

2020 Decennial Census: Housing Units in Loudoun County, Virginia

Loudoun County Department of Finance and Budget: November 24, 2011

The Census Bureau defines housing units as

Living quarters in which the occupant or occupants live separately from any other individuals in the building and have direct access to their living quarters from outside the building or through a common hall. Housing units are usually houses, apartments, mobile homes, groups of rooms, or single rooms that are occupied as separate living quarters. They are residences for single individuals, for groups of individuals, or for families who live together.¹

Interpreting Housing Unit Data

The 2020 Census is the first decennial census to use “differential privacy,” a means of injecting statistical “noise” to obscure individual data responses. One result of the Census Bureau’s use of differential privacy is that most data become somewhat less accurate when moving from larger geographies (such as the county level) down to smaller geographies (census tract, block group, and finally the block levels).

Data on the total number of housing units are not subject to differential privacy.² Data on housing units represent the Census Bureau’s actual count of housing units present as of April 1, 2020, the official census date.³ Data for the 2020 and the 2010 Census were developed in a similar way, permitting a direct comparison of changes in the number of housing units between 2010 and 2020.

Much of the following discussion refers to mapped patterns of housing unit data. Maps are provided at the end of this document. For data from the 2010 Census and when comparing data from 2010 and 2020, data are shown by 2010 census tracts. The last map, which shows data only from the 2020 Census, uses 2020 census tracts. 2020 tract boundaries remain the same as the 2010 boundaries throughout most of the county, except for the southeastern portion of the county, where population growth was high enough to merit splitting some of the 2010 tracts.⁴

¹ U.S. Census Bureau, [2020 Census State Redistricting Data \(Public Law 94-171\) Technical Documentation](#), 2021, p. B-9.

² While data on the total number of housing units is not subject to differential privacy, data on the number of occupied and vacant units are.

³ Data produced by the Census Bureau may vary from Loudoun County’s records somewhat, in part based on timing (determination of units complete and ready to occupy as of April 1). Another reason is that the Census Bureau counts separate living spaces within a single-family home, such as a basement apartment, as housing units. It is also possible that there are differences in location, impacting the count of units on one versus the other side of the street for example. For the latter issue, the Census Bureau will offer the opportunity for jurisdictions to request review and corrections at the census block level as part of its [Census Question Resolution operation](#), currently scheduled from January 2022 through June 2023.

⁴ Prior to each Decennial Census, the boundaries of census tracts are evaluated to see whether they should be split. Because tracts are split rather than completely redrawn, it is possible to compare data from a more recent census to an earlier one. The ability to compare is made possible because the tracts from later censuses nest within tract boundaries from earlier censuses.

Housing Unit Growth

Table 1. Loudoun County's Housing Units

	2000	2010	2020
Total housing units	62,160	109,442	142,074
Housing unit increase	-	47,282	32,632
Percent housing unit increase	-	76%	30%

Sources: U.S. Census Bureau, Decennial Census Redistricting Data (P.L. 94-171) Table H-1 (2010, 2020), 2000 Decennial Summary File 3 Table H001. Loudoun County Department of Finance and Budget.

Housing units in Loudoun County increased by more than 32,000 from 2010 to 2020. The rate of increase was 30 percent. The rates of housing unit increase from both 2000 to 2010 and 2010 to 2020 were similar to population increases, but at somewhat lower rates (population increases were 84 and 35 percent, respectively). While growth in housing units continued to be substantial, the overall numeric and percent increases in housing units were lower than from 2000 to 2010.

Distribution of Housing Unit Growth

The first two maps illustrate the growth in housing units from 2010 to 2020:

- Housing Unit Change, 2010 to 2020, shows that housing unit growth was more predominant in the areas east of Route 15 that were less developed in 2010. Already developed neighborhoods on either side of Route 7 east of Leesburg, for example in the Ashburn, Sterling, and Sugarland Run areas, had fairly stable numbers of housing units⁵ when comparing 2010 and 2020 census counts. Other areas showing stability include the north and west sides of Leesburg, the area around Middleburg, and an area including the eastern side of Lovettsville. Housing unit growth otherwise was widespread, with several tracts west of Route 15 as well as to the east increasing by between 100 and 1000 housing units.
- Housing Unit Percent Change, 2010 to 2020, examines percent change to show the amount of transformation that is occurring in an area. As in the first map, several areas east of Route 15 show the impact of housing unit changes over the 2010 to 2020 period. The area generally north of Route 7 and north and west of Leesburg also has experienced change, with increases in housing units between 15 and 50 percent.

Housing Unit Location

The last two maps present the pattern of all the housing units that existed as of 2010 and 2020. The maps present housing unit density to indicate locations with higher versus lower concentrations of housing. Density is shown in dwelling units per acre (dua). The break points between each of the five categories correspond to land use metrics, as described in Table 2.

⁵ The lowest mapped category, for less than a 100-unit increase, includes a few census tracts where the 2020 Census registered a small decline as compared to the 2010 Census.

Table 2. Density Categories: Dwelling Units per Acre

Break Points	Land Use Metric
Less than or equal to 1 unit per 15 acres	Represents the maximum residential density anticipated in the Rural South Place Type. ⁶
Less than or equal to 1 unit per 5 acres	Represents the maximum residential density anticipated in the Rural North Place Type. ⁷
Less than or equal to 3 units per acre	Consistent with densities in much of the developed portions of the county
Less than or equal to 4 units per acre	At the higher end of existing suburban densities
More than 4 units per acre	Above the Suburban Neighborhood place type density guideline of “up to 4 dua”

Source: Loudoun County 2019 General Plan; Department of Finance and Budget.

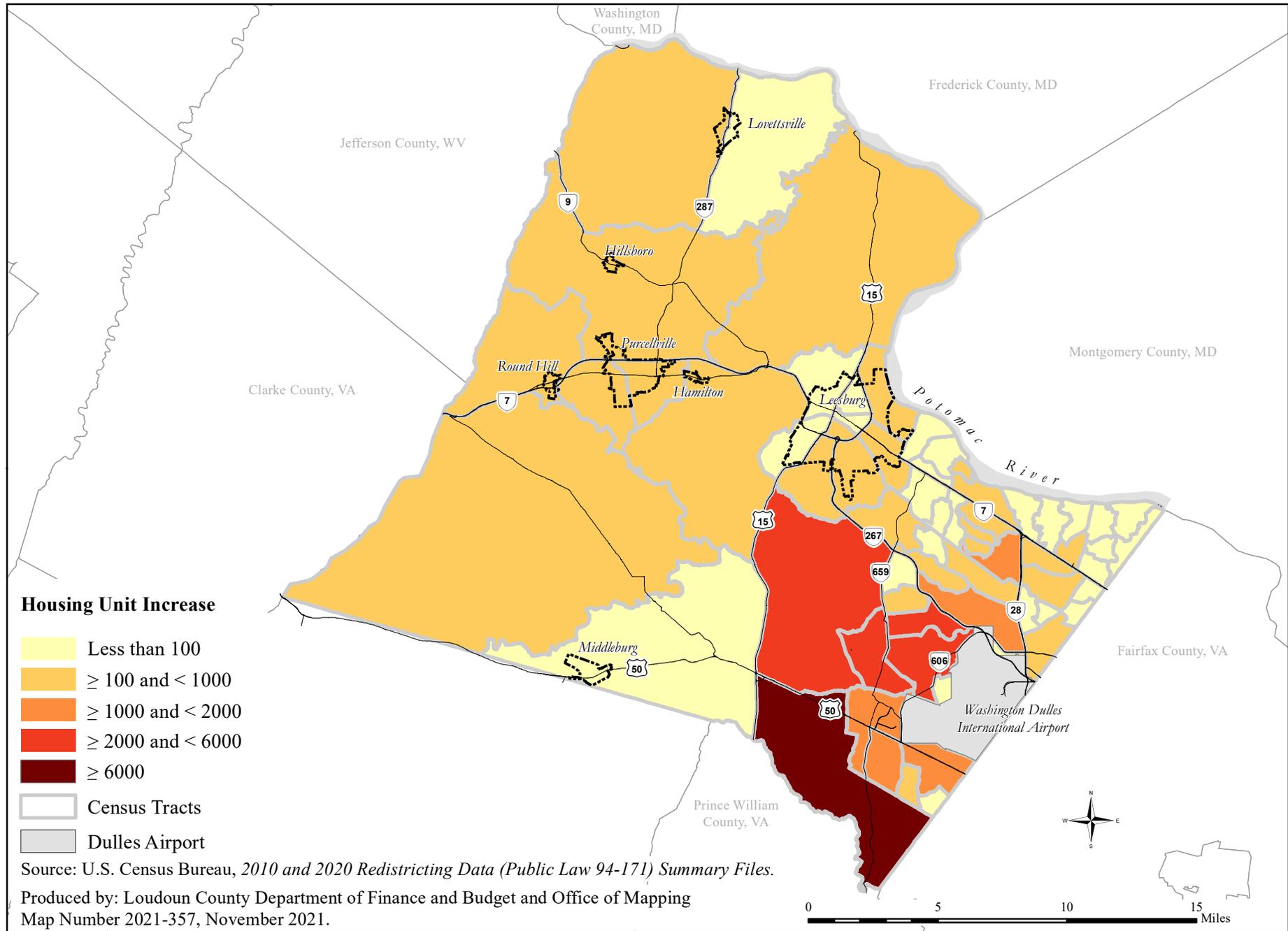
- Housing Unit Density 2010 presents housing unit density as of 2010. The lowest density, the equivalent of one unit per 15 acres or less, was fairly prevalent in the westernmost portions of the county. A clear contrast existed with the higher density in some of the towns and the eastern portion of the county. An intermediate density of up to five units per acre existed through the middle of the county.
- Housing Unit Density 2020 updates the density data to the year 2020 and presents this data using 2020 census tracts. The impact of continued development south of Route 50, to the west of Virginia Route 659, and above Route 7 north and west of Leesburg can be seen through comparison of the two maps. A close examination of Housing Unit Density 2020 also reveals areas where density has increased, including a portion of downtown Leesburg and scattered tracts in the eastern portion of the county.

⁶ The Rural South Place Type and associated AR-2 zoning have a base zoning density of 1 unit/40 acres but can develop at up to 1 unit/15 acres under the cluster development option. This area includes neighborhoods that have developed at the maximum cluster density as well as larger parcels; therefore, the mean density of associated census tracts is generally expected to be less than 1 unit/15 acres.

⁷ The Rural North Place Type and associated AR-1 zoning have a base zoning density of 1 unit/20 acres but can develop up to 1 unit/5 acres under the cluster development option. This area includes neighborhoods that have developed at the maximum cluster density as well as larger parcels; therefore, the mean density of associated census tracts is generally expected to be less than 1 unit/5 acres.

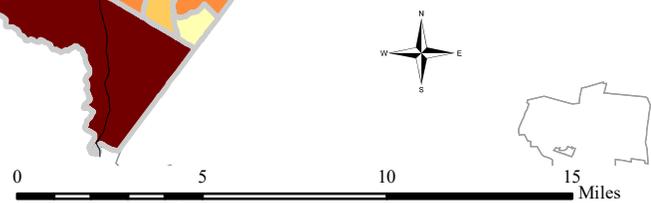
Housing Unit Change, 2010 to 2020, Loudoun County

by 2010 Census Tracts



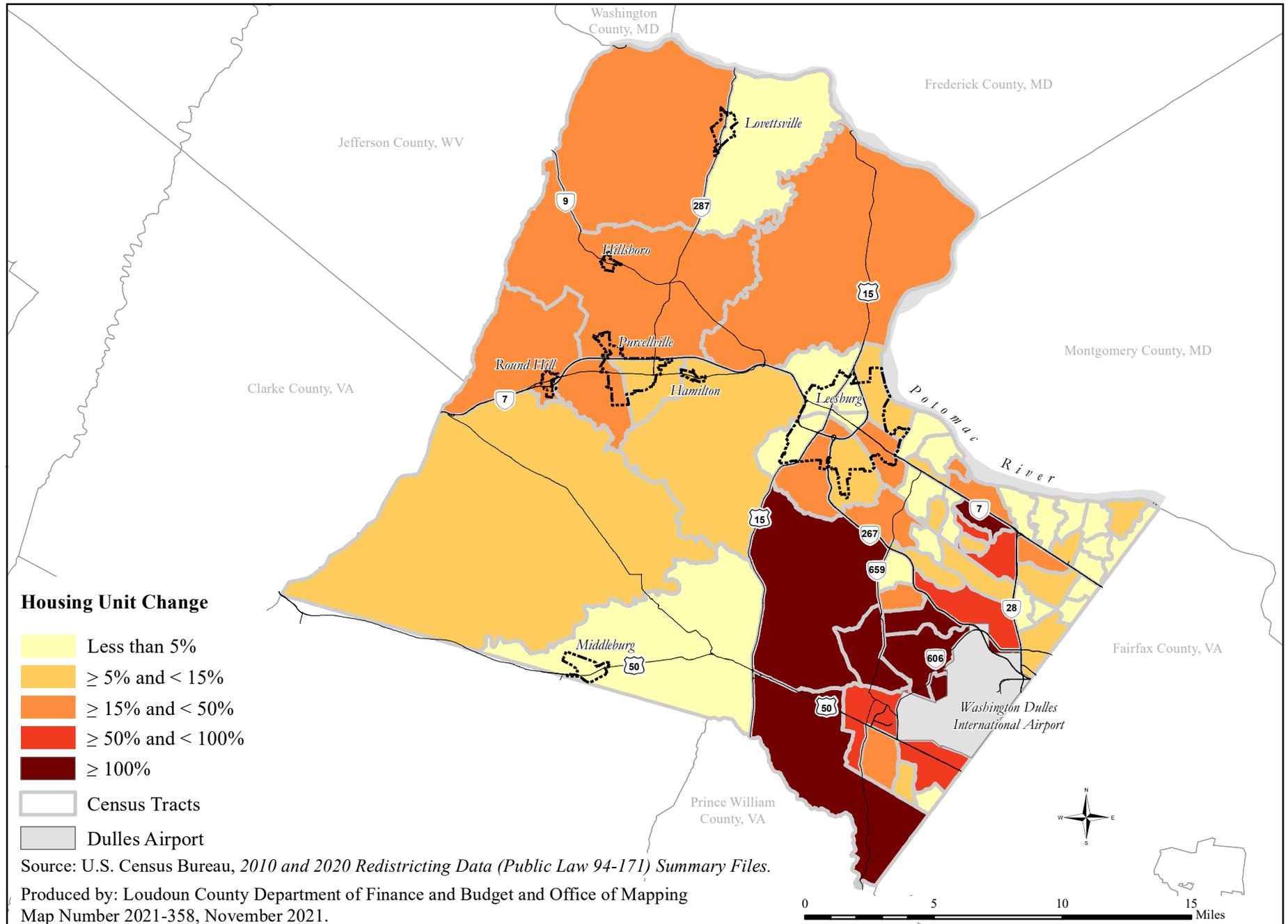
Source: U.S. Census Bureau, 2010 and 2020 Redistricting Data (Public Law 94-171) Summary Files.

Produced by: Loudoun County Department of Finance and Budget and Office of Mapping
 Map Number 2021-357, November 2021.



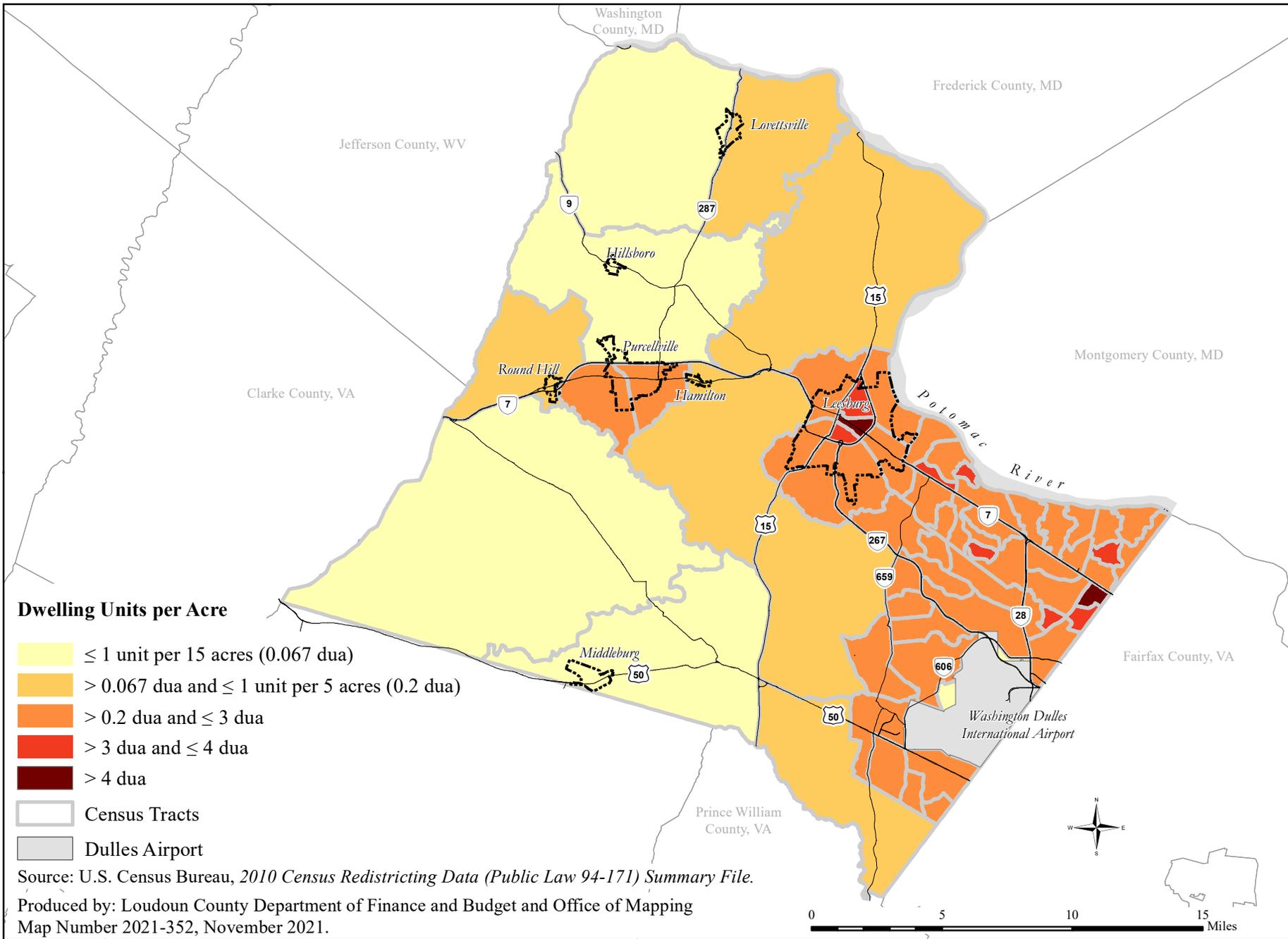
Housing Unit Percent Change, 2010 to 2020, Loudoun County

2010 Decennial Census, Census Tract Data



Housing Unit Density 2010, Loudoun County

2010 Decennial Census, Census Tract Data



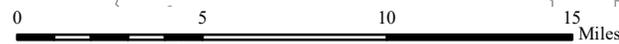
Dwelling Units per Acre

- ≤ 1 unit per 15 acres (0.067 dua)
- > 0.067 dua and ≤ 1 unit per 5 acres (0.2 dua)
- > 0.2 dua and ≤ 3 dua
- > 3 dua and ≤ 4 dua
- > 4 dua

- Census Tracts
- Dulles Airport

Source: U.S. Census Bureau, 2010 Census Redistricting Data (Public Law 94-171) Summary File.

Produced by: Loudoun County Department of Finance and Budget and Office of Mapping
 Map Number 2021-352, November 2021.



Housing Unit Density 2020, Loudoun County

2020 Decennial Census, Census Tract Data

