# 2020 Regional Allocation Formula Methodology

## Contents

## Introduction

Since 2000, the Texas Department of Housing and Community Affairs (TDHCA or the Department) has used a Regional Allocation Formula (RAF) as required by Tex. Gov't Code §§2306.111 and 2306.1115. The RAF uses formula-based components to allocate funding at the subregional level for multifamily and single family activities for the following programs:

- Multifamily Programs:
  - Housing Tax Credit (HTC) Program
  - HOME Investment Partnerships Program (HOME) Multifamily (MF)
- Single Family Programs:
  - State Housing Trust Fund (SHTF) Program*
  - HOME Single Family (SF)

*It should be noted that based on the current program activities and amounts of SHTF, the RAF is not required to be utilized for SHTF as authorized by Tex. Gov't Code §2306.111(d-1). SHTF is funded through state general revenue and is not to be confused with the federally funded National Housing Trust Fund (NHTF).

The methodology presented in this document explains the use of factors in conformity with statutory requirements including the need for housing assistance, the availability of housing resources, and other factors relevant to the equitable distribution of housing funds in urban and rural areas of the state.

Also provided with the Methodology are example allocation spreadsheets for each of the four programs subject to the RAF, in order to show how the methodology affects each program. The provided spreadsheets utilize the following example total allocations:

| Program | Example Total Allocation |
|---|---|
| HTC | $65,000,000 |
| HOME Multifamily | $12,500,000 |
| SHTF | $3,000,000 |
| HOME Single Family | $15,000,000 |

These allocation amounts are only examples. Program area staff calculate the final total allocation amounts following approval of the RAF Methodology by the TDHCA Governing Board using the most current information on the amount available to be allocated under each program or activity. Even when final total allocation amounts are available, other planning considerations may alter the applicability of the RAF. For example, certain HOME SF activities may not release funds subregionally using the RAF. In addition, per Tex. Gov't Code §2306.111(d-1)(3), if SHTF funds administered by the Department (and not otherwise set aside) do not exceed $3 million, then SHTF funds are not required to be allocated using the RAF, although other policies are used to promote the geographic dispersal of funds.

The Draft 2020 RAF Methodology was presented at the May 23, 2019, TDHCA Board meeting for approval to be released for public comment. A public comment period was open from Friday, May 24, 2019, through Friday, June 14, 2019, with a public hearing on Wednesday, May 29, 2019. No public comment was received and no changes were made. The Final 2020 RAF Methodology was presented for approval at the Board meeting of July 25, 2019.

## Statutory Requirement

Tex. Gov't Code §§2306.111 and 2306.1115 require that TDHCA use a formula to allocate funding for the HOME, SHTF, and HTC programs.

Tex. Gov't Code §2306.1115 states:

> (a) To allocate housing funds under Section 2306.111(d), the department shall develop a formula that:
>
> (1) includes as a factor the need for housing assistance and the availability of housing resources in an urban area or rural area;
>
> (2) provides for allocations that are consistent with applicable federal and state requirements and limitations; and
>
> (3) includes other factors determined by the department to be relevant to the equitable distribution of housing funds under Section 2306.111(d).
>
> (b) The department shall use information contained in its annual state low income housing plan and other appropriate data to develop the formula under this section.

The methodology detailed in this document takes into account the need for housing assistance and the availability of housing in urban and rural areas in keeping with the statutory requirements for the HOME SF, HOME MF, SHTF, and HTC programs. The methodology also includes a regional coverage factor for single family programs that measures inverse population density in keeping with the statutory requirements to include other factors necessary for the equitable distribution of funding.

### Urban and Rural Areas

Tex. Gov't Code §2306.004 states:

> (28-a) "Rural area" means an area that is located:
>
> (A) outside the boundaries of a primary metropolitan statistical area or a metropolitan statistical area; or
>
> (B) within the boundaries of a primary metropolitan statistical area or a metropolitan statistical area, if the statistical area has a population of 25,000 or less and does not share a boundary with an urban area.

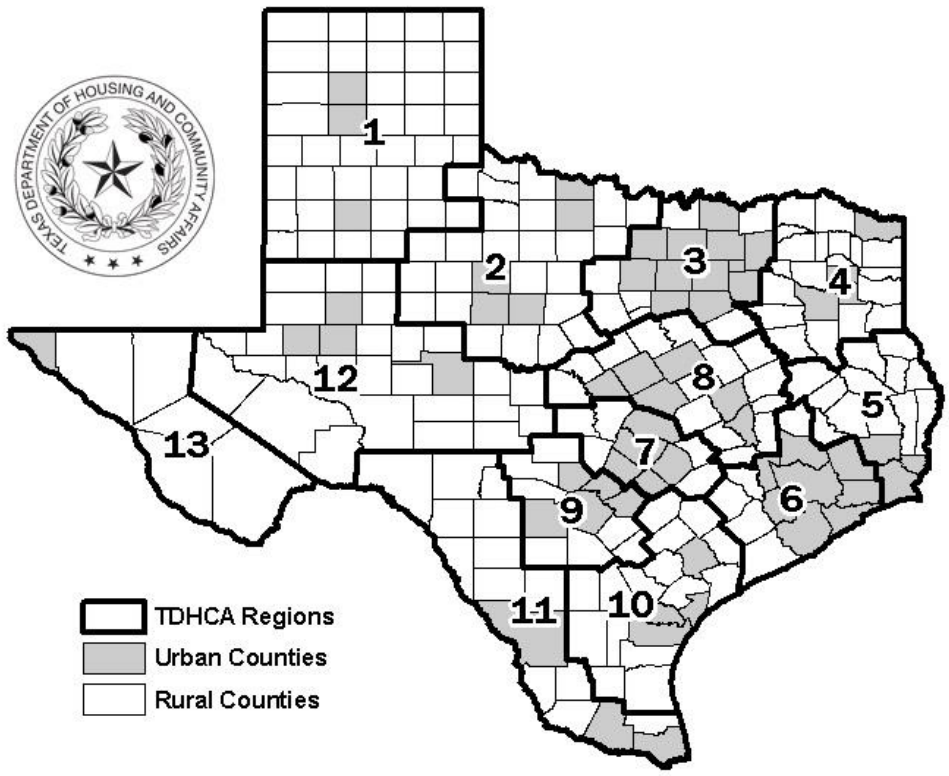
Tex. Gov't Code §2306.004(28-a) is applied to incorporated places and Census Designated Places, as defined by the U.S. Census Bureau, collectively referred to as places. Prior to the development of the RAF each year, the parameters outlined in Tex. Gov't Code are used to determine which places are urban and which are rural. The urban and rural designation for site-specific applications is made at the place level; organizations applying for certain TDHCA-administered funds use the urban and rural place designations to determine which subregional allocation they are eligible to apply for. If a place crosses county or regional boundaries,

the subregional allocation that the place in question is eligible to apply for is determined based on the county that contains the majority area and population of the place.

However, the RAF needs to take into account statewide need and availability. If the RAF only combined data from places, many unincorporated parts of the state would not be included, which would significantly hinder the RAF's utility as an equitable allocation tool. In order to measure housing need across the State of Texas and calculate subregional allocations, county-level data are used. Using county-level data to determine need and availability factors allows for a more complete picture of the State's demographics in determining allocations.

Even though a county may be part of a Metropolitan Statistical Area (MSA) per the U.S. Office of Management and Budget (OMB) definitions, all of the places within that county may meet the definition of a rural area per Tex. Gov't Code §2306.004(28-a). If an MSA county has no places designated as urban, the need and availability of the whole county will be counted toward the rural allocation (*i.e.*, the MSA county had no places with a population over 25,000 or places touching a boundary of a place with a population over 25,000). The allocation process outlined in this document refers to "MSA counties with urban places" as "urban counties" and "Non-MSA counties and counties with only rural places" as "rural counties." The need and availability of "MSA counties with urban places" directs the allocation toward the urban places, and the need and availability of "Non-MSA counties and counties with only rural places" directs the allocation toward the rural places.

**Map of Urban and Rural Counties in Texas by Region**




Sources: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates, Table B01003
U.S. Census Bureau, Jul. 2015, CBSAs, metropolitan divisions, and CSAs.
Tiger data 2015.
Disclaimer: This map is not a survey product; boundaries, distances, and scale are approximate only.

# Methodology

The Department shall use the most current American Community Survey (ACS) 5-Year Estimates data available for the variables involved in the RAF. Land area data are not available in the annually released ACS, therefore, decennial census data must be used for the Regional Coverage Factor.

## Affordable Housing Need

For the purposes of developing an allocation formula, affordable housing need is measured by variables that relate to the types of assistance available through TDHCA programs. Despite SHTF not currently utilizing the RAF, SHTF is included in the RAF methodology description in the event that funding levels or programmatic changes require the RAF to be utilized for this program.

### Income

Income is the primary measurement of eligibility for housing assistance through TDHCA. HOME, HTC, and SHTF serve households that earn less than or equal to 80% Area Median Family Income (AMFI). While eligibility for housing assistance is measured by AMFI, datasets showing how many households are in each AMFI category lag behind by a year from the datasets used to calculate poverty. In order to use the most up-to-date data, the measurement of individuals in poverty will be used to measure eligible populations. Individuals at or below 200% of the poverty level will qualify for a majority of the housing assistance options offered through TDHCA's HOME, HTC, and SHTF programs. In order for *individuals* in poverty to be combined with cost burdened and overcrowded *households*, the number of individuals at or below 200% poverty in each subregion is divided by the average size of a household in Texas. The number of individuals at or below 200% poverty is included as a variable in all four program RAFs.

### Cost Burden and Overcrowding

Renter and owner need for housing assistance is measured through cost burden and overcrowding conditions. The count of cost burdened renter and owner households used in the RAF measures the number of households in Texas that spend more than 30% of their income on rent or homeowner costs (for homeowners with a mortgage), which is a common measure of unaffordable housing. The count of overcrowded renters and owners measures the number of housing units with more than one person per room, including the kitchen and bathroom. Areas with high cost burden or overcrowding may signify a need for assistance.

HTC and HOME MF both offer assistance for reduced-rent apartments. HOME SF offers Tenant-Based Rental Assistance, which pays a portion of a recipient's rent to the landlord. SHTF offers the Amy Young Barrier Removal Program, which can serve both renters and homeowners. Therefore, variables representing renters who need assistance are included in the analysis for all four program RAFs.

HOME SF offers homebuyer assistance, home repair assistance, and single family development programs. For home repair, HOME SF offers grants and no-interest loans to homeowners to rehabilitate or reconstruct their homes. For single family development, typically the homes are built by Community Housing Development Organizations (CHDOs) and the homes are purchased by low-income homeowners. SHTF offers the Amy

Young Barrier Removal Program, which can be used for homeowners and the Bootstrap Loan Program for potential homeowners who use "sweat equity" and low- to no-interest loans to build and secure ownership of their homes. Therefore, variables representing homeowners who need assistance are included in the HOME SF and SHTF RAFs.

### Lack of Kitchen and Plumbing Facilities

HOME SF offers homeowner rehabilitation or reconstruction assistance, and SHTF has activities involving rehabilitation such as the Amy Young Barrier Removal Program. Because TDHCA programs fund rehabilitation, substandard housing units are included in the RAF. Common definitions of substandard housing include lack of operable indoor plumbing, usable flush toilets, usable bathtub or shower, safe electricity, safe or adequate source of heat, or kitchen facilities. Data regarding total units lacking kitchen facilities or plumbing are the only data available on both an annual basis and at a county level. The count of occupied and unoccupied units lacking kitchen facilities and the count of occupied and unoccupied units lacking plumbing are utilized in the HOME SF and SHTF RAFs.

### Summary of Affordable Housing Need for Single Family and Multifamily Activities

The extent of Texans needing affordable housing is measured using five variables for single family activities:

1. Cost burdened renter and owner households;
2. Overcrowded renter and owner households;
3. Housing units lacking kitchen facilities;
4. Housing units lacking plumbing; and
5. Individuals at or below 200% of the poverty rate.

The extent of Texans needing affordable housing is measured using three variables for multifamily activities:

1. Cost burdened renter households;
2. Overcrowded renter households; and
3. Individuals at or below 200% of the poverty rate.

## Housing Availability

Housing availability is measured by variables that relate directly to housing resources. In order to take into account both market-rate and subsidized units, vacancies will be used. A high number of vacancies may indicate that a market has an adequate or potentially abundant supply of housing. Both vacant units for sale and vacant units for rent will be included in the HOME SF and SHTF RAFs, while vacant units for rent alone are included in the HOME MF and HTC RAFs.

## Regional Coverage Factor

Population density is the number of people divided by the area of land in which they live. A high population density means that more people are living in a given land area compared to other equally-sized pieces of land. Inverse population density, which divides the land area by the number of people that live in that area, gives the amount of land per person. A high inverse population density means that fewer people are living in

a given land area compared to other equally-sized pieces of land, and may indicate a challenge in reaching and serving Texans in that area.

Inverse population density is included in the HOME SF and SHTF RAFs as a Regional Coverage Factor to take into account the distance between scattered-site single family activities and the dispersed population within the predominantly rural areas where HOME SF and SHTF administrators provide assistance. TDHCA's multifamily programs generally focus development to a single site, so the Regional Coverage Factor is not as pertinent to multifamily program allocation. The Regional Coverage Factor assists in redistributing single family program funding from urban areas to more rural parts of the state. This better aligns funding availability with the statutory requirement that 95% of HOME funds be allocated for the benefit of those areas of the state that do not receive HOME funds directly from the U.S. Department of Housing and Urban Development (HUD), primarily smaller cities and rural areas (per Tex. Gov't Code §2306.111).

## Summary of Variables

The following chart shows which need, availability, and other variables are used in the RAF Methodology for each of the four applicable programs.

| | | **Multifamily Programs** | | **Single Family Programs** | |
|---|---|---|---|---|---|
| | | HTC | HOME MF | SHTF | HOME SF |
| **Need Variables** | *Cost Burdened Renter Households* | ✓ | ✓ | ✓ | ✓ |
| | *Cost Burdened Owner Households* | | | ✓ | ✓ |
| | *Overcrowded Renter Households* | ✓ | ✓ | ✓ | ✓ |
| | *Overcrowded Owner Households* | | | ✓ | ✓ |
| | *Units Lacking Kitchen Facilities* | | | ✓ | ✓ |
| | *Units Lacking Plumbing Facilities* | | | ✓ | ✓ |
| | *Individuals at or Below 200% of Poverty* | ✓ | ✓ | ✓ | ✓ |
| **Availability Variables** | *Vacant Units for Rent* | ✓ | ✓ | ✓ | ✓ |
| | *Vacant Units for Sale* | | | ✓ | ✓ |
| **Other** | *Regional Coverage Factor* | | | ✓ | ✓ |

## Exceptions to the RAF

Per Tex. Gov't Code §2306.111, there are certain instances in which the RAF requirement does not apply to HOME MF, HOME SF, HTC, or SHTF funds.

### Set-Asides

Specific set-asides will not be subject to the RAF per Tex. Gov't Code §2306.111(d-1), including set-asides for contract-for-deed activities and set-asides mandated by state or federal law, if these set-asides are less than 10% of the total allocation of funds or credits. Set-asides for funds allocated to serve persons with disabilities will not be subject to the RAF. The total amount available through the RAF will not include funds for at-risk developments for the HTC Program or other statutorily created set-asides. Also pursuant to Tex. Gov't Code §2306.111(d-1), programmed activities for SHTF that do not exceed $3 million are not subject to the RAF. It is due to these exceptions that the SHTF funds as currently programmed do not utilize the RAF.

In addition, per Tex. Gov't Code §2306.111(c)(2), 5% of State HOME funds must be spent on activities that serve persons with disabilities in any area of the State; this portion of HOME is not subject to the RAF because it is set-aside for persons with disabilities.

In Tex. Gov't Code §2306.111(d-2), 5% of HTC funds must be allocated to developments that receive federal assistance through USDA. Any developments that receive federal assistance through USDA and HTC for rehabilitation may compete for funding separately under the "USDA Set-Aside." This funding is taken from the total tax credit ceiling prior to applying the RAF.

### Participating Jurisdictions (PJs)

In accordance with Tex. Gov't Code §§2306.111(c)(1), 95% of the funds for HOME must be spent outside PJs. PJs are areas that receive funding directly from HUD. Because 95% of funds cannot be spent within a PJ, the housing need factors, housing availability factors, and Regional Coverage Factor in the PJs are not counted in the HOME MF or HOME SF RAF.

The PJ designations are subject to change annually depending on HUD funding. According to HUD's 2018 HOME allocation, 33 of the PJs are cities and eight of the PJs are counties. Five PJ cities fell completely within PJ counties, resulting in a total of 28 PJ cities and eight PJ counties that will be subtracted from the HOME SF and HOME MF RAFs.

### Allocation Adjustments

The HOME SF and HTC RAFs have subregional allocation adjustments under certain conditions. Tex. Gov't Code §2306.111(d-3) requires that at least $500,000 in housing tax credits be allocated to each urban and rural subregion. In the HTC Program's 2019 Qualified Allocation Plan (QAP), the Department adopted an increase to the $500,000 figure establishing a $600,000 minimum for each region. In a further effort to meet Tex. Gov't Code §§2306.111(c)(1) and (2), the HOME SF RAF has a minimum subregional allocation of $100,000. Additional detail regarding the processes used to adjust allocations for the HOME SF RAF and the HTC RAF can be found in the single family and multifamily RAF examples.

## Single Family RAF Example

Tables 1, 2, and 3 show the need variables, availability variables, and regional coverage factor used in the HOME SF RAF. The SHTF RAF is very similar to the HOME SF RAF with the exception that the SHTF RAF includes PJs. Example numbers are used for clarity. The statewide average household size in the following example is 2.82.

*Table 1: Example of Need Variables Used for HOME SF, by Subregion*

| | Region | Column A: Individuals at or below 200% Poverty without PJs | Column B: Households (HH) at or below 200% Poverty without PJs | Column C: Cost Burdened Owners without PJs | Column D: Cost Burdened Renters without PJs | Column E: Overcrowded Owners without PJs | Column F: Overcrowded Renters without PJs | Column G: Units Lacking Plumbing without PJs | Column H: Units Lacking Kitchen without PJs | Column I: Total Need Variables |
|---|---|---|---|---|---|---|---|---|---|---|
| MSA Counties with Urban Places | 1 | 150,000 | 53,191 | 1,500 | 15,000 | 3,000 | 2,000 | 4,000 | 6,000 | 84,691 |
| | 2 | 100,000 | 35,461 | 2,500 | 16,000 | 3,500 | 2,500 | 3,000 | 5,000 | 67,961 |
| | 3 | 150,000 | 53,191 | 1,500 | 15,000 | 3,000 | 2,000 | 4,000 | 6,000 | 84,691 |
| | 4 | 100,000 | 35,461 | 2,500 | 16,000 | 3,500 | 2,500 | 3,000 | 5,000 | 67,961 |
| | 5 | 150,000 | 53,191 | 1,500 | 15,000 | 3,000 | 2,000 | 4,000 | 6,000 | 84,691 |
| | 6 | 100,000 | 35,461 | 2,500 | 16,000 | 3,500 | 2,500 | 3,000 | 5,000 | 67,961 |
| | 7 | 150,000 | 53,191 | 1,500 | 15,000 | 3,000 | 2,000 | 4,000 | 6,000 | 84,691 |
| | 8 | 100,000 | 35,461 | 2,500 | 16,000 | 3,500 | 2,500 | 3,000 | 5,000 | 67,961 |
| | 9 | 150,000 | 53,191 | 1,500 | 15,000 | 3,000 | 2,000 | 4,000 | 6,000 | 84,691 |
| | 10 | 100,000 | 35,461 | 2,500 | 16,000 | 3,500 | 2,500 | 3,000 | 5,000 | 67,961 |
| | 11 | 150,000 | 53,191 | 1,500 | 15,000 | 3,000 | 2,000 | 4,000 | 6,000 | 84,691 |
| | 12 | 100,000 | 35,461 | 2,500 | 16,000 | 3,500 | 2,500 | 3,000 | 5,000 | 67,961 |
| | 13 | 150,000 | 53,191 | 1,500 | 15,000 | 3,000 | 2,000 | 4,000 | 6,000 | 84,691 |
| Non-MSA counties and counties with only rural | Region | Column A: Individuals at or below 200% Poverty without PJs | Column B: HH at or below 200% Poverty without PJs | Column C: Cost Burdened Owners without PJs | Column D: Cost Burdened Renters without PJs | Column E: Overcrowded Owners without PJs | Column F: Overcrowded Renters without PJs | Column G: Units Lacking Plumbing without PJs | Column H: Units Lacking Kitchen without PJs | Column I: Total Need Variables |
| | 1 | 80,000 | 28,369 | 6,000 | 8,000 | 2,000 | 2,000 | 5,000 | 5,000 | 56,369 |
| | 2 | 60,000 | 21,277 | 9,000 | 5,000 | 1,000 | 1,000 | 7,000 | 7,000 | 51,277 |
| | 3 | 80,000 | 28,369 | 6,000 | 8,000 | 2,000 | 2,000 | 5,000 | 5,000 | 56,369 |
| | 4 | 60,000 | 21,277 | 9,000 | 5,000 | 1,000 | 1,000 | 7,000 | 7,000 | 51,277 |
| | 5 | 80,000 | 28,369 | 6,000 | 8,000 | 2,000 | 2,000 | 5,000 | 5,000 | 56,369 |
| | 6 | 60,000 | 21,277 | 9,000 | 5,000 | 1,000 | 1,000 | 7,000 | 7,000 | 51,277 |
| | 7 | 80,000 | 28,369 | 6,000 | 8,000 | 2,000 | 2,000 | 5,000 | 5,000 | 56,369 |
| | 8 | 60,000 | 21,277 | 9,000 | 5,000 | 1,000 | 1,000 | 7,000 | 7,000 | 51,277 |
| | 9 | 80,000 | 28,369 | 6,000 | 8,000 | 2,000 | 2,000 | 5,000 | 5,000 | 56,369 |
| | 10 | 60,000 | 21,277 | 9,000 | 5,000 | 1,000 | 1,000 | 7,000 | 7,000 | 51,277 |
| | 11 | 80,000 | 28,369 | 6,000 | 8,000 | 2,000 | 2,000 | 5,000 | 5,000 | 56,369 |
| | 12 | 60,000 | 21,277 | 9,000 | 5,000 | 1,000 | 1,000 | 7,000 | 7,000 | 51,277 |
| | 13 | 80,000 | 28,369 | 6,000 | 8,000 | 2,000 | 2,000 | 5,000 | 5,000 | 56,369 |
| | | Col A Total | Col B Total | Col C Total | Col D Total | Col E Total | Col F Total | Col G Total | Col H Total | Col I Total |
| State Total | | 2,570,000 | 911,348 | 121,500 | 287,000 | 62,000 | 49,000 | 123,000 | 149,000 | 1,702,848 |

*Table 2: Example of Availability Variables Used for HOME SF, by Subregion*

| | Region | Column J: Vacant Units For Sale without PJs | Column K: Vacant Units For Rent without PJs | Column L: Total Availability Variables |
|---|---|---|---|---|
| MSA Counties with urban places | 1 | 1,500 | 2,000 | 3,500 |
| | 2 | 1,000 | 3,000 | 4,000 |
| | 3 | 1,500 | 2,000 | 3,500 |
| | 4 | 1,000 | 3,000 | 4,000 |
| | 5 | 1,500 | 2,000 | 3,500 |
| | 6 | 1,000 | 3,000 | 4,000 |
| | 7 | 1,500 | 2,000 | 3,500 |
| | 8 | 1,000 | 3,000 | 4,000 |
| | 9 | 1,500 | 2,000 | 3,500 |
| | 10 | 1,000 | 3,000 | 4,000 |
| | 11 | 1,500 | 2,000 | 3,500 |
| | 12 | 1,000 | 3,000 | 4,000 |
| | 13 | 1,500 | 2,000 | 3,500 |
| Non-MSA counties and counties with only rural places | 1 | 1,500 | 2,000 | 3,500 |
| | 2 | 2,000 | 2,500 | 4,500 |
| | 3 | 1,500 | 2,000 | 3,500 |
| | 4 | 2,000 | 2,500 | 4,500 |
| | 5 | 1,500 | 2,000 | 3,500 |
| | 6 | 2,000 | 2,500 | 4,500 |
| | 7 | 1,500 | 2,000 | 3,500 |
| | 8 | 2,000 | 2,500 | 4,500 |
| | 9 | 1,500 | 2,000 | 3,500 |
| | 10 | 2,000 | 2,500 | 4,500 |
| | 11 | 1,500 | 2,000 | 3,500 |
| | 12 | 2,000 | 2,500 | 4,500 |
| | 13 | 1,500 | 2,000 | 3,500 |
| | | Column J Total | Column K Total | Column L Total |
| State Total | | 39,000 | 61,000 | 100,000 |

*Table 3: Example of Regional Coverage Factor used for HOME SF, by Subregion*

| | Region | Column M: Land area without PJs | Column N: Total Population without PJs | Column O: Regional Coverage Factor |
|---|---|---|---|---|
| MSA Counties with urban places | 1 | 3,000 | 350,000 | 0.009 |
| | 2 | 2,000 | 250,000 | 0.008 |
| | 3 | 3,000 | 350,000 | 0.009 |
| | 4 | 2,000 | 250,000 | 0.008 |
| | 5 | 3,000 | 350,000 | 0.009 |
| | 6 | 2,000 | 250,000 | 0.008 |
| | 7 | 3,000 | 350,000 | 0.009 |
| | 8 | 2,000 | 250,000 | 0.008 |
| | 9 | 3,000 | 350,000 | 0.009 |
| | 10 | 2,000 | 250,000 | 0.008 |
| | 11 | 3,000 | 350,000 | 0.009 |
| | 12 | 2,000 | 250,000 | 0.008 |
| | 13 | 3,000 | 350,000 | 0.009 |
| Non-MSA counties and counties with only rural places | 1 | 15,000 | 200,000 | 0.075 |
| | 2 | 13,000 | 300,000 | 0.043 |
| | 3 | 15,000 | 200,000 | 0.075 |
| | 4 | 13,000 | 300,000 | 0.043 |
| | 5 | 15,000 | 200,000 | 0.075 |
| | 6 | 13,000 | 300,000 | 0.043 |
| | 7 | 15,000 | 200,000 | 0.075 |
| | 8 | 13,000 | 300,000 | 0.043 |
| | 9 | 15,000 | 200,000 | 0.075 |
| | 10 | 13,000 | 300,000 | 0.043 |
| | 11 | 15,000 | 200,000 | 0.075 |
| | 12 | 13,000 | 300,000 | 0.043 |
| | 13 | 15,000 | 200,000 | 0.075 |
| | | Column M Total | Column N Total | Column O Total |
| State Total | | 216,000 | 7,150,000 | 0.893 |

## Compounded Need

To allocate funds, the RAF uses each subregion's ratios of the State's total. All of the variables that measure need are added together before taking each subregion's need as a percentage of the amount of total need in the State. Table 1, Column I, illustrates how the Total Need Variables are derived: households at 200% of poverty, cost burdened owner and renter households, overcrowded owner and renter households, units lacking kitchen facilities, and units lacking plumbing facilities are added together, thereby compounding the need.

This compounding balances the relative importance of the variables; variables with very high or very small numbers are combined with the overall total of need, preventing these variables from having a disproportionate or arbitrary amount of weight for their size.

## Weights

Examples of how the weights operate in the RAF are in Tables 4 and 5. The column header letters (A, B, C, etc.) will build off the previous table, so if the letters are not in alphabetical order, the column header letter refers to a previous table. In order to apply weights, first the subregional percentage or share of statewide need, availability, and inverse population density must be calculated. Table 4 demonstrates how the percentages are derived. Table 4 shows only Urban Region 1 and the statewide total in order to simplify the example.

*Table 4: Percentages Taken*

| Area | Column I: Total Need Variables | Column P: Percent of State's Total Need | Column L: Total Availability Variables | Column Q: Percent of State's Total Availability | Column O: Regional Coverage Factor | Column R: Percent of State's Total Regional Coverage Factor |
|---|---|---|---|---|---|---|
| Urban Region 1 | 84,691 | 5.0% | 3,500 | 3.5% | 0.009 | 1.0% |
| State Total | 1,702,848 | | 100,000 | | 0.893 | |

*Note: Column I is from Table 1, Column L is from Table 2, and Column O is from Table 3.*

A successful allocation formula will provide more funding for areas with high housing need and reduce funding for areas with an abundance of housing resources. Housing availability variables have negative weight to reflect that an abundance of available units might reduce the need for assistance, while housing need variables and the regional coverage factor have positive weights to reflect that these factors may increase the need for assistance. Renter and owner components of a single need or availability category added together are considered to be one variable for the purposes of calculating weight percentages. The weight of each variable, whether need, availability, or regional coverage factor, must have the same absolute value. All variables added together must equal 100%; otherwise, the initial subregion allocation would not add up to the total example allocation. The formulas to determine variable weight for the Single Family RAF are as follows:

- Total Need Variables = HH at or below 200% poverty + Cost Burden + Overcrowding + Units Lacking Plumbing + Units Lacking Kitchen
- Total Availability Variables = Unoccupied Units for Sale or Rent
- Regional Coverage Factor = Inverse Population Density

- Total Need Variables – Total Availability Variables + Regional Coverage Factor = 100%

To put it simply (with x representing the weight of each variable): 5x-x+x=100%

As a result, each variable is weighted at 20% for Single Family programs, giving the appropriate relationship between funding and current availability of resources. The compounded need variables receive 100% weight. Table 5 shows the application of the weights based on a hypothetical statewide availability of $2,500,000.

*Table 5: Weight Application*

| Area | Column P: Percent of State's Total Need | Column S: Weight of Need Variables | Column T: Need Variable Allocation* | Column Q: Percent of State's Total Availability | Column U: Weight of Availability Variable | Column V: Availability Variable Allocation~ | Column R: Percent of State's Total Regional Coverage Factor | Column W: Weight of Regional Coverage Factor | Column X: Regional Coverage Factor Allocation^ | Column Y: Total Allocation+ |
|---|---|---|---|---|---|---|---|---|---|---|
| Urban Region 1 | 5.0% | 100% | $ 124,338 | 3.5% | -20% | $ (17,500) | 1.0% | 20% | $4,799 | $ 111,637 |

*Note: Column P, Q and R taken from Table 4.*
*Column T is calculated as follows: Column P x Column S x statewide availability of funds.
~Column V is calculated as follows: Column Q x Column U x statewide availability of funds.
^ Column X is calculated as follows: Column W x Column R x statewide availability of funds.
+Column Y is calculated as follows: Column T + Column V + Column X.

## HOME Subregional Allocation Adjustment

The HOME SF RAF has a subregional floor in order to allow sufficient funding to award at least one contract in each subregion. If the RAF results in a subregional funding amount that is less than $100,000, that subregion's funding amount is adjusted to provide for at least a minimum of $100,000. The process does not reallocate funds from subregions with initial funding amounts in excess of $100,000 to those subregions with initial funding amounts that are less than $100,000. Funds used to enable the floor are not subject to RAF requirements and are added as a final adjustment to the subregional allocation amounts available for award. The final adjustment simply adds a supplemental allocation to bring all subregions to a minimum of $100,000. The process is complete when each subregion has at least $100,000.

Table 6 shows the process of supplementing funds to subregions that have initial funding amounts that are less than $100,000. This table builds from the previous tables included in this methodology and Urban Regions 1 and 2 are included. The column header letters build off previous tables, so if the letters are not in alphabetical order, the column letter refers to previous tables.

*Table 6: Subregion amount under $100,000*

| Area | Column Y: Initial Subregion amount | Column Z: Amount needed to reach $100,000 | Column AA: Final Subregion Allocation |
|---|---|---|---|
| Urban Region 1 | $111,637 | $- | $111,637 |
| Urban Region 2 | $84,255 | $15,745 | $100,000 |

*Note: Column Y is from Table 5.*

Since the Urban Region 1 initial Subregion amount exceeds $100,000, no adjustment is made to this sub-allocation. However, because the Urban Region 2 initial Subregion amount is less than $100,000, a supplemental allocation amount is added to bring the subregion allocation up to the final allocation amount of $100,000.

## Multifamily RAF Example

Table 7 shows the need and availability variables used in the HTC RAF. The HTC RAF is very similar to the HOME MF RAF with the exception that the HTC RAF includes PJs. Example numbers are used for clarity. The statewide average household size in the following example is 2.80.

*Table 7: Example of Need and Availability Variables used for HTC, by Subregion*

| | Region | Column BB: Individuals at or below 200% Poverty | Column CC: HH at or below 200% Poverty | Column DD: Cost Burdened Renters | Column EE: Overcrowded Renters | Column FF: Vacant Units for Rent |
|---|---|---|---|---|---|---|
| MSA Counties with urban places | 1 | 150,000 | 53,571 | 25,000 | 4,000 | 6,000 |
| | 2 | 100,000 | 35,714 | 20,000 | 2,000 | 4,000 |
| | 3 | 150,000 | 53,571 | 25,000 | 4,000 | 6,000 |
| | 4 | 100,000 | 35,714 | 20,000 | 2,000 | 4,000 |
| | 5 | 150,000 | 53,571 | 25,000 | 4,000 | 6,000 |
| | 6 | 100,000 | 35,714 | 20,000 | 2,000 | 4,000 |
| | 7 | 150,000 | 53,571 | 25,000 | 4,000 | 6,000 |
| | 8 | 100,000 | 35,714 | 20,000 | 2,000 | 4,000 |
| | 9 | 150,000 | 53,571 | 25,000 | 4,000 | 6,000 |
| | 10 | 100,000 | 35,714 | 20,000 | 2,000 | 4,000 |
| | 11 | 150,000 | 53,571 | 25,000 | 4,000 | 6,000 |
| | 12 | 100,000 | 35,714 | 20,000 | 2,000 | 4,000 |
| | 13 | 150,000 | 53,571 | 25,000 | 4,000 | 6,000 |

| | Region | Column BB: Individuals at or below 200% Poverty | Column CC: HH at or below 200% Poverty | Column DD: Cost Burdened Renters | Column EE: Overcrowded Renters | Column FF: Vacant Units for Rent |
|---|---|---|---|---|---|---|
| Non-MSA counties and counties with only rural places | 1 | 40,000 | 14,286 | 7,000 | 700 | 700 |
| | 2 | 25,000 | 8,929 | 2,000 | 400 | 500 |
| | 3 | 40,000 | 14,286 | 7,000 | 700 | 700 |
| | 4 | 25,000 | 8,929 | 2,000 | 400 | 500 |
| | 5 | 40,000 | 14,286 | 7,000 | 700 | 700 |
| | 6 | 25,000 | 8,929 | 2,000 | 400 | 500 |
| | 7 | 40,000 | 14,286 | 7,000 | 700 | 700 |
| | 8 | 25,000 | 8,929 | 2,000 | 400 | 500 |
| | 9 | 40,000 | 14,286 | 7,000 | 700 | 700 |
| | 10 | 25,000 | 8,929 | 2,000 | 400 | 500 |
| | 11 | 40,000 | 14,286 | 7,000 | 700 | 700 |
| | 12 | 25,000 | 8,929 | 2,000 | 400 | 500 |
| | 13 | 40,000 | 14,286 | 7,000 | 700 | 700 |

| | Column BB Total | Column CC Total | Column DD Total | Column EE Total | Column FF Total |
|---|---|---|---|---|---|
| State Total | 2,080,000 | 742,857 | 356,000 | 47,300 | 73,900 |

## Compounded Need

To allocate funds, the RAF uses each subregion's ratios of the State's total. All of the variables that measure need are added together before taking each subregion's need as a percentage of the amount of the total need in the State. Table 8 illustrates how the Total Need Variables are derived: households at or below 200% of poverty, cost burdened renter households, and overcrowded renter households are added together, thereby compounding the need. Table 8 shows only Urban Region 1 and the statewide total, in order to simplify the example.

*Table 8: Total Need Variables*

| Area | Column CC: HH at or below 200% Poverty | Column DD: Cost Burdened Renters | Column EE: Overcrowded Renters | Column GG: Total Need Variables |
|---|---|---|---|---|
| Urban Region 1 | 53,571 | 25,000 | 4,000 | 82,571 |
| State Total | 742,857 | 356,000 | 47,300 | 1,146,157 |

*Note: Columns CC, DD and EE are from Table 7.*

This compounding balances the relative importance of the variables; variables with very high or very small numbers are combined with the overall total of need, preventing these variables from having a disproportionate or arbitrary amount of weight for their size.

## Weights

Examples of how the weights work in the RAF are in Tables 9 and 10. If the letters are not in alphabetical order, the column header letter refers to a previous table.

In order to apply weights, first the subregional percentage or share of statewide need, availability, and inverse population density must be calculated. Table 9 demonstrates how the percentages are derived.

*Table 9: Percentages Taken*

| Area | Column GG: Total Need Variables | Column HH: Percent of State's Total Need | Column II: Vacant Units for Rent | Column JJ: Percent of State's Total Availability |
|---|---|---|---|---|
| Urban Region 1 | 82,571 | 7.2% | 6,000 | 8.1% |
| State Total | 1,146,157 | | 73,900 | |

*Note: Column GG is from Table 8.*

A successful allocation formula will provide more funding for areas with high housing need and reduce funding for areas with an abundance of housing resources. The housing availability variable has negative weight to reflect that an abundance of available units might reduce the need for assistance, while housing need variables have positive weight to reflect that these factors may increase the need for assistance. Renter and owner components of a single need or availability category added together are considered to be one variable for the purposes of calculating weight percentages. The weight of each variable, whether need, availability, or regional coverage factor, must have the same absolute value. All variables added together

must equal 100%; otherwise, the initial subregion allocation would not add up to the total example allocation. The formulas to determine variable weight for the Multifamily RAF are as follows:

- Total Need Variables = HH at or below 200% poverty + Renter Cost Burden + Renter Overcrowding
- Availability Variable = Unoccupied Units for Rent
- Total Need Variables – Availability Variable = 100%

To put it simply (with x representing the weight of each variable): 3x-x=100%

As a result, each variable is weighted at 50% for multifamily programs, giving the appropriate relationship between funding and current availability of resources. The compounded need variables receive 150% weight. Table 10 shows the application of the weights based on a statewide availability of $40,000,000.

*Table 10: Weight Application*

| Area | Column HH: Percent of State's Total Need | Column KK: Weight of Need Variables | Column LL: Need Variable Allocation* | Column JJ: Percent of State's Total Availability | Column MM: Weight of Availability Variable | Column NN: Availability Variable Allocation~ | Column OO: Total Allocation+ |
|---|---|---|---|---|---|---|---|
| Urban Region 1 | 7.2% | 150% | $ 4,322,519 | 8.1% | -50% | $ (1,623,816) | $ 2,698,703 |

*Note: Column HH and JJ taken from Table 9.*
*Column LL is calculated as follows: Column HH x Column KK x statewide availability of funds.
~Column NN is calculated as follows: Column JJ x Column MM x statewide availability of funds.
+Column OO is calculated as follows: Column LL + Column NN.

## HTC Subregional Allocation Adjustment

Tex. Gov't Code §2306.111(d-3) is a requirement regarding funding and the RAF that applies only to HTC. This provision requires that TDHCA allocate at least 20% of housing tax credits to rural areas and that $500,000 or more be available for each of the 26 subregions. In the 2019 QAP the Department adopted an increase to the $500,000 figure establishing a $600,000 minimum for each region. The overall state rural percentage of the total tax credit ceiling amount will be adjusted to a minimum of 20% only at the time of actual award, if needed. Usually, the 20% allocation to rural areas occurs through the competitive process, but, if not, one more deal for rural areas will be awarded from the statewide collapse of the RAF to ensure the requirement is met.

For the HTC RAF, the subregional funding amount is adjusted to a minimum of $600,000 if needed. This is a final adjustment to the subregional allocation amounts available for award. The process proportionately takes funds from subregions with initial funding amounts in excess of $600,000 and reallocates those funds to those subregions with initial funding amounts that are less than $600,000. The process is complete when each subregion has at least $600,000.

Tables 11 and 12 show the process of determining the amount to adjust from subregions with more than $600,000. These tables build from the previous tables included in this methodology and Urban Region 1 and 2 and Rural Region 1 and 2 are included. The column header letters build off previous tables, so if the letters are not in alphabetical order, the column letter refers to previous tables.

These four subregions are examined because the most common movement for funds during the $600,000 adjustment is from Urban Counties to Rural Counties. The first step in the $600,000 adjustment process is to determine the amount over or under $600,000 for each subregion. This is illustrated in Table 11.

*Table 11: Subregional amount over/under $600,000*

| Area | Column OO: Initial Subregion amount | Column PP: Amount needed to reach $600,000 | Column QQ: Amount over $600,000 that can be reallocated |
|---|---|---|---|
| Urban Region 1 | $2,698,703 | $- | $2,098,703 |
| Urban Region 2 | $1,938,732 | $- | $1,338,732 |
| Rural Region 1 | $961,482 | $- | $361,482 |
| Rural Region 2 | $457,720 | $142,280 | $- |
| State Total | $40,000,000 | $853,682.36 | $25,253,682.36 |

*Note: Column OO is from Table 10.*

Column QQ in Table 11 is the amount in Column OO minus $600,000 if the amount in Column OO is over $600,000. At least $600,000 is maintained in each subregion before the adjustment process.

The next step in the adjustment process is to determine the percentage to be reallocated. The proportion of the total amount to be reallocated is in Column SS. Finally, Column OO is adjusted by Column SS to equal the final Sub-Amount in Column TT.

*Table 12: Proportional adjustment*

| Area | Column RR: Percent of Total Amount that can be reallocated* | Column SS: Amount to be reallocated~ | Column TT: Final Subregion Allocation+ |
|---|---|---|---|
| Urban Region 1 | 8.31% | $ (70,945) | $2,627,758 |
| Urban Region 2 | 5.30% | $ (45,255) | $1,893,477 |
| Rural Region 1 | 1.43% | $ (12,220) | $949,262 |
| Rural Region 2 | 0.00% | $142,280 | $600,000 |
| State Total | 100.00% | $0 | $40,000,000 |

**Column RR is calculated as follows: if Column OO is over $600,000, then ((Column OO-$600,000)/(Statewide total for Column QQ))*
*~Column SS is calculated as followed: if Column RR is a percentage, then (Column RR*$42,280); if Column RR is "-%", then Column SS equals Column PP.*
*+Column TT is calculated as follows: Column OO + Column SS.*