## An Assessment of the Need for Large Units in the District of Columbia

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## Executive Summary

This study investigates the need for large family rental housing units-those with three or more bedrooms-in the District of Columbia. Residents have raised concerns that the housing needs of families, particularly families with low incomes, are not being well-addressed. In response, the Council of the District of Columbia authorized funding for the Office of the Deputy Mayor for Planning and Economic Development (DMPED) to assess the need for large family units. DMPED contracted with the Coalition for Nonprofit Housing and Economic Development (CNHED) in partnership with the Urban Institute to conduct the assessment. As directed by the Council of the District of Columbia and DMPED, this assessment focuses on the supply and demand for family-sized (large) units, and in particular the needs of large households with incomes below 50 percent of area median income (AMI).

Analyses of several data sources revealed these major findings:

- The District has a substantial supply of large housing units, but those units may be unsuitable for many families. There are 100,900 units with three or more bedrooms (large units), making up one-third of the housing stock. Though large units are present in every ward, they are not evenly distributed, reducing the geographic options families have for finding suitable housing. Wards 3,4 , and 5 have the greatest number of large units, at least 15,000 in each ward. Wards 1 and 2 have the fewest large units, with less than 9,000 in each ward.
- Furthermore, large units are not equally distributed by tenure and structure type, limiting options for many families. Three-quarters of large units are owner-occupied (for sale) housing, as opposed to rental housing. Three-quarters also are single-family houses, compared to onequarter in multifamily properties (rental apartments, condominiums, and cooperative housing).
- There is demand for large rental units in every ward. Large households made up 14 percent $(38,800)$ of the households in the District; slightly more than half were renting. Nearly one in five large households lived in Ward 4 (7,200 households). Wards 3, 5, and 8 each also had more than 5,000 large households. Wards 1 and 2 had larger proportions of large nonfamily households than other wards. The heads of large households are more likely to be people of color, particularly in large renter households. Large households also typically are headed by younger householders and are more likely to have three generations living in them.
- The supply of rental housing affordable for households making less than 30 percent and 50 percent of AMI falls far short of the need. There are more than 11,600 large households who are renting and have incomes below 50 percent of AMI; three-quarters of those households are housing cost-burdened and over one-third are under-housed. About 6,500 large renter households need housing units that rent for less than $\$ 750$ per month (affordable to a fourperson household at 30 percent of AMI), but there are only 4,000 units that rented at that level in the District: a deficit of approximately 2,500 units. Additionally, the District has only about 5,000 known large units that contain subsidies that can keep the units affordable. To foster and maintain a diverse community of mixed-income families, more subsidized large units at these affordability levels would need to be distributed equitably across the District.
- And the choice of neighborhoods for affordable large units is constrained. Affordability of large units varies widely based on location, with the greatest affordability in neighborhoods east of
the Anacostia River. Even affordable rental housing with large units is quite limited or nonexistent in certain parts of the District, such as Wards 2 and 3, and the options are shrinking across the District. From 2005 to 2016 the District lost more than 900 large renter-occupied units affordable to renters with extremely-low incomes.
- Growth in the supply of large units exceeds growth in large households, but competition with other households and the lack of large rental units may put large units out of reach for lowerincome families. The number of three-or-more bedroom housing units has grown 14 percent since 2000, while the number of households with four or more people fell 2 percent. However, a significant proportion of large renter households in the District have low incomes and face competition for large and affordable units. To maintain a diversity of households, both large and smaller housing units are needed in every part of the District.
- Smaller households may prefer large units. Smaller households, including singles and twoperson households, may prefer to live in large housing units for a variety of reasons (more space, greater privacy, access to better neighborhoods, and so on). If smaller households also have high incomes, they can effectively compete against large households, many of whom have lower incomes, for those units. One-third of smaller households who lived in a two-bedroom or larger unit could be considered "over-housed."
- Families face competition from groups of adults, who may have higher combined incomes. A common strategy for single adults in the District is to cohabitate to share housing costs among several people. Groups of unrelated adults can be competing with families for large units. Furthermore, if all adults are working, they may have higher total income than a family with one or two wage-earners. In fact, groups of adults make up 16 percent of large renter households, a share that has more than doubled since 2000.
- Most of the large-unit stock is single-family houses, and the supply of affordable singlefamily houses is very limited. Single-family houses represent three-quarters of the supply of large housing units. Per housing unit, single-family houses often take up more land area than multifamily properties, which can increase the expense of those units. Very few singlefamily houses for sale are affordable to buyers with lower incomes. In 2017, only 12.7 percent of single-family houses or condominium sales in the District would have been affordable to a household with income at $\$ 88,000$ (considered low income).


## Interviews with affordable housing practitioners resulted in these major findings:

- Affordable housing practitioners confirm there is great need for large units among households with lower incomes. Large units for households with incomes below 30 percent of AMI are limited to those that have unit-based subsidies, such as public housing, Section 8, or the District's Local Rent Supplement Program (LRSP) or to private units that rent to families with Housing Choice, LRSP, or other types of tenant-based vouchers. Practitioners noted that for households with incomes between 30 and 50 percent of AMI finding housing within their budgets may mean they are under-housed (more than one person per room) living in unsubsidized, often rent-controlled, properties.
- Large units produce less revenue per square foot, making them more expensive to operate than small units, and less likely to be developed. As the number of bedrooms in a unit increases, the rent per square foot that the market will bear declines. A building with many small units, therefore, will have a greater net operating income ( NOI ) than a building of the same size with large units. The lower rental revenue potential for large units, along with the high cost of land in the District, makes it relatively more difficult to finance and develop buildings with large units. Many nonprofit and for-profit, mission-driven developers view the preservation or creation of large units for households with incomes below 50 percent of AMI as an important purpose of their organizations. These developers rarely, if ever, consider breaking up large units during renovations; they view the lower rent per square foot as a problem to overcome using government subsidies and many layers of funding.
- The ability to preserve or create housing for households with lower incomes also is shaped by the cost of property acquisition, legal and logistical requirements, and government subsidies.
Affordable housing practitioners usually preserve large units in existing buildings that serve households with incomes below 80 percent of AMI, because of the prohibitive costs of acquiring the property and dividing large units into smaller ones or merging smaller units, and because of the legal and logistical requirements for dealing with occupied buildings. New units devoted to households with extremely-low incomes are created almost exclusively through the Consolidated Request for Proposals for Affordable Housing Projects (RFP) with funds from the Housing Production Trust Fund and the LRSP. For households with incomes between 30 and 50 percent of AMI, units are created or preserved with the Low Income Housing Tax Credit program.
- The Tenant Opportunity to Purchase Act (TOPA) plays an essential role in the preservation and creation of affordable large units in the District. TOPA provides Tenants Associations with the first right of refusal when the properties they reside in are for sale. Nearly all Tenants Associations who register for their TOPA rights do so with technical assistance from communitybased organizations (CBOs), which guide them through the full TOPA process. The District government's funding for CBOs to provide TOPA technical assistance enables tenants to compete successfully in the market to acquire properties and to make collective decisions about the ongoing affordability and unit distribution of the property. The preference of Tenants Associations to maintain or to deepen unit affordability and to preserve or create large units are often deciding factors in their choice to partner with affordable housing developers. Without the ability of tenants to make these choices, affordable housing developers seeking to serve households with lower incomes would acquire far fewer properties in the District's highly competitive real estate market.
- Opportunities to expand the supply of affordable large units exist mainly in new multifamily housing. Demographic and housing market trends nationally (Rappaport 2013) point toward a shift from single-family to multifamily housing development and, in a land-constrained urban area like the District, building more units in higher-density, multifamily developments must be a key part of the strategy to achieve housing production levels necessary to meet rising demand. Although most of the existing supply of large units are single-family houses, these single-family units are typically unaffordable to residents with lower incomes. Furthermore, government subsidies for the development or preservation of rental units for long-term affordability focus on multifamily development rather than single-family houses, allowing the District to serve
many families with a single project. For these reasons, the capacity to expand and preserve the supply of affordable large units exists mainly in multifamily housing.


## Based on these findings, the District should take the following actions:

- Establish a target number of large low-income units to produce and preserve by 2025. Mayor Muriel Bowser has announced a goal to produce 36,000 new units in the District by 2025. In the process of planning for the development and distribution of those units, the District should establish a sub-goal for the number of affordable large units to produce and preserve by 2025. The findings of this study indicate that large households at the low end of the income spectrum are frequently severely housing cost-burdened and under-housed. Cognizant of the data provided in this study, and in the context of the District's aim to greatly increase the overall housing supply, the District should develop a target number of large units to provide for very-low- and extremely-low-income households by 2025.
- Plan for the future. Establish a plan to close the housing gap for the existing and future large renter households at 0-50 percent of AMI in the District. By 2045, the District is expected to gain between 14,000-19,000 additional large households. There will be between 4,000-5,700 additional large households below 50 percent of AMI in the District by 2045 , most of whom will likely be below 30 percent AMI and will need deeply subsidized large units.
- Distribute affordable large units across the District. Large units affordable to extremely-lowand very-low-income large households are geographically concentrated in neighborhoods east of the Anacostia River. The District should strive to distribute affordable large units across all wards as part of its Affirmatively Furthering Fair Housing strategy.
- Incorporate a range of tools and policies to produce and preserve affordable large units.
- Provide subsidies to developers to equalize rent per square foot for large units with those of smaller units. This could be achieved by increasing housing subsidy contract or voucher reimbursement rates or through the provision of new unit- or tenant-based subsidies.
- Reconcile Consolidated RFP metrics to incent the preservation or creation of affordable large units. There are currently conflicts within the metrics that lead to a net disincentive for large units.
- Provide developers with increased density bonuses in exchange for affordable large units through the Planned Unit Development Process and Inclusionary Zoning.
- Increase support for tenants' ability to exercise TOPA rights to preserve affordability and large units.
- Leverage federally-facing platforms to encourage the Department of Housing and Urban Development to fund Section 8 Vouchers, as these are a critical resource for extremely-lowand very-low-income, large households.
- Provide greater operating income or supportable debt to energy-efficient buildings with large units by altering utility allowances.
- Measure progress toward a large unit target by improving tracking of large unit development.
- Conduct a cost analysis: The District should conduct a cost analysis to determine an appropriate portfolio of incentives that will enable the production of affordable family-sized units. This cost analysis, along with the findings of this study, should influence the target number of affordable large units to produce and preserve by 2025. The analysis will inform the extent to which tools such as Planned Unit Developments, Inclusionary Zoning, Tax Increment Financing, the Housing Production Trust Fund, Local Rent Supplement Program for tenant- and project-based subsidies, or other mechanisms will need to be expanded to incent the development and preservation of affordable large units without reducing the overall production of affordable housing.


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## Introduction

The District of Columbia made progress on the preservation and creation of affordable housing in recent years. The District government has allocated more than $\$ 100$ million to the Housing Production Trust Fund each fiscal year 2016-2019, improved Inclusionary Zoning (IZ) regulations, and increased the focus on preservation. Recent concerns have focused attention on the specific housing needs of families in the District. Increasingly, residents with low incomes have organized against what they allege are gentrifying efforts to displace them from neighborhoods they have lived in for decades. These residents have demanded the right to remain in their neighborhoods and to have the housing needs of their families and others like them met. ${ }^{1}$

To investigate the need for large family units-rental units with three or more bedrooms-the District's Office of the Deputy Mayor for Planning and Economic Development (DMPED) contracted with the Coalition for Nonprofit Housing and Economic Development (CNHED) in partnership with the Urban Institute to assess the need for family-sized (large) units in the District of Columbia.

The impetus for this study came from the proposed Family Unit Amendment Act of 2017, currently under consideration by the Council of the District of Columbia, a portion of which was included in the District's fiscal year 2018 budget. The budget required DMPED to conduct an assessment of large family units to determine:

- the number of large family units in each ward;
- the number of households with very-low- and extremely-low-income in each ward that occupy a large family unit;
- any government-assisted projects that resulted in the creation of a large family unit; and
- the need in the District for large family units, including units for families with low incomes across all eight wards

To appropriately assess the need for large units in the District, the research team analyzed survey and administrative data sources on the housing stock, households, and neighborhoods, and interviewed key stakeholders who play a role in the development of affordable multifamily housing. This study is structured to first answer key questions related to the supply of large units, including trends,

[^0]characteristics and location in Part 1. Part 2 explores the affordability of these large units. Part 3 discusses the demand for large units, focusing on large households and their characteristics and needs. Part 4 describes how supply and demand for large units currently match up, and where the need for affordable, family-size units exist-now and in the future. Part 5 provides a discussion of the market dynamics and policies affecting the creation and preservation of large units. Part 6 concludes the study with recommendations for additional policies and regulatory changes.

The aim of this study is to provide a more thorough understanding of any gaps in the supply of and demand for large units in the District. Recognizing that housing is fundamental to helping families thrive in the District, this study explores the questions: is there a need for an increase in the rate of large unit production and preservation in the District? If so, where, what kind, at what price, and for whom?


## Part 1 - What do we know about the District's large housing units?

One third of the District's housing stock of 306,700 units is composed of "large units." These 100,900 large units have three or more bedrooms, and include single family houses, as well as apartments in multifamily condominium, cooperative, and rental properties. ${ }^{2}$ The other two-thirds are smaller housing units with two or fewer bedrooms, including units with no bedrooms (i.e., studio apartments). Most large units, 20 percent of the District's housing stock, are three bedrooms. Another 9 percent are fourbedroom units and four percent are five-or-more-bedroom units.

The number and share of large units in each ward vary considerably. According to the five-year data from the American Community Survey (ACS), the greatest number of large units are in Ward 4 (figure 1), where large units represent over half of the housing. ${ }^{3}$ Ward 5 has the second highest number of large units, followed by Ward 3. Only 5,220 large units are found in Ward 2, where three-bedroom units make up just 12 percent of the housing. The unequal distribution of large units reduces the geographic options families have for finding suitable housing.

FIGURE 1
Number of Housing Units by Ward in DC, 2012-16


Source: Urban-Greater DC analysis of the American Community Survey.
Large units are concentrated in particular neighborhoods. These neighborhoods are often located far from the center of the District, further out in northwest and northeast (figure 2). Within Ward 3, there

[^1]are higher concentrations of large units in the Palisades, Spring Valley, and University Park neighborhoods. Ward 4 has more large units in Crestwood, Brightwood Park, Manor Park, and LamondRiggs. Areas with higher numbers of large units in Ward 5 include Michigan Park, University Heights, Brookland, Brentwood, and Langdon. Although some families may seek residential neighborhoods more distant from the District center, there is a question of how the distribution of large units impacts families' housing location decisions, as well as their access to amenities and employment centers.

FIGURE 2
Number of Housing Units with 3+ Bedrooms by Tract in DC, 2012-16


[^2]
## How has the housing stock by bedroom size changed over time?

Between 1980 and 2000, while the District was continuing a population decline that started in the 1950s, its housing stock fell from 276,900 to 274,800 total units, a net loss of over 2,000 units. ${ }^{4}$ During this period, the net housing losses were entirely in smaller units of two or fewer bedrooms, which decreased by 3,400 units. The number of housing units with three or more bedrooms actually increased by about 1,400 units.

Since 2000, the District has grown by 31,900 housing units, a net increase of 12 percent. The building boom has added both large and smaller units to the District's housing stock. Between 2000 and 201216 , the number of large units increased by 14 percent $(12,200)$ and the number of two-or-fewer bedroom units increased by 11 percent $(19,700)$.

Between 2000 and 2012-16, there were District-wide gains in housing of all bedroom sizes. Twobedroom units increased from 65,200 to almost 84,000 a rise of 29 percent (figure 3). Housing units of other sizes grew much more modestly. The largest number of housing units in the District by far are studios and one-bedroom units, which collectively accounted for 121,900 units in 2012-16, but increased by less than 1 percent. Four-bedroom units had the second highest percentage increase, growing by 26 percent to 26,800 units. Three-bedroom units increased by 9 percent, while units with five or more bedrooms, the smallest in number, grew by 14 percent.

FIGURE 3
Change in Housing Units by Bedroom Size, DC, 2000 to 2012-16


Source: Urban-Greater DC analysis of the American Community Survey
While the number of large units in the District increased by 13,600 from 1980 to 2012-16, growth in large units varied across wards (figure 4a). Ward 8 had the biggest growth in large units, which increased by over 3,000 or 37 percent. Ward 8 also lost 3,600 units with two bedrooms or fewer, however, giving

[^3]the ward a net loss of almost 600 housing units. Ward 7 also experienced a net loss of housing since 1980, but an increase in large units. Both Wards 7 and 8 experienced population losses in the 1980s and 1990s, which resulted in a corresponding drop in housing. As will be discussed later in this report, the increase in large units in these wards may be explained by new assisted housing developments, which tend to have more large units that market-rate properties.

In contrast, Wards 1, 2, and 6 all grew by over 5,000 housing unit each, including more large units. These were areas of strong population growth since 2000, fueling the demand for new housing. The biggest increases in large units since 1980, after Ward 8, were in Wards 3 and 5.


FIGURE 4A
Change in Housing Units by Ward, DC, 1980 to 2012-16


## FIGURE 4B

Change in Housing Units by Ward, DC, 1980 to 2000
$0-2$ bedroom units $\quad 3+$ bedroom units


FIGURE 4C
Change in Housing Units by Ward, DC, 2000 to 2012-16


Ward 1 Ward 2 Ward 3 Ward 4 Ward 5 Ward 6 Ward 7 Ward 8

[^4]Most of the net losses of housing units in Wards 7 and 8 happened before 2000 (figure 4b), while the growth in large units in these wards took place after 2000 (figure 4c). Between 1980 and 2000, both wards collectively lost over 6,600 housing units, including about 780 large units. Since 2000, however, Wards 7 and 8 have replaced over 5,600 of their lost units, with Ward 7 still showing a net loss of some two-or-fewer bedroom units. Apart from Wards 7 and 8, only Ward 4 had a net loss of housing from 1980 to 2000 . Housing grew in all other wards, with Ward 3 having the biggest increases in both large and smaller units.

Since 2000, the growth in housing has been dramatic in several wards, especially for smaller housing units in Wards 1, 2, and 6. Taken together, these three wards accounted for over 18,000 additional units, or 57 percent of the housing increase in the District between 2000 and 2012-16. Almost 90 percent of the net housing growth in Wards 1, 2, and 6 was in units with fewer than three bedrooms. Along with Wards 7 and 8 , Ward 5 had a bigger increase in large units than in smaller units.

## How does the change in housing units compare with household trends?

After decades of decline, the District's population has been growing since the late 1990s. After reaching a historic peak of over 800,000 after World War II, the District's population fell by over 230,000 by the 2000 decennial census. Since then, however, the District has grown to an estimated 681,000 people, its highest population since the 1970s. This growth is expected to continue, with the DC Office of Planning projecting the population to rise to over 787,000 by 2025. ${ }^{5}$

Along with the population, the number of households in the District has been growing, as well. The Census Bureau defines a household as one or more persons who live together in a single housing unit. ${ }^{6}$ Households with multiple people can include family members, groups of unrelated persons, or combinations of the two. ${ }^{7}$

The total number of households in the District has increased by 11 percent from 2000 to 2012-16, to over 276,000. During this period, household sizes—the number of persons in a household-have fluctuated, as well. In 2000, the average District household consisted of 2.16 persons. By 2010, however, the average household has decreased to 2.11 persons, indicating relative increases in households with only one or two members. Since 2010, though, the average household size has started to rise again, reaching 2.28 persons per household in 2016.

When compared to household growth, the increase in smaller housing units has not kept pace with the growth of smaller households. Between 2000 and 2012-16, the number of households with three or fewer persons increased by 14 percent, to about 238,000 (figure 5), while the number of housing units

[^5]with two or fewer bedrooms only grew by 11 percent. Furthermore, there were already fewer smaller housing units than smaller households. The relatively faster household growth further widened this gap.

FIGURE 5
Change in Households and Housing Units by Size, DC, 2000 to 2012-16


Source: Urban-Greater DC analysis of the Neighborhood Change Database and the American Community Survey.

In contrast, the growth in large housing units outpaced the growth in large households. While the number of three-or-more-bedroom housing units grew by 14 percent since 2000, the number of households of four or more persons fell by 2 percent. As shown in figure 5 , the number of large housing units exceeds the number of large households by a significant amount, and this difference has widened since 2000.

However, though it may seem that the District's supply of large units is more than sufficient to accommodate its large households, in reality, these large units are unattainable for many families. As will be discussed in the rest of this section, large and smaller housing units are not equally distributed by tenure, location, structure type, and cost. Some small households choose to occupy large units, while some large households may lack the means to compete for those units in the District's high-cost housing market. Furthermore, although there is a possibility that some singles and couples might move out of large units, that strategy alone would be insufficient to shift the allocation of large units to large households, especially for low-income large households.

## What is the tenure of the large unit housing stock?

Most housing units in the District, 59 percent, were occupied by renters in 2012-16. The remaining 41 percent were owner-occupied. the District's homeownership rate has increased by 5 percentage points since 1980, from 36 percent. By comparison, the overall US homeownership rate decreased slightly from
64.4 to 63.6 percent over this same period. ${ }^{8}$ The District's homeownership rate has been unchanged since 2000, however.

Even though most housing in the District is rental, only 27 percent of occupied large housing units were rented in 2012-16 (figure 6). This means that almost three-quarters of large housing units were owneroccupied and, therefore, not available to renters. In contrast, most smaller units are renter-occupied.

FIGURE 6
Share of Renter-Occupied Housing Units by Bedroom Size and Ward, DC, 2012-16
$0-2$ bedroom units $\quad 3+$ bedroom units


Source: Urban-Greater DC analysis of the American Community Survey.

Since most of the large units in the District are not available for rent, it is important to consider the distribution and affordability of owner-occupied, family-size units, as well. However, it is notable that despite the benefits of homeownership for families, most family-size households in Ward 8 rent instead of own (Fig. 6).

The majority of large housing units were owner-occupied in all wards except Ward 8, where 59 percent of three-or-more-bedroom units were renter-occupied (figure 6). As will be discussed later, the higher number of renter-occupied large units may be related to the concentration of assisted housing in Ward 8. In all other wards, the share of renter-occupied large units was well below the share of renteroccupied smaller units. At the extreme, in Ward 4, 79 percent of housing units with two or fewer bedrooms were renter occupied, compared to only 14 percent of large units.

[^6]As noted earlier, the number of large housing units in the District increased by 13,600 between 1980 and 2012-16. Most of this increase-6,600 large units or 49 percent-was in owner-occupied housing, but this increase did not benefit all wards equally (table 1). The biggest growth in large owner-occupied units was in Ward 3, which accounted for over a third of the increase. Wards 1,5 , and 6 also each had net increases of over 1,000 large owner-occupied units.

TABLE 1
Change in Housing Units by Bedroom Size, Tenure, and Ward, DC, 1980 to 2012-16

| O-2 bedrooms | DC | Ward 1 | Ward 2 | Ward 3 | Ward 4 | Ward 5 | Ward 6 | Ward 7 | Ward 8 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Total | 16,300 | 4,600 | 5,800 | 1,800 | 800 | 1,600 | 7,600 | $-2,200$ | $-3,600$ |
| Renter-occupied | $-4,000$ | 800 | 200 | $-1,300$ | -500 | -100 | 3,500 | $-2,800$ | $-3,800$ |
| Owner-occupied | 16,300 | 4,400 | 5,300 | 2,500 | 600 | 500 | 3,900 | $-1,100$ | 100 |
| Vacant/seasonal | 4,000 | -700 | 300 | 500 | 700 | 1,200 | 100 | 1,700 | 100 |


| 3+ bedrooms | DC | Ward 1 | Ward 2 | Ward 3 | Ward 4 | Ward 5 | Ward 6 | Ward 7 | Ward 8 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Total | 13,600 | 1,000 | 800 | 2,300 | 1,000 | 2,700 | 900 | 1,700 | 3,000 |
| Renter-occupied | 4,500 | 300 | 100 | -180 | 500 | 1,072 | 17 | 950 | 1,694 |
| Owner-occupied | 6,600 | 1,100 | 700 | 2,300 | -200 | 1,000 | 1,400 | -300 | 500 |
| Vacant/seasonal | 2,500 | -400 | 0 | 200 | 700 | 600 | -500 | 1,100 | 800 |

Source: Urban-Greater DC analysis of the Neighborhood Change Database and the American Community Survey.
Note: Due to rounding the rows may not add to the total.
A smaller share of the net increase in large units-4,500 units or 33 percent-was renter-occupied housing. The number of three-or-more-bedroom units occupied by renters grew in all wards except Ward 3, which lost about 180 large rental units. The largest increases in renter-occupied large units were in Wards 8, 5, and 7.

A rise in large units that were vacant or only used seasonally accounted for another 18 percent of the growth in large units in the District between 1980 and 2012-16. ACS tabulations do not provide details on vacant and seasonal units by bedroom size, but for such units of all sizes in the District: 41 percent were vacant for rent, 13 percent were vacant for sale, and 34 percent were vacant but not specified as for rent or for sale. A final 12 percent were units for seasonal, recreational, or occasional use. Wards 1 , 2, and 6 had fewer vacant or seasonal units in 2012-16, which resulted in drops in the share of such units in these wards. For instance, the percentage of large units in Ward 1 that were vacant or seasonal fell from 11.3 to 5.5 percent from 1980 to 2012-16. In contrast, the largest increases in vacant or seasonal large units were in Wards $7,8,4$, and 5.

Like large units, two-or-fewer-bedroom units occupied by owners increased substantially since 1980. The increases in owner-occupied smaller units were mostly in Wards $1,2,3$, and 6 . Unlike large units, however, the number of smaller units occupied by renters decreased in all wards but Wards 1 and 6 , resulting in a 3 percent loss District-wide. Wards 7 and 8 lost substantial numbers of smaller renteroccupied units, as did Ward 3 . Ward 7 also had a significant drop in smaller owner-occupied units. Vacant or seasonal two-or-fewer-bedroom units also increased.

Figure 7 displays the distribution and density of large units across the District. Both large renteroccupied and large owner-occupied units are found in every ward and in most neighborhoods. In a few places, there is less overlap between large units by tenure. Joint Base Anacostia-Bolling, Congress Heights, Bellevue, and Washington Highlands have many more renter-occupied large units than owneroccupied large units. In contrast, neighborhoods such as Cleveland Park, Woodley Park, and Massachusetts Avenue Heights have few large renter-occupied units.

FIGURE 7
Renter-Occupied and Owner-Occupied Housing Units with Three or More Bedrooms, DC, 2012-16


Source: Urban-Greater DC analysis of the American Community Survey.
Note: Dots are randomly placed within the census tract that the units are locate; census tract boundaries are not displayed.

## In what types of properties are large units found?

The data presented above from the ACS provide the number of large and smaller housing units by tenure and ward, as well as how the supply of these units have changed over the past four decades. ACS data have limited information on the types of properties (single-family houses, condominiums, and multifamily rental and cooperative buildings) where large units are found, however. This information can be obtained using real property data from the DC Office of Tax and Revenue. The type of property affects the ownership status of large units, but also their cost and where they can be built. Knowing about the types of properties where large units are found is important to have a better understanding of this stock.

Three-quarters of the District's large units, the largest share, are in single-family houses, attached or detached (figure 8). Another 20 percent are in multifamily rental or cooperative properties. (The data sources do not allow us to distinguish between rental and cooperative properties for this analysis.) Finally, a very small share of large units ( 3 percent) are in condominium properties. ${ }^{9}$

FIGURE 8
Large Units by Property Type and Ward, DC, 2012-16


Source: Urban-Greater DC analysis of data from the Office of Tax and Revenue and estimates from the American Community Survey.
As noted, property type can affect the location of large units, as zoning restrictions and land use provisions are not uniform across the entire city. In Ward 4, for instance, large units consisted almost entirely of single-family houses. Ward 8 had the greatest share of multifamily rental and cooperative properties. The second highest share of large units in rental or cooperative properties was in Ward 1.

[^7]Ward 2 had the largest share of large units in condominium properties, which made up 11 percent of the large unit total.

Among single-family houses in the District, having three or more bedrooms is the norm. District-wide, 84 percent of single-family houses had three or more bedrooms, a share that has been constant over time. Across wards, the share of single-family houses that were large ranged from 69 percent in Ward 7 to 95 percent in Ward 3. In contrast, only a small share of condominiums (7.4 percent) were large units. Condominiums in Ward 5 were the most likely to have three or more bedrooms ( 24 percent), while condominiums in Ward 2 were the least likely (4 percent).

The number of single-family houses in the District rose seven percent from 73,700 to 78,800 between 2002 and 2018 (figure 9). ${ }^{10}$ The supply of large units in condominiums nearly doubled since 2002, but, as discussed previously, remained a very small share of total large units. Large condominium units grew from about 2,000 to 3,900 between 2002 and 2018, an increase of 96 percent.

FIGURE 9
Large Unit Single Family Homes and Condominiums, DC, 2002 to 2018


Source: Urban-Greater DC analysis of data from the Office of Tax and Revenue.
The location of single-family houses by ward is driven partially by land availability in areas zoned for lowdensity residential development. Ward 4 had the greatest number of large single-family houses 18,425 in 2018 (figure 10). Wards 3 and 5 also have a substantial stock of large single-family houses, each with more than 13,000 . Though they had relatively smaller numbers, Wards 7 and 8 had the highest percentage growth in large unit, single-family houses since 2002. In Ward 7, large unit, single-family houses increased from 8,669 to 9,776 , a rise of 13 percent. In Ward 8 , the increase was from 4,874 to 6,051 large unit, single-family houses, or 24 percent.

[^8]FIGURE 10
Single-Family Homes with Three or More Bedrooms by Ward, DC, 2018


Source: Urban-Greater DC analysis of data from the Office of Tax and Revenue.
By far, Ward 2 had the most condominiums of all sizes, accounting for 16,400 units or nearly 1 in 3 condominiums in the District in 2018. However, Ward 2 had the lowest share of condominium units that were large. Ward 5 had 760 large condominiums, followed by about 660 in Ward 1 and 614 in Ward 2 (figure 11). Although the overall numbers remained small, several wards saw a doubling or tripling in the number of large unit condominiums since 2002. In Ward 8, large unit condominiums increased by 253 percent, while in Ward 1 they grew by 214 percent. Ward 3 had the lowest growth rates for large condominiums at only 15 percent.

FIGURE 11
Condominiums with Three or More Bedrooms by Ward, DC, 2018


Source: Urban-Greater DC analysis of data from the Office of Tax and Revenue.
Recently constructed single-family houses and condominiums were less likely to have large units, compared with older construction. Of the single-family houses and condominiums built since 2000 in the District, 33 percent had three or more bedrooms, compared with 60 percent of the units built before

2000 (figure 12). Wards 7 and 8 were exceptions to this trend. Much higher shares of units were built with three or more bedrooms in these two wards since 2000 than in prior years, likely a result of new market rate and affordable units needed to replace housing lost in prior decades. In the remaining wards, fewer large unit, single-family houses and condominiums have been built more recently, compared to previously.

FIGURE 12
Share of Single-Family Homes and Condominiums That Are Large by Year Built and Ward, DC, 2018


City Ward 1 Ward 2 Ward 3 Ward 4 Ward 5 Ward 6 Ward 7 Ward 8

Source: Urban-Greater DC analysis of data from the Office of Tax and Revenue.
Consistent with the findings for large housing units in the District overall, relatively few large unit, singlefamily houses and condominiums are rented, although the share of rentals has increased since 2002. Only 28 percent of single-family houses and condominiums with three or more bedrooms were rented in 2018; however, this was an increase from 18 percent in 2002 (figure 13). The rise in rental occupancy was a consistent trend across all eight wards. Wards 2,7 , and 8 had the highest shares of renteroccupied large unit, single-family houses and condominiums in 2018, with four in ten such housing units being rented in Wards 2 and 8 and more than one-third in Ward 7.

FIGURE 13
Renter-Occupancy Rate for Single-Family Houses and Condominiums with Three or More Bedrooms, DC


Citv Ward 1 Ward 2 Ward 3 Ward 4 Ward 5 Ward 6 Ward 7 Ward 8
Source: Urban-Greater DC analysis of data from the Office of Tax and Revenue.

The rental stock of large unit, single-family houses and condominiums has several different types of property owners. By far, the biggest share of owners, 86 percent in 2018, were identified in property tax records as individual persons who did not live in the property. These individuals may just own a single house in the District, or they may have multiple investment properties. The next most common type of owner were taxable corporations, partnerships, and associations, including banks and government sponsored enterprises (i.e., Fannie Mae, Freddie Mac). These entities owned 9.4 percent of large unit, rental single-family houses and condominiums. Another 1.3 percent were owned by churches, community development corporations, or nonprofits and 0.4 percent by schools or universities. About 1.9 percent, were owned by local and federal government agencies, including the District of Columbia Housing Authority (DCHA) and the US Department of Housing and Urban Development. These ownership patterns generally held across all eight wards. There were a few notable exceptions. In Ward 2 , a much higher share of rented large unit, single-family houses and condominiums, 18.3 percent, were owned by taxable corporations, partnerships, and associations and 3.9 percent were owned by schools and universities. In Wards 7 and 83.3 percent and 9.7 percent of large unit, single-family houses and condominiums that were rented were owned by the local or federal government.

## Part 2 - Affordability

Although the District has a substantial stock of existing large units, a large majority of the stock in most wards is unaffordable to households with low incomes. Part 2 considers how the affordability, location, and stock of large unit rentals, limits the District families', particularly those with low incomes, choices of neighborhood and has a strong impact on their ability to find suitable housing.

## How affordable are large units for sale?

As noted earlier, most large units in the District are owner-occupied and in single-family houses (75 percent). Consistent with overall housing market trends in the District, these units are expensive and generally out of reach of first-time homebuyers with lower incomes, at least without some form of assistance.

Even so, over the past 15 years, there have been significant shifts in the affordability of large unit, singlefamily houses and condominiums (figure 14). In 2002, a homebuyer in a family of four with an income at 80 percent of area median income (AMI) could afford to buy about 4 in 10 large unit single-family houses or condominium units. ${ }^{11}$ But by the peak of the housing bubble in 2007, affordable sales dropped to less than two percent. As house prices fell during the foreclosure crisis and Great Recession, affordability improved; however, during the last several years only 12.7 percent of house sales of large units were affordable to a homebuyer with an income at 80 percent of AMI. Throughout the period, very few single-family houses and condominiums were affordable to first-time homebuyers with household incomes at 50 percent of AMI. In 2015, the District had a small share of large houses for sale ( 22 percent) that were affordable at median family income compared to many other large cities. ${ }^{12}$ The District also had the highest median family income $(\$ 109,170)$ of the 25 largest cities. Places like Boston, Los Angeles, New York, San Diego, San Francisco, San Jose, and Seattle had even smaller shares of large affordable houses for sale. Other cities like Austin, Charlotte, Denver, Houston, Philadelphia, and Phoenix had much higher shares of listings with large affordable houses.

[^9]FIGURE 14
Percent of Large Single-Family Home and Condominium Sales Affordable to a First-time Homebuyer by Household Income Level in DC


Source: Urban-Greater DC analysis of data from the DC Office of Tax and Revenue.
Looking more closely at 2017, of the more than 3,525 single-family houses and condominium units with three or more bedrooms sold in the District, only one in eight (448 units) were affordable to a first-time homebuyer with household income at 80 percent of AMI ( $\$ 88,240$ in 2017). Only 45 large units sold were affordable to a first-time homebuyer with an income at 50 percent of AMI $(\$ 55,150)$.

Therefore, a first-time home-buyer employed as a human resource specialist, a librarian, or a forensic science technician, all professions with annual earnings around $\$ 88,000$, would have been able to afford less than 12.7 percent of the large unit, single-family houses and condominium units sold in the District in 2017. ${ }^{13}$ If that same buyer was employed as a substance abuse counselor, postal service clerk, or a paramedic who earned $\$ 55,000$ annually they would have been able to afford only 1.3 percent of these homes. A household earning $\$ 34,000$ (roughly 30 percent of AMI) annually could not afford to buy a large unit in the District in 2017. Even if a household had two full-time workers who both earned the minimum wage of $\$ 12.50$ in 2017, very few large properties would have been affordable.

In addition to being limited in supply, affordable large unit, single-family houses and condominiums are only found in certain parts of the District (figure 14). In 2017, 89 percent of the large units sold that were affordable at 80 percent of AMI were in Wards 7 or 8 . There were no affordable large unit, single-family houses and condominiums sold in Wards 1, 2, or 3 and only one each in Wards 5 and 6. Much of this pattern of affordability can be tied back to discriminatory lending and real estate practices that date back decades, as well as current zoning regulations and land availability. This history continues to

[^10]constrain the neighborhood choices and wealth-building opportunities today for District families with low incomes.

FIGURE 15
Number of Single-family Homes or Condominium Units Sales with 3+ bedrooms by Ward Affordable to a Firsttime Homebuyer at $\mathbf{8 0}$ or $\mathbf{5 0}$ Percent of Area Median Income, 2017

Income: 80\% of AMI ■ Income: 50\% of AMI


Source: Urban-Greater DC analysis of data from the DC Office of Tax and Revenue.

## How affordable are large rental units?

Though fewer in number than owner-occupied large units, large renter-occupied units are much more likely to be affordable to households with lower incomes. Nevertheless, the supply of affordable rental units is limited and a shrinking share of all large rental units.

The number of large units occupied by renters in the District grew 37 percent from 18,117 in 2005 to 24,959 in 2016. In the same period, the number of large units occupied by renters paying less than $\$ 1,000$ in gross rent fell by 5 percent or 401 units (figure 16). By 2016, more than 900 units had been lost that were occupied by renters paying between $\$ 300$ and $\$ 750$ in 2005 . There was rapid expansion ( 69 percent) of the number of renter-occupied units with gross rents of more than $\$ 1,000$.


FIGURE 16
Number of Renter-Occupied Large Units by Rent Level in DC (constant 2016 dollars)


Source: Urban-Greater DC analysis of 1-year American Community Survey estimates.
Note: Excludes renters not paying cash rent. 2013 and 2014 are interpolated.
Even persons working in full-time, year-round jobs can find it challenging to find affordable large units for rent in the District. For firefighters, chefs and head cooks, or insurance sales agents, who, on average, earned just over $\$ 60,000$ in this area, less than half of large units occupied by renters would have been affordable to them in 2012-16 (table 2). ${ }^{14}$ For someone earning $\$ 40,000$, such as a school bus driver, security guard, or drywall installer, about one-third of large renter-occupied units would have been affordable. Fewer than one in five units would be affordable to a pharmacy aide, childcare worker, or nursing assistant, who earn about $\$ 30,000$ on average. Households with incomes at 30 percent of AMI could also only afford units renting below $\$ 750$ per month.

TABLE 2
Large Renter-Occupied Units by Rent Level in DC, 2012-16

| Rent Level | Minimum Annual <br> Income for Rent to <br> Be Affordable | Units | Percent <br> of Units |
| :--- | :--- | ---: | ---: |
| No cash rent |  | $\$ 0$ to $\$ 20,000$ | 2,200 |
| Gross rent is less than $\$ 500$ | $\$ 20,000$ to $\$ 30,000$ | 1,500 | $10 \%$ |
| Gross rent is $\$ 500$ to $\$ 749$ | $\$ 30,000$ to $\$ 40,000$ | 1,900 | $8 \%$ |
| Gross rent is $\$ 750$ to $\$ 999$ | $\$ 40,000$ to $\$ 60,000$ | 3,800 | $15 \%$ |
| Gross rent is $\$ 1,000$ to $\$ 1,499$ | $\$ 60,000$ or higher | 13,400 | $53 \%$ |
| Gross rent is $\$ 1,500$ or higher |  | 25,500 | $100 \%$ |

Source: Urban-Greater DC analysis of the American Community Survey.
Note: Gross rent is considered affordable if it is less than 30 percent of monthly income. Due to rounding the units may not add to the total.

[^11]Most of the District's large units that are affordable to renter households with lower incomes are in Wards 7 and 8 . There are more than 1,200 large units in each of Wards 7 and 8 that were renting for less than $\$ 750$ per month and affordable to a household with income below 30 percent of AMI in 2012-16 (figure 17). These two wards have 64 percent of the large units affordable at this rent level. In contrast, only 1 percent of the large units affordable at this rent level are located in Wards 2 and 3. For households with incomes that are a bit higher, at $\$ 60,000$ (a little more than 50 percent of AMI), there is not much increase in choice of neighborhood, with more than one in two of large rental units affordable at this level (less than $\$ 1,500$ per month) in Wards 7 and 8 (5,400 units total).

FIGURE 17
Number of Renter-Occupied Units with 3+ bedrooms by Ward and Monthly Gross Rent, 2012-16


Ward 1 Ward 2 Ward 3 Ward 4 Ward 5 Ward 6 Ward 7 Ward 8

Source: Urban-Greater DC analysis of the American Community Survey.
Figure 18 displays the percent of large renter-occupied units in each census tract in the District that rented for less than $\$ 1,500$ per month by quartile. There are a handful of tracts in Wards 1,3 , and 6 that have higher concentrations of affordable rental units but likely at least some of those have assisted housing or rental controlled buildings that help keep the units affordable. Affordable rental units in some of the areas in Ward 6, like Mount Vernon Triangle, NoMa, and Southwest may be more vulnerable as those neighborhoods and nearby areas are experiencing rapid new development. The census tracts with the most affordability for large rental units were concentrated in Ward 7 in neighborhoods like Kenilworth, Mayfair, Naylor Gardens, Hillcrest, Marshall Heights, Lincoln Heights, and Fort Dupont. In Ward 8 there were concentrations in Congress Heights, Bellevue, Washington Highlands, and Barry Farm.

FIGURE 18
Percent of Large Renter-Occupied Units Renting for Less than \$1,500 by Census Tract, 2012-16


Source: Urban-Greater DC analysis of the American Community Survey.

## Where are large units in assisted housing?

Assisted housing provides affordability to households with low incomes who cannot afford housing on the private market. ${ }^{15}$ According to the DC Preservation Catalog, about 20 percent of the District's rental housing stock-an estimated 38,257 units-are subsidized housing. Most of these units are federally subsidized. Data on the bedroom sizes of assisted units are not uniformly available for assisted housing programs and subsidies, but this study does present data on the three largest federal programs-the Low Income Housing Tax Credit (LIHTC), public housing, and multifamily Section 8-as well as data from

[^12]the District's IZ program. Fewer than 5000 units in these programs are known to have three or more bedrooms. ${ }^{16}$

Data on bedroom size are not available for other federally-funded subsidies like Section 211/811, mortgages insured by the Department of Housing and Urban Development (HUD), HOME or Community Development Block Grant, and the locally funded units such as those produced solely with subsidies from the District's Housing Production Trust Fund or through the project-based Local Rent Supplement Program (LRSP). In general, there is not much, if any, overlap among the four programs reported on here so the counts of units for each program can largely be considered unique.

The assisted housing program with the largest number of units is the LIHTC program. The latest data from HUD (2016) includes over 21,000 housing units in properties subsidized under LIHTC (table 3). About four percent of these units are not designated as affordable. The remainder are typically affordable to households with incomes up to 50 or 60 percent of AMI; however, some of these affordable units may be occupied by households who hold housing subsidy vouchers from the federal Housing Choice Voucher Program or the District's Local Rent Supplement Program (LRSP) to provide housing for persons and households with lower incomes.

Of the 71 percent of LIHTC-subsidized units with bedroom sizes reported, 12 percent $(1,815)$ were large units. Ward 8 contained 58 percent of the large units, a significantly higher proportion that any other ward. Ward 3 did not have any LITHC-subsidized units.

TABLE 3
Low Income Housing Tax Credit Units by Ward and Bedroom Size, DC, 2016

|  | DC | Ward 1 | Ward 2 | Ward 3 | Ward 4 | Ward 5 | Ward 6 | Ward 7 | Ward 8 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Projects | 172 | 32 | 4 | 0 | 12 | 13 | 22 | 28 | 61 |
| Total units | 21,563 | 2,828 | 513 | 0 | 797 | 1,984 | 2,948 | 4,436 | 8,057 |
| Low-income units | 20,654 | 2,784 | 507 | 0 | 765 | 1,764 | 2,533 | 4,278 | 8,023 |
| Units w/bedroom size | 15,344 | 2,220 | 512 | 0 | 796 | 929 | 1,797 | 3,764 | 5,326 |
| No bedrooms | 703 | 83 | 101 | 0 | 128 | 49 | 22 | 152 | 168 |
| 1 bedroom | 5,864 | 1,047 | 222 | 0 | 326 | 534 | 837 | 1,394 | 1,504 |
| 2 bedrooms | 6,962 | 872 | 164 | 0 | 330 | 344 | 727 | 1,932 | 2,593 |
| 3 bedrooms | 1,666 | 211 | 23 | 0 | 12 | 2 | 188 | 275 | 955 |
| 4+ bedrooms | 149 | 7 | 2 | 0 | 0 | 0 | 23 | 11 | 106 |

Source: Urban-Greater DC analysis of data from the US Department of Housing and Urban Development.
Another large portion of the District's assisted housing stock is the over 8,000 units of public housing owned and operated by the DCHA (table 4). This housing helps households with incomes at 30 percent of AMI or below. Data gathered from the DCHA website and HUD provided bedroom size information on 62 percent of public housing units. Bedroom sizes were less likely to be available for some of the

[^13]developments that have undergone transformation through programs like HOPE VI. The DCHA also has regulations to right-size housing units based on the number and composition of the household. ${ }^{17}$ The 1,641 units with three or more bedrooms make up 29 percent of the units with bedroom size available. There are fewer public housing units in Wards 2, 3, 4, and 5, and Wards 2, 3, and 4 have no large public housing units.

TABLE 4
Public Housing Units by Ward and Bedroom Size, DC, 2018

|  | DC | Ward 1 | Ward 2 | Ward 3 | Ward 4 | Ward 5 | Ward 6 | Ward 7 | Ward 8 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Projects | 56 | 8 | 4 | 1 | 1 | 6 | 15 | 11 | 10 |
| Units w/bedroom size | 5,654 | 839 | 760 | 151 | 21 | 461 | 1,656 | 1,254 | 512 |
| No bedrooms | 949 | 179 | 552 | 133 | 0 | 83 | 0 | 2 | 0 |
| 1 bedroom | 1,503 | 350 | 206 | 17 | 21 | 194 | 480 | 81 | 154 |
| 2 bedrooms | 1,561 | 225 | 2 | 1 | 0 | 100 | 732 | 425 | 76 |
| 3 bedrooms | 1,129 | 77 | 0 | 0 | 0 | 56 | 312 | 485 | 199 |
| 4 bedrooms | 361 | 7 | 0 | 0 | 0 | 28 | 103 | 175 | 48 |
| 5 bedrooms | 136 | 0 | 0 | 0 | 0 | 0 | 24 | 85 | 27 |
| 6+ bedrooms | 15 | 1 | 0 | 0 | 0 | 0 | 5 | 1 | 8 |

Source: Urban-Greater DC analysis of data from the DC Preservation Catalog and the District of Columbia Housing Authority website. HUD's Picture of Subsidized Households data for 2018 reported a total of 8,249 public housing units in the District. Bedroom sizes were only available for 69 percent of that total.

The last large group of assisted housing programs with data on bedroom size is the Multifamily Section 8 and related programs, which are privately-owned and federally-subsidized (table 5). These programs serve households with incomes below 50 percent of AMI, with a few exceptions up to 80 percent AMI; but, like LIHTC, they also provide affordable units that can be used in combination with federal Housing Choice Voucher Program or the District's LRSP to provide housing for persons and households with lower income. Data on bedroom size are available for all units in this assisted housing program.

Large units $(1,233)$ made up 12 percent of this project-based Section 8 housing. As with public housing units, few units and few large units are located in Wards 2,3 , or 4 . Most large units are in either Ward 8 (42 percent) or Ward 6 (19 percent).

[^14]TABLE 5
Multifamily Section 8 Units by Ward and Bedroom Size, DC, 2012-16

|  | DC | Ward 1 | Ward 2 | Ward 3 | Ward 4 | Ward 5 | Ward 6 | Ward 7 | Ward 8 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Projects | 102 | 22 | 6 | 3 | 4 | 18 | 16 | 11 | 22 |
| Total assisted units | 9,976 | 2,047 | 382 | 73 | 195 | 1,857 | 1,673 | 1,263 | 2,486 |
| Units w/bedroom size | 9,976 | 2,047 | 382 | 73 | 195 | 1,857 | 1,673 | 1,263 | 2,486 |
| No bedrooms | 497 | 80 | 145 | 36 | 13 | 77 | 61 | 23 | 62 |
| 1 bedroom | 4,596 | 1,183 | 180 | 37 | 182 | 1,341 | 667 | 366 | 640 |
| 2 bedrooms | 3,650 | 624 | 46 | 0 | 0 | 240 | 708 | 770 | 1,262 |
| 3 bedrooms | 995 | 147 | 11 | 0 | 0 | 124 | 168 | 96 | 449 |
| 4 bedrooms | 196 | 10 | 0 | 0 | 0 | 69 | 41 | 8 | 68 |
| 5+ bedrooms | 42 | 3 | 0 | 0 | 0 | 6 | 28 | 0 | 5 |

Source: Urban-Greater DC analysis of data from the US Department of Housing and Urban Development.
The District's IZ program is not a direct subsidy program like the others described in this section; it requires that any new construction residential development of more than 10 units or a rehabilitation of an existing building that will be expanded by 50 percent or more and add 10 more units to make a portion of the units affordable to households with low incomes. ${ }^{18}$ Developers can also build at higher densities (more units in the footprint) in exchange for building additional affordable units above the minimum required proportion. Depending on the level of density desired, affordability levels vary among 50, 60, or 80 percent of AMI. Developments subject to IZ are required to provide IZ units in both rental and for-sale projects.

As of June 2018, 1,141 IZ units were planned, under construction or completed (table 6). Eighty-two (7 percent) of the IZ units have three or more bedrooms. Though the majority of IZ units serve households at 80 percent of $A M I$, the large $I Z$ units are fairly evenly split between units affordable at 50 percent of AMI and 80 percent of AMI.

TABLE 6
Inclusionary Zoning Units by AMI Level, Bedroom Size, and Construction Status, DC, 2018

|  | Total |  | Not specified |  | 50\% AMI |  | 60\% AMI |  | 80\% AMI |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0-2 BR | 3+ BR | 0-2 BR | 3+ BR | 0-2 BR | 3+ BR | 0-2 BR | 3+ BR | 0-2 BR | 3+ BR |
| Total | 1,059 | 82 | 3 | 0 | 229 | 42 | 43 | 1 | 784 | 39 |
| In planning | 86 | 6 | 3 | 0 | 15 | 2 | 28 | 0 | 40 | 4 |
| Under construction | 338 | 27 | 0 | 0 | 88 | 16 | 15 | 1 | 235 | 10 |
| Construction completed | 635 | 49 | 0 | 0 | 126 | 24 | 0 | 0 | 509 | 25 |

Source: Urban-Greater DC analysis of data from the DC Department of Housing and Community Development.

[^15]Since IZ requirements are tied to market-rate new construction, IZ units are mostly found in parts of the District where such development recently is more common such as in Wards 1, 5, and 6 (table 7). Fortythree percent of the large IZ units are in Ward 5 in areas such as near Union Market and Ivy City. Ward 6 also had 21 percent of large units in areas like H ST NE corridor and the Navy Yard.

TABLE 7
Inclusionary Zoning Units by AMI Level, Bedroom Size, and Ward, DC, 2018

|  | Total |  | Not specified |  | 50\% AMI |  | 60\% AMI |  | 80\% AMI |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0-2 BR | 3+ BR | 0-2 BR | 3+ BR | 0-2 BR | 3+ BR | 0-2 BR | 3+ BR | 0-2 BR | 3+BR |
| Total | 1,059 | 82 | 3 | 0 | 229 | 42 | 43 | 1 | 784 | 39 |
| Ward 1 | 251 | 6 | 0 | 0 | 47 | 4 | 5 | 0 | 199 | 2 |
| Ward 2 | 118 | 0 | 0 | 0 | 13 | 0 | 11 | 0 | 94 | 0 |
| Ward 3 | 55 | 0 | 2 | 0 | 11 | 0 | 1 | 0 | 41 | 0 |
| Ward 4 | 65 | 9 | 0 | 0 | 18 | 3 | 7 | 1 | 40 | 5 |
| Ward 5 | 157 | 35 | 1 | 0 | 58 | 21 | 5 | 0 | 93 | 14 |
| Ward 6 | 388 | 17 | 0 | 0 | 73 | 7 | 4 | 0 | 311 | 10 |
| Ward 7 | 11 | 5 | 0 | 0 | 6 | 3 | 1 | 0 | 4 | 2 |
| Ward 8 | 14 | 10 | 0 | 0 | 3 | 4 | 9 | 0 | 2 | 6 |

Source: Urban-Greater DC analysis of data from the DC Department of Housing and Community Development.

## What are the neighborhood characteristics where affordable family sized units are located?

As this section has described, affordable large units are not evenly distributed throughout the District, and families with low incomes looking for housing have few choices about where they can afford to live. Most affordable large units are concentrated in neighborhoods located east of the Anacostia River in Wards 7 and 8 (see figure 18 [map of affordable rental]). As with the rest of the United States, the distribution of affordable units across the District has not been accidental. Land availability, prices, and demand have been shaped by the long history of discriminatory policies and practices, both federal and local, that deliberately stripped wealth from black residents, prevented blacks from buying homes in certain communities, and moved them out of others. ${ }^{19}$ This systemic racism helped segregate the District and has resulted in the assessed value of all single family houses and condominiums in majority black neighborhoods being half of the value of those in majority white neighborhoods, despite black neighborhoods having more units. ${ }^{20}$

[^16]The Fair Housing Act of 1968 requires federal and local governments that receive federal housing and community development funding to take affirmative steps to remove barriers to housing choice and reduce disparities between neighborhoods, known as the Affirmatively Furthering Fair Housing (AFFH) rule. ${ }^{21}$ The District government is taking steps to address the legacy and effects of discriminatory policies and practices. The FY2016-FY2020 District of Columbia Consolidated Plan prioritizes neighborhood investments that affirmatively further fair housing choice. ${ }^{22}$ This prioritization is operationalized in the Summer 2018 Consolidated Request for Proposals for Affordable Housing Projects, which awards scoring points for projects that meet the geographic targets that align with the AFFH rule. Actions taken to both offer affordable housing in economically thriving parts of the District and prioritize families that might otherwise have difficulty finding a place to live in the District can enhance the diversity of neighborhoods and reduce the level of segregation.

The neighborhood characteristics vary considerably for neighborhoods with higher concentrations of affordable large units compared to those with fewer. In table 8, neighborhoods are defined as having a concentration of large affordable rental units, if at least 67 percent (the top quartile) of those units rented for less than $\$ 1,500$ a month. Neighborhoods with concentrations of large affordable rental units have resident populations and characteristics that differ on average from other tracts in the District. These neighborhoods had higher shares of black residents and fewer white residents. Adults in these tracts were less likely to have earned a high school or college degree and the tracts had an average unemployment rate that was double the rest of the District. There were more families in these tracts, but the families were less likely to be earning a living wage and the tracts had poverty rates that were 1.8 times higher.

[^17]TABLE 8
Characteristics of Census Tracts by Concentration of Large Affordable Rental Units

| Average Tract Characteristics | Year | Tracts with Concentrations of Large Affordable Rental Units | All other Tracts |
| :---: | :---: | :---: | :---: |
| Number of neighborhoods (tracts) |  | 44 | 135 |
| Pct. of population non-Hispanic white | 2012-16 | 10 | 42 |
| Pct. of population Hispanic | 2012-16 | 7 | 11 |
| Pct. of population non-Hispanic black | 2012-16 | 80 | 41 |
| Pct. of family households | 2012-16 | 54 | 44 |
| Pct. of adults with Bachelor's degree | 2012-16 | 28 | 59 |
| Pct. of adults with a high school degree | 2012-16 | 85 | 91 |
| Unemployment rate | 2012-16 | 17.2 | 8.4 |
| Poverty rate | 2012-16 | 29 | 16 |
| Pct. of families with income below \$75,000 | 2012-16 | 67 | 37 |
| Property crimes per 1,000 population | 2017 | 39.1 | 81.9 |
| Violent crimes per 1,000 population | 2017 | 9.8 | 8.0 |
| Pct. of births with access to prenatal care | 2016 | 49 | 65 |
| Median sales price (single-family houses and condominiums) | 2017 | \$435,762 | \$608,844 |
| Pct. of renter-occupied housing units in: |  |  |  |
| Single-family houses | 2012-16 | 23 | 22 |
| 2-4 unit buildings | 2012-16 | 18 | 15 |
| 5-9 unit buildings | 2012-16 | 13 | 8 |
| 10-19 unit buildings | 2012-16 | 24 | 13 |
| 20+ unit buildings | 2012-16 | 21 | 42 |

Source: Urban-Greater DC analysis of the American Community Survey, and data from DC Office of the Chief Technology Officer, the Office of Tax and Revenue and the Department of Health.
Note: A tract is defined as having a concentration of affordable rental units if it is the in top quartile of all tracts in the city for the percent of 3+ bedroom units renting for less than $\$ 1,500$. Tracts with shares over 67.4 percent in 2012-16 are in this quartile.

There were fewer property crimes reported in communities with concentrations of affordable rental housing, but there were higher violent crime rates. Women in these neighborhoods also were less likely to access adequate prenatal care during their pregnancies.

Adding more affordable large units in all parts of the District would give families with low incomes more of the same freedom families with higher incomes enjoy to make choices about the neighborhood in which they want to raise their children, the schools they want their children to attend, and the public and private amenities they value. The physical character of the communities with concentrations of affordable large units is also different. On average, these neighborhoods have more rental housing stock in smaller buildings (less than 20 units) than all other neighborhoods. The single-family houses and condominiums in these neighborhoods had an average median sales price $\$ 173,000$ lower than other neighborhoods.

Neighborhoods with concentrations of large unit, affordable, single-family houses and condominium sales in 2017, have similar characteristics to those communities with concentrations of large affordable rental units (table 9). These neighborhoods have more families with lower incomes and higher violent
crime rates than neighborhoods with concentrations of affordable rental units on average. The average median sales price is higher in communities with more affordable rental units than in those with more affordable homeownership opportunities.

TABLE 9
Characteristics of Census Tracts by Concentration of Large Affordable Single-Family Homes and Condominium Sales

| Average Tract Characteristics | Year | Tracts with <br> Concentrations of Large <br> Affordable Single-Family <br> Houses \& Condominiums | All Other <br> Tracts |
| :--- | :--- | :--- | ---: |
| Number of neighborhoods (tracts) | Hct. of population non-Hispanic white | $2012-16$ | 43 |
| Pct. of population Hispanic | $2012-16$ | 9 | 130 |
| Pct. of population non-Hispanic black | $2012-16$ | 4 | 42 |
| Pct. of family households | $2012-16$ | 84 | 12 |
| Pct. of adults with Bachelor's degree | $2012-16$ | 52 | 39 |
| Pct. of adults with a high school degree | $2012-16$ | 21 | 44 |
| Unemployment rate | $2012-16$ | 85 | 62 |
| Poverty rate | $2012-16$ | 18.5 | 91 |
| Pct. of families with income below \$75,000 | $2012-16$ | 32 | 7.5 |
| Property crimes per 1,000 population | 2017 | 71 | 14 |
| Violent crimes per 1,000 population | 2017 | 37.3 | 52.5 |
| Pct. of births with access to prenatal care | 2016 | 12.1 | 6.3 |
| Median sales price (single-family houses and | 2017 | 46 | 67 |
| condominiums) |  | $\$ 309,421$ | $\$ 651,291$ |

Source: Urban-Greater DC analysis of the American Community Survey, and data from DC Office of the Chief Technology Officer, the Office of Tax and Revenue and the Department of Health.
Note: A tract is defined as having a concentration of affordable large unit, single family house or condominium sales if it is the in top quartile of all tracts in the city for the percent of these sales affordable to a first-time homebuyer with income less than 80 percent of AMI. Tracts with shares over 52.6 percent in 2017 are in this quartile.

## Part 3: What is the demand for large units?

This section describes the demand for large units in the District by detailing the number of large households, their location, and trends in growth. It is also important to consider the characteristics of large households in the District to help understand what their housing unit and affordability needs are, whose needs are not being met, and whose are being better served by our current housing stock. The composition of large households in the District, when divided by housing tenure, displays many differences in the type of housing unit, unit size, race, age, household composition, and income.

## How many households who live in the District may need a large unit?

In 2012-16, 14 percent of households $(38,784)$ in the District had four or more people and needed a housing unit of at least three bedrooms. Nearly one in five large households lived in Ward 4 (7,200 households). Wards 3,5 , and 8 also each had more than 5,000 large households (figure 19). Most large households are classified by the US Census Bureau as family households. The heads of these households have one or more people living with them who are related by birth, marriage, or adoption. ${ }^{23}$ Nonfamily households, those with unrelated individuals living together, represented nine percent of large households in the District. Wards 1 and 2 had larger proportions of large nonfamily households than other wards.

FIGURE 19
Number of Households with 4 or More People by Household Type, 2012-16


Source: Urban-Greater DC analysis of the American Community Survey.
Neighborhoods with higher shares of households with 4 or more people in them are located along the District's northwestern boarder with Maryland, in much of Ward 4, including the Brightwood Park, Crestwood, and Petworth neighborhood cluster, eastern portions of Ward 5, and in many parts of Ward 8, including Historic Anacostia and near St. Elizabeth's (figure 20). Figure 20 also clearly shows that few large households are in Ward 2, extending from downtown northwest to Dupont Circle and then continuing northwest up Connecticut Avenue.

[^18]FIGURE 20
Percent of Large Households by Census Tract, 2012-16


Source: Urban-Greater DC analysis of the American Community Survey.
As described earlier, the total number of households in the District grew 11 percent from 248,300 in 2000 to 276,500 by 2012-16. Most of that growth was in single-person and 2-person households, which increased in number by 15 percent (figure 21). In contrast, the number of large households declined about two percent in this period, falling from 39,400 to 38,800 . This decline was driven by losses of households made up of five or more people, while 4-person households increased 14 percent. In 201216 , large households made up a substantially smaller share of the District's households (14 percent) than of all households in the United States ( 23 percent).

FIGURE 21
Change in Number of Households by Size, 2012-16


Source: Urban-Greater DC analysis of the Neighborhood Change Database and the American Community Survey.
Growth in large households was concentrated in Wards 3 ( 31 percent) and 4 ( 13 percent). Wards 2 and 5 experienced relatively little change in the number of large households since 2000, but Wards 1, 6, 7, and 8 lost between 8 percent (Ward 6) and 17 percent (Ward 1) of their large households.

## How does housing tenure vary among large households?

Of the 38,700 large households in the District, slightly more than half were renters $(20,200)$. Renters made up a majority of large households in Wards 1, 7, and 8 (figure 22). The 2012-16 homeownership rate topped 60 percent in Wards 3 and 4 for large households. Nearly all large owner households ( 93 percent) lived in single-family houses compared with only 44 percent of large renter households. A substantial proportion of large renter households ( 37 percent) live in multifamily buildings with 10 or more units. ${ }^{24}$

[^19]FIGURE 22
Number of Large Households by Housing Tenure, 2012-16


Source: Urban-Greater DC analysis of the American Community Survey.
Most large households ( 60 percent) lived in a housing unit with three or more bedrooms in 2012-16. However, many large households live in smaller units; 2 in 10 lived in a 2-bedroom unit and 1 in 10 in a 1-bedroom or studio unit. Large renter households ( 46 percent) were more likely to live in smaller units with two or fewer bedrooms than large owner households ( 90 percent). Fifty-four percent of large renter households occupied a unit with three or more bedrooms, 31 percent a 2-bedroom unit, and 14 percent in a smaller unit (figure 23). These data suggest that some large households are not only unable to find an affordable unit to purchase, they are also unable to find or afford a rental unit large enough to meet their needs.

FIGURE 23
Distribution of Large Renter Households by Unit Size, 2012-16


Source: Urban-Greater DC analysis of the American Community Survey microdata from IPUMS-USA, University of Minnesota, www.ipums.org.
Large renter households were most likely to be living in units with three or more bedrooms in Ward 3 (82 percent) and the least likely in Ward 1 (40 percent). Nearly one in three large renter households in Ward 1 lived in a studio or 1-bedroom unit.

## What is the racial and ethnic composition of large households?

In the District, the heads of large households are more likely to be people of color than the heads of smaller households. In 2012-16, 71 percent of the heads of large households were people of color compared with 57 percent of the heads of smaller households. There are also differences in the racial composition of large households by housing tenure. People of color made up 82 percent of large renter households and only 58 percent of large owner households (figure 24). Blacks made up 52 percent of all large households and were underrepresented among large owner households ( 42 percent). Black heads of household represented a smaller share of large households in 2012-16 (52 percent) than in 2000 (68 percent) and a smaller share of large renter households falling from 70 percent in 2000 to 60 percent in 2012-16. The share of large renter households headed by a white person has doubled since 2000, increasing from 9 percent to 18 percent.

FIGURE 24
Race and Ethnicity of Head of Household for Large Households by Housing Tenure, 2012-16


Source: Urban-Greater DC analysis of the American Community Survey microdata from IPUMS-USA, University of Minnesota, www.ipums.org. Note: The groups combine race and ethnicity and all racial groups reported are non-Hispanic to create mutually exclusive categories.

The distribution of large renter households by race and ethnicity across wards largely follows the overall racial and ethnic composition patterns of those wards, with whites representing a higher share of large renter households in Ward 2 ( 35 percent) and Ward 3 ( 70 percent). Households headed by blacks represented nearly all large renter households in Wards 7 and 8 ( 92 percent). Hispanic headedhouseholds made up roughly 40 percent of large renter households in Wards 1 and 4 and about 32 percent in Ward 2.

## How does the composition by age and relationship vary in large households?

Large households are typically headed by younger householders and are more likely to have three generations living in them. Heads of large households had a median age of 42 and the median number of children in such a household was two in 2012-16. As might be expected, given the costs of entering homeownership, renter households are headed by younger people in general. About 15 percent of large renter households and 20 percent of large owner households have three generations living in them. More than 40 percent of large owner households in Wards 7 and 8 have three generations in them compared with about 20 percent of large renter households in those wards. Fewer large households overall have three generations living in them in 2012-16 (17 percent) than in 2000 ( 26 percent). 201216

Though families make up 91 percent of large households, they are not the only type of household that occupies large units in the District; families must compete with groups of adults for large units. About 10 percent of large households in 2012-16 could be categorized as "non-family group homes" where there were at least three unrelated adults in the household (unmarried partners were considered related for this purpose). About one in three of these large non-family group homes had at least two adult students in the household. Non-family group homes made up a bigger share of large renter households (16 percent) than large owner households (3 percent). Nearly all these large renter households live in areas west of the Anacostia River (figure 25). Rented group homes that include students are most common in Wards 3, making up 32 percent of large renter households and 73 percent of large non-family rented group homes in that ward. Student group homes also made up 10 percent of large renter households in Ward 2.

FIGURE 25
Share of Large Renter Households Considered Non-Family Group Homes by Type, 2012-16
$\square$ At least 2 Students $\quad$ Other non-family


City Ward 1 Ward 2 Ward 3 Ward 4 Ward 5 Ward 6 Ward 7 Ward 8

Source: Urban-Greater DC analysis of the American Community Survey microdata from IPUMS-USA, University of Minnesota, www.ipums.org.
The share of large renter households made up of non-family group homes nearly doubled since 2000. About 9 percent of large renter households were non-family group homes compared with 16 percent of these households in 2012-16. Ward 3 saw little change in this type of household but Wards 1, 2, 5 and 6, all saw more than 10 percentage point increases from 2000 to 2012-16.

## What is the income distribution among large households?

Large households have higher median incomes than smaller households, as might be expected since the median large household has more adults. The income distribution of large and smaller households overall is similar. However, renter households typically have far less income than households that own their own homes. About 36 percent of large renter households had incomes under 30 percent of AMI, equivalent to an annual income of $\$ 32,600$ for a family of four, compared with only 4 percent of large owner households (figure 26). Three in five large owner households had incomes greater than 120 percent of AMI compared to only one in five large renter households.

FIGURE 26
Income distribution as a percent of Area Median Income of Large Households, 2012-16


Source: Urban-Greater DC analysis of the American Community Survey microdata from IPUMS-USA, University of Minnesota, www.ipums.org. Note: The income categories are calculated as defined in the DC Housing Production Trust Fund code.

There are extremely-low-income large renter households in every ward, ranging from only 8 percent in Ward 3 to 55 percent in Wards 7 and 8. About three-quarters of large renter households in Wards 7 and 8 have incomes of less than 50 percent of AMI.

Across the District, in 2012-16 there were more than 11,600 large households who were renting and had incomes below 50 percent of AMI, roughly $\$ 54,000$ for a family of four. These large households were living in every ward in the District, but more than half lived in Wards 7 or 8 (figure 27). As figure 13 in Part 2 showed, it would be challenging for these renters to find homeownership opportunities in the District.

FIGURE 27
Number of Large Renter Households with Incomes Less than 50 Percent of AMI, 2012-16

■ Less than 30\% ■ 30 to 50\%


Source: Urban-Greater DC analysis of the American Community Survey and the ACS microdata from IPUMS-USA, University of Minnesota, www.ipums.org.
Note: All values have been rounded to the nearest hundred. The income categories are calculated as defined in the DC Housing Production Trust Fund code.


## Part 4: How do supply and demand for large units match up?

The previous sections of this report described the numbers and characteristics of large housing units of three or more bedrooms in the District, the affordability of those large units, and the numbers and characteristics of large households of four or more persons who likely need large units. Though part 1 documented that the District has many more large housing units than large households, parts 2 and 3 highlighted some of the affordability and other challenges that large households may face in finding large units that meet their needs.

This section examines the intersection between the District's current supply of large housing units and the housing needs of large households, with an emphasis on large renter households with low incomes. Many large households appear to be adequately housed, but others face severe housing cost burdens and may not have enough living space. Furthermore, household growth will exacerbate these challenges, if the supply of large units is unable to meet expected future demand.

## Are large renter households currently well-served?

Part 3 showed there are large households in every ward in the District and that they are a diverse group, varying by race, age, composition, housing tenure, and income. Many large households have been able to find housing that fits their size and affordability needs. But the stock of large units affordable to households with incomes under $\$ 30,000$ falls short of the demand (table 10). About 6,500 large renter households needed a housing unit that rented for less than $\$ 750$ per month in 2012-16 and there were only 4,000 units that rented at that level. Large households who are renting and have low incomes may face unaffordable housing cost burdens; if they are not in subsidized units or do not have a tenant-based assistance, they may be forced to double-up with friends or other families.

TABLE 10
Large Renter Households by Rent Level Affordable with Household Income in DC, 2012-16

| Rent Level | Minimum Annual <br> Income for Rent to <br> Be Affordable | Households | Percent of <br> Households | Large <br> Rental <br> Units | Percent <br> of Units |
| :--- | ---: | ---: | ---: | ---: | ---: |
| No cash rent |  |  |  | 2,200 | $9 \%$ |
| Gross rent is less than $\$ 500$ | $\$ 0$ to $\$ 20,000$ | 4,100 | $20 \%$ | 2,500 | $10 \%$ |
| Gross rent is $\$ 500$ to $\$ 749$ | $\$ 20,000$ to $\$ 30,000$ | 2,400 | $12 \%$ | 1,500 | $6 \%$ |
| Gross rent is $\$ 750$ to $\$ 999$ | $\$ 30,000$ to $\$ 40,000$ | 1,900 | $9 \%$ | 1,900 | $8 \%$ |
| Gross rent is $\$ 1,000$ to $\$ 1,499$ | $\$ 40,000$ to $\$ 60,000$ | 3,300 | $16 \%$ | 3,800 | $15 \%$ |
| Gross rent is $\$ 1,500$ or higher | $\$ 60,000$ or higher | 8,700 | $43 \%$ | 13,400 | $53 \%$ |
| Total |  | 20,200 | $100 \%$ | 25,500 | $100 \%$ |

Source: Urban-Greater DC analysis of the American Community Survey.
Note: Gross rent is considered affordable if it is less than 30 percent of monthly income. Due to rounding the units may not add to the total.

Large households overall do tend to have slightly lower rates of housing cost burden than smaller households, likely due to the presence of more working adults. However, though large owner
households were less likely to be cost-burdened (18 percent) than small owner households ( 26 percent), in 2012-16, both small and large renter households (47-48 percent) had higher levels of housing cost burden than homeowner households (figure 28). Nearly one in four renter households (large and small) were severely cost-burdened. The level of cost burden for large renter households was similar across Wards 1-6, ranging from 41-47 percent, but increased in Wards 7 and 8 ( $55-56$ percent). There was more variation in which wards had higher shares of large renter households with severe cost burden. The higher proportion of student group homes in Ward 3 may contribute to the higher rates of severe cost burden among large renter households.

FIGURE 28
Share of Large Renter Households Who Were Housing Cost-burdened, DC, 2012-16
Cost burden $\quad$ Severe cost burden


[^20]FIGURE 29
Share of Large Renter Households with Incomes Below 50 Percent of AMI Who Were Housing Cost-burdened, DC, 2012-16


Source: Urban-Greater DC analysis of the American Community Survey microdata from IPUMS-USA, University of Minnesota, www.ipums.org. Note: The income categories are calculated as defined in the DC Housing Production Trust Fund code.

Not only were large renter households more likely to be cost-burdened, they were also more likely to live in units with more people per room. Some large households may choose to live with a higher ratio of people per room to save money or for other social and familial benefits. Others may desire to live in a large unit but cannot afford to do so. The data used in this assessment do not distinguish which is the case. The US Census Bureau uses a standard of more than one person per room to indicate households who may be under-housed or often referred to as "overcrowded." This issue is important to look at because living in crowded housing environments may have negative consequences for children, including poor academic achievement, worse health, and behavioral problems that may affect their opportunities later in life (Solari and Mare 2012).

About 17 percent of all large households were living in units with more than one person per room, compared with only 1 percent of small households in 2012-16. ${ }^{25}$ Large renter households had much higher rates of potential under-housing (27 percent) compared with large owner households (4 percent). Ward 1 had the highest share of large renter households who may have been under-housed, reflecting the high demand for units in this central location. Ward 1 also had the second fewest number of large housing units (figure 30). Ward 4, where only 14 percent of the large units are renter-occupied, also had higher rates of potential under-housing. The income group for large renter households with the highest rate of potential under-housing ( 41 percent) was that with incomes between 30 and 50 percent of AMI. These households may be able to obtain housing with unit-based subsidies but are unlikely to receive tenant-based housing vouchers that would require large units for large households because of the extremely long waiting list for such vouchers.

[^21]FIGURE 30
Share of Large Renter Households Living in Units with More than One Person per Room, 2012-16


Source: Urban-Greater DC analysis of the American Community Survey microdata from IPUMS-USA, University of Minnesota, www.ipums.org.
Large renter households face competition for large units from smaller households, in addition to other large households. Thirty-three percent of renter households with three or fewer people were living in at least 2-bedroom units and could be categorized as over-housed, with one person or less per bedroom in the unit, compared with only 14 percent of large renter households in 2012-16. Being over-housed was more common for owner households. Seventy-nine percent of smaller owner households lived in at least a 2-bedroom unit and were over-housed, as were 36 percent of large owner households.

Households receiving housing subsidies, such as those using Housing Choice Vouchers, need to follow the DCHA's regulations about the appropriate size unit for a household, which may further constrain their housing choices. This regulation specifies unit-size standards based on the age and gender composition of the household. ${ }^{26}$ Applying these standards to all large renter households, only about one-quarter were in an appropriately-sized unit for the number, gender, and age of the occupants (figure 31). More than half of large renter households were under-housed according to DCHA standards, living in units that did not have a sufficient number of bedrooms. One in five large households were over-housed, living in units that had more bedrooms than they needed. Wards 7 and 8 had the highest shares of large renter households who were appropriately housed (32-33 percent). Wards 1 (65 percent) and 8 ( 61 percent) have the highest proportion of large renter households who were under-housed. Ward 3 stands out for having the lowest share of households who are under-housed and the highest share who are over-housed.

[^22]FIGURE 31
Appropriateness of Unit Size for Composition of Large Renter Households, 2012-16
Under-housed $\square$ Appropriately-housed $\square$ Over-housed


Source: Urban-Greater DC analysis of the American Community Survey microdata from IPUMS-USA, University of Minnesota, www.ipums.org.
Note: Assumptions about capacity of the unit are based on the composition of the households and the regulations applied by the DCHA.

## What is the anticipated growth in households?

The above discussion points out several ways in which large households may face competition for large units, such that they may not be able to obtain appropriate housing for their needs. Increasing the supply of large units, as well diversifying the locations where large housing units can be found, ensuring a mix of renter- and owner-occupied large units, and encouraging a mix of property types, can help alleviate some of this current competitive stress.

In addition, the District must anticipate future need for large units in its planning and housing policies. The District is still growing. The latest forecasts from the DC Office of Planning (2016) anticipate that the District may reach 987,000 people and 412,000 households by 2045.

The Office of Planning forecasts the total number of households in the District through 2045, but does not break down that forecast into households of specific sizes. Nevertheless, Office of Planning's forecasts do anticipate that the District's average household size will continue to increase, from 2.13 persons per household in 2020 to 2.27 by 2045. Though it is not possible to be certain, figure 31 uses the Office of Planning forecasts to estimate the numbers of large households of four or more persons based on two different scenarios. The first scenario assumes that the annual growth rates for large households are the same as those forecast by Office of Planning for all households. The second assumes that the share of large households remains a constant share of the forecasted number of all households (about 14 percent).

FIGURE 32
Forecasted Number of Large Households, DC, 2020-2045


Source: Urban-Greater DC estimates based on DC Office of Planning household forecasts (2016).
Note: Matched growth rate assumes large households grow at same annual rate as all households, as forecast by Office of Planning. Constant percentage assumes that large households remain a fixed percentage of the forecasted number of all households.

Based on these two scenarios, the total number of large households in the District may reach between 53,000 and 57,800 by 2045 . These scenarios represent an additional 14,000 to 19,000 more large households than the current population. Furthermore, as has been noted in this report, the competition for large units means that the District would likely need to add more than this number of large units to adequately house new large households.

## Is the current supply of large units adequate?

Part 1 of this study cited data showing that the District has a substantial supply of large units, and that those units are found in all areas of the District. Nevertheless, this study also documented that large units are often not occupied by large households. In addition to the supply of large units, several other factors affect the ability of large households to access those units.

- Smaller households may prefer large units. Smaller households, including singles and two-person households, may prefer to live in large housing units for a variety of reasons (more space, greater privacy, access to better neighborhoods, and so on). Previously large households may also continue to occupy large units especially if they are owned, even after children have formed their own households. If smaller households also have high incomes, they can effectively compete against large households, many of whom have lower incomes, for those units.
- Most of the large-unit stock is single-family houses and the supply of affordable single-family houses is limited. Single-family houses are the most prevalent form of large housing units. Per housing unit, single-family houses often take up more land area than multifamily properties,
which can increase the expense of those units. As noted in this report, very few single-family houses for sale are affordable to buyers with lower incomes.
- The choice of neighborhoods for affordable large units is constrained. Though large units are located throughout the District, affordability varies widely based on location. Affordable housing is quite limited or nonexistent certain in parts of the District, and those options are shrinking.
- There is demand for large rental units in every ward. Despite the above, the data show that large households live throughout the District. To maintain a diversity of households, both large and smaller housing units are needed in every part of the District.
- Families face competition from groups of adults, who may have higher combined incomes. A common strategy for single adults in the District is to cohabitate to share housing costs among several people. Groups of unrelated adults can be competing with families for large units. Furthermore, if all adults are working, they may have higher total income than a family with one or two wage-earners.
- The supply of rental and for-sale housing affordable for families making less than 30 percent and 50 percent of AMI falls far short of the need. To foster and maintain a diverse community of mixed-income families, more large subsidized units at these affordability levels would need to be distributed equitably across the District, particularly in neighborhoods west of the Anacostia River.



## Part 5: Market dynamics and policies affecting creation and preservation of large-units

As part of the study process, CNHED and Urban Institute interviewed 20 practitioners in the affordable housing field to obtain their perceptions of the market dynamics and policies affecting the preservation and creation of large units with three or more bedrooms in multifamily rental properties in the District. Interviewees included senior leadership from nonprofit and for-profit affordable housing developers, architects, and general contractors.

CNHED and Urban Institute conducted the interviews with practitioners in the multifamily affordable rental housing market, because their segment of the market is the focus of government efforts to preserve and create affordable housing for households with incomes below 50 percent of AMI. Although, as noted earlier, the greatest number of large units in the District are in single-family houses, townhouses, and condominiums, these types of units are rarely, if ever, developed with the intent of being rented to households with incomes below 50 percent of AMI. Further, these types of housing do not usually receive government subsidies for the development or preservation of the units for long-term affordability. ${ }^{27}$ Though owners of such properties may rent to households with incomes below 30 percent of percent of AMI who have a tenant-based subsidy or, in lower cost areas of the District, to households with incomes between 30 and 50 percent of percent of AMI, there is neither a guarantee that these units will continue to serve these populations as tenants move nor can government agencies plan reliably for their contribution to an overall affordable housing strategy.

## What are the perceptions of the market for large units in multifamily rental properties?

Interviewees unanimously noted that the greatest perceived need for large, three-or-more-bedroom units is in the 0 to 30 percent and 31 to 50 percent of AMI income bands. As this study has shown, tenants in these income bands have the fewest choices of where to live.

For tenants in the 0 to 30 percent of AMI band, the DCHA's rightsizing requirements mean that they must find units with the appropriate number of bedrooms that fit government standards for the age and gender distribution of their families. ${ }^{28}$ As Part 2 demonstrated, only a small share of the District's rental stock is affordable to families in this income range. Units for these tenants are largely limited to those that have unit-based subsidies, such as public housing, Section 8, or the District's LRSP or to private units that rent to families with Section 8, LRSP, or other types of tenant-based vouchers. Section 8 and LRSP occupancy standards do prevent under-housing at lease up, not all landlords monitor for under-housing in the following years of a tenancy.

Interviewees observed that many families with income in the 31 to 50 percent of AMI bracket live in under-housed conditions in unsubsidized, usually rent-controlled properties in order to have housing

[^23]within their budget. Interviewees noted that they generally made these observations when in the process of acquiring an existing property and taking stock of the occupancy situation and needs of current tenants. Households at 31 to 50 percent of AMI also are eligible to lease units in properties subsidized by the LIHTC and IZ programs. Properties with LIHTC and IZ units have occupancy requirements, but, as with other subsidy programs, they are not always enforced as carefully after leasing up.

Interviewees unanimously noted a perceived decline in demand for three-or-more-bedroom units in the 51 to 80 percent of AMI income band. They attributed this declining demand to households in these income bands having a greater number of choices for types of housing and where to live. Data on property sale prices indicate there may not be as much choice as perceived by the interviewees, there are few homeownership opportunities in the District for families in this income band. Households below 60 percent of AMI are eligible to lease units in properties with LIHTC and IZ units at that income level. Assistance from District government programs such as the Home Purchase Assistance Program (HPAP) and the Employer Assisted Housing Program (EAHP) may increase the ability for some households below 60 percent of AMI to afford to purchase a single-family house, townhouse, or condominium in certain parts of the District. ${ }^{29}$ They also may be able to find more affordable rental or ownership opportunities in the surrounding suburbs of Maryland and Virginia.

Interviewees perceived that demand for large units for households with incomes above 80 percent of AMI seemed the lowest, though all noted that they had little direct experience in developing or providing housing for this demographic. Households in this income band have the greatest number of choices. They can afford market rate rental units and could have the option to purchase a single-family house, townhouse, or condominium through HPAP (households with incomes below 110 percent of AMI), EAHP, or conventional means, depending on their income.

## What are the perceptions of the multifamily rental housing industry on the economic viability of preserving or creating large units?

There was consensus among interviewees that for-profit, market-rate developers have little economic incentive to preserve or create three-or-more-bedroom units. As the number of bedrooms in a unit increases, the rent per square foot that the market will bear declines. Therefore, a building with many small units will have a greater net operating income (NOI) than a building of the same size with large units. The lower rental revenue potential for large units, along with the high cost of land in the District, incents market rate developers to preserve and create smaller units to maximize net income.

On the other hand, nonprofit and for-profit, mission-driven developers view the preservation or creation of large units for tenants with incomes in the below 30 percent and 31 to 50 percent of AMI bands as an important purpose of their organizations. These developers rarely, if ever, consider breaking up large units during renovations of properties. They view the lower rent per square foot issue as a problem to overcome using government subsidies and many layers of funding. However, the rent per square foot issue limits how many large units they can create through merging smaller units or creating new ones.

[^24]Some interviewees noted that operating costs (maintenance and cost to turn over the unit) are higher for large units, because households who rent them tend to have children. They also noted the perception in the market that some housing providers prefer not to rent to families with children both because of the potential increased operating costs and because of a desire to avoid increased nuisance complaints from other tenants. Although it is illegal in the United States to discriminate in leasing to a family with children, some housing providers may prefer not to rent to families or create units that families would want to rent because of the belief that operating costs or complaints from tenants will rise. The Fair Housing Act of 1968 did not treat families with children as a protected class, allowing housing providers to continue the decades-long practice of refusing to rent to them, charging them extra rent or security deposit for children, or evicting them. Acceptance of these practices began to change in 1980, when HUD ordered a nationwide study of housing discrimination against families and found that only 25 percent of rental units were available without restrictions to families (Colten and Marans 1982). Eight years later, the passage of the Fair Housing Act Amendments Act of 1988 made it illegal in the United States to discriminate against families with children (Allen 1995). However, decades later most Americans still do not know that it is illegal to treat households with children differently than those without, and housing discrimination against families continues (Oliveri 2008; Abravanel and Cunningham 2002). Additionally, nuisance complaints from neighbors to housing providers and police increase with the presence of children and can lead to the devastating impacts of eviction (Desmond 2016; Desmond 2013).

Some affordable housing developers who serve families with children seek to better deal with the possibility of higher operating costs and concerned neighbors by preferring to operate large units on the ground floor of garden-style apartments or on the lower floors of mid-rise structures and to provide better access to outdoor play areas to limit the impact of noise from playing children on other tenants. One interviewee noted, as an example, a development in the District that is producing large units solely on the ground floor and providing direct access to a walled-off yard to facilitate play areas for children in the households. Another interviewee noted that despite perceptions that developers need to produce a stack of the same-sized units in a building, it is not difficult to shift plumbing to enable different-sized units on the ground floor in new construction or substantial rehabilitation.

Several interviewees noted that lending institutions, market analysts, and government analysts may have biases about the demand for and viability of large units in a project that may result in the denial of funding to projects that hope to create large units or to requirements to scale back the number of such units to receive funds or a favorable market analysis. These preconceptions may hamper a thorough analysis of the market demand for large units and underestimate the ability of housing providers to find tenants for them.

Multiple interviewees noted that the small number of large units in the District's rental housing stock was not a recent phenomenon. Based on decades of experience with the District's rental housing stock, these interviewees noted that studios and one- and two-bedroom units were common in multifamily rental housing constructed in the District throughout the twentieth century. These unit sizes catered to individuals and new families that came to work for the federal government and in prominent industries during the Depression-era expansion, Word War II, and the post-World War II economic expansion. One interviewee remembered seeing advertisements in decades-old newspapers advertising smaller units to businessmen who lived in the District during the week and commuted home to their suburban homes on the weekends.

During the twentieth century, multifamily rental buildings with three-or-more-bedroom units tended to be in two types of rental properties: pre-World War II buildings that catered to the wealthy, some of which included servants' quarters, and federally subsidized housing for households with incomes below 30 percent of AMI, where the rightsizing required by regulations necessitated large units. Some of the losses of large units have occurred as properties in these two categories have been demolished or developers have carved up large units into smaller ones. Earlier in the twentieth century, the demand for large ownership units closer to downtown was met by large numbers of rowhouses. When developers preserve existing housing units without modification, they effectively are preserving the District's past social needs and unit distribution preferences.

## What factors affect willingness and ability to preserve or create large units?

Nonprofit and for-profit affordable housing developers noted that they usually preserve large units in existing buildings for three main reasons: 1) their mission to provide affordable housing to households with incomes below 50 percent of AMI, including families; 2 ) it is cost prohibitive to divide up large units into smaller ones or merge smaller units into larger ones in existing properties that serve households below 80 percent of AMI ; and 3) the legal and logistical requirements for dealing with occupied buildings. One interviewee noted that the cost of acquisition has become so high in the District that developers find the cost of gut rehabilitation to reconfigure units to be cost prohibitive.

Aside from their mission to serve families, some developers noted the stability that families in three-or-more-bedroom units bring to a property. Families appropriately sized in smaller units tend to be newer families, which are likely to move to a larger unit when their families grow. Families in large units tend to be more established and will have more room to grow while staying in place. Given the dearth of affordable large units, families in these units also are more likely to stay in place for longer periods.

Existing buildings usually are occupied; therefore, the District's strong tenant protections make it difficult to reconfigure unit sizes without the voluntary collaboration of existing tenants. Due to the substantial rehabilitation involved, developers seeking to break up or merge existing units in inhabited buildings need the agreement and cooperation of individual households and the Tenants Association, if the Tenants Association is exercising its Tenant Opportunity to Purchase Act (TOPA) rights during the sale of a property. Effected households would need to move to facilitate the merging of occupied units.

All interviewees noted that the creation of units with three or more bedrooms through merging units or creating them in new buildings for households with incomes below 50 percent of AMI would require federal and/or local subsidies to make the financing work. Further, they noted that the slightly lower initial construction costs of building a smaller number of large units compared with a higher number of smaller units in the same building envelope would be quickly outweighed by the loss in rent per square foot that would be generated. In existing structures, the merging of smaller into larger units requires subsidy not only for the extra construction costs but also to cover the rent per square foot lost by reducing the total number of units. The creation of new units devoted to households below 30 percent of AMI almost exclusively occurs through the District's Local Rent Supplement Program. Though, one recent project created new units affordable for incomes below 30 percent of AMI through HUD's Section 8(bb) transfer, which enabled the transfer of a Section 8 contract from a property outside the District to one inside. For the 31 to 50 percent of AMI income band, new units are most often created through the

LIHTC and IZ programs, which occasionally produce rental units affordable to households with incomes up to 50 percent of AMI.

How important is the Tenant Opportunity to Purchase Act to preserving affordable large units?
In describing their work with preserving or creating large units in existing buildings, all interviewees mentioned the key role played by TOPA, which provides Tenants Associations with the first right of refusal when the properties they reside in are for sale. In order to exercise their TOPA rights, the tenants of a property must form and incorporate a Tenants Association with the DHCD's Rental Conversion and Sales Division. If they do so, then they have the right to purchase the property under the terms of sale the owner has negotiated with a third-party purchaser or under a bona fide offer of sale from the owner, if no third party exists.

Nearly all Tenants Associations who register for their TOPA rights do so with technical assistance from community-based organizations (CBOs) funded by the DHCD. The CBOs assist tenants in forming and incorporating Tenants Associations and registering for their rights under TOPA. The CBOs then help to guide Tenants Associations through the full TOPA process: engaging an attorney, researching development options, selecting a development partner, negotiating a development agreement, obtaining financing, and completing the sale.

The DHCD's funding for CBOs to provide TOPA technical assistance enables tenants to compete successfully in the market to acquire properties and to make collective decisions about the ongoing affordability and unit-size distribution of the property. Affordable housing developers would have much greater difficulty competing with market rate developers without the ability of Tenants Associations to exercise their TOPA rights and choose them as development partners. The preference of Tenants Associations to maintain or to deepen the affordability of units at their properties and to maintain or create large units are often deciding factors in their choice to partner with affordable housing developers. Without the ability of tenants to make these choices, affordable housing developers seeking to serve households below 50 percent of AMI, who often need several layers of financing and government subsidies to complete the acquisition of a property and operate it, would acquire far fewer properties in the District's highly competitive real estate market.

## Part 6: Recommendations

The District has a substantial supply of large housing units, and there is demand for large rental units in every ward. However, the supply of rental and for-sale housing affordable for families making less than 50 percent of AMI falls far short of the need and the choice of neighborhoods for affordable large units is limited. Though growth in the supply of large units exceeds growth in large households, many factors put large units out of reach for many families.

During the interviews that CNHED and Urban Institute conducted with practitioners in the affordable housing field, we explored several possible incentives or interventions that could increase their motivations and ability to preserve and create large units in multifamily rental properties in the District.

## Establish a target number of affordable family-sized to produce and preserve by 2025

To accommodate a diverse and growing population, the Mayor has announced a goal to produce 36,000 new units in the District by 2025. In the process of planning for the development and distribution of those units, the District should consider the supply of family-sized units and establish a sub-goal for the number of affordable large units to produce and preserve by 2025.

The findings of this study indicate that large households at the low end of the income spectrum are frequently severely housing cost-burdened and under-housed. Cognizant of the data provided in this study, the District should develop an ambitious target number of housing units to provide large units for extremely-low-income large households by 2025. This target should be integrated into the District-wide planning for achieving the goal of 36,000 units.

There are approximately 6,500 large household renters that can afford rent of no more than $\$ 750 /$ month, and there are only about 4,000 units that rent at that level: a deficit of about 2,500 units. Of the approximately 11,600 very-low and extremely-low-income large renter households in the District ( $0-50$ percent of AMI), about 8,700 of these households are housing cost-burdened and over one third are under-housed.

## Plan for the future

Establish a plan to close the housing gap for the existing and future extremely-low- and very-low-income large households in the District. By 2045, the District is expected to gain between 14,000-19,000 additional large households. There will include between 4,000-5,700 additional large households below 50 percent of AMI in the District by 2045, most of whom will likely be below 30 percent of AMI. These households will also need deeply subsidized family-sized units.

There are opportunities to incorporate plans for the preservation and creation of affordable large units in the Consolidated Plan for the District of Columbia and Annual Action Plans. DHCD should include plans for dealing with the dearth of large units for large households with incomes below 50 percent of AMI in its next Annual Action Plan and in the next District of Columbia Consolidated Plan.

## Distribute affordable large units across the District

Large units affordable to extremely-low and very-low-income large households are geographically concentrated in neighborhoods east of the Anacostia River. The District should strive to distribute affordable large units across all wards as part of its Affirmatively Furthering Fair Housing strategy. The target number of affordable family-sized units should be informed by: (1) the need determined in this study; (2) the following recommendations that would incent greater large unit production and preservation; and (3) a cost analysis of the production and preservation of deeply affordable familysized units

## When providing subsidies, equalize rent per square foot rates for large units with those of smaller units

Interviewees unanimously noted that lower rent per square foot received for units with three or more bedrooms, as compared to studios and one- and two-bedroom units, was the greatest impediment to preserving or creating large units. All interviewees responded positively to the possibility of the District government or the DCHA providing subsidies to equalize the rent per square foot for large units with those of smaller units. Providing subsidies to equalize the rent paid per square foot could be achieved by increasing housing subsidy contract or voucher reimbursement rates to reflect this ratio or through the provision of new unit- or tenant-based subsidies.

## Expand rental subsidies for extremely-low-income large households

Preserving and producing affordable large units without reducing the overall production of affordable housing would require an increase in subsidies, likely through the HPTF. This study demonstrates that many extremely-low-income large families can only afford housing affordable at levels less than $\$ 750 /$ month, and some can afford no more than $\$ 500 /$ month. Reaching these families would require additional funding for the LRSP for tenant- and project-based subsidies.

## Expand zoning incentives to encourage the development of large units

During the interviews, CNHED and Urban Institute explored a wide range of possible zoning changes to incent the preservation or creation of large units. Although interviewees offered possible zoning incentives and responded with interest to a variety of others, there was no clear consensus among them as to which might provide the desired results. However, there was consensus among interviewees and the research team that changes to the District's zoning regulations requiring the creation of large units in exchange for the ability to access density bonuses for multifamily rental properties are worth further study. Three possible avenues to explore are the District's IZ program, the community benefits provided by a Planned Unit Development (PUD), and exceptions or changes to Floor Area Ratio (FAR) restrictions. ${ }^{30}$

[^25]- IZ: The District could alter its IZ program to provide incentives for or to require the creation of a certain percentage of affordable large units in participating developments.
- PUD: When developers request a change in zoning to increase the density on a parcel of land, they must submit a Planned Unit Development application to the District's Zoning Commission. In exchange for this zoning change, the developers are required to provide community benefits. As part of the revision to its Comprehensive Plan, currently under way, the District should explore making affordable housing, including large units, a primary community benefit for all residential PUD applications.
- FAR: The bottom level of a property where the distance from the grade to the floor above it is four feet or less, does not count toward the FAR restriction. ${ }^{31}$ The District could provide incentives for developers of multifamily properties that fit this description to create large units on this level.


## Reconcile conflicting incentives in the Consolidated RFP metrics

All interviewees noted that improved RFP metrics for large units could help to encourage their preservation and creation efforts, whether through increased points for units with three or more bedrooms or through altering other metrics that penalize projects for having large units. Some interviewees noted that it would help to have a sliding scale of additional points for all large units preserved or created by a project. Currently, projects need a threshold of 10 percent large units to qualify for increased points and do not receive what they consider a significant boost in points until they reach a threshold of 20 percent large units. Many preservation projects with large units do not have enough of them to qualify for extra RFP points, so it would help these projects to have a sliding scale.

Some interviewees noted that the increased points received by projects with the 10 percent or 20 percent large units were offset by point reductions received due to calculations affected by the inclusion of units with three or more bedrooms. A project could gain points for its number of large units but lose points on metrics related to per unit cost increases for land, construction, and lawyer and architect fees. Because the DHCD looks at efficiency, as well as subsidy and subsidy leveraging per unit, the project would score less well on both fronts. For example, the metrics for senior housing with studios and onebedroom units are better because they receive bonus points for serving seniors and smaller units provide a better per unit cost and per unit subsidy, while the points bonus received by another project for large units could be canceled out by points lost due to cost and benefit per unit calculations. Such unintended consequences could be eliminated or mitigated by more careful vetting of the interaction of RFP metrics. The metrics also should consider the impact of children on higher operating costs of large units when evaluating projects and balance that with the goal of housing families.

[^26]
## Provide greater operating income to buildings with large units by altering utility allowances

The DCHA should consider altering utility allowances for the housing subsidies they oversee to differentiate between energy-efficient and non-energy-efficient buildings. The utility savings provided by energy-efficient buildings could be used for greater operating income or to increase the amount of supportable debt to reduce the gap financing need. The shift of available money from utility allowances to operating income or debt could provide additional operating subsidies or capital for large units, which would have a higher utility cost delta.

## Preserve existing supply by increasing tenants' ability to exercise their TOPA rights

Given the important function that TOPA plays in preserving affordability and large units, the District government should resist any efforts to weaken the law or tenants' ability to exercise its provisions. ${ }^{32}$ For example, CBOs play a key role in providing TOPA technical assistance to Tenants Associations; therefore, it is essential that the District maintain or increase its funding for the provision of these services. In FY2017 and FY2018, the District government increased funding for CBOs to provide TOPA technical assistance. However, the District's FY19 budget cut these services by 36 percent. As a result, the CBOs providing TOPA technical assistance will likely have to cut their staffing, which will directly affect the number of tenant groups that will be able to register for and exercise their TOPA rights, and the number of affordable units that could have been preserved through their exercise. To maintain or improve the level of positive TOPA preservation outcomes, the District should consider reversing this budget cut and restore or increase funding for TOPA technical assistance.

## Encourage HUD to fund Section 8 Vouchers

The District should leverage federally-facing platforms to call on HUD to increase funding for Section 8 vouchers. The federal government plays a significant role in providing housing for extremely-low-income large households. It is important that HUD provide adequate funding to maintain public large units, as well as fund housing vouchers so that a greater number of large extremely-low-income families can afford adequate housing.

## Conduct a cost analysis

The District should conduct a cost analysis to determine an appropriate portfolio of incentives that will enable the production of affordable large units. This cost analysis should influence of the target number of affordable large units to produce and preserve by 2025. The analysis will inform the extent to which tools such as Planned Unit Developments, Inclusionary Zoning, Tax Increment Financing, or subsidies

[^27]would need to be expanded to incent the development of affordable large units without reducing the overall rate of affordable housing production.

As noted by interviewees, buildings with large units are more expensive than buildings with small units. This is largely because the rent per square foot in a building with small units is higher than in a building with large units. More small units can fit in a building than large units, so the rental income for buildings with small units is significantly greater. Therefore, projects with large units have significantly greater net operating expenses, so projects with small units are often more viable than those with large units. Since large units are less likely to be developed, it is important that the District set a large-unit production target and provide tools that will enable developers to create units that large low-income families need. The comparatively high cost of producing new affordable large units also underscores the importance of preserving the existing stock of affordable large units.

## Measure progress by improving tracking of large unit development

To facilitate ongoing evaluations of the numbers of large units available to residents, the District government should prioritize the gathering of bedroom size data, in addition to other data gathered for rental and ownership units. Below are three specific recommendations.

- RFP-funded projects: The publicly available data on projects funded through the RFP does not contain bedroom sizes for units. The District government should make data on bedroom sizes for each unit that has received funding through the RFP publicly available in a machine-readable format.
- Rent control database: In the FY 2016 Budget Support Act of 2015, the Council of the District of Columbia mandated the creation of a user-friendly, internet-accessible, searchable database for the submission, management, and review of all documents and relevant data that compliance with rent control requires housing providers to submit to the Rental Accommodations Division (RAD) of the DHCD. In the FY 2019 Budget Support Act of 2018, the Council funded the full rent control database project, and included a requirement that all rental housing providers reregister their properties with the Rent Administrator of the DHCD. These two requirements are intertwined and, when completed, will provide the bedroom size for each residential rental property built in 1975 or earlier. As administrative data on unit sizes of multifamily rental properties is limited to a handful of subsidy programs, the District government should ensure that these efforts are completed expeditiously.
- DCHA properties: Bedroom sizes for units in some DHCA-owned properties are publicly available through its website and HUD. The DCHA should make data on bedroom sizes for all its units by development publicly available in a machine-readable format.


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[^0]:    ${ }^{1}$ Over the past few years, tenant groups have brought lawsuits regarding the preservation and creation of large units against developers and the District government in the context of plans to redevelop affordable housing into mixed-use, mixed-income developments. They point to the failed right-to-return promises of the urban renewal projects in the 1950s and 1960s that cleared black residents from the District's Southwest quadrant and the long and ongoing displacement of the residents of Temple Courts, which is a part of the District's New Communities initiative. At Brookland Manor, tenants filed a class action lawsuit in August 2016 against the property owner alleging discrimination based on familial status, because the owner intends to redevelop the property with fewer large units. In May 2018, the Brookland Manor/Brentwood Village Resident Association appealed the Zoning Commission's approval of the owner's Planned Unit Development, citing the reduction in large units and significant displacement pressures on current residents. At Barry Farm, also part of the New Communities initiative, tenants have protested the planned loss of total affordable units and large units, as well as the required relocation of residents during redevelopment. In April 2018, the DC Court of Appeals vacated the Zoning Commission's approval of the Barry Farm redevelopment plan in an appeal filed by the Barry Farm Tenants and Allies Association and sent it back for reconsideration, citing the loss of affordable units, inadequate plans for relocation, the loss of amenities for families, and other issues.

[^1]:    ${ }^{2}$ Large units do not include dormitories, nursing homes, and other institutional and non-institutional living quarters that are not separate housing units.
    ${ }^{3}$ Survey estimates, such as those from the ACS, have margins of error associated with them because the data are based on a statistical sample. The margins of error are not reported in this assessment, but to convey that there is uncertainty, all estimates of counts from the American Community Survey have been rounded to the nearest onehundred. Percentages from the ACS are calculated from the un-rounded estimates and reported as rounded to the nearest integer. Data from administrative sources, like the District's Office of Tax and Revenue do not have sampling error and values with greater precision are reported.

[^2]:    Source: Urban-Greater DC analysis of the American Community Survey.

[^3]:    ${ }^{4}$ Changes in the size and composition of the housing stock are due to the production of new units, renovations to existing units, and the loss or demolition of housing units. The data available allow us to estimate net changes, but do not allow us to parse out the individual components of this change.

[^4]:    Source: Urban-Greater DC analysis of the Neighborhood Change Database and the American Community Survey.

[^5]:    ${ }^{5}$ See the growth forecast from 2015 at "DC Forecasts," District of Columbia Office of Planning, accessed September 21, 2018, https://planning.dc.gov/publication/dc-forecasts.
    ${ }^{6}$ Additionally, the population includes persons who live in group quarters, such as college dormitories, nursing homes, and other institutional and non-institutional settings that are not considered to be separate housing units. The Census Bureau does not count persons living in group quarters in the household population.
    ${ }^{7}$ The number of households depends not only on the District's population but also on factors that affect household formation, that is, the decision people make to live together as a separate entity. Factors affecting household formation include demographic conditions, such as the age of the population, as well as the supply and cost of available housing suitable for particular types of households.

[^6]:    ${ }^{8}$ The District had homeownership rates in 2012-16 comparable to other large cities, such as Boston ( 35 percent) San Francisco ( 37 percent), Atlanta ( 43 percent) and Seattle ( 46 percent). Data for these comparison cities are from Table DP04 from the 2012-16 American Community Survey, available via US Census Bureau's American FactFinder at https://factfinder.census.gov/faces/nav/jsf/pages/community facts.xhtml.

[^7]:    ${ }^{9}$ Any unit classified with the use code "Residential-Condo-Horizontal," "Residential-Condo-Vertical," "Condo-Investment-Horizontal," "Condo-Investment-Vertical," "Condo-Horizontal-Combined," or "Condo-VerticalCombined" by the DC Office of Tax and Revenue, regardless of structure type, is a condominium for the purposes of this report.

[^8]:    ${ }^{10}$ Real property data are current as of the second quarter of 2018. The data sources do not permit us to track changes in large units in multifamily rental or cooperative properties over time.

[^9]:    ${ }^{11}$ The US Department of Housing and Urban Development uses annual income limits based on AMI to define eligibility for housing assistance programs. For the District, the AMI is the median family income for all families in the Washington, DC metropolitan area and is calculated based on data from the American Community Survey. Most housing assistance programs only serve households with incomes below 80 percent of AMI. See https://www.huduser.gov/portal/datasets/il.html for more information.
    ${ }^{12}$ Governing. "Family Housing Affordability in U.S. Cities." November, 2015, accessed on September 22, 2018, http://www.governing.com/gov-data/other/family-housing-affordability-in-cities-report.html. The study from Governing uses HUD's definition of area median income with references to the median family income for the Washington, DC metropolitan area.

[^10]:    ${ }^{13}$ Eighty percent of AMI based on DC HPTF code was $\$ 88,240$ for a family of four in 2017 . Fifty percent of AMI was $\$ 55,150$. Information on wage levels of occupations comes from the US Bureau of Labor Statistics Occupational Employment Statistics for the Washington, DC metropolitan area.

[^11]:    ${ }^{14}$ Gross rent, which includes utility costs, is considered affordable if it is less than 30 percent of a household's monthly income.

[^12]:    ${ }^{15}$ Subsidized units discussed in this section are not in addition to the rental units with affordable rents described above; they represent a subset of the total affordable rental stock.

[^13]:    ${ }^{16}$ There is some overlap in the units subsidized by these three programs. Five hundred sixty-five large units have both Multifamily Section 8 and LIHTC subsidies, and there are 23 properties, with unknown unit size, that have public housing and LIHTC subsidies, and 3 properties with all three subsidy programs.

[^14]:    ${ }^{17}$ See for example the regulations for voucher holders:
    https://dcregs.dc.gov/Common/DCMR/SectionList.aspx?SectionNumber=14-5205

[^15]:    ${ }^{18}$ The number and distribution of inclusionary units depends on the construction type and density of the inclusionary development, as well as the zoning district where the development is located.

[^16]:    ${ }^{19}$ Kijikazi, et al. (2016) provides an extensive history of the deliberately constructed barriers that prevented the accumulation of property and wealth for black residents in the District. Rothstein (2017) provides evidence that institutional and structural racism created segregated communities across the United States. See also Dawkins (2004) and Pietila (2010).
    ${ }^{20}$ Based on the authors' calculations of data on 2016 assessed value available from the District's Office of Tax and Revenue. Majority black or white neighborhoods were defined as census tracts with at least 75 percent of population represent by the group.

[^17]:    ${ }^{21}$ Additionally, under the Fair Housing Act Amendments Act of 1988, families with children are protected from discrimination in renting, buying, or seeking financing for housing.
    ${ }^{22}$ The FY2016-FY2020 District of Columbia Consolidated Plan states: "New affordable housing developments located in identified high-opportunity neighborhoods will receive preference points through the city's competitive application process. DHCD seeks to create affordable housing that integrates neighborhoods racially, ethnically, and economically and diversifies the District's affordable housing supply to include higher opportunity neighborhoods and Wards. These preference points will provide a counterbalance to the implicit incentive for developers to build affordable housing in low-cost and high-poverty neighborhoods. In lower opportunity areas, DHCD is committed to nonhousing investments that increase the desirability of distressed neighborhoods through increasing community amenities, public investments, and economic opportunities." (pp. 142-143).

[^18]:    ${ }^{23}$ Census.gov Glossary. "Family household." US Census Bureau, accessed September 21, 2018, https://www.census.gov/glossary/\#term Familyhousehold.

[^19]:    ${ }^{24}$ These statistics for large households by structure type, and many others in this section, are from the ACS publicuse microdata. ACS and Census public use microdata have limited geographic identifiers. The smallest geographic unit available for these data are public use microdata areas (PUMAs). The District is divided into five PUMAs, whose boundaries do not align with wards or other common geographic areas. To be able to report summary statistics by ward from the microdata, we created weights that distribute observations based on the proportion of housing units of different bedroom sizes within a PUMA that fall within each ward. We used a census block-PUMA crosswalk file obtained from MABLE/Geocorr, a tool provided by the Missouri Census Data Center, to apportion 2010 block-level housing unit counts by ward and PUMA. The block-level housing counts were further distributed by bedroom size using 2012-16 ACS block-group-level summary tabulations. Microdata observations were then replicated and reweighted based on the estimated proportion of the PUMA's housing units of the same bedroom size in the respective wards. Weights were scaled so that the total number of observations remained unchanged from the original Census-provided weights.

[^20]:    Source: Urban-Greater DC analysis of the American Community Survey microdata from IPUMS-USA, University of Minnesota, www.ipums.org. Note: The income categories are calculated as defined in the DC Housing Production Trust Fund code.

    As is true for all households with lower incomes, large renter households with lower incomes have higher rates of housing cost burden. Three-quarters (of large renter households with incomes below 50 percent of AMI are cost-burdened, with higher rates for households with incomes of below 30 percent of AMI ( 81 percent) (figure 29). Figure 29 also shows that there is unmet need for more affordable large units across the District, particularly in Wards 3 and 4 where few large renter households with incomes below 30 percent of AMI can live without being housing cost-burdened.

[^21]:    ${ }^{25}$ See Blake, Kellerson, and Simic 2007 for a discussion of measuring overcrowding in housing.

[^22]:    ${ }^{26}$ District of Columbia Municipal Regulations and District of Columbia Register. "Section: 14-5205: Determination of Voucher Size." June 29, 2012, accessed September 21, 2018, https://dcregs.dc.gov/Common/DCMR/SectionList.aspx?SectionNumber=14-5205.

[^23]:    ${ }^{27}$ Rather, the District uses its Housing Production Trust Fund (HPTF), Home Purchase Assistance Program (HPAP), and Employer Assisted Housing Program (EAHP) focus federal and local funds on subsidizing the creation of these types of housing for the homeownership market.
    ${ }^{28}$ District of Columbia Municipal Regulations and District of Columbia Register. "Section: 14-5205: Determination of Voucher Size." June 29, 2012, accessed September 21, 2018, https://dcregs.dc.gov/Common/DCMR/SectionList.aspx?SectionNumber=14-5205.

[^24]:    ${ }^{29}$ The Seattle Planning Commission (2014) for example included several actions around expanding affordable housing programs, including those for homeownership assistance, such as reducing barriers to accessing homeownership assistance for families and expanding limited equity programs.

[^25]:    ${ }^{30}$ Several cities have adopted or are exploring changes to zoning regulations to increase the production of large units. These include adjustments to the FAR calculation, density bonuses, and specifying certain percentages of two- or three-bedroom units in particular zones. See page 14 in The Seattle Planning Commission (2014) for the zoning changes Seattle explored and the endnotes on page 30 provide examples from other cities including San Francisco, Portland, and Toronto.

[^26]:    ${ }^{31}$ FAR is calculated by dividing the total Gross Floor Area (GFA) of all buildings on a lot by the area of that lot. 63 DCR 2447, 2650 (March 4, 2016 - Part 2).

[^27]:    ${ }^{32}$ The impact of the recent elimination of TOPA rights for tenants in single-family houses, with some exceptions that will sunset, may also warrant further study. D.C. Law 22-120. TOPA Single-Family Home Exemption Amendment Act of 2018, accessed September 22, 2018, https://code.dccouncil.us/dc/council/laws/22-120.html. The dearth of large units in multifamily rental properties available to households below 30 percent of AMI has led many who have housing vouchers, which require rightsizing for age and gender, to find housing in the single-family rental market. The findings presented earlier in this report show that most large units in the District are contained in single-family houses.

