From Data to Decisions: A Practical Guide to Community–Driven Housing Needs Assessments

Housing Gap Analysis Guide (with Excel Worksheet)

Purpose

This guide explains the purpose of a housing gap analysis and provides a clear structure for using the accompanying spreadsheet tool responsibly. It is designed for communities that need a clear, defensible, and accessible way to analyze affordability alignment across the income spectrum.

A housing gap analysis compares household incomes to monthly housing costs to identify where affordability misalignment exists. It helps communities understand:

- Whether current housing costs align with local incomes, and
- Which income levels face the greatest affordability constraints

What is a Housing Gap Analysis?

What it is	What it is not
A comparison of household incomes to monthly housing costs	A housing demand or population growth forecast
A way to identify unmet affordability needs	A replacement for a project pro forma or feasibility study
A tool for prioritization and communication	A statistically precise estimate of unit production targets
A bridge between data analysis and action planning	A substitute for community engagement or market context

When to Use a Housing Gap Analysis

When and why to use a housing gap analysis:

- After clarifying assessment purpose and scope
- After compiling core income and housing cost data
- Before setting priorities, targets, or strategies
- When communicating affordability constraints to decision-makers or funders.

Rental and Ownership Gap Analyses

Rental and ownership affordability analysis should be completed separately, as they utilize different data sources and incorporate differing assumptions. This tool begins with the rental analysis.

Rental Gap Analysis Steps

Step 1: Define Income Bands (AMI)

Households are grouped by income using Area Median Income (AMI) benchmarks. For this tool, communities should analyze the full affordability spectrum:

- 0-30% AMI
- 31-50% AMI
- 51-80% AMI
- 81-100% AMI
- 101-120% AMI
- 121%-150%+ AMI

Affordability challenges often extend into moderate or workforce income ranges, especially in small, rural, or tourism-based communities. Limiting analysis to income bands typically considered lower income (<80% AMI) may obscure broader market pressures.

Data Source:

- HUD Income Limits (https://www.huduser.gov/portal/datasets/il.html)
  - Use county-level limits, unless part of a metropolitan area
  - Use the average household size for your community (data.census.gov Table: B25010)

Step 2: Define Renter Households by Income Band

This step defines “renter household demand” for the analysis. It is recommended that communities use renter households only; however, if the income by tenure data is not available or reliable for small geographies, use total households by income level and document the limitation.

Once communities identify the number of households by income level (Less than $10,000, $10,000 to $14,999, etc.), the income levels will need to be mapped to AMI levels for analysis. This spreadsheet maps the income data to the most aligned AMI level automatically.

It does this by converting the AMI level percentages into dollar thresholds, then compares those thresholds to the Census income brackets, and assigns the number of households into the appropriate AMI band. For example, the 0%-30% AMI threshold is approximately equivalent to households making $0 - $34,999 annually.

Data Source:

- US Census Bureau (Census) American Community Survey (ACS)
  - Table B25118 – Tenure by Household Income, or
  - Table S2503 – Financial Characteristics by Tenure
  - Identify the number of renter households for each ACS income bracket.
  - These income brackets are provided in dollar ranges. The spreadsheet will map them into AMI bands automatically using the midpoint method described below.

Midpoint Method for Income Bracket Conversion to AMI Income Bands

Because ACS income tables are reported in dollar brackets and this tool uses AMI-based bands, the spreadsheet automatically assigns each ACS income bracket to an AMI band using a midpoint method:

- For each ACS income bracket, the spreadsheet defines a lower bound and upper bound in dollars.
- It calculates the bracket midpoint: (lower bound + upper bound) / 2.
- It assigns the entire bracket's household count to the AMI band that contains that midpoint.

Step 3: Estimate Maximum Affordable Monthly Rent

For each income band:

Maximum Affordable Monthly Rent = (Annual Income x .30) / 12

This uses the widely accepted affordability benchmark that housing should cost no more than 30% of gross household income. This calculation is automated in the spreadsheet.

Step 4: Identify Rental Housing Cost Distribution

This step estimates the supply of housing units based on how many rental units exist within each rent range.

The table noted below provides the number of rental units by rental rate category (e.g. $500-$749, $759-$999, etc.) Rental affordability analysis should use gross rent, including utilities.

Data Source:

- US Census Bureau (Census) American Community Survey (ACS)
  - Table B25063 – Gross Rent
  - Use 5-year estimates
  - Note margins of error for small geographies

Step 5: Calculate the Gap

For each income band, the spreadsheet will calculate the "gap":

- Gap = Renter Households – Affordable Rental Units
  - Where there is a positive gap, there is a shortage of units
  - Where there is a negative gap, there is a surplus of units

Step 6: Interpret the Results

This tool identifies patterns, not exact units needed at each income level. In small communities, even small numbers of unit gaps may represent structural constraints.

Rental Gap Analysis Assumptions:

- Assumes units are fully occupied
- Does not adjust for unit condition
- Does not measure vacancy rates
- Uses gross rent as a proxy for affordability
- Does not account for seasonal rent fluctuations
- Uses ACS data, subject to margins of error
- Uses AMI benchmarks, which are county- or metropolitan-wide, not specific to the local community

Ownership Gap Analysis Steps

Ownership analysis mirrors the rental framework but requires additional assumptions to convert monthly affordability into an estimated purchase price.

Step 1: Define Income Bands (AMI)

Use the same income level bands as the Rental Gap Analysis:

- 0-30% AMI
- 31-50% AMI
- 51-80% AMI
- 81-100% AMI
- 101-120% AMI
- 121%-150%+ AMI

Data Source:

- HUD Income Limits (https://www.huduser.gov/portal/datasets/il.html)
  - Use county-level limits, unless part of a metropolitan area
  - Use the average household size for your community (data.census.gov Table: B25010)

Step 2: Define Owner Households by Income Band

This step defines “demand” for the number of homes affordable to owner-occupied households. It is recommended that communities use owner households only. However, if the income by tenure data is not available or reliable for small geographies, use total households by income level and document the limitation.

Once communities identify the number of households by income level (Less than $10,000, $10,000 to $14,999, etc.), the income levels will need to be mapped to AMI levels for analysis. *This spreadsheet automatically maps the income data to the most aligned AMI level automatically.*

It does this by converting the AMI level percentages into dollar thresholds, then compares those thresholds to the Census income brackets, and assigns the number of households into the appropriate AMI band. For example, the 0%-30% AMI threshold is approximately equivalent to households making $0 - $34,999 annually.

Data Source:

- US Census Bureau (Census) American Community Survey (ACS)
  - Table B25118 – Tenure by Household Income, or
  - Table S2503 – Financial Characteristics by Tenure
- Identify the number of owner households for each ACS income bracket.
- These income brackets are provided in dollar ranges. The spreadsheet will map them into AMI bands automatically using the midpoint method described below.

Midpoint Method for Income Bracket Conversion to AMI Income Bands

Because ACS income tables are reported in dollar brackets and this tool uses AMI-based bands, the spreadsheet automatically assigns each ACS income bracket to an AMI band using a midpoint method:

- For each ACS income bracket, the spreadsheet defines a lower bound and upper bound in dollars.
- It calculates the bracket midpoint: (lower bound + upper bound) / 2.
- It assigns the entire bracket's household count to the AMI band that contains that midpoint.

Step 3: Estimate Maximum Affordable Monthly Housing Cost

For each income band:

Maximum Affordable Monthly Housing Cost = (Annual Income x .30) / 12

Step 4: Identify Owner Housing Cost Distribution

Unlike the Rental Analysis, ownership requires translating the affordable monthly housing cost into an estimated home price. The spreadsheet converts the maximum affordable monthly cost into an estimated affordable home price, using basic assumptions, including:

- 30-year fixed mortgage
- Market interest rate (document year or month used)
- 5-10% down payment (or other local norm)
- Estimated property tax rate
- Estimated insurance cost

Using those assumptions, the tool estimates what purchase price would keep total monthly costs at or below 30% of gross monthly household income.

Step 5: Identify Home Value Distribution

This step estimates the supply of housing units based on how many owner-occupied units exist within each range of home value.

Data Source:

- Use ACS 5-year Table B25075 (Value of Owner-Occupied Housing Units) to count owner-occupied units by value range.
- ACS value is owner-reported estimated value, not sales price. Where possible, supplement with local assessor data or recent sales data.

Step 6: Calculate the Gap

The spreadsheet will then calculate the "gap" for each income band:

- Gap = Owner Households – Affordable Homes
  - Where there is a positive gap, there is a shortage of homes at that income level
  - Where there is a negative gap, there is a surplus of homes at that income level

Step 7: Interpret the Results

Again, this tool identifies patterns, not exact units needed at each income level.

Because ownership requires additional assumptions about mortgage length, interest rate, taxes, and down payment assistance, pay attention to how each of those may shift estimated affordability thresholds. The Ownership Gap Analysis is more sensitive to assumptions than the Rental Gap Analysis and should be interpreted with caution.

How to Use the Housing Gap Analysis Spreadsheet

This section provides a walk-through of each tab within the spreadsheet using an example. Communities should follow the same sequence for their own geography.

Tab 1: Instructions & Assumptions

Purpose: Document data sources, assumptions, and limitations

Key Elements (example):

- **Geographic area:** Denali Borough, Alaska
- **Data Set/Year:** 2019-2023 ACS 5-year Estimates
- **Income Limits Source:** HUD County-Level Income Limits (2025)
- **Household Size:** Average renter household size (ACS Table B25010)
- **Affordability Standard:** 30% of gross household income
- **Income Bands Used:** 30%, 50%, 80%, 100%, 120%, and 150%+ AMI
- **Income Mapping Method:** ACS Income brackets assigned to AMI bands using midpoint method
- **Mortgage assumptions for ownership analysis only:** Interest rate, term, property tax estimate, insurance estimate

Tab 3: Household Income Distribution

Purpose: Defines the “demand” for affordable rental units and affordable homes.

Input:

- Renter or owner household counts by income bracket
- The spreadsheet converts brackets into numeric ranges, calculates the midpoint of each bracket, and automatically assigns each bracket to the appropriate AMI band.
- Use household counts for renters, owners, or total households (ACS Table B25118)

For example, if an ACS income bracket midpoint falls within the 51-80% AMI range, all households in that bracket are assigned to that band. This creates total households (renter/owner) by AMI band.

See spreadsheet for example.

Tab 4: Housing Cost Distribution

Purpose: Define the "supply" of affordable rental units and affordable homes.

For Rental Gap Analysis:

- Identify rental unit counts by gross rental rate bracket.
- The spreadsheet converts rent brackets into numeric ranges, calculates bracket midpoints, and determines which AMI bands can afford each rent level.

For Owner Gap Analysis:

- Enter owner-occupied housing unit counts by value bracket (ACS Table B25075)
- The spreadsheet converts home value brackets into numeric ranges, calculates bracket midpoints, and determines which AMI bands can afford each home value.

See spreadsheet for example.

Tab 5: Calculate the Gap

Purpose: Calculate the number of renter and owner-occupied households to affordable rental units and affordable homes.

For each AMI band:

- The spreadsheet compares that to the total renter or owner-occupied households in that AMI band.
    - Rental Gap = Renter Households – Affordable Rental Units
    - Ownership Gap = Owner Households – Affordable Homes

See spreadsheet for example.

How Findings Inform Action

Housing gap analysis should serve as a starting point for strategy, not an endpoint.

This analysis can support:

- Identifying priority income groups
- Discussing needed housing types
- Aligning action plan strategies with income levels
- Communicating affordability needs with elected officials and funders