

TECHNICAL APPENDIX

This appendix describes the sources and methods used to make the estimates that appear in Barbara Sard and Will Fischer, "Preserving Safe, High Quality Public Housing Should Be a Priority of Federal Housing Policy." Part A addresses the estimates concerning the current public housing stock and its residents. Part B explains our cost estimates. Part C includes data tables concerning the size and location of current public housing units.

A. Public Housing and Its Residents

Our analysis uses data from the U.S. Department of Housing and Urban Development (HUD) and the Census Bureau. We utilize three HUD datasets: the *Picture of Subsidized Households*, from 1996 and 2000;¹ spreadsheets detailing demolition or disposition application approvals for public housing units, downloaded as recently as June 24, 2008;² and Resident Characteristics Report (RCR) data, at the national and project level.³ For our location analysis, we use tract-level Census 2000 data on poverty and race, downloaded via the Census Bureau's American FactFinder website.⁴

Estimate of Available Units

To analyze the future of the public housing stock, it was first necessary to identify the public housing units available to eligible families now or in the near future. We defined available units as those that are still in the public housing program for which HUD has not approved a public housing agency's request for demolition or disposition. ("Disposition" means a sale or transfer of units out of the public housing program.) This definition differs from HUD's determinations of units under Annual Contributions Contract or units eligible for operating subsidies, primarily because these HUD concepts include some units that have already been approved for demolition or disposition, and thus either are no longer available or will shortly become unavailable for occupancy.

Identifying available units — that is, those still in the program and not approved for demolition or disposition — is not a straightforward task. After examining various available HUD data sources, we determined that the most reliable starting point was HUD's *Picture of Subsidized Households 2000*. (HUD has not made public a more recent version of the *Picture* data.) We used a variety of methods to identify the units that were listed as existing in the 2000 *Picture* but were subsequently demolished or disposed, or approved for demolition or disposition.

¹ HUD, *Picture of Subsidized Households 2000*, <http://www.huduser.org/picture2000/>; HUD, *Picture of Subsidized Households 1996*: <http://www.huduser.org/datasets/assthsq/statedata96/allst.htm>.

² HUD's Demolition/Disposition spreadsheets are available at <http://www.hud.gov/offices/pih/systems/pic/sac/>.

³ Resident Characteristics Report (RCR) data at the national level covered the period March 1, 2007 – June 30, 2008, and were downloaded July 31, 2008; RCR data at the project level were for the period from October 1, 2006 through January 31, 2008, downloaded in early March 2008. RCR data are available at <https://pic.hud.gov/pic/RCRPublic/rcrmain.asp>.

⁴ The Census Bureau FactFinder website is <http://factfinder.census.gov>. We used the data from Census Summary File 3, based on the 1-in-6 sample who received the 2000 long form questionnaire. In order to match public housing projects with the appropriate tracts, we downloaded Census 2000 Cartographic Boundary files from the Census website at <http://www.census.gov/geo/www/cob/tr2000.html>.

The demolition/disposition data available to the public include the dates of agency requests for approval to demolish or dispose of units but do not include the dates that units were removed from the public housing inventory. Moreover, the HUD data concerning the number of units removed or remaining appeared to be unreliable, based on local data available to us.⁵ As a result, we had to use other information, as described below, to determine when demolition or disposition occurred, if at all, particularly for demolition/disposition applications approved in 2000 or earlier.

Further complicating the matter is the fact that HUD recently changed the numbering system for public housing developments, as part of the transition to an asset-management system. We used a crosswalk provided by HUD to translate the new project numbers back to the old numbers from the *Picture 2000*.⁶ However, the new project numbers group some buildings differently than the old numbers and there was no way for us to determine when such changes have been made. Thus, in many cases, we found multiple demolition/disposition entries for the same date associated with the same old project number, in some cases with a total number of units approved for removal far exceeding the number of units in the original project. We attempted to make sense of these entries on a case-by-case basis, but the numbering changes may have caused us to undercount or overcount the number of units approved for demolition. Additionally, the crosswalk between project numbers did not include projects in the U.S. territories, so we were unable to obtain project-level estimates of available units in the U.S. territories.⁷

Updating the 2000 Data

To update the unit count for each development provided in the *Picture 2000*, our primary source was the demolition/disposition spreadsheet downloaded on June 24, 2008. We used a demolition/disposition spreadsheet downloaded on February 21, 2008 (which used the earlier project numbers), the *Picture 1996* data, and the RCR data as of January 31, 2008 as supplemental information sources.

The following rules were used to exclude an entire project from the count of available units. A project was excluded entirely if one or more of the following applies:

- Its unit count in *Picture 2000* was zero.
- Its removal application date was after 2000 and the number of units approved for removal is equal to or exceeds its *Picture 2000* count.
- Its count in the RCR data (as of January 31, 2008) was equal to the number listed as approved for removal but remaining on the February 21, 2008 spreadsheet.

⁵ The spreadsheets appear to indicate whether the units are “remaining” or whether they have been removed as of the date of download. We spot-checked data about particular developments and found that units listed as remaining may have already been demolished.

⁶ HUD’s Crosswalk is available at <http://www.hud.gov/offices/pih/systems/pic/dvcrswlk.cfm>.

⁷ As discussed in more detail below, our estimate of 1,160,911 available units includes the units in the territories, but these units are excluded from our more detailed analyses of unit type or location.

- The number of units approved for demolition but listed as remaining in the June 24, 2008 spreadsheet exceeded the unit count in the RCR.

If HUD had approved the demolition or disposition of a project, according to the June 24, 2008 spreadsheet, but the project did not meet one of these criteria for full exclusion, we estimated the number of remaining available units in the following manner, depending on the date of application approval.

- If the date of application was after 2000, we subtracted the total number of units approved for removal from the number of units listed in the *Picture 2000*. But if HUD's RCR data showed a *lower* number of units under Annual Contributions Contract in January 2008 than the resulting total, we used the RCR count as the number of available units.
- If the date was 2000 or earlier, we had to determine whether those units had already been removed prior to the count listed in *Picture 2000*. We used the *Picture 1996* to help us in this process. We applied the following rules:
 - If the difference between the *Picture 1996* count and the *Picture 2000* count was equal to the number approved for removal, we kept the number listed in the *Picture 2000*.
 - If the difference between the *Picture 1996* count and the *Picture 2000* count was less than the number approved for removal, we subtracted the number approved for removal from the *Picture 1996* count.
 - If the *Picture 1996* and the *Picture 2000* counts are the same and HUD approved removal in the period 1995 - 1999, we subtracted the number approved for removal from the *Picture 2000* count.

If none of these rules clarified whether the *Picture 2000* count for a development was greater than the number of units available in 2008, we reviewed the anomalies on a case-by-case basis and made our best judgment or used the RCR count of units under ACC.⁸ We also removed 1,663 units in Atlanta's five remaining high-rise family developments, which we knew from other sources were approved for demolition during our analysis.⁹

From this process, we calculated that a total of 1,138,893 units in 13,570 projects listed in the *Picture 2000* are still available. We then had to adjust this figure to reflect new units, largely the result

⁸ Of the 61,919 public housing units in Puerto Rico, Guam and the Virgin Islands listed in the *Picture 2000*, we were able to identify 860 units in particular projects that were subsequently removed. In addition, we excluded some 3,057 units in the territories that are listed in the demolition/disposition spreadsheet of June 24, 2008 as approved for removal but remaining as of the date of the spreadsheet. We were unable to identify the specific projects in which these units are found due to the change in project numbers and HUD's omission of data on the territories from the crosswalk. Because we could not link the 3,057 units to specific developments, we did not include units in the territories in our breakdowns of units by project size, metropolitan location, and senior status.

⁹ Atlanta Housing Authority news releases indicated demolition was approved for the final four developments on July 2, 2008, with Bowen Homes' approval actually coming on June 20. None of these developments had been added to the demolition/disposition spreadsheet downloaded on June 24, 2008.

of HOPE VI redevelopment, that were not reflected in *Picture 2000*. Using the data available, we added to the total 21,979 "new" units in 356 projects listed in the RCR data as of January 31, 2008 that were not listed in the *Picture 2000*. The project numbers for these projects, by and large, are higher than the rest of the agency's project numbers, and in many cases follow somewhat sequentially. We took this to indicate that they are likely new replacement developments.¹⁰ We had no way of accounting for replacement units that may have been added back into the original project number.¹¹

The 21,979 units therefore do not include all replacement units built since 2000. HUD's HOPE VI Progress Report shows 31,661 replacement units built as of September 30, 2007 (the latest data available to us). We do not know how many of these replacement units were built since 2000, or how many replacement units have been built at non-HOPE VI developments.

Adding these assumed replacement units brings our estimate of the total number of available units to 1,160,911 in 13,926 projects. It is important to remember that even if this estimate is correct as of the end of June 2008, it is constantly in flux at the margin due to HUD approval of additional requests for demolition or disposition and agencies bringing new replacement units on line. As explained in the body of the analysis, more units are likely to be lost than replaced under current policies, meaning that the number of available units will decline.

Location Analysis

To our knowledge, no one has analyzed the characteristics of the neighborhoods in which public housing is located using 2000 Census data. (HUD and independent researchers have done a number of analyses using the 1990 Census data.) In light of the substantial changes in the 10-year period in the concentration of poverty in central cities — and the demolition of about 200,000 public housing units since 1995 (see below), we concluded that any analysis of the future of public housing had to be based on the most recent information available concerning its location. Of course, neighborhoods could have changed considerably in the last 8 years, but the 2000 Census is the most recent data available that is sufficiently detailed at the neighborhood level.

The starting point of our location analysis is HUD's geocoding of public housing projects to a specific latitude and longitude in the *Picture 2000*. Our data was at the project level, so we had a single set of coordinates for each project, regardless of the number or configuration of buildings that are a part of each project. We used those coordinates to identify the tracts in which the projects were located and to match them to the tract-level Census data using a standard process of joining shapefiles in ArcGIS.¹² *Picture 2000* also identifies whether a project is in a metropolitan or non-

¹⁰ It did come to our attention that a small number of these units—perhaps around 3,000—may actually be in the *Picture 2000* under different project numbers and have simply been given new project numbers after being taken over by a different housing authority. We did not spend the time to explore that possibility in depth.

¹¹ For example, if there is a 200-unit project with 100 units approved for demolition and a count of 148 units in the January 2008 RCR, we cannot tell whether there are still 48 units to be demolished or whether all 100 units were demolished and 48 replacement units were built. Generally, in such a case we assumed that no replacement units had been built. Combined with the decision rules described above, this assumption meant that we considered only 100 units to be "available" in such a development.

¹² The *Picture 2000* includes some data on census tract poverty rate and racial composition. However, the data are not available for 1,922 geocoded projects — about one in seven — in the *Picture* dataset. Matching census data to tract

metropolitan location. We used the metro/non-metro identifiers in *Picture 2000*, without updating. The Office of Management and Budget (OMB) has changed the boundaries of some metropolitan areas since 2000. As a result, some projects identified as non-metropolitan may now be in metro areas, and vice versa.

Sample Narrowing for Location Analysis

We analyzed the location of the available public housing units, determined by the processes described above. Due to data limitations, we could only include 969,873 of the 1,160,911 available units in the location analysis. The following are the categories of units excluded, summarized in the table below.

- *Units that are not in the Picture 2000.* As explained above, we were able to identify 21,979 units that were not in *Picture 2000*, which likely are replacement units. Because these projects are not in *Picture 2000*, we do not have latitude/longitude coordinates for them and cannot match them to census tracts.
- *Units in "scattered site developments".* For administrative reasons, HUD sometimes assigns a single project code to so-called "scattered-site developments" that consist of more than one building in different locations. Often these are single-family units. The number of units in such projects is at times quite large (with more than 250 units). Despite the different actual locations of the units, *Picture 2000* assigned a single latitude/longitude point to some developments identified as "scattered site." Given the inherent inaccuracy of this practice, we decided to exclude all projects with a HUD label of "scattered" or "scat" from our location analysis, thereby excluding 41,726 units. Some scattered site developments are probably still included in the analysis and mistakenly assumed to be in a single location, but we believe the exclusion minimizes the distortion by omitting most of the more numerous such "developments." We do not know whether the exclusion of these nearly 42,000 units skews the census tract analysis in any particular direction. It may result in a slight upward skewing of our description of development size, but the median project size among the excluded "scattered site developments" is only slightly smaller than the median project size among the rest of the *Picture 2000* projects.
- *Units in U.S. territories.* The U.S. Census is not conducted in the territories, and the federal poverty thresholds are not designed to apply in the territories (where incomes and the cost of living in some cases are far below those on the mainland). For these reasons, we did not analyze the poverty rates and other characteristics of neighborhoods in which public housing in the territories is located.
- *Units with geocoding problems.* Our count of available units includes 11,626 units included in the *Picture 2000* but lacking geocoding coordinates, and 4,210 units for which the available geocoding information did not generate usable data (due to either an inability to translate the latitude/longitude into a tract or geocoding to a tract with zero population). Since we do not have valid census tract identifiers for these units, we excluded them from the analysis.

identification for all of the projects allowed us to get a fuller picture of the neighborhoods in which nearly all public housing is located.

Summary of Exclusions From Location Analysis (out of total estimated available units (1,160,911))	
Excluded Category (sequential exclusions)	Number of Units
Projects and units not included in the <i>2000 Picture</i> (likely new construction)	21,979
Projects which include the label "Scattered" or "Scat" in <i>2000 Picture</i>	41,726
Projects in U.S. territories	58,002
Projects that HUD did not geocode in the <i>2000 Picture</i>	11,626
Projects for which we identified geocoding problems	4,210
Projects for which the ratio of units in the <i>2000 Picture</i> to the total number of housing units in the geocoded tract, according to Census 2000, exceeds 1.0	53,495
Total	190,038

- *Units with an excessively high ratio of public housing units to total housing units.* We excluded all projects where the number of public housing units reported in *Picture 2000* was greater than the total number of housing units listed in the project's census tract, since this result can only be explained by inaccurate or incomplete data. In such cases either the public housing data or the Census data could be incorrect, but we had no way to determine which it was. Another possibility is that the project's units are in more than one census tract, but we could only match the single address provided.

The statement in the analysis that public housing is located in more than 3,500 communities is based on an estimate that at least 3,566 census "places" are home to at least one public housing development. Census places include local jurisdictions such as cities and towns, as well as certain unincorporated communities. The 3,566 figure does not include projects that were not in the *2000 Picture*, that are located in the territories, or that HUD did not geocode in the *2000 Picture*. Consequently, it is a low-end estimate of number of communities where public housing is located.

Determining "Senior" and "Family" Developments

Public housing developments may house all types of households — families with children, single individuals or couples who are elderly or have disabilities, or others — with the mix largely determined by the share of 1-bedroom or larger units. Such general occupancy developments are usually called "family" projects. Some of these developments have individual buildings set aside for seniors or people with disabilities. Other developments were built to serve primarily elderly households or individuals with disabilities, and have mostly efficiency or 1-bedroom units. For simplicity, we have labeled these "senior projects."

Analyses in the 1990s revealed that residents of "family" projects were more likely to be black, and these projects were much more likely to be located in high poverty, largely minority areas.¹³ Policy-makers and researchers have linked the potentially deleterious impacts of living in high poverty communities primarily to families with children, though others also may be adversely

¹³ E.g., John Goering, Ali Kamely and Todd Richardson, "The Location and Racial Composition of Public Housing in the United States: An Analysis of the Racial Occupancy and Location of Public Housing Developments," US Department of Housing and Urban Development (1994); Sandra J. Newman and Ann B. Schnare, "... And a Suitable Living Environment': The Failure of Housing Programs to Deliver on Neighborhood Quality," *Housing Policy Debate* 8:4 (1997), pp. 703-741.

impacted by living in deteriorated housing in high-crime areas. Consequently, we concluded that it was important to analyze the size and location of general occupancy developments separately from the public housing stock as a whole.

Most of the senior/general occupancy labels came from the Public Housing Operating Cost Study and a spreadsheet available on the study's website.¹⁴ For projects that were not included on that spreadsheet, we developed a methodology for identifying senior projects based on the method used by the Government Accountability Office's 2005 report on the condition of senior developments.¹⁵ Using the *2000 Picture* data, we identified public housing developments as primarily occupied by elderly persons (62 or older) or non-elderly persons with disabilities if:

1. the development had at least 10 occupied units, *and*
2. all of the units in the development contained only one bedroom OR at least 50 percent of heads of households were elderly persons OR at least 50 percent of heads of households were non-elderly persons with disabilities OR at least 80 percent of heads of households were either elderly persons or non-elderly persons with disabilities.

Using this method, we were able to categorize an additional 700 projects with 29,940 units as either general occupancy or senior developments.¹⁶

Of the 1,160,911 total units available, 765,280 are in general occupancy or “family” projects and 315,915 are in “senior” projects. We were not able to identify the project type for 79,716 available units. The unidentified units are either the “new” units (for which do not have *2000 Picture* data) or units in the territories, where the lack of project-level demolition data means that we do not have reliable counts available at the project level.¹⁷ The available information, however, indicates that the great majority of the 58,002 units in the territories are in “family” projects, suggesting that the total number of units in family projects is at least 820,000.

Occupied Units

This analysis estimates that 1,040,000 of the 1,161,000 public housing units available now or in the near-term are occupied as of mid-2008. As of June 30, 2008, HUD's Resident Characteristics Report (RCR) includes data on 977,716 households living in public housing. Some agencies may have failed to report on all occupants. Most significantly, RCR does not include data from many agencies participating in the Moving to Work demonstration (MTW). Twelve of the largest

¹⁴ The PHOCS spreadsheet is available at http://www.gsd.harvard.edu/research/research_centers/phocs/Cost_Study_Final_Estimates.xls.

¹⁵ U.S. Government Accountability Office, “Distressed Conditions in Developments for the Elderly and Persons with Disabilities and Strategies Used for Improvement,” GAO-06-163 (2005).

¹⁶ We categorized developments with fewer than 10 occupied units as general occupancy projects.

¹⁷ The same problems keep us from being able to label a similar number of units as metropolitan or non-metropolitan. The slight discrepancy in the numbers that are unable to be labeled is due to the fact that a few “new” projects are included in the PHOCS list, which is from 2001, and can be identified as either senior or general occupancy developments. We have no more recent source of information about metropolitan location.

agencies, that own about 90,000 units we deemed available, reported data on only 13,000 households. Based on information provided by these agencies in written materials or in response to our inquiries, we estimate that there are approximately 62,000 additional occupied units not accounted for in RCR. The estimate of 1,040,000 occupied units may be slightly low, as several thousand additional units are owned by smaller MTW agencies that are not included in the RCR data, and other agencies also may have failed to report fully.¹⁸

These estimates indicate that approximately 121,000 of the 1,161,000 remaining public housing units are not occupied. Vacancies could occur for a number of reasons. HUD's 2007 Public Housing Operating Fund Annual Report states that in that year at non-MTW agencies, 33,625 units were unoccupied because they were undergoing modernization or had been rendered uninhabitable by a disaster or "casualty loss." Some of the remaining units likely were off-line for modest repainting or repairs for reoccupancy, while others were available for rent.

Resident Demographics

We relied primarily on data from HUD's Resident Characteristics Report as of June 30, 2008 to identify the characteristics of public housing residents. Cross-tabulations of these data are not possible, so in some cases we used the more detailed breakdown of 2006 data reported by HUD in its "Seventh Annual Report to Congress on Public Housing and Rental Assistance Programs." We used the RCR figures on the percentage of residents in particular age groups, percentages of each household type, and the average household size to adjust the RCR data to reflect the estimated 62,000 households not included in the RCR database.

For example, RCR reports that the average size of the 977,716 households included in the database is 2.17 people. Assuming that the estimated 62,000 households not included in the database have the same average size, there are 2,256,000 people living in public housing. We applied the RCR data showing that nearly 16 percent of residents of public housing were age 62 or older to this total number of residents to estimate that there are 351,363 seniors living in public housing. About 30,000 of these seniors are either a member of an elderly couple or live with other relatives.

B. Estimates of Public Housing Funding Needs

This appendix describes the sources and methods we used (1) to estimate the backlog of capital needs in public housing developments and (2) to compare public housing preservation costs to the current public housing funding level and the cost of replacement vouchers. It covers the following areas:

- General framework and assumptions;
- Capital backlog needs;
- Replacement reserve contributions;
- Operating costs;

¹⁸ RCR includes data for a 16-month period, for families that did not exit the program during that period. As a result, the RCR figure of nearly 978,000 occupied units we used as the starting point may itself be higher or lower than a point-in-time count would be. It is unlikely, however, that the difference would be large.

- Voucher costs; and
- Comparison with baseline public housing funding level.

General Framework and Assumptions

Number of Public Housing Units

Our estimates of the capital backlog and annual public housing preservation costs include costs for the 1,161,000 units we estimate remained in the public housing program and were not approved for removal as of June 2008. We assumed that 98 percent of these units would be eligible for operating subsidies, the same percentage as the share of total units in 2007 not in the process of being removed that were eligible for operating subsidies.

Period of Analysis

Our preservation cost estimates look at costs over a period of 30 years, on the grounds that 30 years is both a common loan term and in many cases the useful life of a development before further major renovations will be needed. Thirty years is also the same period generally used in the methodology HUD uses to compare costs of major rehabilitation of public housing and voucher costs for purposes of determining whether a development is eligible for mandatory or voluntary conversion.¹⁹

Inflation and Discount Rates

Inflation rates for 2008 and 2009 are CBO estimates. Inflation and discount rates in 2010 and after are from the January 2008 revision of OMB circular A-94 (available at http://www.whitehouse.gov/omb/circulars/a094/a94_appx-c.html). These are the same rates used in HUD's voucher conversion cost comparison methodology and for other federally required cost-benefit analyses.

Again following the same approach as the HUD methodology, we applied a single, general inflation rate to all costs in 2010 and after, instead of separate inflation rates for the different types of goods and services (such as utilities, rents, administrative salaries, and capital equipment) that will influence needs and funding levels in the public housing and voucher programs. If prices grow more rapidly in one area than another, this could cause our cost estimates to be too high or too low. For example, utility costs make up a disproportionately high share of public housing costs, so if utility prices rise more rapidly than the general rate of inflation, the real cost of public housing preservation will be higher than we anticipate. Higher utility cost growth could also cause public housing to be more expensive relative to vouchers (since a smaller share of voucher expenditures goes to utilities), although this effect could be offset if there is also rapid growth in prices (particularly residential rents) that drive voucher costs.

¹⁹ See appendix to 24 C.F.R. part 972.

Financing Terms

Our estimate of the annual cost of addressing the capital backlog assumes that 20 percent of the backlog would be met through upfront grants, while the remaining 80 percent would be funded through debt financing. We assumed a 30-year loan financing period for new debt taken out to address the backlog, a debt coverage ratio of 1.15, and an interest rate of 6.0 percent. (We also assumed continuing payments on \$2.6 billion in debt under the Capital Fund Financing Program discussed below, for a period of 20 years after the debt was taken out. Twenty-years is the typical maximum financing period permitted under that program.)

The interest rate of 6.0 percent is based on reports of interest rates in previous years for long-term, fixed-rate, tax-exempt financing, with credit enhancement or mortgage insurance costs included.²⁰ We assumed that interest rates today would bear the same relationship to the 10-year Treasury bond rate (a spread of 220 basis points) as was typical in previous years.

Public Housing Capital Backlog

The main source of our estimates of capital backlog needs is a HUD-sponsored study conducted by Abt Associates in 2000, the most recent national estimate based primarily on an actual assessment of public housing developments.²¹ That study estimated an average of \$20,390 in backlog needs per unit as of 1998. If the per unit backlog had simply grown since then at the rate of growth in construction costs, it would have come to \$28,600 in 2009.²² Actual current backlog needs will depend on the amount of new needs that have accumulated since 1998, the extent to which housing agencies have addressed capital needs, and changes in the size and characteristics of the public housing stock.

Backlog Needs Addressed and Accumulated Since 1998

Funding under the public housing capital fund from 1998 through 2004 was significantly higher than the amount of capital needs that Abt's estimates suggest likely accrued during that period. Funding fell below the accrual level in later years, but the deficit in those years only offset a portion of the surplus above estimated accrual needs in 2004 and before. Overall, we estimate that capital fund expenditures reduced the per-unit capital backlog from \$28,600 to \$21,600.

This estimate uses the level of funds obligated for capital fund formula grants from 1998 through 2007 and the amount appropriated for those grants in 2008 (since data on obligations for 2008 will not be available until the end of the year). We made three adjustments to those funding levels:

²⁰ James Stockard, Gregory Byrne, Kevin Day, Lora Nielsen, *Report on Debt Financing of Public Housing Capital Improvements, Public Housing Operating Cost Study*, Harvard University Graduate School of Design, November 1, 2001.

²¹ Meryl Finkel, Donna DeMarco, Hin-Kin Lam, Karen Rich, *Capital Needs of the Public Housing Stock in 1998: Formula Capital Study*, Abt Associates, prepared for U.S. Department of Housing and Urban Development, January 2000.

²² Our estimate of growth in construction cost uses the McGraw Hill Construction Engineering News-Record Building Cost Index for the period from 1998 to 2007. We assumed that construction cost growth from 2007 to 2008 would be the same as the growth from January-September 2007 to January-September 2008, and that from 2008 to 2009 construction costs would grow at CBO's projected rate of general CPI inflation.

- We added amounts borrowed through the Capital Fund Financing Program, net of an estimate of capital funds used to repay CFFP debts. HUD reports that it has approved \$3.6 billion in CFFP debt. We include only \$2.6 billion of this debt in our calculations, based on an estimate that the remaining \$1.0 billion either refinanced existing debt (and therefore would not further reduce the backlog) or was approved by HUD but never actually borrowed.
- We excluded funds set aside within the capital fund for purposes other than core capital grants.
- We deducted an estimated 8.1 percent of capital funds that were used for “replacement housing factor” (RHF) grants that did not address capital needs in existing buildings. Data on HUD’s website indicates that 8.1 percent of capital formula funds were used for RHF grants in 2003-2008, the only years covered by the data.

Beyond the set-aside and RHF funds we excluded, some capital grant funds were not used to address capital needs at projects (and instead went for purposes such as capital improvements to administrative buildings or computer systems, or transfers to cover shortfalls in the operating fund). At the same time, some funds from other sources were used for capital needs (such as Low-Income Housing Tax Credits and tax exempt bonds, or HOPE VI funds spent on rehabilitation). We did not have enough information to estimate these amounts reliably, but made the assumption that the amount of funds from outside the capital fund used to address backlog needs at public housing developments roughly offset the amount of capital funds used for other purposes.

We assumed that new needs have accumulated since 1998 at an annual rate of \$2,100 per unit in 2009 dollars. That figure is 90 percent of the annual capital accrual rate estimated by the 2000 Abt study. We used this lower figure because the Abt estimate is an estimate of the accrual of new needs after backlog needs are addressed. The rate at which additional needs would accumulate in a building with a large backlog would be significantly lower, because many building systems already would be beyond their useful life and therefore would not accrue new needs.

Changes in Size and Characteristics of Public Housing Stock

As the starting point for selecting a sample of units for inspection, the capital formula study used 1997 HUD data containing 1,308,050 units, about 147,000 more than the 1,161,000 we estimate remained in the public housing program and were not approved for removal as of June 2008. We assumed that 35,000 new public housing units would have been built during this period (including nearly all of the 31,661 HOPE VI replacement units built by September 2007, and a small number of units built since September 2007 or at non-HOPE developments), which would mean the total number of units demolished or otherwise removed from the stock would be about 180,000.

The estimates in the 2000 Abt study excluded just over 100,000 units, because these units had been or were scheduled to be demolished under HOPE VI or because for other reasons they were not expected to be eligible for capital funds in the future. If an additional 80,000 units with relatively high capital needs were eliminated and 35,000 new units with no backlog needs were built, the average level of backlog needs would have fallen from \$21,600 to about \$19,300. This would correspond to a total backlog of \$22 billion, the figure used in the analysis.

Replacement Costs

We used an estimate that replacement of a public housing unit will cost \$146,000. This was calculated based on HUD's 2007 Total Development Cost limits, which are per-unit development cost estimates broken down by unit size and type of building (detached, semi-detached, row house, walkup, and elevator). We weighted the estimates based on the building types and units sizes in the public housing stock, and multiplied the resulting average by 90 percent (since many public housing projects would not incur all of the costs — such as site acquisition and remediation — that the TDC is intended to cover). We then used the method described in note 4 to adjust the result to reflect growth in construction costs.

Number of Units Requiring Replacement

The analysis estimates that the total capital need would be \$32 billion (or \$28,000 per unit) if 100,000 units were to be replaced rather than renovated. There is not sufficient information available to estimate the number of units where demolition and new construction (or, alternatively, replacement with tenant-based vouchers) is more appropriate than renovation of the existing structure, but it is likely roughly on the order of magnitude of 100,000.

This figure is somewhat above recent estimates of the number of “severely distressed” public housing units (discussed further in note 28 of the analysis). For example, the Urban Institute estimated that (apparently as of 2003) between 47,000 and 82,000 units met a definition of “severely distressed” that — like the definition used in the HOPE VI program — combined poor physical condition and social problems.²³ It would be expected, however, that the number of units requiring replacement would be higher than the number of severely distressed units, since some developments may be in extremely poor physical condition but not experience the types of social problems that the definition of severe distress requires.

The 100,000 figure is also above the 86,000 units that we estimate are located in large developments in high poverty census tracts. This would be expected as well, since while some of the 86,000 units may not require replacement, additional units not included in the 86,000 likely should be replaced rather than renovated.

Replacement Reserves

The 2001 Harvard Graduate School of Design (GSD) analysis of debt financing in public housing listed \$800 as the high end of a range of possible annual contributions to replacement reserves for public housing, based on a review of a number of sources of data on accrual costs and replacement reserve levels. In our estimates of the cost of a replacement reserve that would partially cover newly accrued capital needs, we adjusted the GSD estimate for inflation, resulting in an annual reserve contribution of \$1,060 per unit.

This level would cover only a portion of new capital needs that accumulate over time, with the assumption that proceeds from future refinancing or other sources would cover the remainder. The

²³ Margery Austin Turner et al., “Estimating the Public Costs and Benefits of HOPE VI Investments: Methodological Report,” July 2007.

\$1,060 estimate, however, is well above the typical replacement reserve contribution in privately owned rental housing. For example, an Ernst and Young survey found that the median replacement reserve contribution in Low-Income Housing Tax Credit properties in 2005 was \$250.²⁴ The higher estimate we used reflects an assumption that capital needs will accumulate somewhat more rapidly in public housing. In addition, it would provide housing agencies enough ongoing revenues to cover a somewhat larger share of newly accumulated capital needs than is typical in the private sector (and therefore leave a smaller share that would need to be covered through refinancing or grant funding at the time of the next major rehabilitation).

The 1998 Abt capital needs study estimated that after full modernization an average public housing unit would accrue \$1,679 in additional capital needs per year, in 1998 dollars. Adjusted for inflation, this comes out to \$2,350 per unit per year in 2009. The \$1,060 replacement reserve contribution we assumed in our analysis would be adequate to cover 45 percent of those costs.

Public Housing Operating Costs

We used the actual amount of operating subsidies housing authorities are eligible for in 2008 (as reported by HUD on September 10, 2008) as the starting point for our estimate of the amount of operating subsidy needed to preserve public housing. We then inflated those levels by HUD estimates of growth in eligibility under the operating subsidy formula from 2008 to 2009 that were included in HUD's 2009 Congressional Budget Justifications, and made three further adjustments to reflect differences between eligibility under the current formula and actual long-term operating subsidy needs.

- First, we based the utility cost component of the operating subsidy on an estimate of actual utility costs in 2009. HUD's formula is designed in a manner that may cause eligibility for operating subsidies to cover utility costs in any given year to be far above or below actual costs. Eligibility over a 30 year period, however, will likely be more closely linked to actual 2009 costs than to 2009 eligibility. Our estimate is based on actual public housing utility costs from July 2006 through June 2007, CPI data on utility inflation through July 2008, Department of Energy (DOE) projections of energy inflation after July 2008, and an assumption that inflation for water and other non-energy utilities will continue at the same rate as in recent years. We assumed no change in the *quantity* of energy consumed in public housing; if housing agencies have reduced consumption in response to conservation incentives and higher prices, 2009 costs could be somewhat lower.
- Second, we used an estimate of rental income intended to reflect current rent revenues. When the operating subsidy formula was established, the "formula income" (that is, the level of rental revenue deducted from estimated expenses to determine subsidy eligibility) was frozen through 2009 at the 2004 level without any adjustment for inflation. As a result, a \$2.23 billion estimate of the formula income level included in the 2009 HUD budget justifications reflects 2004 rents rather than 2009 rents.

²⁴ Ernst and Young, *Understanding the Dynamics IV: Housing Tax Credit Investment Performance*, June 2007.

- It is not yet clear how formula income will be calculated in 2010 and after, the bulk of the period covered by our estimates. But regardless, the resources available to PHAs from rents to offset operating costs will be determined by actual current rent revenues, so we used an estimate of current revenues in our analysis. We assumed that per-unit tenant rent revenues would have risen at the same rate as average incomes for the bottom 20 percent of all households from 2004 to 2007 — the most recent year for which income data are available — and at half the rate of inflation from 2007 to 2009. This comes out to an average per-unit increase of 3.0 percent per year from 2004 through 2009.²⁵
- Third, we adjusted the non-utility component of formula eligibility to reflect growth in employee benefit costs. The estimates of non-utility expenses in the formula are based on 2000 data, adjusted for inflation. Benefits account for about 16 percent of non-utility costs in public housing and more than one-fourth of employment costs. But HUD's inflation adjustment only takes into account growth in wages and salaries. Because benefit costs (and particularly health insurance premiums) have increased more rapidly than wages and salaries, HUD's adjustment understates the increase in expenses. The adjustment for benefit cost growth increased our estimate of non-utility operating expenses by 2.4 percent.

Our estimates do not assume any future reduction in federal costs for operating expenses due to modernization, so to the extent that there is such a reduction public housing costs would be lower than we estimated. Capital improvements could potentially reduce both utility and non-utility operating expenses, although under the current operating subsidy formula only reductions in utility expenses would translate to lower federal spending (and, as noted above, utility costs could be driven up if utility prices rise more rapidly than the general rate of inflation). In addition, modernization could reduce vacancies, which under the current formula could have two offsetting effects on federal costs: (1) reducing federal costs by increasing the rent revenues that are deducted from operating subsidies; and (2) increasing federal costs by requiring operating subsidies for units that are currently entirely ineligible because the agency or development has a high vacancy rate.

Voucher Costs

Voucher Subsidy Costs

We estimate that the average cost of a voucher in 2009 will be \$7,216. This figure is based on Voucher Management System data submitted by housing agencies to HUD for the fourth quarter of 2007, inflated for 2008 using HUD's regional Annual Adjustment Factors (AAFs) weighted by a projection of vouchers in use by state and local agencies, and for 2009 using a CBPP estimate of the average AAF based on CPI rent and utility inflation data.

We then made three adjustments (applied cumulatively) to reflect the likely costs of vouchers issued to replace public housing:

²⁵ In later years we assumed that rents, like operating and other costs, would rise at the general rate of inflation. We did not assume any changes in PHA policies or federal statutes or regulations affecting rent revenues, or in the income level of tenants after renovation.

- First, we reduced the average cost based on our estimate that rent and utility costs (capped by the payment standard) in areas where public housing units are located are on average 94 percent of rent and utility costs in areas where vouchers are located. To derive this estimate we compared (1) the average HUD Fair Market Rent for counties and New England towns weighted by the number of public housing units in the county or town with (2) an average weighted by the number of vouchers administered by housing agencies in the county or town.
- Second, we reduced the per unit cost to reflect the fact that public housing households on average are smaller than voucher households and therefore are eligible for smaller units and lower voucher subsidies. Based on national average FMRs for different unit sizes we estimated that average rent and utility costs of units rented by public housing households would be about 96 percent of costs for voucher households in the same area.
- Third, we estimated that the average tenant payment by a public housing tenant would be about 2 percent higher than the average payment by current voucher holders, based on the difference in incomes between the two groups reported in HUD's RCR database. (Public housing tenants have lower *median* income than voucher holders, but the average income is most relevant for a cost analysis.)

Voucher Administrative Fees

Our voucher cost estimates assume agencies will receive the full administrative fee for which they are eligible under the statutory administrative fee formula: \$846 in 2009. This is our estimate of the full funding level for fees per unit leased, based on the amount of administrative fees appropriated for 2008, the share of total administrative fee eligibility that HUD reports those fees cover, and our estimate of the number of units likely to be leased in 2008, and adjusted for inflation from 2008 to 2009.

Transition Costs and Residual Value

The analysis contains an estimate of average voucher costs over 30 years when transition costs stemming from removing a development from public housing are included. When public housing units are dropped from a housing agency's stock, the agency is eligible for an "asset repositioning fee" equal to 75 percent of the operating subsidies the unit would have been eligible for in the first year, 50 percent in the second year, and 25 percent in the third year. We assumed that the roughly \$6,500 fee for a typical unit would be sufficient to cover one-time transition costs of voucher replacement, such as demolition and relocation. This estimate may be on the low end for a project where tenants in most units must be relocated or that involves substantial demolition or remediation costs, but it would be well on the high end for projects where tenants can use vouchers to remain in place (that is, where the project is sold or otherwise taken out of the public housing stock, but there is no demolition or major renovation that would displace current tenants.).

Agencies would also be eligible for up to 10 years of replacement housing factor funding for each unit lost. We did not count this funding as a cost of voucher replacement, because the funds must be used to build new replacement units rather than for the direct costs of demolishing or disposing of a unit and replacing it with a voucher.

Our estimates of public housing preservation costs do not take into account the value of the land on which public housing is located. This approach diverges from the methodology HUD requires for the cost comparisons used to determine whether a project is eligible for voluntary conversion. That methodology counts the “residual value” of the land (after costs from demolition and remediation are deducted) as a cost of maintaining a unit as public housing, on the grounds that the land could be sold or used for other purposes if it were not retained as public housing. We did not include the cost of land in our analysis because our purpose was to estimate federal costs. Proceeds generated by sale of public housing land would generally go to the housing agency, not to the federal government, so keeping land for public housing does not create an opportunity cost for the federal government.

Comparison with Baseline Funding Level

The analysis compares the cost of full funding for public housing to the 2009 CBO baseline level, which is the actual 2008 funding level adjusted for inflation. (For the operating fund, the baseline reflects the 2008 prorated funding level plus inflation, *not* the full formula funding level.) We only included funds in the baseline that are specifically for operating and capital expenses for existing public housing developments. As a result, we excluded funds set aside within the operating fund for technical assistance with the transition to asset management, several set-asides within the capital fund for purposes other than formula grants, and replacement housing factor grants that the capital fund formula requires be used to develop replacement units. Since the preservation funding level we compared to the baseline does not cover the cost of replacing severely distressed public housing, we did not include HOPE VI in the baseline.

Congress has not yet determined the public housing funding level for 2009. The Administration’s budget request would increase the operating fund appropriation modestly above the baseline level, but would sharply reduce funding below the baseline for the capital fund and for public housing overall. A House Appropriations subcommittee and the Senate Appropriations Committee, however, have approved HUD appropriations bills with overall public housing funding levels above the baseline. If the final 2009 funding level for the relevant components of public housing operating and capital funds is above the baseline, the “sustainable” level of funding will require a smaller increase over baseline funding than we estimated.

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TABLE 1A: SUMMARY OF AVAILABLE UNITS BY PROJECT TYPE

Type of Project	Total Available Units	Units in Location Analysis
All Units	1,160,911	969,873
Senior	315,915	311,103
General Occupancy ("Family")	765,280	658,770
Senior/General Occupancy Designation not possible	79,716	N/A
Metro-Area, including New York City Housing Authority (NYCHA)	856,507	752,051
Metro-Area, excluding NYCHA	697,373	632,123
Non-Metro-Area	224,447	217,822
Metro-Area/Non-Metro-Area Designation not possible	79,957	N/A
General Occupancy, Metro-Area, including NYCHA	611,091	510,251
General Occupancy, Metro-Area, excluding NYCHA	460,448	398,814
General Occupancy, non-Metro-Area	153,948	148,519
Senior, Metro-Area including NYCHA	245,392	241,800
Senior, Metro-Area excluding NYCHA	236,901	233,309
Senior, non-Metro-Area	70,499	69,303

Note: Not all projects for which we have a senior/general occupancy label have a metro-area/non-metro-area designation. This is why the subgroups using both labels do not add to the single-label totals.

TABLE 1B: DISTRIBUTION OF AVAILABLE AND LOCATION ANALYSIS UNITS BY PROJECT SIZE

	AVAILABLE UNITS (EXCLUDING U.S. TERRITORIES)							LOCATION ANALYSIS UNITS						
	NUMBER OF UNITS IN THE PROJECT							NUMBER OF UNITS IN THE PROJECT						
	1-25	26-50	51-100	101-249	250-500	501+	Total	1-25	26-50	51-100	101-249	250-500	501+	Total
All Projects	57,857	152,247	243,300	319,958	153,794	175,426	1,102,582	49,671	137,970	223,306	296,527	139,995	122,404	969,873
Senior	11,833	39,963	92,215	138,720	31,184	2,000	315,915	11,621	39,209	91,144	136,585	30,544	2,000	311,103
General Occupancy ("Family")	44,475	109,274	144,736	174,389	121,006	171,400	765,280	38,050	98,761	132,162	159,942	109,451	120,404	658,770
Senior/General Occupancy Designation not possible	1,549	3,010	6,349	6,849	1,604	2,026	21,387							
Metro-Area, including New York City Housing Authority (NYCHA)	29,015	77,139	158,403	269,641	149,461	172,848	856,507	23,246	67,736	146,598	254,909	137,710	121,852	752,051
Metro-Area, excluding NYCHA	28,869	76,399	155,834	255,062	131,128	50,081	697,373	23,114	66,996	144,029	240,545	121,423	36,016	632,123
Non-Metro-Area	27,278	71,971	78,449	43,468	2,729	552	224,447	26,425	70,234	76,708	41,618	2,285	552	217,822
Metro-Area/Non-Metro-Area Designation not possible	1,564	3,137	6,448	6,849	1,604	2,026	21,628							
Metro-Area, General Occupancy, including NYCHA	25,309	57,080	92,691	146,886	118,277	170,848	611,091	19,692	48,057	81,669	133,815	107,166	119,852	510,251
Metro-Area, General Occupancy, excluding NYCHA	25,176	56,507	90,942	137,441	102,301	48,081	460,448	19,573	47,484	79,920	124,585	93,236	34,016	398,814

TABLE 1C: DISTRIBUTION OF ESTIMATED AVAILABLE UNITS BY STATE AND PROJECT TYPE

	All Units	Senior Units	General Occupancy ("Family") Units	Units with unknown Senior/ General Occupancy Status	Metro-Area Units	Non-Metro-Area Units	Units with unknown Metro/ Non-Metro status	Metro-Area General Occupancy Units	Metro-Area Senior Units
Total	1,160,911	315,915	765,280	79,716	856,507	224,447	79,957	611,091	245,392
Alaska	1,285	303	982	0	574	711	0	454	120
Alabama	40,070	4,004	35,979	87	25,739	14,244	87	23,071	2,668
Arkansas	14,671	4,792	9,486	393	5,002	9,276	393	3,036	1,966
Arizona	6,938	1,184	5,303	451	5,964	282	692	4,780	1,184
California	41,107	8,508	32,394	205	39,406	1,496	205	31,009	8,397
Colorado	8,287	1,905	6,132	250	6,527	1,510	250	5,217	1,310
Connecticut	15,678	7,443	8,129	106	15,137	435	106	7,994	7,143
District of Columbia	7,877	2,469	5,117	291	7,586	0	291	5,117	2,469
Delaware	2,791	749	2,042	0	2,635	156	0	1,886	749
Florida	36,194	10,262	25,528	404	33,408	2,382	404	23,392	10,016
Georgia	45,039	7,349	37,149	541	24,252	20,246	541	19,008	5,244
Guam	751	0	0	751	0	0	751		
Hawaii	5,442	1,404	4,038	0	4,366	1,076	0	3,366	1,000
Idaho	811	552	259	0	399	412	0	164	235
Illinois	61,237	25,644	35,206	387	44,924	15,926	387	26,749	18,175
Indiana	16,300	6,877	9,291	132	12,979	3,189	132	7,999	4,980
Iowa	4,466	2,926	1,540	0	1,379	3,087	0	619	760
Kansas	9,151	5,807	3,344	0	4,534	4,617	0	2,204	2,330
Kentucky	23,200	4,996	17,277	927	10,039	12,234	927	7,355	2,684
Louisiana	25,005	2,224	22,667	114	18,448	6,443	114	16,614	1,834
Maine	4,140	2,041	2,099	0	2,890	1,250	0	1,550	1,340
Maryland	21,330	5,848	14,469	1,013	19,346	971	1,013	13,648	5,698
Massachusetts	33,384	15,645	16,626	1,113	31,746	525	1,113	16,499	15,247
Michigan	23,447	12,048	10,937	462	17,462	5,523	462	8,826	8,636
Minnesota	20,739	14,964	5,696	79	14,381	6,279	79	4,357	10,024
Mississippi	13,862	850	12,940	72	2,587	11,203	72	2,494	93
Missouri	17,479	8,255	8,852	372	8,605	8,502	372	4,435	4,170
Montana	2,077	365	1,709	3	978	1,096	3	910	68
Nebraska	7,184	4,843	1,817	524	2,603	4,057	524	891	1,712
Nevada	4,154	1,298	2,788	68	4,086	0	68	2,788	1,298
New Hampshire	4,331	3,005	1,326	0	3,426	905	0	1,130	2,296
New Jersey	39,387	18,188	18,954	2,245	37,142	0	2,245	18,954	18,188
New Mexico	4,655	734	3,722	199	2,000	2,456	199	1,422	578
New York	196,845	24,887	168,463	3,495	188,532*	4,818	3,495	166,137*	22,371*
North Carolina	36,499	4,869	30,360	1,270	23,227	12,002	1,270	19,069	4,158
North Dakota	1,779	979	800	0	1,017	762	0	427	590
Ohio	46,382	16,889	28,930	563	41,796	4,023	563	25,949	15,847
Oklahoma	12,968	5,699	7,269	0	7,446	5,522	0	4,464	2,982
Oregon	5,391	2,199	3,190	2	4,566	823	2	2,467	2,099
Pennsylvania	62,878	22,135	40,072	671	53,220	8,987	671	35,703	17,517
Puerto Rico	54,084	0	0	54,084	0	0	54,084		
Rhode Island	9,779	6,162	3,453	164	8,741	874	164	2,879	5,862
South Carolina	14,446	1,503	12,527	416	9,457	4,573	416	8,184	1,273
South Dakota	1,767	1,162	605	0	657	1,110	0	284	373
Tennessee	35,918	6,595	27,397	1,926	21,073	12,919	1,926	16,274	4,799
Texas	58,658	13,671	43,115	1,872	41,049	15,737	1,872	31,865	9,184
Utah	2,159	849	1,310	0	1,944	215	0	1,189	755
Virginia	19,742	2,825	16,785	132	17,653	1,957	132	15,377	2,276
Virgin Islands	3,494	0	0	3,494	0	0	3,494		
Vermont	1,831	1,332	499	0	581	1,250	0	209	372
Washington	12,982	6,441	6,541	0	11,383	1,599	0	5,700	5,683
West Virginia	6,958	2,492	4,339	127	4,551	2,280	127	2,787	1,764
Wisconsin	13,097	7,471	5,390	236	8,654	4,207	236	3,948	4,706
Wyoming	785	273	437	75	410	300	75	241	169

TABLE 2A: DISTRIBUTION OF PROJECTS/UNITS (2008) BY TRACT POVERTY/RACE (2000)

Entire Location Analysis Sample	Tract Poverty					
	< 10%	10- <20%	20- <30%	30- <40%	40+%	Total
Number of projects	2,078	4,429	2,869	1,477	1,221	12,074
% of projects, overall	17.2%	36.7%	23.8%	12.2%	10.1%	
Within poverty category, % projects in tract w. black & Hispanic population <10%	67.5%	43.8%	19.6%	7.7%	3.0%	33.6%
% projects, black & Hispanic population 10-30%	22.5%	32.7%	23.5%	10.8%	7.2%	23.5%
% projects, black & Hispanic population 30-50%	6.3%	13.7%	21.1%	13.4%	6.1%	13.4%
% projects, black & Hispanic population 50-80%	2.7%	7.1%	24.8%	29.9%	22.2%	14.9%
% projects, black & Hispanic population 80-100%	1.1%	2.6%	11.0%	38.2%	61.4%	14.7%
Number of units, 2008	114,047	257,811	227,337	156,682	213,996	969,873
% of units, 2008	11.8%	26.6%	23.4%	16.2%	22.1%	
Within poverty category, % units in tract w. black & Hispanic population <10%	60.6%	37.4%	15.5%	5.0%	2.5%	22.1%
% units, black & Hispanic population 10-30%	26.5%	31.8%	21.1%	12.0%	5.7%	19.7%
% units, black & Hispanic population 30-50%	7.6%	15.2%	19.1%	11.5%	4.6%	12.3%
% units, black & Hispanic population 50-80%	2.9%	10.3%	27.8%	24.4%	17.9%	17.5%
% units, black & Hispanic population 80-100%	2.3%	5.3%	16.5%	47.1%	69.2%	28.4%

TABLE 2B : DISTRIBUTION OF PROJECTS/UNITS (2008) BY TRACT POVERTY/RACE (2000)

General Occupancy Projects	Tract Poverty					
	< 10%	10- <20%	20- <30%	30- <40%	40+%	Total
Number of projects	1,173	2,908	2,135	1,116	923	8,255
% of projects, overall	14.2%	35.2%	25.9%	13.5%	11.2%	
Within poverty category, % projects in tract w. black & Hispanic population <10%	60.3%	38.6%	16.9%	6.7%	1.7%	27.6%
% projects, black & Hispanic population 10-<30%	27.6%	35.3%	22.4%	9.5%	6.3%	24.1%
% projects, black & Hispanic population 30-<50%	8.2%	15.6%	22.6%	12.7%	5.7%	14.9%
% projects, black & Hispanic population 50-<80%	2.8%	7.9%	27.0%	31.9%	20.2%	16.7%
% projects, black & Hispanic population 80-100%	1.1%	2.5%	11.2%	39.2%	66.1%	16.6%
Number of units	57,357	154,084	158,651	114,832	173,846	658,770
% of units	8.7%	23.4%	24.1%	17.4%	26.4%	
Within poverty category, % units in tract w. black & Hispanic population <10%	51.9%	31.9%	13.1%	3.7%	1.7%	16.2%
% units, black & Hispanic population 10-<30%	32.8%	33.3%	19.2%	11.3%	4.9%	18.5%
% units, black & Hispanic population 30-<50%	9.6%	17.9%	19.2%	9.2%	4.0%	12.3%
% units, black & Hispanic population 50-<80%	2.5%	11.3%	31.2%	24.4%	15.7%	18.8%
% units, black & Hispanic population 80-100%	3.2%	5.6%	17.3%	51.4%	73.8%	34.2%

TABLE 2C: DISTRIBUTION OF PROJECTS/UNITS (2008) BY TRACT POVERTY/RACE (2000)

Senior Projects	Tract Poverty					
	< 10%	10- <20%	20- <30%	30- <40%	40+%	Total
Number of projects	905	1,521	734	361	298	3,819
% of projects, overall	23.7%	39.8%	19.2%	9.5%	7.8%	
Within poverty category, % projects in tract w. black & Hispanic population <10%	76.8%	53.9%	27.7%	10.8%	7.1%	46.5%
% projects, black & Hispanic population 10-<30%	15.8%	27.7%	26.6%	15.0%	10.1%	22.1%
% projects, black & Hispanic population 30-<50%	3.8%	9.9%	16.9%	15.5%	7.4%	10.1%
% projects, black & Hispanic population 50-<80%	2.5%	5.6%	18.5%	23.6%	28.5%	10.8%
% projects, black & Hispanic population 80-100%	1.1%	2.9%	10.4%	35.2%	47.0%	10.4%
Number of units	56,690	103,727	68,686	41,850	40,150	311,103
% of units	18.2%	33.3%	22.1%	13.5%	12.9%	
Within poverty category, % units in tract w. black & Hispanic population <10%	69.5%	45.7%	21.1%	8.5%	5.8%	34.5%
% units, black & Hispanic population 10-<30%	20.2%	29.5%	25.4%	14.2%	9.5%	22.3%
% units, black & Hispanic population 30-<50%	5.6%	11.1%	19.0%	17.9%	7.3%	12.3%
% units, black & Hispanic population 50-<80%	3.4%	8.8%	19.9%	24.2%	27.8%	14.8%
% units, black & Hispanic population 80-100%	1.4%	4.8%	14.5%	35.3%	49.7%	16.2%

TABLE 2D: DISTRIBUTION OF PROJECTS/UNITS (2008) BY TRACT POVERTY/RACE (2000)

All Metro-Area Projects, including New York City Housing Authority	Tract Poverty					
	< 10%	10- <20%	20- <30%	30- <40%	40+%	Total
Number of projects	1,515	2,160	1,507	1,088	1,054	7,324
% of projects, overall	20.7%	29.5%	20.6%	14.9%	14.4%	
Within poverty category, % projects in tract w. black & Hispanic population <10%	59.3%	30.5%	13.3%	4.2%	2.7%	25.0%
% projects, black & Hispanic population 10-<30%	27.3%	35.6%	22.8%	10.8%	8.0%	23.6%
% projects, black & Hispanic population 30-<50%	8.1%	16.2%	18.6%	11.6%	5.9%	12.9%
% projects, black & Hispanic population 50-<80%	3.7%	12.2%	26.6%	25.9%	20.4%	16.6%
% projects, black & Hispanic population 80-100%	1.5%	5.4%	18.6%	47.5%	63.1%	21.9%
Number of units	93,481	160,834	161,105	133,686	202,945	752,051
% of units	12.4%	21.4%	21.4%	17.8%	27.0%	
Within poverty category, % units in tract w. black & Hispanic population <10%	54.5%	25.8%	10.4%	2.7%	2.2%	15.6%
% units, black & Hispanic population 10-<30%	30.3%	33.6%	19.8%	12.0%	5.9%	18.9%
% units, black & Hispanic population 30-<50%	8.8%	17.2%	17.7%	10.5%	4.5%	11.6%
% units, black & Hispanic population 50-<80%	3.6%	14.9%	30.1%	21.4%	17.1%	18.5%
% units, black & Hispanic population 80-100%	2.8%	8.5%	22.0%	53.4%	70.2%	35.3%

TABLE 2D2: DISTRIBUTION OF PROJECTS/UNITS (2008) BY TRACT POVERTY/RACE (2000)

All Metro-Area Projects, excluding New York City Housing Authority	Tract Poverty					
	< 10%	10- <20%	20- <30%	30- <40%	40+%	Total
Number of projects	1,508	2,131	1,459	1,012	938	7,048
% of projects, overall	21.4%	30.2%	20.7%	14.4%	13.3%	
Within poverty category, % projects in tract w. black & Hispanic population <10%	59.5%	30.9%	13.6%	4.5%	3.0%	25.9%
% projects, black & Hispanic population 10-<30%	27.3%	35.9%	23.4%	11.5%	8.7%	24.3%
% projects, black & Hispanic population 30-<50%	8.0%	16.0%	18.8%	12.3%	6.6%	13.1%
% projects, black & Hispanic population 50-<80%	3.7%	11.9%	26.1%	27.6%	22.3%	16.7%
% projects, black & Hispanic population 80-100%	1.5%	5.3%	18.0%	44.2%	59.4%	19.9%
Number of units	91,129	149,911	135,049	105,470	150,564	632,123
% of units	14.4%	23.7%	21.4%	16.7%	23.8%	
Within poverty category, % units in tract w. black & Hispanic population <10%	55.2%	27.7%	11.5%	3.4%	3.0%	18.3%
% units, black & Hispanic population 10-<30%	29.4%	34.9%	23.2%	13.4%	7.5%	21.5%
% units, black & Hispanic population 30-<50%	8.8%	16.0%	19.4%	12.8%	6.0%	12.8%
% units, black & Hispanic population 50-<80%	3.6%	14.2%	24.7%	26.1%	20.5%	18.4%
% units, black & Hispanic population 80-100%	2.9%	7.2%	21.2%	44.4%	62.9%	29.0%

TABLE 2E : DISTRIBUTION OF PROJECTS/UNITS (2008) BY TRACT POVERTY/RACE (2000)

All Non-Metro-Area Projects	Tract Poverty					
	< 10%	10- <20%	20- <30%	30- <40%	40+%	Total
Number of projects	563	2,269	1,362	389	167	4,750
% of projects, overall	11.9%	47.8%	28.7%	8.2%	3.5%	
Within poverty category, % projects in tract w. black & Hispanic population <10%	89.3%	56.5%	26.7%	17.5%	5.4%	46.9%
% projects, black & Hispanic population 10-<30%	9.4%	29.9%	24.2%	11.1%	2.4%	23.3%
% projects, black & Hispanic population 30-<50%	1.2%	11.2%	23.9%	18.5%	7.8%	14.2%
% projects, black & Hispanic population 50-<80%	0.0%	2.3%	22.8%	40.9%	33.5%	12.2%
% projects, black & Hispanic population 80-100%	0.0%	0.0%	2.5%	12.1%	50.9%	3.5%
Number of units	20,566	96,977	66,232	22,996	11,051	217,822
% of units	9.4%	44.5%	30.4%	10.6%	5.1%	
Within poverty category, % units in tract w. black & Hispanic population <10%	88.5%	56.7%	28.0%	18.5%	6.9%	44.4%
% units, black & Hispanic population 10-<30%	9.6%	28.7%	24.1%	12.1%	2.2%	22.4%
% units, black & Hispanic population 30-<50%	1.9%	11.8%	22.6%	17.9%	7.4%	14.6%
% units, black & Hispanic population 50-<80%	0.0%	2.8%	22.1%	41.4%	32.4%	14.0%
% units, black & Hispanic population 80-100%	0.0%	0.0%	3.1%	10.2%	51.0%	4.6%

**TABLE 3A: DISTRIBUTION OF PROJECTS/UNITS (2008) BY PROJECT SIZE (2008)
AND TRACT POVERTY (2000)**

Entire Location Analysis Sample	Project Size					
	1-25 units	26-50 units	51-100 units	101-249 units	250-500 units	501+ units
Total Projects	3,157	3,520	2,915	1,927	419	136
Total Units, 2008	49,671	137,970	223,306	296,527	139,995	122,404
Average Tract Pov, by unit	17.7%	19.9%	22.1%	28.2%	35.2%	40.1%
Median Tract Pov, by unit	15.9%	17.8%	19.4%	26.7%	34.2%	40.6%
Number Projects, <10% poverty	750	600	475	225	25	3
% Projects in size category in <10% poverty	23.8%	17.1%	16.3%	11.7%	6.0%	2.2%
Number Units, <10% poverty	11,478	23,341	35,992	32,547	8,498	2,191
% units in size category with <10% poverty	23.1%	16.9%	16.1%	11.0%	6.1%	1.8%
% of units in <10% pov in size category	10.1%	20.5%	31.6%	28.5%	7.5%	1.9%
Number Projects, 10-<20% poverty	1,369	1,466	1,052	469	60	13
% Projects in size category in 10-<20% poverty	43.4%	41.7%	36.1%	24.3%	14.3%	9.6%
Number Units, 10-<20% poverty	21,886	57,436	79,835	69,279	18,750	10,625
% units in size category with 10-<20% poverty	44.1%	41.6%	35.8%	23.4%	13.4%	8.7%
% of units in 10-<20% pov in size category	8.5%	22.3%	31.0%	26.9%	7.3%	4.1%
Number Projects, 20-<30% poverty	656	898	729	472	92	22
% Projects in size category in 20-<30% poverty	20.8%	25.5%	25.0%	24.5%	22.0%	16.2%
Number Units, 20-<30% poverty	10,666	35,162	55,806	72,575	30,244	22,884
% units in size category with 20-<30% poverty	21.5%	25.5%	25.0%	24.5%	21.6%	18.7%
% of units in 20-<30% pov in size category	4.7%	15.5%	24.6%	31.9%	13.3%	10.1%
Number Projects, 30-<40% poverty	253	369	387	356	85	27
% Projects in size category in 30-<40% poverty	8.0%	10.5%	13.3%	18.5%	20.3%	19.9%
Number Units, 30-<40% poverty	3,809	14,448	29,795	56,794	28,408	23,428
% units in size category with 30-<40% poverty	7.7%	10.5%	13.3%	19.2%	20.3%	19.1%
% of units in 30-<40% pov in size category	2.4%	9.2%	19.0%	36.3%	18.1%	15.0%
Number Projects, 40+% poverty	129	187	272	405	157	71
% Projects in size category in 40+% poverty	4.1%	5.3%	9.3%	21.0%	37.5%	52.2%
Number Units, 40+% poverty	1,832	7,583	21,878	65,332	54,095	63,276
% units in size category with 40+% poverty	3.7%	5.5%	9.8%	22.0%	38.6%	51.7%
% of units in 40+% pov in size category	0.9%	3.5%	10.2%	30.5%	25.3%	29.6%

**TABLE 3B: DISTRIBUTION OF PROJECTS/UNITS (2008) BY PROJECT SIZE (2008)
AND TRACT POVERTY (2000)**

General Occupancy Projects	Project Size					
	1-25 units	26-50 units	51-100 units	101-249 units	250-500 units	501+ units
Total Projects	2,499	2,532	1,748	1,021	321	134
Total Units, 2008	38,050	98,761	132,162	159,942	109,451	120,404
Average Tract Pov, by unit	18.5%	21.2%	24.2%	30.7%	36.5%	40.0%
Median Tract Pov, by unit	16.7%	19.2%	21.8%	29.1%	35.9%	40.6%
Number Projects, <10% poverty	558	326	171	93	22	3
% Projects in size category in <10% poverty	22.3%	12.9%	9.8%	9.1%	6.9%	2.2%
Number Units, <10% poverty	8,118	12,474	12,807	14,169	7,598	2,191
% units in size category with <10% poverty	21.3%	12.6%	9.7%	8.9%	6.9%	1.8%
% of units in <10% pov in size category	14.2%	21.8%	22.3%	24.7%	13.3%	3.8%
Number Projects, 10-<20% poverty	1,031	1,018	605	202	39	13
% Projects in size category in 10-<20% poverty	41.3%	40.2%	34.6%	19.8%	12.2%	9.7%
Number Units, 10-<20% poverty	15,994	39,709	45,112	30,124	12,520	10,625
% units in size category with 10-<20% poverty	42.0%	40.2%	34.1%	18.8%	11.4%	8.8%
% of units in 10-<20% pov in size category	10.4%	25.8%	29.3%	19.6%	8.1%	6.9%
Number Projects, 20-<30% poverty	563	725	508	254	63	22
% Projects in size category in 20-<30% poverty	22.5%	28.6%	29.1%	24.9%	19.6%	16.4%
Number Units, 20-<30% poverty	8,934	28,246	38,309	39,346	20,932	22,884
% units in size category with 20-<30% poverty	23.5%	28.6%	29.0%	24.6%	19.1%	19.0%
% of units in 20-<30% pov in size category	5.6%	17.8%	24.2%	24.8%	13.2%	14.4%
Number Projects, 30-<40% poverty	231	309	278	210	61	27
% Projects in size category in 30-<40% poverty	9.2%	12.2%	15.9%	20.6%	19.0%	20.2%
Number Units, 30-<40% poverty	3,391	12,154	21,101	33,856	20,902	23,428
% units in size category with 30-<40% poverty	8.9%	12.3%	16.0%	21.2%	19.1%	19.5%
% of units in 30-<40% pov in size category	3.0%	10.6%	18.4%	29.5%	18.2%	20.4%
Number Projects, 40+% poverty	116	154	186	262	136	69
% Projects in size category in 40+% poverty	4.6%	6.1%	10.6%	25.7%	42.4%	51.5%
Number Units, 40+% poverty	1,613	6,178	14,833	42,447	47,499	61,276
% units in size category with 40+% poverty	4.2%	6.3%	11.2%	26.5%	43.4%	50.9%
% of units in 40+% pov in size category	0.9%	3.6%	8.5%	24.4%	27.3%	35.3%

**TABLE 3B2: DISTRIBUTION OF PROJECTS/UNITS (2008) BY PROJECT SIZE (2008)
AND TRACT POVERTY (2000)**

Metro-Area General Occupancy Projects, Excluding New York City Housing Authority	Project Size					
	1-25 units	26-50 units	51-100 units	101-249 units	250-500 units	501+ units
Total Projects	1,351	1,214	1,042	784	275	51
Total Units, 2008	19,573	47,453	79,920	124,585	93,236	34,016
Average Tract Pov, by unit	18.3%	20.6%	24.4%	30.9%	37.1%	45.7%
Median Tract Pov, by unit	15.4%	17.8%	21.6%	29.7%	37.1%	46.5%
Number Projects, <10% poverty	404	259	138	85	21	1
% Projects in size category in <10% poverty	29.9%	21.3%	13.2%	10.8%	7.6%	2.0%
Number Units, <10% poverty	5,773	9,803	10,373	13,048	7,238	601
% units in size category with <10% poverty	29.5%	20.7%	13.0%	10.5%	7.8%	1.8%
% of units in <10% pov in size category	12.2%	20.7%	21.9%	27.5%	15.3%	2.5%
Number Projects, 10-<20% poverty	456	434	334	146	33	3
% Projects in size category in 10-<20% poverty	33.8%	35.8%	32.1%	18.6%	12.0%	5.9%
Number Units, 10-<20% poverty	6,851	17,136	25,218	21,907	10,573	2,183
% units in size category with 10-<20% poverty	35.0%	36.1%	31.6%	17.6%	11.3%	6.4%
% of units in 10-<20% pov in size category	8.2%	20.4%	30.1%	26.1%	12.6%	2.6%
Number Projects, 20-<30% poverty	237	260	268	180	52	6
% Projects in size category in 20-<30% poverty	17.5%	21.4%	25.7%	23.0%	18.9%	11.8%
Number Units, 20-<30% poverty	3,538	10,236	20,770	28,478	17,120	3,358
% units in size category with 20-<30% poverty	18.1%	21.6%	26.0%	22.9%	18.4%	9.9%
% of units in 20-<30% pov in size category	4.2%	12.3%	24.9%	34.1%	20.5%	4.0%
Number Projects, 30-<40% poverty	165	161	178	164	47	7
% Projects in size category in 30-<40% poverty	12.2%	13.3%	17.1%	20.9%	17.1%	13.7%
Number Units, 30-<40% poverty	2,294	6,290	13,747	26,761	15,610	5,165
% units in size category with 30-<40% poverty	11.7%	13.3%	17.2%	21.5%	16.7%	15.2%
% of units in 30-<40% pov in size category	3.3%	9.0%	19.7%	38.3%	22.3%	7.4%
Number Projects, 40+% poverty	89	100	124	209	122	34
% Projects in size category in 40+% poverty	6.6%	8.2%	11.9%	26.7%	44.4%	66.7%
Number Units, 40+% poverty	1,117	3,988	9,812	34,391	42,695	22,709
% units in size category with 40+% poverty	5.7%	8.4%	12.3%	27.6%	45.8%	66.8%
% of units in 40+% pov in size category	1.0%	3.5%	8.6%	30.0%	37.2%	19.8%

**TABLE 3B3: DISTRIBUTION OF PROJECTS/UNITS (2008) BY PROJECT SIZE (2008)
AND TRACT POVERTY (2000)**

Metro-Area General Occupancy Projects, Including New York City Housing Authority	Project Size					
	1-25 units	26-50 units	51-100 units	101-249 units	250-500 units	501+ units
Total Projects	1,360	1,229	1,065	841	314	133
Total Units, 2008	19,692	48,057	81,669	133,815	107,166	119,852
Average Tract Pov, by unit	18.3%	20.8%	24.8%	31.6%	36.9%	40.1%
Median Tract Pov, by unit	15.4%	17.9%	22.0%	30.5%	36.3%	40.6%
Number Projects, <10% poverty	404	260	138	85	22	3
% Projects in size category in <10% poverty	29.7%	21.2%	13.0%	10.1%	7.0%	2.3%
Number Units, <10% poverty	5,773	9,838	10,373	13,048	7,598	2,191
% units in size category with <10% poverty	29.3%	20.5%	12.7%	9.8%	7.1%	1.8%
% of units in <10% pov in size category	11.8%	20.2%	21.3%	26.7%	15.6%	4.5%
Number Projects, 10-<20% poverty	461	434	334	148	36	12
% Projects in size category in 10-<20% poverty	33.9%	35.3%	31.4%	17.6%	11.5%	9.0%
Number Units, 10-<20% poverty	6,921	17,136	25,218	22,304	11,667	10,073
% units in size category with 10-<20% poverty	35.2%	35.7%	30.9%	16.7%	10.9%	8.4%
% of units in 10-<20% pov in size category	7.4%	18.4%	27.0%	23.9%	12.5%	10.8%
Number Projects, 20-<30% poverty	238	263	271	189	60	22
% Projects in size category in 20-<30% poverty	17.5%	21.4%	25.5%	22.5%	19.1%	16.5%
Number Units, 20-<30% poverty	3,553	10,346	20,955	29,983	19,998	22,884
% units in size category with 20-<30% poverty	18.0%	21.5%	25.7%	22.4%	18.7%	19.1%
% of units in 20-<30% pov in size category	3.3%	9.6%	19.5%	27.8%	18.6%	21.2%
Number Projects, 30-<40% poverty	168	167	183	177	60	27
% Projects in size category in 30-<40% poverty	12.4%	13.6%	17.2%	21.1%	19.1%	20.3%
Number Units, 30-<40% poverty	2,328	6,512	14,069	28,936	20,404	23,428
% units in size category with 30-<40% poverty	11.8%	13.6%	17.2%	21.6%	19.0%	19.6%
% of units in 30-<40% pov in size category	2.4%	6.8%	14.7%	30.2%	21.3%	24.5%
Number Projects, 40+% poverty	89	105	139	242	136	69
% Projects in size category in 40+% poverty	6.5%	8.5%	13.1%	28.8%	43.3%	51.9%
Number Units, 40+% poverty	1,117	4,225	11,054	39,544	47,499	61,276
% units in size category with 40+% poverty	5.7%	8.8%	13.5%	29.6%	44.3%	51.1%
% of units in 40+% pov in size category	0.7%	2.6%	6.7%	24.0%	28.8%	37.2%

**TABLE 3C: DISTRIBUTION OF PROJECTS/UNITS (2008) BY PROJECT SIZE (2008)
AND TRACT POVERTY (2000)**

Senior Projects	Project Size					
	1-25 units	26-50 units	51-100 units	101-249 units	250-500 units	501+ units
Total Projects	658	988	1,167	906	98	2
Total Units, 2008	11,621	39,209	91,144	136,585	30,544	2,000
Average Tract Pov, by unit	15.1%	16.4%	18.9%	25.3%	30.5%	43.4%
Median Tract Pov, by unit	13.3%	14.2%	15.8%	23.3%	29.9%	43.4%
Number Projects, <10% poverty	192	274	304	132	3	0
% Projects in size category in <10% poverty	29.2%	27.7%	26.1%	14.6%	3.1%	0.0%
Number Units, <10% poverty	3,360	10,867	23,185	18,378	900	0
% units in size category with <10% poverty	28.9%	27.7%	25.4%	13.5%	3.0%	0.0%
% of units in <10% pov in size category	5.9%	19.2%	40.9%	32.4%	1.6%	0.0%
Number Projects, 10-<20% poverty	338	448	447	267	21	0
% Projects in size category in 10-<20% poverty	51.4%	45.3%	38.3%	29.5%	21.4%	0.0%
Number Units, 10-<20% poverty	5,892	17,727	34,723	39,155	6,230	0
% units in size category with 10-<20% poverty	50.7%	45.2%	38.1%	28.7%	20.4%	0.0%
% of units in 10-<20% pov in size category	5.7%	17.1%	33.5%	37.8%	6.0%	0.0%
Number Projects, 20-<30% poverty	93	173	221	218	29	0
% Projects in size category in 20-<30% poverty	14.1%	17.5%	18.9%	24.1%	29.6%	0.0%
Number Units, 20-<30% poverty	1,732	6,916	17,497	33,229	9,312	0
% units in size category with 20-<30% poverty	14.9%	17.6%	19.2%	24.3%	30.5%	0.0%
% of units in 20-<30% pov in size category	2.5%	10.1%	25.5%	48.4%	13.6%	0.0%
Number Projects, 30-<40% poverty	22	60	109	146	24	0
% Projects in size category in 30-<40% poverty	3.3%	6.1%	9.3%	16.1%	24.5%	0.0%
Number Units, 30-<40% poverty	418	2,294	8,694	22,938	7,506	0
% units in size category with 30-<40% poverty	3.6%	5.9%	9.5%	16.8%	24.6%	0.0%
% of units in 30-<40% pov in size category	1.0%	5.5%	20.8%	54.8%	17.9%	0.0%
Number Projects, 40+% poverty	13	33	86	143	21	2
% Projects in size category in 40+% poverty	2.0%	3.3%	7.4%	15.8%	21.4%	100.0%
Number Units, 40+% poverty	219	1,405	7,045	22,885	6,596	2,000
% units in size category with 40+% poverty	1.9%	3.6%	7.7%	16.8%	21.6%	100.0%
% of units in 40+% pov in size category	0.6%	3.5%	17.6%	57.0%	16.4%	5.0%

**TABLE 3D: DISTRIBUTION OF PROJECTS/UNITS (2008) BY PROJECT SIZE (2008)
AND TRACT POVERTY (2000)**

All Non-Metro-Area Projects	Project Size					
	1-25 units	26-50 units	51-100 units	101-249 units	250-500 units	501+ units
Total Projects	1,601	1,810	1,036	295	7	1
Total Units, 2008	26,425	70,234	76,708	41,618	2,285	552
Average Tract Pov, by unit	17.5%	20.1%	21.4%	24.1%	24.0%	18.6%
Median Tract Pov, by unit	16.2%	18.6%	19.4%	22.7%	20.7%	18.6%
Number Projects, <10% poverty	270	178	96	19	0	0
% Projects in size category in <10% poverty	16.9%	9.8%	9.3%	6.4%	0.0%	0.0%
Number Units, <10% poverty	4,358	6,925	6,989	2,294	0	0
% units in size category with <10% poverty	16.5%	9.9%	9.1%	5.5%	0.0%	0.0%
% of units in <10% pov in size category	21.2%	33.7%	34.0%	11.2%	0.0%	0.0%
Number Projects, 10-<20% poverty	845	860	453	107	3	1
% Projects in size category in 10-<20% poverty	52.8%	47.5%	43.7%	36.3%	42.9%	100.0%
Number Units, 10-<20% poverty	13,819	33,192	33,324	15,237	853	552
% units in size category with 10-<20% poverty	52.3%	47.3%	43.4%	36.6%	37.3%	100.0%
% of units in 10-<20% pov in size category	14.3%	34.2%	34.4%	15.7%	0.9%	0.6%
Number Projects, 20-<30% poverty	384	562	319	94	3	0
% Projects in size category in 20-<30% poverty	24.0%	31.1%	30.8%	31.9%	42.9%	0.0%
Number Units, 20-<30% poverty	6,453	21,800	23,603	13,442	934	0
% units in size category with 20-<30% poverty	24.4%	31.0%	30.8%	32.3%	40.9%	0.0%
% of units in 20-<30% pov in size category	9.7%	32.9%	35.6%	20.3%	1.4%	0.0%
Number Projects, 30-<40% poverty	73	155	111	49	1	0
% Projects in size category in 30-<40% poverty	4.6%	8.6%	10.7%	16.6%	14.3%	0.0%
Number Units, 30-<40% poverty	1,267	6,108	8,166	6,957	498	0
% units in size category with 30-<40% poverty	4.8%	8.7%	10.7%	16.7%	21.8%	0.0%
% of units in 30-<40% pov in size category	5.5%	26.6%	35.5%	30.3%	2.2%	0.0%
Number Projects, 40+% poverty	29	55	57	26	0	0
% Projects in size category in 40+% poverty	1.8%	3.0%	5.5%	8.8%	0.0%	0.0%
Number Units, 40+% poverty	528	2,209	4,626	3,688	0	0
% units in size category with 40+% poverty	2.0%	3.2%	6.0%	8.9%	0.0%	0.0%
% of units in 40+% pov in size category	4.8%	20.0%	41.9%	33.4%	0.0%	0.0%

TABLE 4: SUMMARY TRACT POVERTY STATISTICS BY UNIT

(National Poverty Rate: 12.38%)

	Mean Public Housing Unit	Median Public Housing Unit
All Projects		
Tract Poverty, Overall	27.6%	25.5%
Tract Poverty, Senior	22.6%	19.4%
Tract Poverty, General Occupancy	30.0%	28.0%
Metro-Area Projects—Including New York City Housing Authority (NYCHA)		
Tract Poverty, Overall	29.5%	28.0%
Tract Poverty, Senior	24.0%	21.4%
Tract Poverty, General Occupancy	32.1%	30.6%
Metro-Area Projects—Excluding NYCHA		
Tract Poverty, Overall	28.0%	25.5%
Tract Poverty, Senior	23.7%	21.1%
Tract Poverty, General Occupancy	30.5%	28.3%
Non-Metro-Area Projects		
Tract Poverty, Overall	21.0%	19.1%
Tract Poverty, Senior	17.6%	16.1%
Tract Poverty, General Occupancy	22.6%	20.8%

TABLE 5: DISTRIBUTION BY TRACT RACIAL COMPOSITION AND POVERTY (2000) OF METRO-AREA GENERAL OCCUPANCY UNITS (EXCLUDING NEW YORK CITY HOUSING AUTHORITY) IN PROJECTS OF 250 OR MORE UNITS (2008)

	Tract Poverty						
	< 10%	10-<20%	20-<30%	30-<40%	40+%	Total	30+%
Total units	7,839	12,756	20,478	20,775	65,404	127,252	86,179
% units in tract with black & Hispanic population <10%	34.7%	12.0%	3.0%	1.3%	3.0%	5.6%	2.6%
% units in tract with black & Hispanic population 10-<30%	39.3%	27.4%	25.0%	23.2%	7.2%	16.7%	11.0%
% unit in tract with black & Hispanic population 30-<50%	14.5%	18.8%	20.6%	9.5%	5.4%	10.4%	6.4%
% units in tracts with black & Hispanic population 50-<80%	3.8%	25.5%	13.8%	23.4%	16.5%	17.3%	18.2%
% units in tract black & Hispanic population 80-100%	7.7%	16.4%	37.6%	42.5%	67.9%	50.0%	61.8%
% units in majority black & Hispanic tract (50+% of population)	11.5%	41.9%	51.4%	65.9%	84.4%	67.3%	80.0%