



## Constructing a Community Housing Profile: Estimating Supply and Demand in Your Local Housing Market

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The issue of sufficient affordable housing affects many small communities in Oklahoma. For many communities, it's more than an issue of providing shelter—it's an economic development concern. As volunteers from strategic planning committees become involved in developing the economic opportunities available to their community, they realize that a lack of housing presents a major obstacle to that goal. Local economic development committees would like to attract new industry to the area, but where will the potential employees live? Some small-towns envision themselves as a haven for the growing number of retirees in the state, but have no homes in which to house them. Clearly, the issue of adequate housing is one that must be addressed before successful economic growth can take place in communities.

Beyond being a component necessary for economic growth, a healthy housing market can be an important *source* of economic growth. For instance, the development of rural housing creates jobs for those already living in the area and attracts new workers into the area. As those workers spend their wages and building supplies are purchased, the local economy will likely experience an upswing. In addition, the purchase of a new home also tends to be followed by the purchase of moving services, new appliances, home furnishings, lawn care items, and do-it-yourself home improvement products. This can definitely provide an economic boost to area retailers. This activity may be followed by a "ripple" effect in which the prosperity of local business owners and their employees allows them to purchase more from the local economy.

This fact sheet outlines the necessary steps associated with creating a housing development strategy. Special attention is paid to one of the most daunting tasks faced by local leaders: estimating demand and supply in the local housing market.

### Steps in the Housing Development Process

An anonymous author once said, "Even the longest journey begins with the first step." The first step in community housing development is to get organized. The Iowa State Extension Service has identified seven steps associated with the housing development process.

1. Initiate the process; organize a housing task force.
2. Identify the major housing problems faced by the community, and set some preliminary goals.

3. Develop a community housing profile including estimates of supply and demand.
4. Assess local housing needs. Analyze the data collected in Step 3 in light of community housing standards and goals.
5. Set public policy goals and objectives.
6. Prepare housing strategies and housing action plans.
7. Implement, monitor, and evaluate your progress.

The one step that is the most overwhelming to community volunteers is the estimation of local housing demand and supply. In fact, many volunteers may believe that they are incapable of performing such an analysis. The purpose of the following sections is to describe a methodology for estimating housing demand and supply. It is straightforward enough that housing taskforce volunteers should be able to create the estimates on their own.

### Estimating Housing Demand

Some basic data collection is necessary before housing demand can be estimated. Begin at the U.S. Census web site ([www.census.gov](http://www.census.gov)) or at the Oklahoma Resources Integrated General Information Network, or ORIGINS, located at <http://origins.ou.edu>. The following information is required:

1. US Census population estimates for the community for 1990-1999.
2. US Census population projection for the community for 2000 and 2005.
3. US Census estimated population in group quarters for 1990.
4. US Census estimate of average persons per household for the community in 1990.

For example, in 1990, Tishomingo, OK had an estimated population of 3,116; however 275 lived in group-quarters (probably in dormitories at the local university). Thus, the actual population to be housed in 1990 was 2,841. The average persons per household in Tishomingo in 1990 was 2.4. Thus, the number of households in Tishomingo can be found by dividing the population to be housed (2,841) by the average persons per household (2.4). Estimated number of households in Tishomingo in 1990 was 1,184.

According to Census data, the state of Oklahoma averages 0.858 households per housing unit. Literally, less than

one household lives in one housing unit. This is a statistical idiosyncrasy stemming from the fact that people and households are counted separately from housing units in Census years. Applying this ratio to the calculation of housing demand is optional, and the researcher should recognize that doing so will increase the demand estimate.

Applying the ratio of 0.858 households per housing unit to the number of households in Tishomingo, generates the preliminary housing demand for Tishomingo in 1990. Specifically, 1,184 households divided by .858 households per housing unit equals 1,380 housing units. In addition, a recommended 4% vacancy rate may be added to preliminary demand to produce the estimated demand for housing in Tishomingo. In 1990, that estimate was 1,435 (1,380 times 1.04).

The 4% vacancy rate is suggested by Jerry Knox, Associate Professor of Community and Regional Planning at Iowa State University. The idea is that in an efficient housing market, prospective buyers should be met with a variety of choices of units so that they might choose which one, if any, best suits their needs. This 4% vacancy rate is a variable over which community leaders have control. If declining population rates, for example, suggest that 4% is too high, the percentage may be decreased. One suggestion is to consult local realtors about their opinion on this matter.

The steps described above may be taken for the years 1991-1999 with a few qualifications. First, it will be necessary to assume that average persons per household will remain constant at 2.4. In addition, even though the Census publishes population estimates at the city level for these years, there is no estimate of group quarters. In 1990, 275 persons, or 8.825% of the total population lived in group-quarters. In order to estimate the population in group-quarters for the years 1991-1999, assume that 8.825% of the population will continue to live in group-quarters. Another possibility, especially in smaller communities, is to simply check on the local group housing population by calling the area colleges, prisons, nursing homes, etc. After consulting with Murray State College in Tishomingo, for example, it was determined that this 8.825% estimate was still reasonable.

Projections of housing demand for the community in 2000 and 2005 may also be developed by applying the same methodology to US Census projections of population for the community. (It is also possible to find more recent population projections that have been produced by private data companies. One example is Woods and Poole, Economics, Inc.) Using this technique, Tishomingo is estimated to have a demand for 1,400 housing units in 2000. The reduction in housing demand for Tishomingo from 1990 to 2000 is a result of the declining estimates of population.

By using Census data to estimate demand for housing, community leaders can at least get a sketchy view of their housing market. One further recommendation, however, is to make the analysis more realistic by consulting with major employers in the area. Many employers may have a good idea about how many of their employees live in the city and county and how many commute a considerable distance. These employers may be able to estimate an additional demand for housing among their own employees who would not otherwise be counted in the estimate because they do not live in the city or county. For instance, if the housing demand for all of Johnston County were being estimated, a major employer like Sundowner Trailers, a firm that employs almost 700 in rural

Johnston County, would need to be consulted. Sundowner estimates that as much as 65% of its workforce lives outside the county.

## Estimating Housing Supply

Housing supply figures are available from the Census for 1990 only. For many communities, this may be the best available estimate of the housing stock. Although it is likely that some homes have been constructed, mobile homes moved in, retail buildings redesigned for residence, etc., it is also likely that some units have deteriorated beyond habitation, been demolished, been destroyed by weather or fire, etc. The implication is that the original 1990 figure may not be too far off base.

For communities that require residential building permits, there is a way to estimate new units built in the area. *The Oklahoma Statistical Abstract* lists number of building permits for residential units issued annually by city or town and by county. Thus, the new units built each year may be added to the initial stock as given by 1990 Census data.

Tishomingo, for example, is predicted to have a demand for 1,400 housing units in 2000 with a stock of just 1,363 (1990 Census figure). A shortage of housing is expected to continue into 2000. The shortage of housing equal to 37 units in 2000 can be interpreted as the number of new housing units needed in the region by the year 2000 in order to meet anticipated demand. The shortage is expected to diminish from 1990 to 2000 because of anticipated declines in population. Refer to Table 1 for a summary of this information.

Again, estimates of supply may be made more realistic by consulting with experts in the area. For instance, local realtors may know of new housing developments outside the city limits or just inside an adjacent county. If so, these units may need to be added to the estimates of supply.

## Limitations of the Estimates

### Quality

Unfortunately, the use of secondary data to estimate housing stock provides no way of estimating the condition of existing units with respect to habitability. Tishomingo may have had 1,363 units in 1990, but what condition were they

**Table 1. Housing Supply and Demand.**  
Tishomingo, OK 1990 and 2000

	1990	2000
Population	3,116	3,040
Population in Group Quarters	275	268
Population to be Housed	2,841	2,772
Number of Households	1,184	1,155
Preliminary Housing Demand	1,380	1,346
Demand with 4% Vacancy Rate	1,435	1,400
Housing Supply (1990 Census)	1,363	1,363
Shortage	72	37

in at that time? What condition are they in now? The only way for a housing task force to know if available housing is "acceptable" (based on their own subjective definitions) is to assess the situation for themselves. Techniques such as "windshield surveys," where volunteers drive or walk through the residential part of town to document the quantity and quality of housing units, may provide community leaders with a better picture of the *quality* of available housing.

### Quantity

Clearly, the estimates of housing demand depend on the accuracy of various assumptions. For example, if the percentage of the population living in group-quarters actually declines, the estimate of housing demand will be too low, and vice-versa.

This estimate of housing demand may be too low for another reason. This estimate does not consider the possibility that persons not living (but possibly working) in Tishomingo would prefer to live there but cannot find available space. This problem can be dealt with on a limited basis by consulting with the major employers in the area.

Finally, it is undoubtedly true that estimates of population and housing from the 1990 Census are extremely out of date. The Oklahoma State Data Center at the Oklahoma Department of Commerce indicates the following schedule of release for Census 2000 data.

- Population by State - December 31, 2000.
- Population by all levels - April 1, 2001.
- Selected population and housing characteristics - June through September, 2001.
- Summary File 1: Population and housing characteristics for race and Hispanic categories - June through September, 2001.
- Summary File 2: Population and housing characteristics approximated for detailed race and Hispanic categories - October through December, 2001.
- Summary File 3: Demographic, social, economic and housing characteristics - August through December, 2002.
- Summary File 4: Demographic, social, economic and housing characteristics iterated for detailed race and Hispanic categories and ancestry group - December 2002 through March 2003.

### Conclusion

The purpose of this fact sheet is to assist local leaders in their quest for finding more ample housing. A successful campaign will follow the steps as outlined by the Iowa State Extension Service. An organized housing task force must clearly identify the housing problem in their community. The creation of a community profile provides local leaders with

## Appendix

### Blank Tables for Calculating Housing Demand and Supply

**Table 1A. 1990 Housing Demand.**

<i>Line</i>	<i>1990 Demand</i>
1 Enter Population Estimate from U.S. Census	
2 Enter Population in Group Quarters from 1990 Census	
3 % of Population in Group Quarters - Line 2 divided by Line 1 (Needed for later years.)	
4 Population to be Housed Line 1 minus Line 2	
5 Enter Average Persons per Household from 1990 Census	
6 Number of Households Line 4 divided by Line 5	
7 Preliminary Housing Demand Line 6 divided by 0.858	
8 Demand with 4% Vacancy Rate - Line 7 times 1.04	
9 Housing Stock (1990 Census)	
10 Housing Shortage in 1990 Line 8 minus Line 9	

**Table 2A. 2000 Housing Demand.**

<i>Line</i>	<i>2000 Demand</i>
11 Enter Population Estimate or Projection	
12 Enter % Population in Group Quarters - Line 3	
13 Population in Group Quarters - Line 11 times Line 12	
14 Population to be Housed - Line 11 minus Line 13	
15 Enter Average Persons per Household from 1990 census	
16 Number of Households - Line 14 divided by Line 15	
17 Preliminary Housing Demand Line 16 divided by 0.858	
18 Demand with 4% Vacancy Rate - Line 17 times 1.04	
19 Housing Stock (1990 Census)	
20 Total Number of New Housing Units Needed by 2000 - Line 18 minus Line 19	

some basic information about their community. Estimates of housing supply and demand are important components of that profile.

The nature of the supply and demand discourages their use as hard and fast figures. On the other hand, as the example presented in this fact sheet indicates, enough information was available to indicate that available housing is an important issue for leaders and residents in Tishomingo, OK.

Even so, the nature of secondary data suggests that community leaders undertake some kind of collection of primary data. For instance, even though it is believed that 1,390 housing units exist in Tishomingo, it will not be known how many of these units are acceptable, or even habitable. Techniques such as windshield surveys can provide community leaders with a better picture of their housing stock. Surveys of local residents may also provide information about the current deficiencies in the housing stock, as well as point to potential future needs. For sample surveys, refer to the Iowa State University Exten-

sion housing guidebook located at <http://www.exnet.iastate.edu/Pages/housing/aahe/guidebook/process.html>.

## Resources

Housing Assistance Council, "Information About...The Effects of Housing Development on a Rural Community's Economy," 1025 Vermont Ave, NW, Suite 606, Washington, D.C. 20005, URL: <http://www.ruralhome.org/pubs/infoshts/econ.htm>

Knox, Jerry, Housing Needs Assessment, Iowa State University, September 25, 1995, URL: <http://www.public.iastate.edu/~crp534/homepage.html>.

Years, Mary, *Community Housing Needs Assessment and Strategic Planning Process*, Iowa State University Extension, URL: <http://www.exnet.iastate.edu/Pages/housing/aahe/guidebook/process.html>

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