303)	20,086	480
HDC 2010 Series A-2 Bonds ($3,000,000); Permanent Mortgage Loan at an interest rate of 5.1% per annum, maturing May 2041; secured by mortgage.	2,770	-	(405)	2,365	57
Long Term Debt (before Premium)	**781,132**	**84,098**	**(39,773)**	**825,457**	39,130
Add Premium on HDC Revenue Bond Loan Agreements	19,035	-	(4,063)	14,972	-
TOTAL LONG TERM DEBT	**$ 800,167**	**$ 84,098**	$ (43,836)	**$ 840,429**	$ 39,130

During 2018, an additional $2,783,000 of the 2010 Series A-1 Bonds and $344,000 of the 2010 Series A-2 Bonds was prepaid in connection with the Baychester/Murphy PACT transaction (see Note 21).

15. LONG TERM DEBT (continued)

Description of Long Term Debt	Jan. 1, 2017	Proceeds	Payments & Amortization	Dec. 31, 2017	Due Within One Year
Bonds:					
State Guaranteed Certificates of Indebtedness Outstanding (State Program) three issues remaining bearing interest of 3.5% to 3.75% per annum maturing annually through July 2024.	$ 10,789	-	$ (2,225)	$ 8,564	$ 1,462
State Guaranteed Certificates of Indebtedness Outstanding (incorporated into the Federal Housing Program), three issues remaining bearing interest of 3.5% to 4.75% per annum, maturing annually through July 2024.	1,642	-	(243)	1,399	244
Loans Funded by:					
HDC Capital Fund Program Revenue Bonds, Series 2013 A ($185,785,000); Loan Agreement with an interest rate of 3.0% to 5.0% per annum, maturing annually through July 2025.	150,555	-	(13,740)	136,815	14,415
HDC Capital Fund Program Revenue Bonds, Series 2013 B-1 ($348,130,000); Loan Agreement with an interest rate of 5.0% to 5.25% per annum, maturing annually through July 2033.	310,160	-	(16,625)	293,535	17,465
HDC Capital Fund Program Revenue Bonds, Series 2013 B-2 ($122,170,000); Loan Agreement with an interest rate of 5.0% to 5.25% per annum, maturing annually through July 2032.	122,170	-	-	122,170	-
Loan Payable - 2013 Equipment Lease/Purchase Agreement; with BAPCC for Energy Performance Contract ($18,045,580) at an interest rate of 1.98% per annum, maturing January 19, 2026.	15,140	-	(1,328)	13,812	1,392
Loan Payable - 2016 Equipment Lease/Purchase Agreement; (Ameresco A) with BAPCC for Energy Performance Contract ($51,548,356) at an interest rate of 3.27% per annum, maturing June 28, 2036.	51,548	1,699	-	53,247	730
Loan Payable - 2016 Multi-draw term loan facility; with NY Green Bank ($11,000,000) at rate of 3.5% per annum on the used portion and at 0.50% per annum on the unused portion, paid off on December 18, 2017.	94	10,906	(11,000)	-	-
Loan Payable - 2017 Equipment Lease/Purchase Agreement; (BQDM); with BAPCC for Energy Performance Contract ($60,132,977.75) at an interest rate of 3.6178% per annum, maturing December 15, 2037.	-	60,133	-	60,133	-
Loan Payable - 2017 Equipment Lease/Purchase Agreement; (SANDY A); with BAPCC for Energy Performance Contract ($43,000,000) at an interest rate of 3.6178% per annum, maturing December 22, 2037.	-	43,000	-	43,000	-
HDC 2009 Series L-1 Bonds ($23,590,000); Permanent Mortgage Loan at an interest rate of 6.3% per annum, maturing November 2043; secured by mortgage.	22,634	-	(336)	22,298	358
HDC 2010 Series A-1 Bonds ($25,325,000); Permanent Mortgage Loan at an interest rate of 5.1% per annum, maturing November 2041; secured by mortgage.	23,883	-	(494)	23,389	520
HDC 2010 Series A-2 Bonds ($3,000,000); Permanent Mortgage Loan at an interest rate of 5.1% per annum, maturing May 2041; secured by mortgage.	2,829	-	(59)	2,770	61
Long Term Debt (before Premium)	**711,444**	**115,738**	**(46,050)**	**781,132**	36,647
Add Premium on HDC Revenue Bond Loan Agreements	23,898	-	(4,863)	19,035	-
TOTAL LONG TERM DEBT	**$ 735,342**	**$ 115,738**	$ (50,913)	**$ 800,167**	$ 36,647

15. LONG TERM DEBT (continued)

<u>Pledged Revenue</u>

CFFP Series 2013A & B Bonds - As security for the Series 2013 A, B-1, and B-2 CFFP Bonds which were issued by HDC, the Authority pledged future HUD Capital Fund Program grant revenue to service the bond debt (thereby satisfying the Authority's loans payable to HDC). With HUD's approval, the Authority pledged as sole security for the bonds, a portion of its annual appropriation from HUD. The bonds are payable with pledged revenue through 2033. The Authority has committed to appropriate capital contributions of the Capital Fund Program in amounts sufficient to cover the scheduled principal and interest requirements of the debt. Total principal and interest paid for 2018 and 2017, by the Authority was $59,544,000 and $59,529,000, respectively. As of December 31, 2018, total principal and interest remaining on the combined debt for Series 2013 A, B-1, and B-2 are $520,640,000 and $206,570,000, respectively, with annual debt service ranging from $59,559,000 in the coming year 2019 to $38,792,000 in the final year 2033.

2013 Equipment Lease/Purchase Agreement - As security for the Equipment Lease/Purchase Agreement with Banc of America Public Capital Corp, the Authority pledged HUD Operating Subsidy revenue to service the loan debt. With HUD's approval, the Authority pledged as security, a portion of its annual appropriation from HUD that consists of HUD Financial Incentive Payments. The loan is payable with pledged revenue through 2026. The Authority has committed to appropriate HUD Operating Subsidy revenue in amounts sufficient to cover the scheduled principal and interest requirements of the debt. Total principal and interest paid for 2018 and 2017, by the Authority was $1,659,000 and $1,622,000 respectively. As of December 31, 2018, total principal and interest remaining on the Equipment Lease/Purchase Agreement are $12,420,000 and $1,018,000, with annual debt service ranging from $1,696,000 in the coming year 2019 to $853,000 in the final year 2026.

2016 Equipment Lease/Purchase Agreement for Ameresco A - As security for the Equipment Lease/Purchase Agreement with Banc of America Public Capital Corp, the Authority pledged HUD Operating Subsidy revenue to service the loan debt. With HUD's approval, the Authority pledged as security, a portion of its annual appropriation from HUD that consists of HUD Financial Incentive Payments. The loan is payable with pledged revenue through 2036. The Authority has committed to appropriate HUD Operating Subsidy revenue in amounts sufficient to cover the scheduled principal and interest requirements of the debt. As of December 31, 2018, total principal and interest remaining on the Equipment Lease/Purchase Agreement are $53,389,000 and $18,437,000, with annual debt service payments ranging from $3,343,000 in the coming year 2019 to $2,439,000 in the final year 2036. During the construction period and prior to beginning debt service payments, the interest will be added to the principal of the loan. In 2018 and 2017, the Authority added $871,000 and $1,699,000 respectively, in interest to this loan.

15. LONG-TERM DEBT (continued)

2017 Equipment Lease/Purchase Agreement for Sandy A **-** As security for the Equipment Lease/Purchase Agreement with Banc of America Public Capital Corp, the Authority pledged HUD Operating Subsidy revenue to service the loan debt. With HUD's approval, the Authority pledged as security, a portion of its annual appropriation from HUD that consists of HUD Financial Incentive Payments. The loan is payable with pledged revenue through 2037. The Authority has committed to appropriate HUD Operating Subsidy revenue in amounts sufficient to cover the scheduled principal and interest requirements of the debt. As of December 31, 2018, total principal and interest remaining on the Equipment Lease/Purchase Agreement are $44,570,000 and $20,033,000, with no annual debt service payments due during the coming year 2019 to $4,271,000 in the final year 2037. Debt service payments will begin in June 2020. During the construction period and prior to beginning debt service payments, the interest will be added to the principal of the loan. In 2018, the Authority added $1,570,000 in interest to this loan.

2017 Equipment Lease/Purchase Agreement for BQDM **-** As security for the Equipment Lease/Purchase Agreement with Banc of America Public Capital Corp, the Authority pledged HUD Operating Subsidy revenue to service the loan debt. With HUD's approval, the Authority pledged as security, a portion of its annual appropriation from HUD that consists of HUD Financial Incentive Payments. The loan is payable with pledged revenue through 2037. The Authority has committed to appropriate HUD Operating Subsidy revenue in amounts sufficient to cover the scheduled principal and interest requirements of the debt. As of December 31, 2018, total principal and interest remaining on the Equipment Lease/Purchase Agreement are $62,328,000 and $27,868,000, with no annual debt service payments due during the coming year 2019 to $5,640,000 in the final year 2037. Debt service payments will begin in June 2020. During the construction period and prior to beginning debt service payments, the interest will be added to the principal of the loan. In 2018, the Authority added $2,195,000 in interest to this loan.

2018 Equipment Lease/Purchase Agreement for Ameresco B (EPC007) - As security for the Equipment Lease/Purchase Agreement with Banc of America Public Capital Corp, the Authority pledged HUD Operating Subsidy revenue to service the loan debt. With HUD's approval, the Authority pledged as security, a portion of its annual appropriation from HUD that consists of HUD Financial Incentive Payments. The loan is payable with pledged revenue through 2038. The Authority has committed to appropriate HUD Operating Subsidy revenue in amounts sufficient to cover the scheduled principal and interest requirements of the debt. As of December 31, 2018, total principal and interest remaining on the Equipment Lease/Purchase Agreement are $79,462,000 and $53,969,000, with no annual debt service payments due during the coming year 2019 to $8,841,000 in the final year 2038. Debt service payments will begin in January 2021. During the construction period and prior to beginning debt service payments, the interest will be added to the principal of the loan. In 2018, the Authority added $1,269,000 in interest to this loan.

15. LONG-TERM DEBT (continued)

Pledged Assets

The Authority has five Equipment Lease/Purchase Agreements supporting energy performance contracts with Banc of America Public Capital Corp. As of December 31, 2018, the restricted cash balances that were held in escrow and pledged as collateral for these five leases totaled $207,337,000 and the related equipment serving as collateral for these EPCs totaled $ 38,828,000. The Authority has four loan agreements outstanding with HDC. As of December 31, 2018, the restricted cash balances that were held in debt service reserve accounts and serving as collateral for these four loans totaled $31,338,000.

Combined Debt of the Authority

Future principal and interest payments of all the Authority's outstanding long-term debt (excluding amortized bond premium) at December 31, 2018 are payable as follows ($ in thousands):

	Years	Principal	Interest	Total
Current portion	2019	$ 39,130	$ 37,914	$ 77,044
Long-term portion:				
	2020	33,112	36,934	70,046
	2021	48,499	35,010	83,509
	2022	51,237	32,794	84,031
	2023	53,415	30,412	83,827
	2024-2028	236,243	116,033	352,276
	2029-2033	255,355	61,076	316,431
	2034-2038	97,014	13,886	110,900
	2039-2043	11,452	1,462	12,914
Total long-term portion		786,327	327,607	1,113,934
Total payments		**$ 825,457**	**$ 365,521**	**$ 1,190,978**

Interest rates on outstanding debt range from 1.98 percent to 6.30 percent. During 2018 and 2017, principal repayments totaled $36,647,000 and $46,051,000, respectively.

16. ACCRUED LEAVE TIME

Accumulated unpaid leave time is accrued at estimated amounts of future benefits attributable to services already rendered. The liability for compensated absences is calculated for all active employees and is based upon the leave time policy of the Authority, of which two of the major policy factors are retirement eligibility requirements and days eligible for payment.

The liability is comprised of three components: (1) liability for unused leave time (days and hours), (2) liability for bonus retirement leave for employees currently eligible to retire, and (3) liability for bonus retirement leave for employees not currently eligible to retire.

The liability for those employees who are retirement eligible is classified as a current liability, while the liability of those employees not currently eligible to retire is classified as a long-term liability.

The changes in accrued leave time for the years ending December 31, 2018 and 2017 are as follows:

Summary of Accrued Leave Time ($ in thousands)

Description of Liability	Dec. 31, 2016	Increases	Decreases	Dec. 31, 2017	Increases	Decreases	Dec. 31, 2018
Unused leave time	$ 96,205	$ 10,445	$ (13,478)	$ 93,172	$ 10,808	$ (16,269)	$ 87,711
Bonus:							
Retirement eligible	34,806	7,062	(5,845)	36,023	7,491	(7,693)	35,821
Not retirement eligible	46,586	5,610	(6,851)	45,345	6,615	(7,801)	44,159
Total Bonus	81,392	12,672	(12,696)	81,368	14,106	(15,494)	79,980
Subtotal	177,597	23,117	(26,174)	174,540	24,914	(31,763)	167,691
Employer FICA	13,463	1,891	(2,002)	13,352	1,906	(2,430)	12,828
Leave Time Liability	**$ 191,060**	**$ 25,008**	**$ (28,176)**	**$ 187,892**	**$ 26,820**	**$ (34,193)**	**$ 180,519**

The current and long-term portions of leave time liability as of December 31, 2018 and 2017 are as follows ($ in thousands):

Description of Liability	2018	2017
Current portion	$ 73,987	$ 75,770
Long-term portion	106,532	112,122
Total accrued leave time	**$ 180,519**	**$ 187,892**

17. EMPLOYEE BENEFITS

Deferred Compensation Plan

The Authority does not have its own Deferred Compensation Plan. The Authority's employees participate in The City of New York Deferred Compensation Plan, which offers a 457 Plan, a 401(k) Plan, and a Roth 401(k) Plan, through payroll deductions. Employees may choose to make pre-tax contributions and/or Roth (after-tax) contributions in the 457 Plan. The plan allows employees to save regularly, in certain cases, with before-tax dollars while deferring federal, state and local income taxes. The pre-tax contributions will remain tax deferred until withdrawn through plan benefit payments.

Pension Plan

The Authority follows the provisions of GASB Statement No. 68 *Accounting and Financial Reporting for Pensions – an amendment of GASB Statement No. 27.* This Statement establishes financial reporting standards for state and local governments for pensions (see Note 1).

Plan Description. Authority employees are members of the New York City Employees' Retirement System, a multiple employer, cost-sharing, public employee retirement system. NYCERS provides retirement, as well as death and disability benefits. The NYCERS plan combines the features of a defined benefit pension plan with those of a defined contribution pension plan, but is considered a defined benefit plan for financial reporting purposes. NYCERS administers the New York City Employees Retirement System qualified pension plan.

NYCERS issues a stand-alone financial report, which is included in The City of New York Comprehensive Annual Financial Report as a pension trust fund. This financial report may be obtained from the New York City Employees' Retirement System, 335 Adams Street, Suite 2300, Brooklyn, N.Y. 11201-3724, or from the website of NYCERS at http://nycers.org.

All persons holding permanent civil service positions in the competitive or labor class are required to become members of the system six months after their date of appointment, but may voluntarily elect to join the system prior to their mandated membership date. All other eligible employees have the option of joining the system upon appointment or anytime thereafter.

Tier 1 - All members who joined prior to July 1, 1973.

Tier 2 - All members who joined on or after July 1, 1973 and before July 27, 1976.

Tier 3 - Only certain members who joined on or after July 27, 1976 and prior to April 1, 2012.

Tier 4 - All members (with certain member exceptions) who joined on or after July 27, 1976 but prior to April 1, 2012. Members who joined on or after July 27, 1976 but prior to September 1, 1983 retain all rights and benefits of Tier 3 membership.

Tier 6 – Members who joined on or after April 1, 2012.

The 63/10 Retirement Plan ("Tier 6 Basic Plan"), changed the vesting period from five years of credited service to ten years of credited service.

NYCERS provides three main types of retirement benefits: Service Retirements, Ordinary Disability Retirements, which are non-job-related disabilities, and Accident Disability Retirements, which are job-related disabilities, to participants generally based on salary, length of service, and member Tiers. The Service Retirement benefits provided to Tier 1 participants fall into four categories according to the level of benefits provided and the years of service required. Three of the four categories provide annual benefits of 50% to 55% of final salary after 20 or 25 years of service, with additional benefits equal to a specified percentage per year of service, currently 1.2% to 1.7%, of final salary. The fourth category has no minimum service requirement and instead provides an annual benefit for each year of service equal to a specified percentage, currently 0.7% to 1.53%, of final salary.

Pension Plan (continued)

Funding Policy. Benefit and contribution provisions, which are contingent upon the time at which the employee last entered qualifying service, salary, and length of credited service, are established by State law and may be amended only by the State Legislature. The plan has contributory and non-contributory requirements, with retirement age of 55 or older depending upon when an employee last entered qualifying service, except for employees in physically taxing titles and those who can retire at age 50 with proper service.

Employees entering qualifying service on or before June 30, 1976 are enrolled in a non-contributory plan. Employees entering qualifying service after June 30, 1976, but before June 29, 1995, are enrolled in a plan which required a 3 percent contribution of their salary. This 3 percent required contribution was eliminated for employees who reached 10 years of service, effective October 1, 2000. Employees entering qualifying service after June 28, 1995 are enrolled in a plan which requires a 4.85 percent contribution of their salary, or a 6.83 percent contribution for physically taxing positions.

Under the Tier 6 Basic Plan, employees who joined NYCERS between April 1, 2012 and March 31, 2013 are required to contribute 3 percent of gross wages. On April 1, 2013 a new contribution structure took effect which ranges from 3 percent to 6 percent dependent upon annual wages earned during the "plan year". The Authority's contributions for the years ended December 31, 2018 and 2017 were $164,165,000 and $165,240,117 respectively. The Authority's contractually required contributions for the years ended December 31, 2018 and 2017 as a percentage of covered payroll were 21.38% and 21.99%, respectively.

Pension Plan (continued)

Net Pension Liability. As of December 31, 2018 and 2017, the Authority reported a liability of $894,818,000 and $1,032,725,000, respectively, for its proportionate share of NYCERS's net pension liability, as calculated by the New York City Office of the Actuary. The net pension liability was measured as of June 30, 2018 and June 30, 2017 and the total pension liability used to calculate the net pension liability was determined by actuarial valuations as of June 30, 2016 and June 30, 2015, respectively. The Authority's proportion of the net pension liability was based on a projection of the Authority's long-term share of contributions to the pension plan relative to the projected contributions of all participating employers, actuarially determined. At June 30, 2018 and 2017 the Authority's proportion of net pension liability was 4.885% and 4.973%, respectively. For the years ended December 31, 2018 and 2017, the Authority recognized pension expense of $137,537,000 and $126,621,000, respectively. At December 31, 2018 and 2017, the Authority reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources ($ in thousands):

Deferred Outflows of Resources - 2018			**Deferred Inflows of Resources - 2018**		
Change of assumptions	$	13,130	Difference between expected and actual experience	$	83,216
Changes in proportion and differences between contributions subsequent to the measurement date		-	Net difference between projected and actual earnings on pension plan investments		48,323
Total contributions subsequent to the measurement date		81,672	Changes in proportion and differences between contributions subsequent to the measurement date		20,532
Total	**$**	**94,802**		**$**	**152,071**

Deferred Outflows of Resources - 2017			**Deferred Inflows of Resources - 2017**		
Change of assumptions	$	50,908	Difference between expected and actual experience	$	27,555
Changes in proportion and differences between contributions subsequent to the measurement date		1,299	Net difference between projected and actual earnings on pension plan investments		42,197
Total contributions subsequent to the measurement date		82,494	Changes in proportion and differences between contributions subsequent to the measurement date		10,941
Total	**$**	**134,701**		**$**	**80,693**

Pension Plan (continued)

Deferred outflows of resources related to pensions resulting from Authority contributions subsequent to the measurement date of $81,672,000 will be recognized as a reduction of the net pension liability in the year ended December 31, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows ($ in thousands):

Year	Total
2019	$ (980)
2020	(33,427)
2021	(59,406)
2022	(27,677)
2023	(17,278)
2023	(173)
Total	**$ (138,941)**

Actuarial Methods and Assumptions. The total pension liability in the June 30, 2016 and June 30, 2015 actuarial valuations used, respectively, by the Authority in 2018 and in 2017 were both determined using the following actuarial assumptions, applied to all periods included in the measurement:

Investment Rate of Return	7% per annum, net of investment expenses
Salary Increases	3.0% per annum general, merit and promotion increases plus assumed general wage increases
Cost of Living Adjustments	1.5% and 2.5% per annum for certain tiers

In October 2015 the independent actuarial auditor, Gabriel, Roeder, Smith & Company ("GRS"), issued a report on their NYC Charter-mandated actuarial experience studies for the four-year and ten-year periods ended June 30, 2013 (the GRS Report).

Based, in part on the GRS Report, on published studies of mortality improvement, and on input from the City's outside consultants, the Actuary proposed, and the Boards of Trustees of the NYCERS adopted, new post-retirement mortality tables for use in determining employer contributions beginning in Fiscal Year 2016. The new tables of post-retirement mortality are based primarily on the experience of the NYCERS (the Base Tables) and the application of Mortality Improvement Scale MP-2015, published by the Society of Actuaries in October 2015 (the Valuation Tables). Scale MP-2015 replaced Mortality Improvement Scale AA.

In addition, beginning in Fiscal Year 2016, the Actuary revised the Actuarial Asset Valuation Method to constrain the Actuarial Asset Value to be within a 20% corridor of the Market Value of Assets.

Pursuant to Section 96 of the New York City Charter, studies of the actuarial assumptions used to value liabilities of the five actuarially-funded New York City Retirement Systems ("NYCRS") are conducted every two years.

Pension Plan (continued)

Expected Rate of Return on Investments. The long-term expected rate of return on pension plan investments was determined using a building block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighing the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Class	Target Asset Allocation	Long-Term Expected Real Rates of Return
U.S. Public Market Equities	29.00%	6.30%
International Public Market Equities	13.00%	7.00%
Emerging Public Market Equities	7.00%	9.50%
Private Market Equities	7.00%	10.40%
Fixed Income	33.00%	2.20%
Alternatives (Real Assets, Hedge Funds	11.00%	5.50%
Total	100.00%	

The City has determined its long-term expected rate of return on investments to be 7.00%. This is based upon an expected real rate of return ranging from 5.0% to 5.2% and a long-term Consumer Price Inflation assumption of 2.5% per year, which is reduced by investment related expenses.

Discount Rate. The discount rate used to measure the total pension liability was 7.00% as of June 30, 2018 and June 30, 2017. The projection of cash flows used to determine the discount rate assumed that employer contributions will be made based on rates determined by the Actuary. Based on those assumptions, the NYCERS fiduciary net position was projected to be available to make all projected future benefit payments of current active and non-active NYCERS members. Therefore, the long-term expected rate of return on NYCERS investments was applied to all periods of projected payments to determine the total pension liability.

The following presents the Authority's proportionate share of the net pension liability as of December 31, 2018 and 2017, calculated using the discount rate of 7%, as well as what the Authority's proportionate share of the net pension liability would be if it were calculated using a discount rate that is one-percentage point lower (6%) or one-percentage point higher (8%) than the current rate ($ in thousands):

NYCHA's proportionate share of the net pension liability	1% decrease (6%)	Discount rate (7%)	1% increase (8%)
2018	$ 1,371,679	$ 894,818	$ 492,502
2017	$ 1,492,550	$ 1,032,725	$ 628,766

The fiduciary net position and additions to and deductions from the fiduciary net position have been determined on the same basis as reported by NYCERS. For this purpose, benefits and refunds are recognized when due and payable in accordance with the terms of the Plan; investments are reported at fair value.

Other Postemployment Benefits

The Authority follows the provisions of GASB Statement No. 75 ("GASB 75"), *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions,* which was implemented in 2017 (see Note 2). GASB 75 replaces the requirements of Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*, as amended, and No. 57, *OPEB Measurements by Agent Employers and Agent Multiple-Employee Plans.*

Plan Description. The Authority is a component unit of The City and a member of the New York City Health Benefits Program. The New York City Health Benefits Program (the "Plan"), administered by the City of New York, is a single-employer defined benefit healthcare plan which provides OPEB to eligible retirees and beneficiaries. Retirees are eligible to participate if they have at least 10 years of credited service as a member of the NYCRS (5 years of credited service if employed on or before December 31, 2001), 15 years of service if a member of TRS or BERS, or receives a pension check from NYCERS. OPEB includes health insurance, Medicare Part B reimbursements, and welfare fund contributions.

Funding Policy. The Administrative Code of The City of New York ("ACNY") defines OPEB to include Health Insurance and Medicare Part B reimbursements; Welfare Benefits stem from the Authority's many collective bargaining agreements. The Authority is not required by law or contractual agreement to provide funding for OPEB other than the pay-as-you go amount necessary to provide current benefits to retirees and eligible beneficiaries/dependents. For the calendar years ended December 31, 2018 and 2017, the Authority paid $61.7 million and $69.0 million, respectively, to the Plan. Based on current practice, (the Substantive Plan which is derived from ACNY), the Authority pays the full cost of basic coverage for non-Medicare-eligible/Medicare-eligible retiree participants. The costs of these benchmark plans are reflected in the annual June 30th actuarial valuations by using age-adjusted premium amounts. Plan retiree participants who opt for other basic or enhanced coverage must contribute 100% of the incremental costs above the premiums for the benchmark plans. The Authority also reimburses covered employees 100% of the Medicare Part B premium rate applicable to a given year. The Authority pays per capita contributions to the welfare funds the amounts of which are based on negotiated contract provisions. There is no retiree contribution to the welfare funds.

Census Data. The following table presents the NYCHA census data used in the June 30, 2017 and June 30, 2016 OPEB valuations which were used to measure the Total OPEB Liability at December 31, 2018 and December 31, 2017, respectively.

	Number of Participants	
Status	June 30, 2017	June 30, 2016
Active	9,535	9,941
Inactives	1,031	1,023
Deferred Vested	566	611
Retired	8,939	8,789
Total	**20,071**	**20,364**

Other Postemployment Benefits (continued)

Total OPEB Liability. The Entry Age Actuarial Cost Method used in the current OPEB actuarial valuation is unchanged from the prior actuarial valuation.

Under this method, the Actuarial Present Value ("APV") of Benefits ("APVB") of each individual included in the valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit age(s). The employer portion of this APVB allocated to a valuation year is the Employer Normal Cost. The portion of this APVB not provided for at a valuation date by the APV of Future Employer Normal Costs is the Total OPEB Liability.

Increases (decreases) in liabilities due to benefit changes, actuarial assumption changes and /or actuarial method changes are also explicitly identified and amortized in the annual expense.

Changes in Total OPEB Liability. Changes in the Authority's Total OPEB Liability for the years ended December 31, 2018 and December 31, 2017 are as follows ($ in thousands)

	Total OPEB Liability	
Description	2018	2017
Total OPEB Liability at the Beginning of the Year	**$ 2,562,879**	**$ 2,484,343**
Changes for the Year:		
Service Cost	116,663	99,842
Interest	85,032	86,759
Differences between Expected and Actual Experience	48,400	(68,103)
Change in Assumptions	(176,030)	42,001
Contributions - Employer	(61,714)	(68,963)
Implicit Rate Subsidy	(13,000)	(13,000)
Net Changes	**(649)**	**78,536**
Total OPEB Liability at the End of the Year	**$ 2,562,230**	**$ 2,562,879**

Other Postemployment Benefits (continued)

Sensitivity Analysis. The following presents the Total OPEB Liability of the Authority, as well as what the Authority's Total OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage point higher than the discount rates of 3.64% and 3.16% used to measure the Total OPEB Liability at December 31, 2018 and December 31, 2017, respectively ($ in thousands):

1% decrease (2.64%)	Discount rate (3.64%) 2018	1% increase (4.64%)
$ 2,959,420	$ 2,562,230	$ 2,247,413
1% decrease (2.16%)	Discount rate (3.16%) 2017	1% increase (4.16%)
$ 2,967,304	$ 2,562,879	$ 2,237,092

The following presents the total OPEB Liability of the Authority, as well as what the Authority's total OPEB Liability would be if it were calculated using health care cost trend rates that are 1-percentage-point lower or 1-percentage-point higher than the current healthcare cost trend rates ($ in thousands):

1% decrease	Current healthcare cost trend rates	1% increase
2018	2018	2018
$ 2,150,087	$ 2,562,230	$ 3,133,866
2017	2017	2017
$ 2,137,623	$ 2,562,879	$ 3,158,334

OPEB Expense. The OPEB expense recognized by the Authority for the years ended December 31, 2018 and 2017 are $129,110,000 and $136,767,000, respectively.

Other Postemployment Benefits (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources. Deferred outflows of resources and deferred inflows of resources by source reported by the Authority at December 31, 2018 and December 31, 2017, respectively, are as follows ($ in thousands):

Deferred Outflows of Resources - 2018			Deferred Inflows of Resources - 2018		
Difference between expected and actual experience	$	39,772	Difference between expected and actual experience	$	44,538
Changes in assumptions		27,468	Changes in assumptions		234,499
Total	**$**	**67,240**		**$**	**279,037**

Deferred Outflows of Resources - 2017			Deferred Inflows of Resources - 2017		
Difference between expected and actual experience	$	-	Difference between expected and actual experience	$	56,321
Changes in assumptions		34,735	Changes in assumptions		122,166
Total	**$**	**34,735**		**$**	**178,487**

Amounts reported as Deferred Outflows of Resources of $67,240,000 and Deferred Inflows of Resources of $279,037,000 related to OPEB as of December 31, 2018 will be recognized in OPEB Expense as follows ($ in thousands):

Year		Total
2019	$	(59,585)
2020		(59,585)
2021		(52,475)
2022		(26,273)
2023		(13,879)
Total	**$**	**(211,797)**

Other Postemployment Benefits (continued)

Funding Status and Funding Progress. As of December 31, 2018, the most recent roll-forward actuarial valuation date, the Plan was not funded. The total OPEB liability for benefits was $2,562,230,000, all of which is unfunded. There were no assets accumulated in a trust. Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. The determined actuarial valuations of OPEB incorporated the use of demographic and salary increase assumptions among others as reflected below. Amounts determined regarding the funded status and the annual expense of the Authority are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The schedule of changes in the net OPEB liability and related ratios shown in the RSI section immediately following the notes to financial statements presents GASB Statement No. 75 results of OPEB valuations for Fiscal Years 2018 and 2017.

Actuarial Methods and Assumptions. The actuarial assumptions used in the 2018 and the 2017 OPEB valuations are a combination of those used in the NYCERS pension actuarial valuations and those specific to the OPEB valuations.

These assumptions are generally unchanged from the previous valuation except as noted below. The NYCERS pension assumptions are provided in the five "Silver Books" available on the Reports page of the OA website (www.nyc.gov/actuary).

The probability of retirement set out in each of the Silver books is assumed to be 100% at either age 63 or 70, depending upon the program of benefits for the individual employee. For the OPEB valuation, 100% of the individuals remaining in service at these ages are assumed to either retire with a benefit or to terminate employment without a benefit, depending upon whether they have attained the requisite service.

For the 2016 OPEB and pension valuations, new tables of postretirement mortality were proposed by the Actuary and adopted by each of the NYCERS Boards during Fiscal Year 2016. These tables were based primarily on the experience of each system and the application of Mortality Improvement Scale MP-2015 published by the Society of Actuaries in October 2015. Scale MP-2015 applied on a generational basis replaced Mortality Improvement Scale AA which was applied on a static projection basis.

Other Postemployment Benefits (continued)

The OPEB-specific actuarial assumptions primarily used in the June 30, 2018 and 2017 OPEB actuarial valuations of the Plan are as follows:

Valuation Date	June 30, 2017 and June 30, 2016
Measurement Date	December 31, 2018 and December 31, 2017
Discount Rate	3.64%[1] per annum for the December 31, 2018 measurement date 3.16%[1] per annum for the December 31, 2017 measurement date
Actuarial Cost Method	Entry Age Normal cost method, level percent of pay calculated on an individual basis.
Per-Capita Claims Costs	EBCBS and GHI plans are insured via a Minimum Premium arrangement while the HIP and many of the other HMOs are community rated. Costs reflect age-adjusted premiums for all plans. HIP HMO and GHI/EBCBS non-Medicare premiums have been adjusted for Health Savings Agreement changes. Age adjustment based on assumed age distribution of covered population used for non-Medicare retirees and HIP and Other HMO Medicare retirees. Age adjustment based on actual age distribution of the GHI/EBCBS Medicare covered population. All reported premiums assumed to include administrative costs. [1] As required under GASB 75 the discount rates are based on the S&P Municipal Bond 20 Year High Grade Index, since there is no pre-funding assumed for this plan.

Initial monthly premium rates used in the valuation are as follows:

Plan		Monthly Rates FY 2018			Monthly Rates FY 2017	
HIP HMO						
Non-Medicare						
Single	$	652.44	(A)	$	600.18	(A)
Family		1,598.47	(A)		1,470.45	(A)
Medicare		164.98	(A)		160.83	(A)
GHI/EBCBS:						
Non-Medicare						
Single	$	620.08	(A)	$	567.48	(A)
Family		1,652.27	(A)		1,487.47	(A)
Medicare		172.42			168.35	
Others:						
Non-Medicare Single	$	1,018.56	(B)	$	1,030.56	(B)
Non-Medicare Family		2,223.80	(B)		2,226.45	(B)
Medicare Single		311.79	(B)		276.18	(B)
Medicare Family		621.50	(B)		546.28	(B)

(A) For the Fiscal Year 2018 and 2017 valuations, HIP HMO status quo premiums are decreased by 4.13% and 5.10%, respectively, and status quo GHI/EBCBS Pre-Medicare premiums are decreased by 0.51% and 0.82%, respectively, to reflect Fiscal year 2018 Health Savings agreement changes announced during Fiscal Year 2017.

(B) Other HMO premiums represent the total premium for medical (not prescription) coverage including retiree contributions.

Welfare Funds

The Welfare Fund Contribution reported as of the valuation date, June 30, 2017 and June 30, 2016, respectively, (including any reported retroactive amounts) was used as the per capita cost for valuation purposes.

Projected contributions reflect $25 increases at July 1, 2016 and July 1, 2017. The calculations reflect an additional one time $100 contribution for Fiscal Year 2017 in July 2016.

Reported annual contribution amounts for the last three years are shown in the Fiscal Year 2018 GASB 74/75 report in Section 3, Tables 3h to 3l. Welfare Fund Rates are based on actual reported Union Welfare Fund code for current retirees. Weighted average annual contribution rates used for future retirees, based on Welfare Fund enrollment of recent retirees, are shown in the following table.

	Annual Rate			
		2018		2017
NYCERS	$	1,850	$	1,743
BERS		1,903		1,713

Other Postemployment Benefits (continued)

Medicare Part B Premiums

Calendar Year	Monthly Premium	
2013-15	$ 104.90	
2016	109.97	
2017	113.63	
2018	125.85	*

* Reflected only in the FY 2018 valuation

Medicare Part B Premium reimbursement amounts have been updated to reflect actual premium rates announced for calendar years through 2018. Due to limited cost-of living adjustment in Social Security benefits for Calendar Years 2017 and 2018, some Medicare Part B participants will not be charged the Medicare Part B premium originally projected or ultimately announced for those years. Thus, the valuation uses a blended estimate as a better representation of future Part B premium costs.

For the 2018 OPEB actuarial valuation the annual premium used was $1,436.89, which is equal to an average of the Calendar Year 2017 and 2018 monthly premiums shown.

For the Year 2018, the monthly premium was determined as follows:

- 28% of the basic $104.90 monthly hold-harmless amount, assuming that there would be no claims made for the slight increase in Part B premiums for continuing retirees, and

- 72% of the announced premium of $134.00 for Calendar Year 2018, representing the approximate percentage of the overall U.S. Medicare population that will pay the announced amount.

For the 2017 OPEB valuation the annual premium used was $1,341.60, which is equal to:

- 70% of the basic $104.90 monthly hold-harmless amount, assuming that there would be no claims made for the slight increase in Part B premiums for continuing retirees, and

- 30% of the announced premiums (6 months at $121.80 for Calendar Year 2016 and 6 months at $134.00 for Calendar Year 2017), representing the proportion of the Medicare population that will pay the announced amount.

Other Postemployment Benefits (continued)

Medicare Part B Prem. (cont.)

Overall Medicare Part B Premium amounts are assumed to increase by the following percentages to reflect the income-related increases in Medicare Part B Premiums for high income individuals.

	Income-Related Part B Increase	
Fiscal Year	2018	2017
2017	N/A	4.0%
2018	4.5%	4.5%
2019	5.0%	5.0%
2020	5.2%	5.2%
2021	5.3%	5.3%
2022	5.4%	5.4%
2023	5.5%	5.5%
2024	5.6%	5.6%
2025	5.8%	5.8%
2026	5.9%	5.9%
2027 and later	6.0%	6.0%

Medicare Part B Reimbursement Assumption

90% of Medicare participants are assumed to claim reimbursement; based on historical data (unchanged from last year).

Health Care Cost Trend Rate (HCCTR)

Covered medical expenses are assumed to increase by the following percentages (unchanged from the last valuation). For purposes of measuring entry age calculations, actual historic plan increases are reflected to the extent known.

HCCTR ASSUMPTIONS - 2018

Year Ending *	Pre-Medicare Plans	Medicare Plans	Medicare Part B Premium	Welfare Fund Contributions
2018 **	7.61%	2.42%	7.73%	0.0%
2019	7.0%	5.0%	5.0%	3.5%
2020	6.5%	5.0%	5.0%	3.5%
2021	6.0%	5.0%	5.0%	3.5%
2022	5.5%	5.0%	5.0%	3.5%
2023 and later	5.0%	5.0%	5.0%	3.5%

* Fiscal Year for Pre-Medicare and Medicare Plans and Calendar Year for Medicare Part B Premiums

** Actual amounts based on the *2015 Health Care Savings Agreement Initiative Report of Status of Healthcare Savings* dated March 29, 2018. Welfare Fund contribution rates assumed to increase based on current pattern bargaining (additional $25 for 2018).

Other Postemployment Benefits (continued)

Health Care Cost Trend Rate (HCCTR)

HCCTR ASSUMPTIONS - 2017

Year Ending *	Pre-Medicare Plans	Medicare Plans	Medicare Part B Premium	Welfare Fund Contributions
2017 **	7.84%	2.51%	5.0%	0.0%
2018	7.5%	5.0%	5.0%	0.0%
2019	7.0%	5.0%	5.0%	3.5%
2020	6.5%	5.0%	5.0%	3.5%
2021	6.0%	5.0%	5.0%	3.5%
2022	5.5%	5.0%	5.0%	3.5%
2023 and later	5.0%	5.0%	5.0%	3.5%

* Fiscal Year for Pre-Medicare and Medicare Plans and Calendar Year for Medicare Part B Premiums

** Actual amounts based on the *2015 Health Care Savings Agreement Initiative Report of Status of Healthcare Savings* dated June 19, 2017. Welfare Fund contribution rates assumed to increase based on current pattern bargaining (additional $25 each for fiscal year 2017 for 2018, plus a one-time $100 in Fiscal Year 2017.

Participation

Participation assumptions were updated as part of the Fiscal Year 2017 valuation to reflect recent experience. The Office of the Actuary reviewed recent experience to confirm these assumptions were still reasonable for the Fiscal Year 2018 valuation. Actual elections are used for current retirees. Some current retirees not eligible for Medicare are assumed to change elections upon attaining age 65 based on patterns of elections of Medicare-eligible retirees.

For current retirees who appear to be eligible for health coverage but have not made an election (non-filers), the valuation reflects single GHI/EBCBS coverage and Part B premium benefits only, to approximate the obligation if these individuals were to file for coverage. For future retirees, the portion assumed to file for future benefits, and therefore valued similarly, are as follows (this assumption was used for the first time in the 2017 valuation):

	2018	2017
NYCERS (NYCHA)	13%	13%
BERS	12%	12%

Other Postemployment Benefits (continued)

Participation

Participants who do not qualify for coverage because they were working less than 20 hours a week at termination are assumed to be reflected in waivers and non-filers.

Detailed assumptions for future Program retirees are presented below:

Plan Participation Assumptions - 2018

Benefits:	**NYCERS**	**BERS**
Pre-Medicare		
GHI/EBCBS	72%	70%
HIP HMO	20%	16%
Other HMO	4%	2%
Waiver	4%	12%
Medicare		
GHI	72%	78%
HIP HMO	20%	16%
Other HMO	4%	2%
Waiver	4%	4%
Post-Medicare Migration		
Other HMO to GHI	-	-
HIP HMO to GHI	-	-
Pre-Med. Waiver	-	-
** to GHI @ 65	-	67%
** to HIP @ 65	-	-

Plan Participation Assumptions - 2017

Benefits:	**NYCERS NYCHA**	**BERS**
Pre-Medicare		
GHI/EBCBS	65%	70%
HIP HMO	26%	16%
Other HMO	4%	2%
Waiver	5%	12%
Medicare		
GHI	72%	78%
HIP HMO	20%	16%
Other HMO	4%	2%
Waiver	4%	4%
Post-Medicare Migration		
Other HMO to GHI	-	-
HIP HMO to GHI	-	-
Pre-Med. Waiver	-	-
** to GHI @ 65	-	67%
** to HIP @ 65	-	-

Other Postemployment Benefits (continued)

Demographic Assumptions	The actuarial assumptions used in the 2018 and the 2017 OPEB valuations are a combination of those used in the NYCERS pension actuarial valuations and those specific to the OPEB valuations.
Cadillac Tax	The OPEB actuarial valuation includes an explicit calculation of the high cost plan excise tax ("Cadillac Tax") that will be imposed beginning in 2022 under National Health Care Reform.
Actives/Inactives Liabilities	The actuarial assumptions used in the 2018 and the 2017 OPEB valuations assumed that 40% of the measured liability of the Active/Inactive population, which is roughly equivalent to assuming 60% of the Active/Inactive members will terminate membership prior to vesting and not receive OPEB.

18. OPERATING REVENUES

Operating revenues include tenant revenue, net and other income and are comprised of the following for the years ended December 31, 2018 and 2017 are ($ in thousands):

DESCRIPTION	2018	2017
Tenant revenue, net:		
Rental revenue, net	$ 1,046,734	$ 1,031,183
Other	23,288	20,445
Total tenant revenue, net	1,070,022	1,051,628
Other income:		
Commercial and community center revenue	13,925	13,801
Insurance and benefits reimbursements	6,714	11,010
Developer fees	4,434	11,013
Contract retention reductions	-	8,077
Sub-let income	3,335	3,299
Energy rebates	2,580	3,384
Section 8 income	720	773
Other	5,043	5,409
Total other income	36,751	56,766
Total operating revenues	$ 1,106,773	$ 1,108,394

19. SUBSIDIES AND GRANTS

Subsidies include operating subsidies to fund all the Authority's programs, as well as to fund interest on outstanding debt. Subsidies to fund operations are received periodically and recorded when due. Grants are awarded by the federal, state or city governments to provide funding for administration and program operations. Subsidies and grants for the years ended December 31, 2018 and 2017 are as follows ($ in thousands):

DESCRIPTION	2018	2017
Section 8 Housing Assistance Programs	$ 1,140,715	$ 1,100,686
Federal Operating Subsidy	936,583	889,603
City of New York Subsidies	165,912	80,143
Federal Capital Funds used for operating purposes	120,513	54,018
FEMA	22,463	28,180
Other	1,019	1,544
Total subsidies and grants	$ 2,387,205	$ 2,154,174

The Authority participates in a number of programs, funding for which is provided by Federal, State and City agencies. These grant programs are subject to financial and compliance audits by the grantors or their representatives.

20. OPERATING EXPENSES

Operating expenses for the years ended December 31, 2018 and 2017 are as follows ($ in thousands):

Description	2018	2017 Restated
Personnel services	$ 1,248,707	$ 1,244,411
Program costs	2,283,631	1,986,510
Depreciation	366,632	370,938
Total operating expenses	$ 3,898,970	$ 3,601,859

20. OPERATING EXPENSES (continued)

Operating expenses include general and administrative, utilities, and maintenance and operations in the following amounts for the years ended December 31, 2018 and 2017 ($ in thousands):

DESCRIPTION	2018	2017 Restated
General and administrative:		
Salaries	$ 226,298	$ 231,874
Employee benefits	383,106	377,309
Claims and insurance expense	138,678	106,346
Rental and lease expense	40,628	40,693
Contracts	41,782	31,804
Professional services	37,216	29,751
Other	22,971	20,623
	$ 890,679	$ 838,400
Utilities:		
Water	$ 182,969	$ 182,069
Heating gas	180,171	168,014
Electricity	169,610	164,740
Fuel oil	14,243	8,546
Cooking gas	8,251	8,231
Steam	7,945	7,116
Labor	19,216	15,826
	$ 582,405	$ 554,542
Maintenance and operations:		
Labor	$ 473,213	$ 464,283
Contract costs	321,060	143,857
Materials	81,158	65,538
	$ 875,431	$ 673,678

21. DEVELOPMENT TRANSACTIONS

Section 8 Transaction

On December 23, 2014, the Authority completed a transaction, referred to as “Section 8 Recap”, in which six project-based Section 8 developments, comprising 875 housing units, were sold to a newly formed limited liability company, Triborough Preservation LLC (“Triborough”), in which NYCHA retains a 0.005% membership interest.

The total amount of the transaction was $300 million. Triborough paid $158,882,000 in cash at the closing and issued a Purchase Money Note (the “Note”) for the remaining portion of $141,118,000. The Note bears simple interest at 6% per annum. There is no required annual payment of principal and interest, except to the extent of cash flow, however, the entire principal plus unpaid interest is immediately due and payable on the maturity date of December 2044. The transaction gain will be recognized as cash is received.

21. DEVELOPMENT TRANSACTIONS

<u>Section 8 Transaction (continued)</u>

The cash received at closing is non-refundable. The transaction agreements contain put options that can require the Authority to repurchase the property after the expiration of the fifteen year low income tax credit compliance period. Due to this continuing involvement, the Authority will recognize the cash received as revenue over the fifteen year compliance period, in accordance with GASB Statement No. 62. During both 2018 and 2017 the Authority recognized $16,946,000 as revenue from this transaction. The resulting unearned revenue is as follows ($ in thousands):

Description of Liability	2018	2017
Current portion	$ 16,946	$ 16,946
Long-term portion	169,090	186,036
Unearned revenue from Section 8 Recap	$ 186,036	$ 202,982

On March 3, 2017, cash of $109,147,000 was received by NYCHA, consisting of the following:

- $95,311,000 – Note Principal
- $12,701,000 – Note Interest
- $ 1,135,000– Developer Fee

In accordance with GASB Codification Section 2250.110, the Note Principal and Interest as well as the Developer Fee were not previously recognized since these items were contingent on events that may not have materialized. However, these estimates were adjusted in 2016. The $95,310,669 Seller Note Principal payment will be recognized as gain on sale over the fifteen year tax credit compliance period beginning December 23, 2014.

The $12,701,000 of interest income and the $1,135,000 Developer Fee were fully recognized as income in 2016.

NYCHA has been granted a Right of First Refusal which states that at the end of the fifteen year Compliance Period and for the twelve months thereafter, Triborough will not sell or otherwise dispose of the property without first offering it to NYCHA for a period of thirty days.

This Section 8 Recap transaction is intended to result in the rehabilitation of these developments by the new owner. A separate developer for this rehabilitation is a newly formed limited liability company, of which the Authority has a 50% interest. The rehabilitation work on the developments is anticipated to generate $46,611,000 in developer fees, of which the Authority's share is $23,306,000.

21. DEVELOPMENT TRANSACTIONS (continued)

Ocean Bay – Bayside Transaction

On December 29, 2016, the Authority completed a transaction in which Ocean Bay – Bayside, comprising 1,395 units and a community center (Parcel A) was leased to a newly formed limited liability company, Ocean Bay RAD, LLC, in which NYCHA retains a 0.005% membership interest. Concurrently, in a related transaction, the Authority entered into a lease agreement with a newly formed corporation, Bayside Land Lease Corporation, in which NYCHA retains a 50% ownership interest for the purpose of making improvements to the land (Parcel B) funded by FEMA proceeds.

The Authority also holds certain rights to repurchase the leasehold interest held by the owner as set forth in the Right of First Refusal and Purchase Option Agreement. Under the Authority's right of first refusal, the owner cannot sell or transfer Parcel A to a third-party without first offering it to the Authority for one hundred twenty days at a price equal to the outstanding debt plus taxes attributable to the sale. If the Authority notifies the owner that it is exercising its right of first refusal, the sale must take place within one hundred twenty days after the Authority provides notice. The Authority's right of first refusal terminates five years following the close of the tax credit compliance period. In accordance with the Parcel B lease, the Parcel B lease will terminate upon the Authority's exercise of its Right of First Refusal and Purchase Option Agreement. The transaction agreements contain put options that can require the Authority to repurchase the property after the expiration of the fifteen year low income tax credit compliance period. Due to this continuing involvement, the Authority will recognize the cash received as revenue over the fifteen year compliance period, in accordance with GASB Statement No. 62.

The resulting unearned revenue as of December 31, 2018 and 2017 is as follows ($ in thousands):

Description of Liability	2018	2017
Current portion	$ 2,836	$ 2,836
Long-term portion	34,017	36,853
Unearned Revenue from RAD	$ 36,853	$ 39,689

21. DEVELOPMENT TRANSACTIONS (continued)

2018 PACT Transactions

In 2018, the Authority entered into four real estate transactions involving nearly 2,500 units at 18 developments under the PACT ("Permanent Affordability Commitment Together ") program, as follows:

Transaction	Date
Twin Parks West	10/31/18
Betances	11/16/18
Highbridge/Franklin	11/30/18
Baychester/Murphy	12/28/18

PACT is the Authority's preservation initiative, which centers on the conversion of public housing funding to Section 8 project-based vouchers and the creation of public-private partnerships to address the needs of NYCHA's developments. Under PACT, the Authority seeks to identify resources and opportunities to make major physical and operational improvements while preserving long term affordability, maintaining strong resident rights, and stabilizing developments by placing them on a more solid financial footing.

Under the 2018 PACT transactions, the Authority leased the properties to newly formed developer entities with NYCHA retaining a minority interest in these entities. The total amount of the transactions was $180,310,000. The Authority was paid $19,685,000 in cash at the closing and issued Purchase Money Notes for the remaining portion of $160,625,000. The Notes bear interest ranging from 1% to 5.54% per annum. There is no required annual payment of principal and interest except to the extent of cash flow. The leases include a Purchase Option and Right of First Refusal which permits the Authority to acquire the leasehold interest from the other member after a specified period of time, with the exception of the Baychester/Murphy transaction. The Authority will recognize the cash received under this transaction as revenue under the operating lease method over the shorter of the lease term or when the Purchase Option or Right of First Refusal can be exercised. Any developer fees will be recorded when earned.

The resulting unearned revenue as of December 31, 2018 is as follows ($ in thousands)

Description of Liability	2018
Current portion	$ 376
Long-term portion	19,252
Unearned Revenue from PACT	$ 19,628

22. SUPERSTORM SANDY

On October 29, 2012, Sandy made landfall, causing significant damage in New York City as well as other states and cities along the U.S. eastern seaboard. Certain Authority developments sustained substantial damage to buildings and equipment, including their infrastructure and mechanical and electrical systems. Expenses, comprised of emergency costs, permanent costs based on in-kind cost of repairs and rent abatement, were $332,500,000. The Authority anticipates expenditures for building restoration, electrical, mechanical, and plumbing systems, and grounds restoration to protect physical assets from future storm damage and to better serve its residents. These expenditures are estimated at $2,887,000,000 and will be capitalized as work is completed. As of December 31, 2018, $885,570,000 has been expended relating to this work.

Costs incurred and continuing to be incurred, but not reflected as Sandy costs include excess fuel costs and other costs relating to temporary boilers and generators. These costs incurred through December 31, 2018, are included in ordinary operating expenses. The majority of these costs remain eligible for insurance and FEMA recovery purposes.

Substantially all costs related to Sandy are expected to be reimbursed by insurance recoveries, FEMA and other sources. NYCHA has insurance coverage of up to $509,750,000 from its commercial and flood insurance carriers. To date, the Authority has received $458,475,000 from its insurance carriers, of which $131,972,000 and $809,000 was reported in 2018 and 2017, respectively. Insurance recoveries are reported as non-operating revenue.

23. RELATED PARTY TRANSACTIONS

Mixed-Finance Transactions

On March 16, 2010, the Authority closed two mixed-finance transactions in which 21 NYCHA developments, comprising 20,139 housing units, were sold to two newly-created, limited liability companies. Thirteen developments, containing 14,465 dwelling units, were sold to NYCHA Public Housing Preservation I, LLC, in which NYCHA I Housing Development Fund Corporation, a component unit of NYCHA, is the sole managing member and has a 0.01% membership interest in LLC I. LLC I is a Low Income Housing Tax Credit LLC. Eight developments, containing 5,674 dwelling units, were sold to NYCHA Public Housing Preservation II, in which NYCHA II Housing Development Fund Corporation, a component unit of NYCHA, is the sole managing member and has a 49.9% membership interest in LLC II.

The LLCs were created in connection with the mixed-finance transactions and are considered blended component units for financial reporting purposes. The Authority served as developer and continues to be the property manager for both LLCs.

23. RELATED PARTY TRANSACTIONS

<u>Mixed-Finance Transactions (continued)</u>

The total acquisition price for the developments sold to LLC I was $590,250,000. At closing, LLC I paid $53,733,000 in cash using a combination of mortgage proceeds of $32,809,000 and equity contributions of $20,924,000 from the equity investor limited partner. NYCHA issued a Seller Note to LLC I for the remaining portion of $536,517,000, with interest on the Note accruing at 2.69%. As of December 31, 2018 there is an outstanding balance of $58,349,000, including interest of $34,103,000 on the Seller Note, which has been reported as a Note receivable in the Condensed Combining Information (see Note 26).

The total acquisition price for the developments sold to LLC II was $3,000,000, which was paid entirely at the closing using the proceeds from a $3,000,000 mortgage.

The two mixed-finance transactions were structured and closed in a manner which allowed the Authority to utilize financing opportunities available under the provisions of the American Recovery and Reinvestment Act of 2009 ("ARRA") in order to qualify for certain federal funding. At the time of the closing, NYCHA qualified to receive an annual allocation of HUD federal operating and capital funding for a portion of the dwelling units. Additional HUD federal operating subsidies for 2018 and 2017 were $67,022,000 and $61,083,000, respectively.

Financing Summary **-** As a result of the transactions, the LLCs have received more than $400 million in permanent public and private funding from ARRA funds (the "ARRA loans"), State of New York modernization funds, and the sale of long-term bonds and tax credits. The majority of this funding has been invested in capital improvements at the 21 developments and for funding operating reserves. The LLC I transaction also included approximately $360 million of short-term bridge financing to fund the acquisition price and rehabilitation costs, all of which was prepaid in July 2013.

LLC I was structured to provide its 99.99% investor member the benefit of the low-income housing tax credits. The investor members provided $228 million in equity payments through December 31, 2018, in return for tax credit benefits.

NYCHA holds a substantial amount of indebtedness from the LLCs upon completion of the rehabilitation of the developments. Funds received from the ARRA loans were provided to the LLCs as permanent loans from NYCHA. At December 31, 2018, outstanding ARRA loans payable to NYCHA from LLC I and LLC II, respectively, are $75,780,000 and $27,384,000. The outstanding ARRA loan payable for LLC II was reduced by $4,693,000 as a result of the Baychester/Murphy PACT transaction (See Note 21).

In addition to the ARRA loans, the Authority provided additional loans ("Loan A") and ("Loan C") to the LLC's, to enable them to carry out rehabilitation work at the developments and to provide a source of funding to redeem the Bridge Bonds at maturity. As of December 31, 2018, outstanding Loan A payable to NYCHA from LLC I was $476,956,000 and from LLC II was $2,681,000. Loan A interest from LLC I, charged at a rate of 2.69% per annum, was $86,938,000. Outstanding Loan C payable to NYCHA as of December 31, 2018 was $42,000,000. The outstanding Loan A payable for LLC II was reduced by $305,000 as a result of the Baychester/Murphy PACT transaction (see Note 21).

23. RELATED PARTY TRANSACTIONS

Mixed-Finance Transactions (continued)

In September 2013, NYCHA converted the remaining construction-period financing for both LLC I and LLC II from construction loans to permanent loans due to HDC. The permanent loans for LLC I and LLC II are $21,940,000 and $22,451,000, respectively, as of December 31, 2018 (see Note 15).

Responsibilities and Obligations **–** NYCHA has certain responsibilities and obligations under separate agreements with the LLCs including (i) continuing to manage the operations of the developments; (ii) served as developer for the rehabilitation work at the developments; (iii) providing operating and capital subsidies to the LLCs; and (iv) providing operating deficit and completion guarantees. The operating deficit guarantee will terminate if specified operating income conditions are met.

As of December 31, 2018, the balance due to NYCHA from LLC I and LLC2 was $5,855,000 and $2,098,000 for reimbursable costs in managing the operation of the developments. In 2018, NYCHA provided operating subsidies and capital contributions of $7,625,000 to LLC I and $40,284,000 to LLC II under the mixed -finance transaction agreements.

NYCHA has retained the right to reacquire the developments of LLC I in the future. The right of first refusal terminates fifteen (15) years after the first day following the expiration of the final year of the tax credit period with respect to each development.

For LLC II, NYCHA was granted a call option (the "Call Option") with respect to the membership interest of the other participating member on the following terms: (i) the Call Option is exercisable by notice from the managing member to the other participating member; (ii) the closing date shall be the date selected by the managing member, provided that such date must be on or after the date which is the five (5) year anniversary of the admission of the other participating member to the Company; (iii) the purchase price under the Call Option shall equal fifty percent (50%) of the distributions made to the other participating member during the calendar year preceding the closing under the Call Option; and (iv) such purchase price shall be paid in immediately available funds.

The Authority exercised the Call Option on December 28, 2018. On December 28, 2018, the Ground Lease between the Authority and LLC II relating to the Baychester and Murphy developments was terminated, thereby causing ownership of the properties to revert to the Authority. As a result, the capital assets and HDC loans were transferred to NYCHA and the outstanding NYCHA financing (ARRA Loan and NYCHA Loan A) for these developments was cancelled. These transfers and the cancellation of the financing is considered a special item by LLC II.

23. RELATED PARTY TRANSACTIONS (continued)

The City of New York

As described in Note 1A, the Authority is a component unit of The City of New York. As of December 31, 2018, and 2017, the Authority had receivables due from The City in the amount of $154,255,000 and $56,241,000, respectively. During 2018 and 2017, The City provided operating subsidies and grants to the Authority of $165,912,000 and $80,143,000, respectively. In addition, during 2018 and 2017, The City provided $92,003,000 and $89,501,000, respectively, in capital contributions to NYCHA to fund modernization costs.

The City also provides certain services to the Authority. The total cost for these services, most of which is for the cost of water, was $184,274,000 and $183,518,000, respectively, for 2018 and 2017. At December 31, 2018 and 2017, the Authority had amounts due to The City for services of $1,071,000 and $1,053,000, respectively. Pursuant to a Cooperation Agreement dated July 1, 2015, The City has waived acceptance of payments in lieu of taxes from the Authority beginning January 1, 2015 through June 30, 2025.

24. NET POSITION

The Authority's Net Position represents the excess of assets over liabilities and consists of the following:

a. *Net investment in capital assets:* net capital assets less the outstanding bonds payable used to finance these assets

b. *Unrestricted Deficit:* net position with no statutory restrictions

Below is net position by type as of December 31, 2018 and 2017 ($ in thousands):

DESCRIPTION	2018	2017 Restated
Net investment in capital assets	$ 6,450,404	$ 5,995,349
Unrestricted Deficit	(3,019,622)	(3,117,026)
Net position	$ 3,430,782	$ 2,878,323

25. COMMITMENTS AND CONTINGENCIES

Lease Commitments - The Authority rents office space under operating leases, which expire at various dates. Future minimum lease commitments under these leases as of December 31, 2018 are ($ in thousands):

Year	Amount
2019	$ 29,363
2020	36,282
2021	36,480
2022	36,938
2023	37,409
2024-2028	193,813
2029-2033	194,057
2034-2038	211,168
2039-2043	237,436
2044-2048	183,406
2049-2050	59,793
Total lease commitments	$ 1,256,145

Rental expense, which includes certain related operating costs, was $40,628,000 and $40,693,000 for the years ended December 31, 2018 and 2017, respectively.

Pending Litigation - The Authority is a defendant in a number of lawsuits arising from claims for personal injury, property damage, breach of contract, civil rights and personnel matters. Management believes that the ultimate resolution of these matters will not have a material adverse impact on the financial position of the Authority.

Obligations under Purchase Commitments – The Authority is involved in modernization and other contracted programs. At December 31, 2018, outstanding obligations under purchase commitments were approximately $1,852,881,000, compared to $1,616,680,000 at December 31, 2017.

26. CONDENSED COMBINING INFORMATION

The following are Condensed Statements of Net Position as of December 31, 2018 and 2017, Condensed Statements of Revenues, Expenses and Changes in Net Position for the Years Ended December 31, 2018 and 2017, and Condensed Statements of Cash Flows for the Years Ended December 31, 2018 and 2017, for the Authority and its component units, the LLCs.

New York City Housing Authority
Condensed Statement of Net Position
December 31, 2018
($ in Thousands)

	NYCHA	LLC I	LLC II	Eliminations	Total
ASSETS					
Current assets	$ 1,657,192	$ 100,759	$ 13,326	$ (7,953)	$ 1,763,324
Capital assets, net	6,599,863	372,987	106,367	(38,435)	7,040,782
Restricted assets	737,612	688	826	-	739,126
Notes receivable	769,783	-	-	(769,783)	-
Other assets	399,572	-	-	-	399,572
TOTAL ASSETS	**10,164,022**	**474,434**	**120,519**	**(816,171)**	**9,942,804**
DEFERRED OUTFLOWS OF RESOURCES	**176,125**	-	-	-	**176,125**
LIABILITIES					
Current liabilities	1,172,184	19,179	4,566	(7,953)	1,187,976
Long-term debt	757,826	21,559	21,914	-	801,299
Notes payable	-	740,023	29,760	(769,783)	-
Pension liability	894,818	-	-	-	894,818
OPEB liability	2,562,230	-	-	-	2,562,230
Other liabilities	810,716	-	-	-	810,716
TOTAL LIABILITIES	**6,197,774**	**780,761**	**56,240**	**(777,736)**	**6,257,039**
DEFERRED INFLOWS OF RESOURCES	**431,108**	-	-	-	**431,108**
NET POSITION					
Net investment in capital assets	6,239,490	(212,791)	60,722	362,983	6,450,404
Unrestricted deficit	(2,528,225)	(93,536)	3,557	(401,418)	(3,019,622)
TOTAL NET POSITION	**$ 3,711,265**	**$ (306,327)**	**$ 64,279**	**$ (38,435)**	**$ 3,430,782**

New York City Housing Authority
Condensed Statement of Revenues, Expenses, and Changes in Net Position
For the Year Ended December 31, 2018
($ in Thousands)

	NYCHA	LLC I	LLC II	Eliminations	Total
Operating Revenues	$ 986,238	$ 87,114	$ 33,421	$ -	$ 1,106,773
Operating Expenses	3,722,005	204,298	78,830	(106,663)	3,898,470
Operating Loss	**(2,735,767)**	**(117,184)**	**(45,409)**	**106,663**	**(2,791,697)**
Non-Operating Revenues, net	2,478,641	89,167	42,766	(86,786)	2,523,788
Gain (Loss) Before Capital Contributions	(257,126)	(28,017)	(2,643)	19,877	(267,909)
Capital Contributions	809,974	6,934	21,211	(17,751)	820,368
Transfers	2,909	-	(2,909)	-	-
Change in Net Position	**552,848**	**(21,083)**	**18,568**	**2,126**	**552,459**
Net Position - Beginning	3,155,508	(285,244)	48,620	(40,561)	2,878,323
Net Position - Ending	**$ 3,708,356**	**$ (306,327)**	**$ 67,188**	**$ (38,435)**	**$ 3,430,782**

26. CONDENSED COMBINING INFORMATION (continued)

New York City Housing Authority
Condensed Statement of Cash Flows
For the Year Ended December 31, 2018
($ in Thousands)

	NYCHA	LLC I	LLC II	Eliminations	Total
Net cash provided (used) by					
Operating activities	$ (2,189,373)	$ (90,300)	$ (50,205)	$ 106,663	$ (2,223,215)
Non-capital financing activities	2,336,921	102,610	43,968	(86,786)	2,396,713
Capital and related financing activities	(73,094)	(25,100)	5,137	(19,877)	(112,934)
Investing activities	80,161	1,441	127	-	81,729
Net increase (decrease)	**154,615**	**(11,349)**	**(973)**	**-**	**142,293**
Beginning cash and cash equivalents	982,762	101,987	10,948	-	1,095,697
Ending cash and cash equivalents	**$ 1,137,377**	**$ 90,638**	**$ 9,975**	**$ -**	**$ 1,237,990**

.

New York City Housing Authority
Condensed Statement of Net Position
December 31, 2017 Restated
($ in Thousands)

	NYCHA	LLC I	LLC II	Eliminations	Total
ASSETS					
Current assets	$ 1,536,143	$ 111,847	$ 15,130	$ (23,072)	$ 1,640,048
Capital assets, net	6,146,062	366,326	109,918	(40,561)	6,581,745
Restricted assets	553,023	696	835	-	554,554
Notes receivable	761,299	-	-	(761,299)	-
Other assets	382,690	-	-	-	382,690
TOTAL ASSETS	**9,379,217**	**478,869**	**125,883**	**(824,932)**	**9,159,037**
DEFERRED OUTFLOWS OF RESOURCES	**186,564**	-	-	-	**186,564**
LIABILITIES					
Current liabilities	1,041,867	15,632	16,927	(23,072)	1,051,354
Long-term debt	716,002	21,940	25,578	-	763,520
Notes payable	-	726,541	34,758	(761,299)	-
Pension liability	1,032,725	-	-	-	1,032,725
OPEB liability	2,562,879	-	-	-	2,562,879
Other liabilities	797,620	-	-	-	797,620
TOTAL LIABILITIES	**6,151,093**	**764,113**	**77,263**	**(784,371)**	**6,208,098**
DEFERRED INFLOWS OF RESOURCES	**259,180**	-	-	-	**259,180**
NET POSITION					
Net investment in capital assets	5,795,545	(219,810)	56,631	362,983	5,995,349
Unrestricted deficit	(2,640,037)	(65,434)	(8,011)	(403,544)	(3,117,026)
TOTAL NET POSITION	**$ 3,155,508**	**$ (285,244)**	**$ 48,620**	**$ (40,561)**	**$ 2,878,323**

26. CONDENSED COMBINING INFORMATION (continued)

New York City Housing Authority
Condensed Statement of Revenues, Expenses, and Changes in Net Position
For the Year Ended December 31, 2017 Restated
($ in Thousands)

	NYCHA	LLC I	LLC II	Eliminations	Total
Operating Revenues	$ 989,664	$ 85,725	$ 33,005	$ -	$ 1,108,394
Operating Expenses	3,435,998	185,004	75,032	(94,175)	3,601,859
Operating Loss	**(2,446,334)**	**(99,279)**	**(42,027)**	**94,175**	**(2,493,465)**
Non-Operating Revenues, net	2,123,596	83,097	36,157	(80,319)	2,162,531
Gain (Loss) Before Capital Contributions	(322,738)	(16,182)	(5,870)	13,856	(330,934)
Capital Contributions	676,831	7,758	13,760	(11,730)	686,619
Change in Net Position	**354,093**	**(8,424)**	**7,890**	**2,126**	**355,685**
Net Position - Beginning	2,801,415	(276,820)	40,730	(42,687)	2,522,638
Net Position - Ending	**$ 3,155,508**	**$ (285,244)**	**$ 48,620**	**$ (40,561)**	**$ 2,878,323**

New York City Housing Authority
Condensed Statement of Cash Flows
For the Year Ended December 31, 2017
($ in Thousands)

	NYCHA	LLC I	LLC II	Eliminations	Total
Net cash provided (used) by					
Operating activities	$ (2,164,082)	$ (77,165)	$ (28,546)	$ 94,175	$ (2,175,618)
Non-capital financing activities	2,000,647	97,490	37,447	(80,319)	2,055,265
Capital and related financing activities	160,939	(8,712)	(4,979)	(13,856)	133,392
Investing activities	113,908	415	56	-	114,379
Net increase (decrease)	**111,412**	**12,028**	**3,978**	**-**	**127,418**
Beginning cash and cash equivalents	871,350	89,959	6,970	-	968,279
Ending cash and cash equivalents	**$ 982,762**	**$ 101,987**	**$ 10,948**	**$ -**	**$ 1,095,697**

REQUIRED SUPPLEMENTARY INFORMATION

(UNAUDITED)

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Changes in the Authority's Total OPEB Liability and Related Ratios

	2018	2017	2016
Total OPEB Liability			
Service Cost	$ 116,663	$ 99,842	$ 129,183
Interest	85,032	86,759	84,197
Differences between Expected and Actual Experience	48,400	(68,103)	-
Change in Assumptions	(176,030)	42,001	(186,804)
Contributions - Employer	(61,714)	(68,963)	(74,740)
Implicit Rate Subsidy	(13,000)	(13,000)	(13,000)
Net Changes in total OPEB Liability	(649)	78,536	(61,164)
Total OPEB Liability - beginning	2,562,879	2,484,343	2,545,507
Total OPEB Liability at the End of theYear	$ 2,562,230	$ 2,562,879	$ 2,484,343
Covered Payroll	$ 767,872	$ 751,506	$ 762,086
Total OPEB Liability as a percentage of covered payroll	333.7%	341.0%	326.0%
Discount Rate used to measure Total OPEB Liability	3.64%	3.16%	3.71%

This schedule is intended to show information for ten years. The additional years' information will be displayed as it becomes available.

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF THE AUTHORITY'S CONTRIBUTIONS
TO THE NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)
($ in thousands)

	For the Years Ended December 31,				
	2018	**2017**	**2016**	**2015**	**2014**
Contractually Required Contribution	$164,165	$165,240	$174,207	$159,206	$155,894
Contributions in relation to the contractually required contribution	$164,165	$165,240	$174,207	$159,206	$155,894
Contribution Deficiency	-	-	-	-	-
Authority covered payroll	$767,872	$751,506	$762,086	$789,540	$757,566
Contributions as percentage of covered payroll	21.38%	21.99%	22.86%	20.17%	20.58%

This Schedule is intended to show information for ten years. The additional years' information will be displayed as it become available.

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF THE AUTHORITY'S PROPORTIONATE SHARE OF THE NET PENSION LIABILITY OF NYCERS
($ in thousands)

	For the Years Ended June 30,				
	2018	**2017**	**2016**	**2015**	**2014**
NYCHA's proportion of the net pension liability	4.89%	4.97%	5.00%	5.07%	5.02%
NYCHA's proportionate share of the net pension liability	$894,818	$1,032,725	$1,214,112	$1,026,612	$904,747
NYCHA's covered-employee payroll (Note A)	$626,947	$624,372	$616,479	$624,615	$611,709
NYCHA's proportionate share of the net pension liability as a percentage of it's covered-employee payroll	142.73%	165.40%	196.94%	164.36%	147.90%
Plan fiduciary net position as a percentage of the total pension liability	78.80%	74.80%	69.57%	73.13%	71.41%

Note A: NYCHA's covered-employee payroll represents the total covered payroll of NYCERS multiplied by NYCHA's share of the Net Pension Liability.

This schedule is intended to show information for ten years. The additional years' information will be displayed as it becomes available.

STATISTICAL SECTION

(UNAUDITED)

Redfern Houses, Queens

LaGuardia Houses, Manhattan

New York City Housing Authority

STATISTICAL SECTION (UNAUDITED)

This part of the Comprehensive Annual Financial Report presents detailed information as a context for understanding what the information in the financial statements, note disclosures, and required supplementary information says about the Authority's overall financial health. The following are the categories of the schedules that are included in this Section:

Financial Trends

These schedules contain trend information to help the reader understand how the Authority's financial performance and well-being have changed over time.

Revenue Capacity

This schedule contains information to help the reader assess the Authority's most significant revenue source.

Debt Capacity

This schedule presents information to help the reader assess the affordability of the Authority's current levels of outstanding debt and the Authority's ability to issue additional debt in the future.

Demographic and Economic Information

These schedules offer demographic and economic indicators to help the reader understand the environment within which the Authority's financial activities take place.

Operating Information

These schedules contain service and infrastructure data to help the reader understand how the information in the Authority's financial report relates to the services the Authority provides and the activities it performs.

SCHEDULES OF FINANCIAL TRENDS

NEW YORK CITY HOUSING AUTHORITY
COMPARATIVE OPERATING AND NON-OPERATING REVENUES AND EXPENSES
($ in thousands)

	2018	2017 Restated	2016	2015	2014	2013	2012	2011	2010	2009
OPERATING REVENUE:										
Tenant revenue, net	$ 1,070,022	$ 1,051,628	$ 1,041,574	$ 990,524	$ 956,815	$ 919,973	$ 905,457	$ 895,864	$ 870,977	$ 830,148
Other income	36,751	56,766	45,744	45,749	48,964	48,917	42,084	42,977	27,893	33,686
Total operating revenue	**$ 1,106,773**	**$ 1,108,394**	**$ 1,087,318**	**$ 1,036,273**	**$ 1,005,779**	**$ 968,890**	**$ 947,541**	**$ 938,841**	**$ 898,870**	**$ 863,834**
OPERATING EXPENSES:										
Rent for leased dwellings	$ 1,006,991	$ 987,017	$ 940,722	$ 946,968	$ 966,100	$ 964,451	$ 952,269	$ 944,704	$ 989,506	$ 949,652
General and administrative	890,679	838,400	847,573	810,374	837,617	848,730	837,610	774,525	720,397	728,549
Utilities	582,405	554,542	534,797	575,017	594,579	590,007	542,933	566,173	572,549	538,790
Maintenance and operations	875,431	673,678	707,929	619,594	650,957	565,197	513,273	518,297	532,088	473,313
Depreciation	366,632	370,938	357,611	344,377	367,176	345,481	351,388	342,378	319,615	318,204
OPEB Expense	129,110	136,767	168,061	(97,357)	18,508	161,308	144,030	394,263	327,575	116,805
Protective services	29,833	22,353	24,640	22,904	20,161	71,162	87,094	86,679	87,467	85,380
Tenant services	17,389	18,164	19,307	22,618	25,966	33,133	29,913	29,597	29,200	28,972
Expenses relating to Superstorm Sandy	-	-	-	-	-	-	224,104	-	-	-
Total operating expenses	**$ 3,898,470**	**$ 3,601,859**	**$ 3,600,640**	**$ 3,244,495**	**$ 3,481,064**	**$ 3,579,469**	**$ 3,682,614**	**$ 3,656,616**	**$ 3,578,397**	**$ 3,239,665**
OPERATING LOSS	(2,791,697)	(2,493,465)	(2,513,322)	(2,208,222)	(2,475,285)	(2,610,579)	(2,735,073)	(2,717,775)	(2,679,527)	(2,375,831)
NON-OPERATING REVENUES (EXPENSES):										
Subsidies and Grants	$ 2,387,205	$ 2,154,174	$ 2,124,415	$ 2,213,763	$ 2,135,245	$ 2,010,903	$ 1,987,986	$ 2,069,796	$ 2,163,495	$ 1,825,990
Insurance recoveries	131,972	809	6,701	45,027	45,361	122,319	-	-	-	-
Investment income	25,811	16,080	25,231	10,249	7,668	4,517	4,406	6,360	8,256	11,666
Gain (loss) on the sales of capital assets	14,898	22,397	28,730	12,579	384	13,258	1,717	3,163	13,969	(14,522)
Interest expense	(32,622)	(30,005)	(29,169)	(29,911)	(30,463)	(19,839)	(20,117)	(20,113)	(17,349)	(8,931)
Change in fair value of investments	(3,304)	(745)	(3,131)	(3,700)	(553)	(167)	(2)	60	13	(360)
Debt financing costs	(172)	(179)	(185)	(353)	(291)	(6,432)	(5,244)	(6,934)	-	-
Total non-operating revenues, net	**$ 2,523,788**	**$ 2,162,531**	**$ 2,152,592**	**$ 2,247,654**	**$ 2,157,351**	**$ 2,124,559**	**$ 1,968,746**	**$ 2,052,332**	**$ 2,168,384**	**$ 1,813,843**
CAPITAL CONTRIBUTIONS	**$ 820,368**	**$ 686,619**	**$ 640,887**	**$ 433,505**	**$ 330,548**	**$ 504,226**	**$ 336,814**	**$ 470,895**	**$ 561,992**	**$ 443,537**
CHANGE IN NET POSITION	**$ 552,459**	**$ 355,685**	**$ 280,157**	**$ 472,937**	**$ 12,614**	**$ 18,206**	**$ (429,513)**	**$ (194,548)**	**$ 50,849**	**$ (118,451)**

Source: Annual Financial Statements

NEW YORK CITY HOUSING AUTHORITY
NET POSITION BY CATEGORY
($ In thousands)

CATEGORY	2018	2017 Restated	2016	2015	2014	2013	2012	2011	2010	2009
Net investment in capital assets	$ 6,450,404	$ 5,995,349	$ 5,692,787	$ 5,407,064	$ 5,308,896	$ 5,371,385	$ 5,336,914	$ 5,349,279	$ 5,236,899	$ 5,060,566
Restricted	-	-	-	-	-	-	16,340	51,740	14,130	14,289
Unrestricted (Deficit)	(3,019,622)	(3,117,026)	(3,117,424)	(3,255,974)	(3,630,743)	(3,705,846)	(2,525,793)	(2,144,045)	(1,810,964)	(1,685,639)
TOTAL NET POSITION	**$ 3,430,782**	**$ 2,878,323**	**$ 2,575,363**	**$ 2,151,090**	**$ 1,678,153**	**$ 1,665,539**	**$ 2,827,461**	**$ 3,256,974**	**$ 3,440,065**	**$ 3,389,216**

SOURCE: Annual Financial Statements

NEW YORK CITY HOUSING AUTHORITY
CAPITAL ASSETS BY CATEGORY
($ in thousands)

CATEGORY	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Land	$ 687,507	$ 689,847	$ 689,847	$ 689,847	$ 689,847	$ 689,847	$ 689,847	$ 689,847	$ 689,873	$ 689,873
Buildings	3,146,646	3,173,419	3,178,668	3,181,654	3,181,655	3,196,901	3,201,594	3,201,356	3,208,298	3,201,744
Building improvements	11,035,969	10,288,303	9,694,139	9,056,789	8,436,033	8,127,997	7,876,321	7,653,405	7,153,298	6,669,648
Facilities and other improvements	515,617	501,133	494,724	488,892	479,726	475,253	463,823	458,894	453,881	448,524
Furniture and equipment	965,607	936,064	893,387	861,623	834,716	795,199	759,766	804,901	844,126	793,224
Leasehold improvements	114,081	113,153	113,153	113,153	113,153	113,069	112,992	113,002	112,897	111,840
Total Capital Assets	**$ 16,465,427**	**$ 15,701,919**	**$ 15,063,918**	**$ 14,391,958**	**$ 13,735,130**	**$ 13,398,266**	**$ 13,104,343**	**$ 12,921,405**	**$ 12,462,373**	**$ 11,914,853**
Less Accumulated Depreciation:										
Buildings	$ 2,926,183	$ 2,930,106	$ 2,911,809	$ 2,890,698	$ 2,865,379	$ 2,852,796	$ 2,825,036	$ 2,790,789	$ 2,758,603	$ 2,721,779
Building improvements	5,184,028	4,914,618	4,625,164	4,367,515	4,104,980	3,835,281	3,589,624	3,351,413	3,104,580	2,880,108
Facilities and other improvements	455,043	448,081	441,235	434,416	426,647	417,144	405,541	391,506	374,536	354,968
Furniture and equipment	756,904	728,275	703,388	673,779	630,443	590,810	547,179	558,611	598,868	566,928
Leasehold improvements	102,487	99,094	95,748	92,299	87,692	81,538	74,682	67,734	60,808	54,036
Total Accumulated Depreciation	**9,424,645**	**9,120,174**	**8,777,344**	**8,458,707**	**8,115,141**	**7,777,569**	**7,442,062**	**7,160,053**	**6,897,395**	**6,577,819**
Net Capital Assets	**$ 7,040,782**	**$ 6,581,745**	**$ 6,286,574**	**$ 5,933,251**	**$ 5,619,989**	**$ 5,620,697**	**$ 5,662,281**	**$ 5,761,352**	**$ 5,564,978**	**$ 5,337,034**
Related Debt	590,378	586,396	593,787	526,187	311,093	249,312	325,367	412,073	328,079	276,468
Net Investment in Capital Assets	**$ 6,450,404**	**$ 5,995,349**	**$ 5,692,787**	**$ 5,407,064**	**$ 5,308,896**	**$ 5,371,385**	**$ 5,336,914**	**$ 5,349,279**	**$ 5,236,899**	**$ 5,060,566**

Capital assets are not classified as *being depreciated* and *not being depreciated* since construction in progress is not shown as a separate category, but rather classified over the categories to which it belongs.

Source: Annual Financial Statements

SCHEDULE OF REVENUE CAPACITY

NEW YORK CITY HOUSING AUTHORITY
REVENUES ON A GROSS BASIS
($ in thousands)

DESCRIPTION	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Revenues (Gross):										
Subsidies and Grants	$ 2,387,205	$ 2,154,174	$ 2,124,415	$ 2,213,763	$ 2,135,245	$ 2,010,903	$ 1,987,986	$ 2,069,796	$ 2,163,495	$ 1,825,990
Operating Revenues	1,106,773	1,108,394	1,087,318	1,036,273	1,005,779	968,890	947,541	938,841	898,870	863,834
Insurance recoveries	131,972	809	6,701	45,027	45,361	122,319	-	-	-	-
Investment Income	25,811	16,080	25,231	10,249	7,668	4,517	4,406	6,360	8,256	11,666
Gain on the sales of capital assets	14,898	22,397	28,730	12,579	384	13,258	1,717	3,163	13,969	-
Change in fair value of investments	-	-	-	-	-	-	-	60	13	-
Total Revenues	**$ 3,666,659**	**$ 3,301,854**	**$ 3,272,395**	**$ 3,317,891**	**$ 3,194,437**	**$ 3,119,887**	**$ 2,941,650**	**$ 3,018,220**	**$ 3,084,603**	**$ 2,701,490**

Source: Annual Financial Statements

SCHEDULE OF DEBT CAPACITY

NEW YORK CITY HOUSING AUTHORITY
LONG TERM DEBT
($ in thousands, except per capita)

Description of Long Term Debt	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Bonds:										
State Guaranteed Certificates of Indebtedness Outstanding (State Program) three issues remaining bearing interest from 3.5% to 3.75%, per annum maturing annually through July 2024.	$ 7,102	$ 8,564	$ 10,789	$ 13,014	$ 15,927	$ 18,840	$ 22,059	$ 26,385	$ 31,129	$ 35,873
State Guaranteed Certificates of Indebtedness Outstanding (incorporated into the Federal Housing Program), three issues remaining bearing interest from 3.5% to 4.75% per annum, maturing annually through July 2024.	1,155	1,399	1,642	1,886	2,218	2,550	3,345	4,177	5,464	6,750
City Guaranteed Bonds Payable (City Program) bearing interest at 4.0% per annum, maturing annually through January 2010	-	-	-	-	-	-	-	-	-	926
Multi-family Housing Refunding Bonds payable, principal and interest at 5.65% per annum, maturing annually through July 2010	-	-	-	-	-	-	-	-	-	3,165
Loans Funded by:										
HDC Capital Fund Program Revenue Bonds, Series 2005 A ($281,610,000); Loan Agreement with an interest rate of 3.0% to 5.0% per annum, defeased September 2013.	-	-	-	-	-	-	213,990	225,410	236,275	246,615
HDC Capital Fund Program Revenue Bonds, Series 2013 A ($185,785,000); Loan Agreement with an interest rate of 3.0% to 5.0% per annum, maturing annually through July 2025.	122,400	136,815	150,555	163,790	176,630	185,785	-	-	-	-
HDC Capital Fund Program Revenue Bonds, Series 2013 B-1 ($348,130,000); Loan Agreement with an interest rate of 5.0% to 5.25% per annum, maturing annually through July 2033.	276,070	293,535	310,160	325,985	341,190	348,130	-	-	-	-
HDC Capital Fund Program Revenue Bonds, Series 2013 B-2 ($122,170,000); Loan Agreement with an interest rate of 5.0% to 5.25% per annum, maturing annually through July 2032.	122,170	122,170	122,170	122,170	122,170	122,170	-	-	-	-
Loan Payable - 2013 Equipment Lease/Purchase Agreement; with BAPCC for Energy Performance Contract ($18,045,580) at an interest rate of 1.98% per annum, maturing January 19, 2026.	12,420	13,812	15,140	16,408	17,265	17,736	-	-	-	-
Loan Payable - 2016 Equipment Lease/Purchase Agreement; (Ameresco A) with BAPCC for Energy Performance Contract ($51,548,356) at an interest rate of 3.27% per annum, maturing June 28, 2036.	53,389	53,247	51,548	-	-	-	-	-	-	-
Loan Payable - 2016 Multi-draw term loan facility; with NY Green Bank ($11,000,000) at rate of 3.5% per annum on the used portion and at 0.50% per annum on the unused portion, paid off on December 18, 2017.	-	-	94	-	-	-	-	-	-	-
Loan Payable - 2017 Equipment Lease/Purchase Agreement; (BQDM); with BAPCC for Energy Performance Contract ($60,132,977.75) at an interest rate of 3.6178% per annum, maturing December 15, 2037.	62,328	60,133	-	-	-	-	-	-	-	-
Loan Payable - 2017 Equipment Lease/Purchase Agreement; (SANDY A); with BAPCC for Energy Performance Contract ($43,000,000) at an interest rate of 3.6178% per annum, maturing December 22, 2037.	44,570	43,000	-	-	-	-	-	-	-	-

NEW YORK CITY HOUSING AUTHORITY
LONG TERM DEBT
($ in thousands, except per capita)

Description of Long Term Debt	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Loans Funded by: (continued)										
Loan Payable - 2018 Equipment Lease/Purchase Agreement; (Ameresco B); with BAPCC for Energy Performance Contract ($79,461,775.81) at an interest rate of 4.75% per annum, maturing July 1, 2038.	79,462	-	-	-	-	-	-	-	-	-
HDC 2009 Series L-1 Bonds ($23,590,000); Permanent Mortgage Loan at an interest rate of 6.3% per annum, maturing November 2043; secured by mortgage.	21,940	22,298	22,634	22,949	23,245	23,523	23,590	23,590	23,590	-
HDC 2009 Series L-2 Bonds ($68,000,000); Subordinate Loan at interest rate of 2.25% per annum, matured in September 2013; secured by mortgage.	-	-	-	-	-	-	68,000	68,000	68,000	-
HDC 2010 Series B Bonds ($150,000,000); Mortgage Loan at interest rate of 2.125% per annum, prepaid in July 2013; secured by mortgage.	-	-	-	-	-	-	19,825	110,050	150,000	-
HDC 2011 Series A Bonds ($140,000,000); Mortgage Loan at an interest rate of 3.25% per annum, prepaid in July 2013; secured by mortgage.	-	-	-	-	-	-	47,955	140,000	-	-
HDC 2012 Series A Bonds ($67,540,000); Mortgage Loan at an interest rate of SIFMA +1.1% per annum, prepaid in July 2013; secured by mortgage.	-	-	-	-	-	-	16,821	-	-	-
HDC 2010 Series A-1 Bonds ($25,325,000); Permanent Mortgage Loan at an interest rate of 5.1% per annum, maturing November 2041; secured by mortgage.	20,086	23,389	23,883	24,352	24,798	25,222	25,325	25,325	25,325	-
HDC 2010 Series A-2 Bonds ($3,000,000); Permanent Mortgage Loan at an interest rate of 5.1% per annum, maturing May 2041; secured by mortgage.	2,365	2,770	2,829	2,885	2,938	2,988	3,000	3,000	3,000	-
Long Term Debt (before Premium)	**$ 825,457**	**$ 781,132**	**$ 711,444**	**$ 693,439**	**$ 726,381**	**$ 746,944**	**$ 443,910**	**$ 625,937**	**$ 542,783**	**$ 293,329**
Add Premium on HDC Revenue Bond Loan Agreements	14,972	19,035	23,898	29,603	35,974	42,637	6,919	8,075	9,348	10,740
TOTAL LONG TERM DEBT	**$ 840,429**	**$ 800,167**	**$ 735,342**	**$ 723,042**	**$ 762,355**	**$ 789,581**	**$ 450,829**	**$ 634,012**	**$ 552,131**	**$ 304,069**
Less current portion	39,130	36,647	35,145	33,637	32,942	20,563	84,020	16,578	16,896	20,461
LONG TERM DEBT, NET	**$ 801,299**	**$ 763,520**	**$ 700,197**	**$ 689,405**	**$ 729,413**	**$ 769,018**	**$ 366,809**	**$ 617,434**	**$ 535,235**	**$ 283,608**
Percentage of Personal Income	**19.68%**	**18.83%**	**17.34%**	**17.49%**	**18.74%**	**19.42%**	**11.13%**	**15.75%**	**13.56%**	**7.47%**
Per Capita	**$ 2,205**	**$ 2,040**	**$ 1,854**	**$ 1,805**	**$ 1,901**	**$ 1,959**	**$ 1,117**	**$ 1,572**	**$ 1,367**	**753**

Note A
See Note 15 on Long Term Debt for more details

Note B
Percentage of Personal Income and Per Capita calculations are based on total long term debt using demographic information for NYCHA's residents (see NYCHA's Demographic and Economic Statistics-Ten Year Trend).

Source: Annual Financial Statements

NEW YORK CITY HOUSING AUTHORITY
PLEDGED REVENUE COVERAGE
($ in thousands)

Description of Loan Payable: Equipment Purchase/Lease Agreement with Bank of America for Energy Performance Contract

Year	Source of Revenue	Net Available Revenues	Principal and Interest Requirements	Coverage Ratio
2013	HUD Operating Subsidy	$ 407	$ 407	1.0
2014	HUD Operating Subsidy	$ 819	$ 819	1.0
2015	HUD Operating Subsidy	$ 1,197	$ 1,197	1.0
2016	HUD Operating Subsidy	$ 1,586	$ 1,586	1.0
2017	HUD Operating Subsidy	$ 1,622	$ 1,622	1.0
2018	HUD Operating Subsidy	$ 1,659	$ 1,659	1.0

Notes:

1. Net Available Revenues represent the annual debt service for the current year. The Authority has committed to appropriate HUD Operating revenue in amounts sufficient to cover the scheduled principal and interest requirements of the debt.

2. Details regarding the Authority's outstanding debt can be found in the notes to the financial statements.

NEW YORK CITY HOUSING AUTHORITY
PLEDGED REVENUE COVERAGE
($ in thousands)

Description of Bond: NYC Housing Development (HDC)
Capital Fund Program Revenue Bonds, Series 2013 A and 2013 B

Year	Source of Revenue	Net Available Revenues	Principal and Interest Requirements	Coverage Ratio
2014	Capital Fund 2014	$ 98,746	$ 41,655	2.4
2015	Capital Fund 2015	$ 102,119	$ 59,343	1.7
2016	Capital Fund 2016	$ 106,244	$ 59,517	1.8
2017	Capital Fund 2017	$ 115,442	$ 59,529	1.9
2018	Capital Fund 2017	$ 176,082	$ 59,544	3.0

Notes:

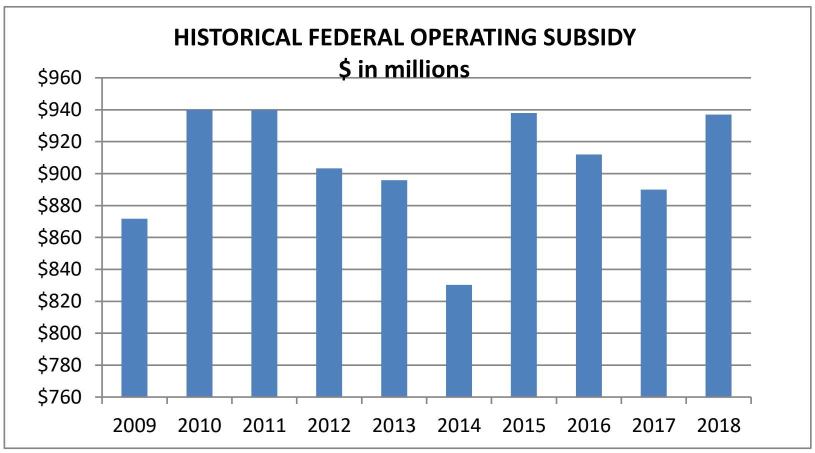
1. Net Available Revenues represent 33 1/3 percent of the Capital Fund grant, which is the maximum amount available for principal and interest requirements.
2. Details regarding the Authority's outstanding debt can be found in the notes to the financial statements.
3. The 2013 Series A bond proceeds were used in part to defease the remaining debt on the 2005 A bonds in September of 2013.

NEW YORK CITY HOUSING AUTHORITY

HISTORICAL FEDERAL OPERATING SUBSIDY

($ in millions)

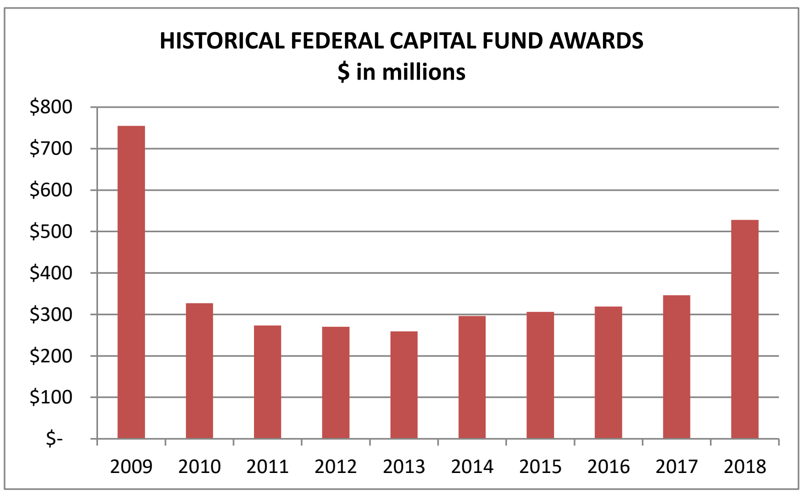
Year	Congressional Appropriation	NYCHA Funding
2009	$ 4,455	$ 872
2010	$ 4,775	$ 940
2011	$ 4,617	$ 940
2012	$ 3,962	$ 903
2013	$ 4,054	$ 896
2014	$ 4,400	$ 830
2015	$ 4,440	$ 938
2016	$ 4,500	$ 912
2017	$ 4,400	$ 890
2018	$ 4,550	$ 937



Source: New York City Housing Authority, Finance Department

NEW YORK CITY HOUSING AUTHORITY
HISTORICAL FEDERAL CAPITAL FUND AWARDS
($ in millions)

Capital Fund Grant Year	Congressional Appropriation	NYCHA Funding
2009	$ 5,435	$ 755
2010	$ 2,500	$ 327
2011	$ 2,500	$ 273
2012	$ 2,405	$ 270
2013	$ 2,070	$ 259
2014	$ 1,875	$ 296
2015	$ 1,925	$ 306
2016	$ 1,900	$ 319
2017	$ 1,942	$ 346
2018	$ 2,750	$ 528



Source: New York City Housing Authority, Finance Department

SCHEDULES OF DEMOGRAPHIC AND ECONOMIC INFORMATION

NEW YORK CITY HOUSING AUTHORITY
RESIDENT DEMOGRAPHICS - OPERATING PROGRAMS

ALL PROGRAMS	DECEMBER 31, 2018 TOTAL	
NUMBER OF FAMILIES	170,740	
POPULATION	381,159	
AVERAGE FAMILY SIZE	2.2	
AVERAGE TENURE IN PUBLIC HOUSING	23.1 YEARS	
AVERAGE FAMILY ANNUAL INCOME	$ 25,007	
AVERAGE MONTHLY RENT	$ 533	
		Percentage of Population
NUMBER OF SENIOR RESIDENTS (AGE 62 OR MORE):	80,806	21.2%
NUMBER OF SINGLE SENIOR RESIDENTS (AGE 62 OR MORE):	39,465	23.1%
NUMBER OF MINORS UNDER 18:	100,299	26.3%
		Percentage of Households
NUMBER OF WORKING FAMILIES:	78,777	46.1%
NUMBER OF FAMILIES RECEIVING PUBLIC ASSISTANCE:	22,146	13.0%
NUMBER OF SINGLE PARENT FAMILIES WITH MINORS UNDER 18:	26,660	15.6%
NUMBER OF SENIOR (AGE 62 OR MORE) HEAD OF HOUSEHOLDS:	67,842	39.7%
HOUSEHOLDS BELOW POVERTY LEVEL	84,858	49.7%

Source: The Performance Tracking and Analytics Department

NEW YORK CITY HOUSING AUTHORITY

RESIDENT DEMOGRAPHICS - HOUSING CHOICE VOUCHER PROGRAM

AS OF DECEMBER 31, 2018

BOROUGH

	Bronx	Brooklyn	Manhattan	Queens	Staten Island	Outside the 5 Boroughs Portables	Total
NUMBER OF HOUSEHOLDS	38,550	26,619	9,036	8,254	1,828	1,868	86,155
NUMBER OF HOUSEHOLDS PERCENTAGE	44.74%	30.90%	10.49%	9.58%	2.12%	2.17%	100.00%

RACE and ETHNICITY

	Unknown	American Indian/ Native Alaskan	Asian/ Native Hawaiian/ Other Pacific Islander	Black	Hispanic	White	Total
NUMBER OF HOUSEHOLDS	473	277	2,295	24,841	43,612	14,657	86,155
NUMBER OF HOUSEHOLDS PERCENTAGE	0.55%	0.32%	2.66%	28.83%	50.62%	17.01%	100.00%

APARTMENT SIZE (NUMBER OF BEDROOMS)

	Unknown	0	1	2	3	4	5 or more	Total
NUMBER OF HOUSEHOLDS	441	4,665	25,895	31,938	19,178	3,296	742	86,155
NUMBER OF HOUSEHOLDS PERCENTAGE	0.51%	5.41%	30.06%	37.07%	22.26%	3.83%	0.86%	100.00%

Source: The Performance Tracking and Analytics Department

Demographic and Economic Statistics - Ten Year Trend

POPULATION - TEN YEAR TREND

2008 - 2017*

Year	United States	Percentage Change from Prior Period	City of New York	Percentage Change from Prior Period
2008	304,093,966	0.95 %	8,068,195	0.68 %
2009	306,771,529	0.88	8,131,574	0.79
2010	309,348,193	0.84	8,192,026	0.74
2011	311,663,358	0.75	8,284,098	1.12
2012	313,998,379	0.75	8,361,179	0.93
2013	316,204,908	0.70	8,422,460	0.73
2014	318,563,456	0.75	8,471,990	0.59
2015	320,896,618	0.73	8,516,502	0.53
2016	323,127,513	0.70	8,537,673	0.25
2017	325,719,178	0.80	8,622,698	1.00

POPULATION OF NEW YORK CITY BY BOROUGH

	2017	2010	2000	1990	1980	1970
Bronx	1,471,160	1,388,240	1,333,854	1,203,789	1,168,972	1,471,701
Brooklyn	2,648,771	2,510,240	2,465,812	2,300,664	2,230,936	2,602,012
Manhattan	1,664,727	1,588,530	1,540,373	1,487,536	1,428,285	1,539,233
Queens	2,358,582	2,235,310	2,229,895	1,951,598	1,891,325	1,987,174
Staten Island	479,458	469,706	445,414	378,977	352,121	295,443
Total	8,622,698	8,192,026	8,015,348	7,322,564	7,071,639	7,895,563
Percentage Increase (Decrease) from Prior Decade	5.3%	2.2%	9.5%	3.5%	(10.4%)	1.5%

Demographic and Economic Statistics - Ten Year Trend

2008 - 2017*

Year	Personal Income (in thousands) United States	City of New York	New York City as a Percentage of United States	Per Capita Personal Income (in thousands) United States	City of New York	New York City as a Percentage of United States
2008	12,492,705,000	$412,898,932	3 %	$41,082	$51,177	125 %
2009	12,079,444,000	398,791,095	3	39,376	49,040	125
2010	12,459,613,000	412,633,711	3	40,277	50,370	125
2011	13,233,436,000	446,838,428	3	42,461	53,940	127
2012	13,904,485,000	476,181,797	3	44,282	56,953	129
2013	14,068,960,000	492,554,049	4	44,493	58,484	131
2014	14,801,624,000	519,790,330	4	46,464	61,354	132
2015	15,463,981,000	540,352,366	3	48,190	63,444	132
2016	16,017,781,445	547,658,481	3	49,571	64,144	129
2017	16,413,550,863	NA	NA	50,392	NA	NA

Source: U.S. Department of Commerce, Bureau of Economic Analysis

* Amounts as of March 22, 2018
N/A = data not available

New York City Housing Authority

Demographic and Economic Statistics - Ten Year Trend

POPULATION - TEN YEAR TREND
2009 - 2018

Year	NYCHA	Change from Prior Period
2009 ……………………….	403,665	0.23 %
2010 ……………………….	403,995	0.08 %
2011 ……………………….	403,357	(0.16) %
2012 ……………………….	403,736	0.09 %
2013 ……………………….	403,120	(0.15) %
2014 ……………………….	401,093	(0.50) %
2015………………………..	400,474	(0.20) %
2016………………………..	396,581	(0.97) %
2017………………………..	392,259	(1.09) %
2018	381,159	(2.83) %

New York City Housing Authority

Demographic and Economic Statistics - Ten Year Trend

2009 - 2018

Year	Personal Income (in thousands) NYCHA
2009 ……………………….	4,068,739
2010 ……………………….	4,070,320
2011 ……………………….	4,024,487
2012 ……………………….	4,052,026
2013 ……………………….	4,064,839
2014 ……………………….	4,068,376
2015 ……………………….	4,133,013
2016 ……………………….	4,241,327
2017 ……………………….	4,248,457
2018 ……………………….	4,269,695

Source: New York City Housing Authority, Resident Demographics - Operating Programs

City of New York - Persons Receiving Public Assistance - Ten Year Trend

2009- 2018
(annual averages in thousands)

Year		Public Assistance	SSI (a)
2009	…………………………………	346	414,923
2010	…………………………………	346	420,878
2011	…………………………………	356	423,707
2012	…………………………………	353	425,991
2013	…………………………………	357	425,034
2014	…………………………………	337	402,529
2015	…………………………………	360	398,856
2016	…………………………………	370	394,680
2017	…………………………………	364	388,629
2018	…………………………………	356	NA

(a) The SSI data is for December of each year.
N/A: Not Available

Sources: The City of New York, Human Resources Administration and the U.S. Social Security Administration.

New York City Housing Authority
Persons Receiving Public Assistance - Ten Year Trend

2009- 2018

Year		Public Assistance
2009	…………………………………	20,829
2010	…………………………………	20,094
2011	…………………………………	20,028
2012	…………………………………	19,561
2013	…………………………………	20,055
2014	…………………………………	20,379
2015	…………………………………	21,214
2016	…………………………………	22,710
2017	…………………………………	23,077
2018	…………………………………	22,146

Source: New York City Housing Authority, Performance Tracking and Analytics Department

Nonagricultural Wage and Salary Employment - Ten Year Trend

2009–2018

(average annual employment in thousands)

	2018 (b)	2017	2016	2015	2014	2013	2012	2011	2010	2009
Private Employment:										
Services (a)	2,586	2,520	2,471	2,399	2,309	2,213	2,137	2,065	1,996	1,956
Wholesale Trade	146	141	146	146	144	142	141	140	138	139
Retail Trade	351	345	349	352	350	340	328	314	303	292
Manufacturing	72	74	76	78	77	77	76	76	76	82
Financial Activities	470	468	466	459	449	438	439	439	428	434
Transportation, Warehousing and Utilities	138	134	135	132	126	123	122	122	120	122
Construction	154	147	146	139	129	122	116	112	113	121
Total Private Employment	3,917	3,829	3,789	3,705	3,584	3,455	3,359	3,268	3,174	3,146
Government	548	551	552	550	545	544	546	551	558	567
Total	4,465	4,380	4,341	4,255	4,129	3,999	3,905	3,819	3,732	3,713
Percentage Increase (Decrease) from Prior Year	0.9%(b)	0.9%(b)	2.0%	3.1%	3.3%	2.4%	2.3%	2.3%	0.5%	(2.6%)

(a) Includes rounding adjustment.
(b) Six months average.

Notes: This schedule is provided in lieu of a schedule of principal employees because it provides more meaningful information. Other than the City of New York, no single employer employs more than 2 percent of total nonagricultural employees.

Data are not seasonally adjusted.

Source: New York State Department of Labor, Division of Reseach and Statistics.

Employment Status of the Resident Population - Ten Year Trend

2008–2017

	Civilian Labor Force (in thousands)		Unemployment Rate	
	New York City Employed	New York City Unemployed(a)	New York City	United States
2008 ……………………….	3,706	221	5.6 %	5.8 %
2009 ……………………….	3,592	369	9.3	9.3
2010 ……………………….	3,574	377	9.5	9.6
2011 ……………………….	3,603	360	9.1	8.9
2012 ……………………….	3,647	376	9.3	8.1
2013 ……………………….	3,724	361	8.8	7.4
2014 ……………………….	3,829	299	7.2	6.2
2015 ……………………….	3,920	237	5.7	5.3
2016 ……………………….	3,978	217	5.2	4.9
2017 ……………………….	4,032	192	4.6	4.4

(a) Unemployed persons are all civilians who had no employment during the survey week, were available for work, except for temporarily illness, and had made efforts to find employment some time during the prior four weeks. This includes persons who were waiting to be recalled to a job from which they were laid off of were waiting to report to a new job within 30 days.

Note: Employment and unemployment information is not seasonally adjusted.
Sources: U.S. Department of Labor, Bureau of Labor Statistics, and Office of the Comptroller, Fiscal and Budget Studies.

SCHEDULES OF OPERATING INFORMATION

NEW YORK CITY HOUSING AUTHORITY
PUBLIC HOUSING ASSESSMENT SYSTEM (PHAS) - INTERIM RULE

The table below shows the New York City Housing Authority's actual calculations for the three components that constitute the Financial Condition Indicator:

SCORING COMPONENTS (FINANCIAL CONDITION INDICATORS)	MEASUREMENT	CALCULATION METHODOLOGY	YEAR 2018	2017	2016	2015	2014	2013
Quick Ratio	Liquidity	Current Assets* / Current Liabilities ***Excluding restricted assets and inventory**	3.29	4.12	3.56	2.99	2.37	1.94
Months Expendable Net Assets Ratio	Adequacy of Reserves	Unrestricted Resources / Average Monthly Operating & Other Expenses	6.36	8.08	7.24	6.49	5.07	5.04
Debt Service Coverage Ratio	Capacity to Cover Debt	Adjusted Operating Income / Annual Debt Service Excluding CFFP Debt ***Includes projects with Debt Service only**	10.55	1.47	2.38	23.20	19.23	7.37

The table below shows the New York City Housing Authority's actual calculations for the three components that constitute the Manangement Operations Indicator (MASS):

SCORING COMPONENTS (MANAGEMENT OPERATIONS INDICATORS)	MEASUREMENT	CALCULATION METHODOLOGY	YEAR 2018	2017	2016	2015	2014	2013
Occupancy Rate	Project Performance in Keeping Available Units Occupied	Units Months Leased / Units Months Available	99.27%	99.39%	99.40%	99.41%	99.32%	98.94%
Tenant Accounts Receivable	Amount of Tenant Accounts Receivable Against Tenant Revenue	Accounts Receivable- Tenants / Total Tenant Revenue* *** Includes rents and other charges to the tenants**	9.04%	7.67%	5.9%	5.84%	5.89%	5.99%
Accounts Payable	Total Vendor Accounts Payable, Both Current and Past due Against Total Monthly Operating Expenses	Total Accounts Payable / Total Operating Expenses / 12	0.37	0.32	0.55	0.69	0.46	.28

Note 1: On February 23, 2011, HUD published the Interim PHAS Rule in the Federal Register. The Interim Rule makes changes to the Public Housing Assessment Scoring (PHAS) methodology begining with the year 2011 and classifies the financial indicators under separate scoring components (Financial Condition and Management Operations)

Note 2: REAC's assessment and analysis is based upon the Financial Data Schedule (FDS) submitted electronically by the PHA using the Financial Assessment Subsystem (FASS). This financial data is required to be reported in accordance with generally accepted accounting principles (GAAP), as mandated by the Uniform Financial Reporting Standards Rule.

Source: HUD Financial Data Schedule

SUMMARY OF PUBLIC HOUSING DEVELOPMENTS

DEVELOPMENT DATA	DEVELOPMENTS IN FULL OPERATION			
	PROGRAM			
	FEDERAL**	LLC I	LLC II	TOTAL***
NUMBER OF DEVELOPMENTS	297	13	6	316
NUMBER OF CURRENT APARTMENTS	153,750	14,460	4,950	173,160
NUMBER OF SECTION 8 TRANSITION APARTMENTS	-	2,678	1,353	4,031
TOTAL NUMBER OF APARTMENTS	154,314	14,476	4,972	173,762
RESIDENTIAL BUILDING	2,145	155	51	2,351
NON-RESIDENTIAL BUILDING	99	8	3	110
POPULATION* PUBLIC HOUSING	337,663	26,177	7,358	371,198
POPULATION* SECTION 8 TRANSITION	-	6,831	3,130	9,961
TOTAL POPULATION*	337,663	33,008	10,488	381,159

* Population as of January 1, 2019
** Figures listed above are for FHA Homes owned by NYCHA as of 01/01/2019. Does not include FHA Homes that have been sold.
*** Does not include Lavanburg Houses and PSS Grandparent Family Apartments

Source: Development Data Book - 2019
New York City Housing Authority, Performance Tracking and Analytics Department

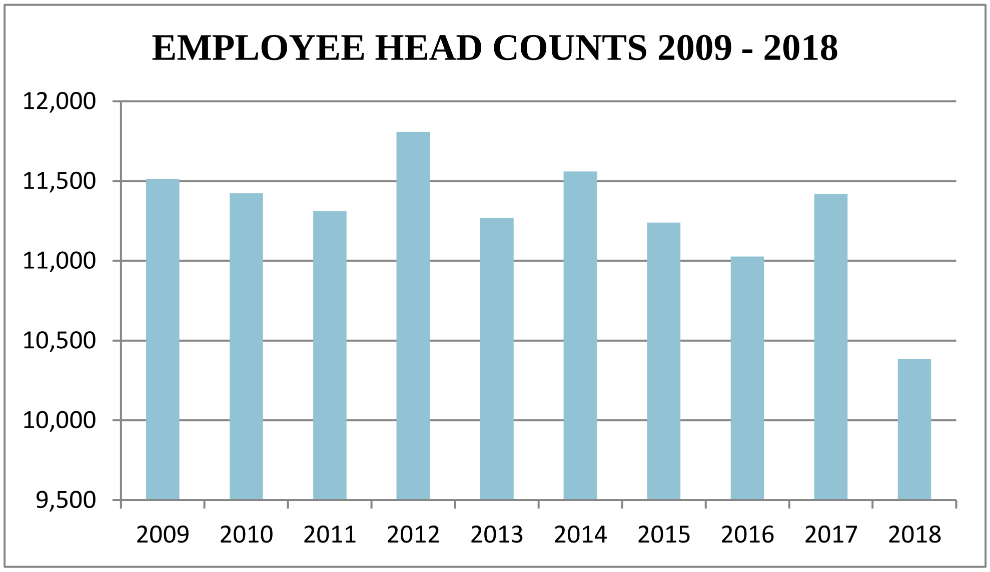
NEW YORK CITY HOUSING AUTHORITY
LEASE COMMITMENTS
($ in thousands)

LESSOR	YEAR OF EXPIRATION	ANNUAL RENTAL 2018	FUTURE MINIMUM ANNUAL RENTS	FACILITY
250 Broadway Associates	2019	$ 15,265	$ 8,485	Office Building
90 Church Street Limited Partnership	2024	12,901	405,550	Office Building
Fordham Renaissance	2030	3,428	32,060	Office Building
Vanderbilt Associates Owner LP	2030	2,430	28,215	Office Building
LIC 73 Owner LLC	2030	3,653	767,681	Office Building
Hutch Metro Center I LLC	2026	2,054	14,154	Office Building
Other		897	-	Office Building
TOTAL		**$ 40,628**	**$ 1,256,145**	

Source: New York City Housing Authority
Financial Accounting and Reporting Services Department

NEW YORK CITY HOUSING AUTHORITY
EMPLOYEE HEAD COUNTS 2009 - 2018

Year	Full Time	Part Time	Total
2009	11,323	191	11,514
2010	11,222	201	11,423
2011	11,115	197	11,312
2012	11,591	217	11,808
2013	11,107	162	11,269
2014	11,401	158	11,559
2015	11,079	160	11,239
2016	10,624	403	11,027
2017	10,976	444	11,420
2018	10,287	97	10,384



Note: Includes only employees who are active and receiving bi-weekly pay.

Source: New York City Housing Authority
Department of Human Resources