

# Rental Housing in Minnesota: 1990

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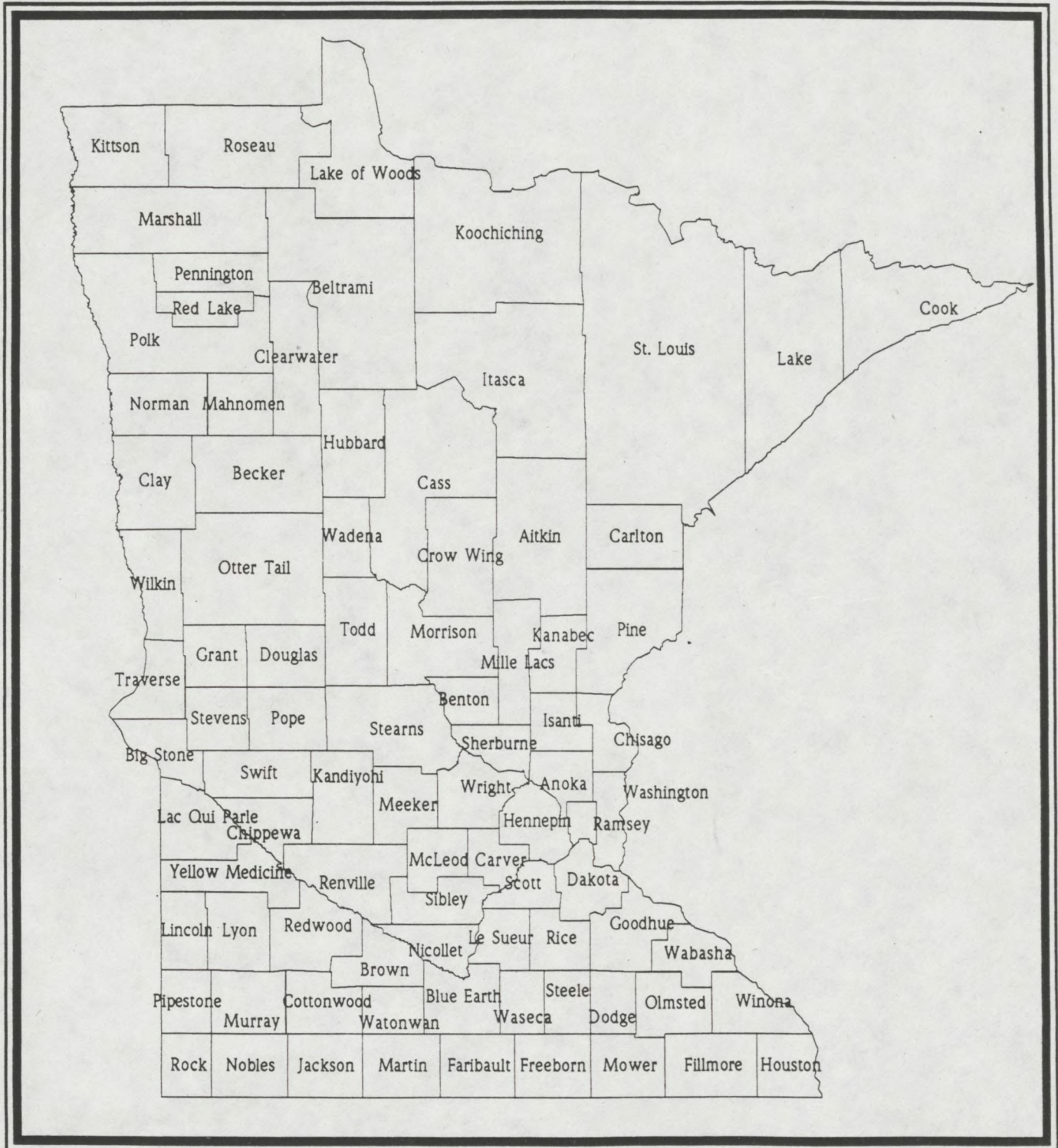
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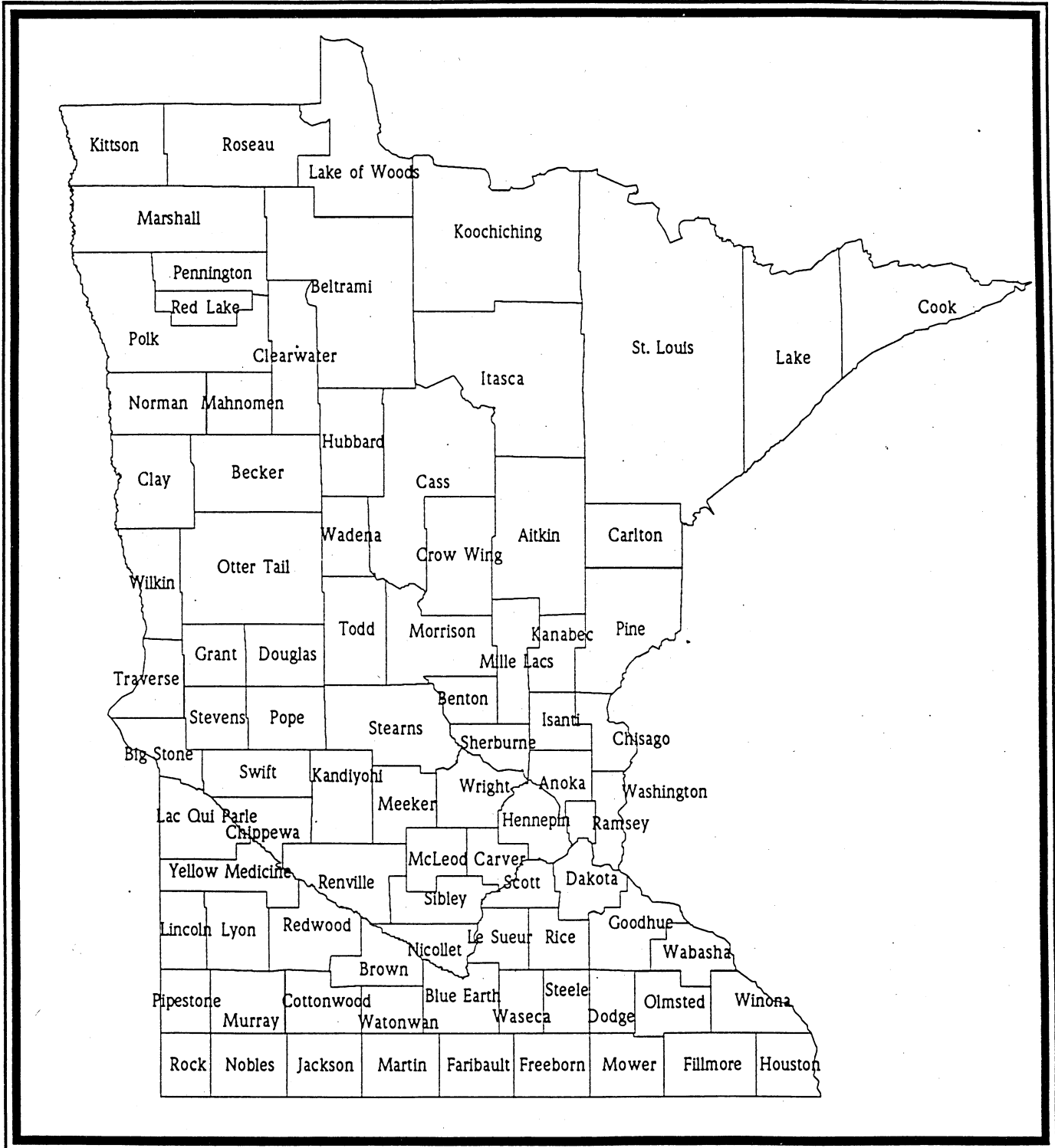
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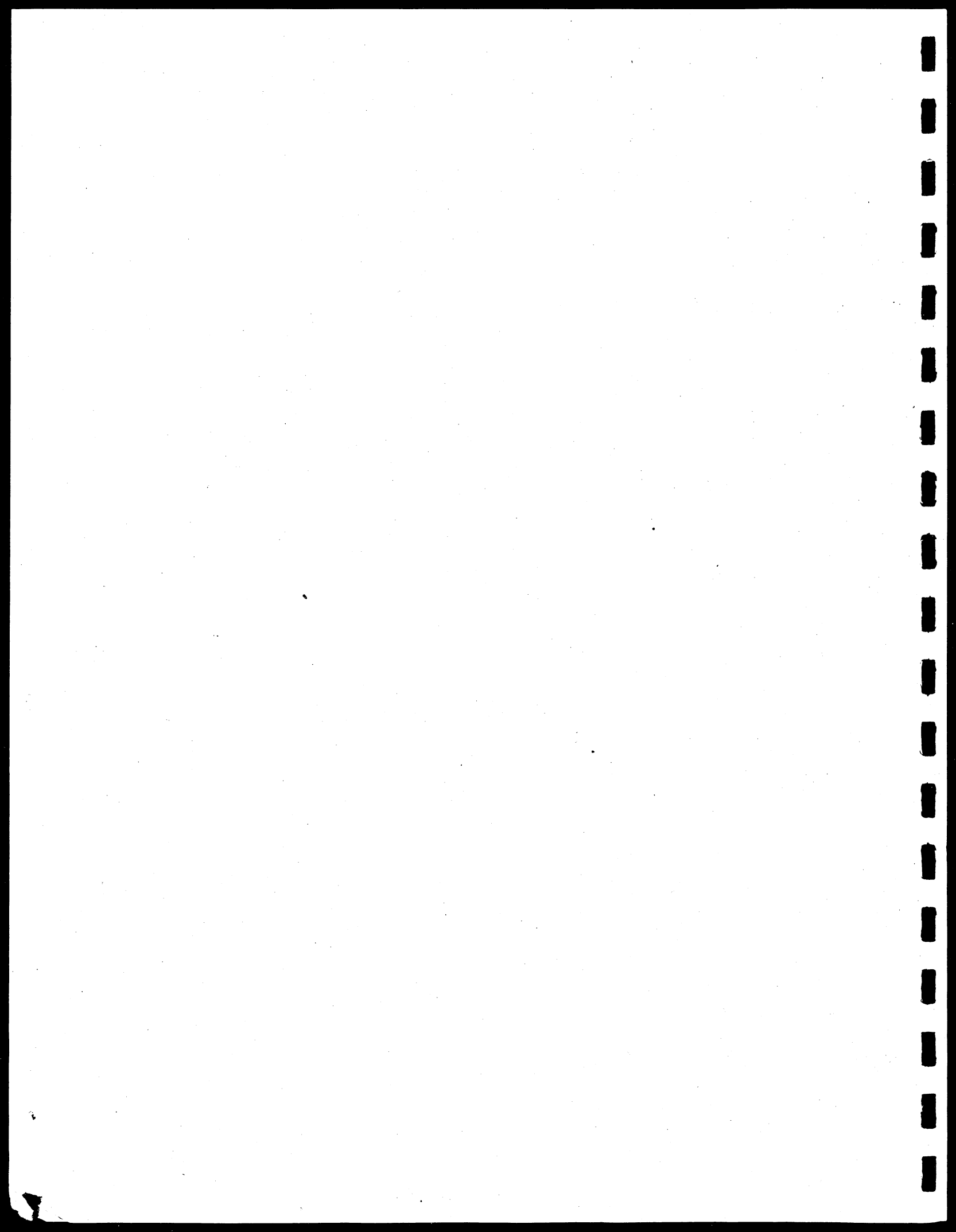
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A REPORT TO THE MINNESOTA LEGISLATURE  
THE EFFECT OF PROPERTY TAXES ON RENTAL HOUSING



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## Executive Summary

### A Portrait from 1990 Census Data

#### Census data paints the following picture of renters and rental housing in 1990:

- ✦ 28.2% of Minnesota households were renters, almost unchanged from 1980 and significantly below the national proportion of 35.8%.
- ✦ The areas with the highest growth rates for renter households were generally along a line from Rochester to St. Cloud, excluding the fully developed portions of the metropolitan area.
- ✦ There was an actual decline in the number of renter households in 28 counties from 1980 to 1990
- ✦ Non white households were 2 to 2.5 times as likely to be renters as white households in 1990.
- ✦ 1 to 4 unit dwellings provided almost 40% of occupied rental housing units. Apartment buildings with 5 or more units provided 58% of rental housing units in 1990.
- ✦ 40% of the rental housing stock in Duluth, Minneapolis, and St. Paul was built before 1940.
- ✦ Over 93% of the rental housing stock in the inner suburbs of the Twin Cities was built after 1950.
- ✦ Large renter households grew at a faster rate than small renter households. The result was an increase in the average size of renter households and some increase in traditional measures of crowding for renter households.
- ✦ Real median income of renter households declined from 1980 to 1990 by 3.6%. It decreased by more than 15% in 29 counties and grew by more than 5% in only 4 counties. The real median income of owner households increased somewhat over the same period.
- ✦ Median income of renter households in 1990 was 47% of the median household income for owner households.
- ✦ Over 43% of renter households in 1990 had incomes that were less than 50% of median household income for the county in which they live.
- ✦ For the state as a whole, median gross rents increased by 79% to \$422 a month from 1980 to 1990.
- ✦ 72% of very low income renter households (income less than 50% of median county household income) were paying 30% or more of their income for rent.
- ✦ 59% of low income renter households (income less than 80% of median county household income) were paying 30% or more of their income for rent.
- ✦ Both of the 72% and 59% figures represent an increase over 1980.

### Property Taxes and Rental Housing

- ✦ Principles of economics suggest that increases(decreases) property taxes should lead to increases(decreases) in rents although the full impact will not be felt immediately.
- ✦ Statistical work using data from 134 metropolitan areas across the country is consistent with the proposition that rents vary directly with property taxes.
- ✦ In 1992 apartments in Minnesota accounted for a little over 4% of total market value and paid almost 7% of total property taxes for an effective tax rate of 4.13%.
- ✦ Property taxes on apartments in Minnesota consistently rank among the highest in the nation. Data from the Institute for Real Estate Management for 1991 for four types of apartment buildings and 141 metropolitan areas shows the following rankings for cities in Minnesota:
- ✦ The statistical work reported here and basic principles of economics suggest that the system of preferential tax classifications lowers rents for eligible tenants.
- ✦ There has been little change in the proportion of residential rental property with preferential tax classifications. This percentage was 8% from 1983 to 1990. It rose to 9.5% in 1992 and appears to have declined somewhat for taxes payable in 1993.
- ✦ The Minnesota system of preferential tax classification for low income and subsidized rental housing has become extraordinarily complicated.
- ✦ There is a strong case to be made for simplification and stability of the system of preferential classification for subsidized rental housing in particular and the property tax system in general.

## Rental Housing in Minnesota: 1990

This report on rental housing in Minnesota has two major subdivisions. The first uses 1990 census data to provide a description of Minnesota renters and rental housing in 1990. The second focuses on the economics of property taxes and rental housing.

### A Portrait from 1990 Census Data

The following description of rental housing in Minnesota is based on the most recent 1990 US Census data, specifically data from Summary Tape File 3 (STF3). STF3 offers the most complete housing data currently available. Data in STF3 are organized as two way comparisons, e.g., type of tenure by age, the ratio of rent-to-income by broad income classes. It would be most desirable to be able to analyze the ratio of rent to income by income and age. With currently available data, this more detailed examination is not possible.

For this report, data on rental housing are organized at multiple levels of aggregation: the state as a whole, county level data, and the 13 Minnesota development regions. In addition, data are examined with a metropolitan/non-metropolitan division. Within the metropolitan area, data are reported for the central cities, Minneapolis and St. Paul, along with development policy areas identified by the Metropolitan Council. Data are also reported separately for the five largest out state cities, Duluth, Mankato, Moorhead, Rochester and St. Cloud.

### Renter Households

From 1980 to 1990 the number of renter households in Minnesota grew by 13.3%, close to but somewhat less than the growth in total households, 14.0%. The growth in renter and owner households was about twice the growth in total population of 7.3%. However growth was not uniform over the state. Figure 1 shows the percentage growth in renter households by county. The area of fastest growth was generally along a line from Rochester to St. Cloud, excluding the fully developed portions of the metropolitan area. As seen in Figure 1, 28 outstate counties showed an actual drop in the number of renter households. This pattern of renter household growth is similar to data on population growth from 1980 to 1990 reported by Hart (1992).<sup>1</sup> Detailed data are reported in Appendix Table 1.

Figure 2 shows renter households as a percentage of total households in 1990. For the state as a whole, 28.2% percent of households were renters in 1990, a proportion that decreased only slightly from its 1980 value of 28.3% and is less than the national proportion of 35.8%. Counties with the highest proportions of renters are those with the largest cities and/or those with significant numbers of college students seeking rental housing. In Minneapolis and St. Paul almost 50% of households are renters, a proportion matched only in Mankato and St. Cloud.

In 1990 for the state as a whole, nonwhite households were 2 to 2.5 times as likely to be renters as white households. While 27% of white households were renters, 64% of nonwhite households were renters. The pattern by counties is more difficult to interpret as the number of nonwhite households is so small in many counties. Information on the number of households by race and ethnicity along with the proportion of renter households by race and ethnicity is reported in Appendix Table 2.

What types of units did renters occupy in 1990? For the state as a whole, single family housing units, either attached or detached, accounted for 21% of occupied rental housing units. Adding 2 to 4 unit buildings accounted for almost 40% of occupied rental units. For the state as a whole mobile homes provided less than 2% of occupied rental units, although in six counties mobile homes accounted for over

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10% of occupied rental housing units. Apartment buildings with five or more units accounted for 58% of occupied rental housing units across the state. In the seven county metropolitan area, they accounted for 68.5% of rental housing units. See Appendix Table 3 for more information.

### Age of the Rental Housing Stock

The Census collects information on the year of construction. The accuracy of this information in the case of rental housing is somewhat unclear, although there is less reason to expect that mistakes vary systematically across counties. For the state as a whole, 1990 census data shows a median year of construction for rental units of 1967, somewhat newer than the median year of construction reported for all units of 1963. However, the overall median hides a great deal of variation across the state.

The state's larger cities, Duluth, Minneapolis, and St. Paul, have the oldest housing stocks and the oldest rental housing stocks in the state. The median year of construction for all residential units for both Duluth and Minneapolis is 1939. For St. Paul it is 1944. While rental housing units are of somewhat more recent construction in all three cities, it is worth noting that 40% of the rental housing stock in these three cities is now over 50 years old. For the state as a whole almost one quarter of the rental housing stock is over 50 years old. By contrast, in communities immediately surrounding Minneapolis and St. Paul just over 93% of the rental housing stock was built after 1950.<sup>2</sup>

Tables 1 to 3 list the ten counties at the extreme ends of the distribution on the following measures of the age of the rental housing stock: median year of construction, the proportion of rental housing built during the 1980's, and the proportion of rental housing that is over 50 years old. More complete information is reported in Appendix Table 4.

### Crowding

Crowding has traditionally been analyzed by looking at the proportion of housing units with more than 1.01 or 1.51 people per room. Census data for the state for owner-occupied housing units shows that both measures declined substantially from 1980 to 1990, 2.12% to 1.20% and 0.31% to 0.24%. For renter occupied housing units there was an increase in both measures of crowding. Rental units with 1.01 or more people per room increased from 2.65% to 3.76% of the total while the percentage for units with 1.51 or more people per room increased from 0.91% to 1.53%. See Appendix table 5 for more detail.

These measures of crowding are consistent with data on the increase in households by size of household reported in Table 4 for the state as a whole. While the percentage increase in the number of households is similar for owners and renters, there was a much larger percentage increase in persons living in renter households than in owner households, 12.9% as compared to 6.2%. Consistent with these differences in the growth of households and persons, the increases in owner households were concentrated among smaller households with actual declines in the number of large owner households. For renters, exactly the reverse was the case with the largest renter households showing the highest rates of growth.

### Lack of Plumbing Facilities

From 1980 to 1990 there was a substantial decline in the proportion of units without access to complete plumbing facilities. For owner occupied units the decline was from 1.42% to 0.52%. For rental units the decline was from 3.78% to 0.69%. Not surprisingly the counties with the largest proportions of units without complete plumbing facilities are found outside the metropolitan area. For all but nine counties in the state, the proportion of rental units without complete plumbing facilities is less



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than 2% of total units. More detailed information on the incidence of complete plumbing facilities is reported in Appendix Table 5.

Census data used to include information on the number of substandard units. Such measures have been discontinued due to concerns about the subjective nature of such determinations. For a period of time it was popular to use data on units without complete plumbing facilities as a proxy measure of substandard housing. With the substantial increase in indoor plumbing since World War II and with increased sensitivity to other elements of substandard housing, the appropriateness of data on access to plumbing facilities as a measure of substandard housing is open to serious question.<sup>3</sup> Its applicability to a state with a substantial rural population is also less clear. As the most recent census data makes clear, the proportion of units without access to complete plumbing facilities is now extremely low and the vast majority of these cases are probably explained by special circumstances.

### Income of Renter Households

The period from 1979 to 1989<sup>4</sup> saw substantial growth in the dollar level of median household income. However, adjusting for inflation shows only a very small increase in real income. For the state as a whole, nominal median household income increased by 74.0% from 1979 to 1989. Over the same period, the cost of living as measured by the Minneapolis-St. Paul Consumer Price Index increased by 72.3%, implying an increase in real income of only 1%.<sup>5</sup> Figure 3 shows changes in median real household income by county. For most counties, increases were between plus and minus five percent. Nine counties had an increase greater than 5%, and four counties experienced a decrease greater than 15%.

With available census data, median income for renter households must be estimated by interpolation. For comparability the same linear interpolation procedure was applied to both the 1980 and 1990 census data. For the state as a whole, median nominal renter household income increased by 66.1%. With inflation of 72.3%, the smaller increase in nominal income translates into a 3.6% decline in median real renter household income. In only four counties did median real renter household income increase by more than 5%. In 29 counties it decreased by more than 15%. The county by county information is shown in Figure 4.

Renter households have significantly lower incomes on average than owner households. When median renter household income is measured against the overall median income, it declined from 62% in 1980 to just over 59% in 1990. In 1990 median renter household income was only 47% of the median for owner households. Figure 5 shows the distribution of renter and owner households in 1990 by broad income classes. See also Appendix Table 6.

Not only do renter households have less income than owner households, but there is an increasing concentration of very poor households among renter households. In 1980 41.6% of renter households had very low incomes, that is their incomes were less than half of the overall median household income for the county in which they lived. From 1980 to 1990 the number of very low income renter households increased by 21% as compared to the overall growth in renter households of 13.3%. As a result the proportion of very low income renter households increased by almost two percentage points to 43.4%. While in 1990 only 28.2% of all households across the state were renters, over 62% of very low income households were renters. More complete information is reported in Appendix Tables 7 and 8.

In 1980 the county with the largest concentration of poor renter households was Chisago county where

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very low income renters were 52% of renter households. In only two other counties was there a similar concentration of very low income renter households. In 1990 there were 17 counties where more than 50% of renter households had incomes that were 50% or less of the overall county median.

### Rents

Census data reports that for the state as a whole median gross rent increased from 1980 to 1990 by 78.8% from \$236 to \$422. Figure 6 shows median gross rents across the state in 1990. Rents might increase for a number of reasons: In a period of inflation it would not be surprising if rents increased along with the price of other goods as a landlord's cost of doing business would also be expected to be increasing. Any difference between the increase in cost and the increase in rents would be reflected in a change in landlord net income. Even without a change in costs or profits, median rents could change if the size and/or quality of rental units changes. For example, it would not be surprising if rents increased by more than the rate of inflation if renters occupied larger or better rental units. Census data on median rents do not provide enough information to decompose the overall increase in rents as they do not include appropriate information on changes in costs, profits, and the size and quality of rental units.

The rent component of the Consumer Price Index (CPI) is designed to measure the change in market rents for a standard apartment, that is one of constant size and quality, and might help one to interpret the increase in rents as measured by the census. Over the period 1980 to 1990 the rent component of the CPI for the Twin Cities increased by 61.7%. This increase is very close to the increase in the overall Twin Cities CPI but almost 10 percentage points lower than the increase in the rent component of the national CPI. The magnitude of this difference is surprising and somewhat unusual. Apartment vacancies in the metropolitan area showed a significant increase in the late 1980's while vacancy rates for the rest of the country did not. The rent component of the Twin Cities CPI is consistent with an interpretation that increased vacancies held down rents vis-a-vis the rest of the country. However, there is less evidence that increases in the cost of providing rental housing were lower in the Twin Cities than elsewhere. Using the Minneapolis-St. Paul CPI, one gets a picture of larger or better apartments on average and some suggestion of a price/cost squeeze on landlords.

Figures 7 and 10 show estimates of the number of rental units at different rent levels for the state as a whole and for three geographic subdivisions. In these diagrams 1980 rents have been adjusted to 1990 dollars using the increase in the rent component of the Twin Cities CPI. There is one further adjustment as census data on the number of rental units by rent show a somewhat smaller total than data on the number of renter households. For the state as a whole the difference is 6.8% in 1980 and 4.1% in 1990. The pattern is similar in 1980 and 1990, very small discrepancies in the metropolitan area and larger differences outstate. For each census and for each geographic area, data on the number of units for each rent interval were adjusted by the overall percentage discrepancy for that area.

Figure 7 suggests that for the state as a whole there was little change in the number of units renting for \$400 a month or less with most of the increase in rental units occurring at higher rent levels. However this statewide picture masks some significant differences. While there was little change in the overall number of rental housing units from 1980 to 1990 within the central cities of Minneapolis and St. Paul, there was a substantial reduction in the number of units renting for less than \$400 a month offset by an increase in the number of rental units with higher rents. Within the metropolitan area but outside the central cities there was a smaller loss in the number of units with rents of \$400 or less and a substantial increase in the number of units with higher rents. Outside the metropolitan area almost all of the increase in rental units were at rent levels of under \$400 a month.

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### The Ratio of Rent to Income

It has become traditional to look at the ratio of rent to income as a measure of rent burden. Historically ratios of 25% and more recently ratios of 30% have come to be considered excessive. Data on the ratio of rent to income for low income renter households in 1980 and 1990 are included in Appendix Tables 7 and 8. These numbers need to be interpreted with care. In particular the number of renter households with a high ratio of rent to income for any single year is likely to be an overestimate of the number of households with income related rent problems that should be a concern of public policy for at least several reasons.

Household income is more variable than rent. Looking only at low income renter households measures not only those households whose incomes are consistently low but also those households whose incomes are temporarily low. Households with a high ratio of rent to income but whose incomes are only temporarily low will see their ratio of rent to income decline as their income increases.

One also expects that the ratio of rent to income may be high for some younger households who willing choose to spend a high proportion of their current income on housing in anticipation that their income will soon increase as they accumulate work experience. Some of these households may also be receiving significant financial help from their parents that is not captured in census measures of household income. Students would be a particular example. Unfortunately data currently available for the 1990 census do not allow one to measure the importance of these groups.

Comments above, about groups for which there might be less policy concern about the ratio of rent to income, should not be interpreted to imply that there should be no public policy concern about the ratio of rent to income for any households. There clearly are a number of households for whom poverty is not a sometime thing but rather a condition with which they must cope for a number of years. These are situations of legitimate public policy concern.

While data on the number of households with a high ratio of rent to income may be misleadingly high for any single year, there is less reason to discount changes over time. From 1980 to 1990 almost all traditional measures of rent burden deteriorated, showing a larger number and a larger proportion of low income renter families with a significant rent burden. In 1990, just under three quarters of very low income renter households had rent payments of at least 30% of income. The 72.3% figure is an increase of almost three percentage points from 1980. When one adds renter households with incomes of 50% to 80% of county median household income, the proportion of renter households paying 30% of their income for rent declines to 58.9%. However, it is important to note that the 58.9% figure for 1990 is still an increase of just over three percentage points from 1980. Counties with the largest proportions of low income renter households paying 30% or more of their income for rent are shown in Table 5.

Households with high ratios of rent to income are overwhelmingly poor. In 1990 for the state as a whole, very low income renter households paying at least 30% of their income in rent accounted for over 75% of all households paying at least 30% of their income for rent. Those earning less than 80% of county median household income, paying at least 30% of their income for rent accounted for 94% of all households with high ratios of rent to income.

Demographic and economic changes over the decade would have led many housing analysts to expect that measures of rent burden would have declined not increased. Aging of the baby boomers should have moved a greater proportion of younger households into years of higher earnings, and the state of the

economy in 1989 and 1990, as measured by the unemployment rate, was stronger than that of 1979 and 1980. It is against these changes, that should have allowed an improvement in the financial situation of renters, that increases in the proportion of low income renter households and increases in the ratio of rent to income shown in Appendix Tables 7 and 8 are especially discouraging.

## **Property Taxes and Rental Housing**

### **The Incidence of Property Taxes**

**E**conomic analysis of the impact of property taxes on rental housing is traditionally based on an analysis of the implications of equilibrium in competitive markets with profit maximizing landlord/investors. The assumption of equilibrium means that at the margin rents are offering landlord/investors a risk adjusted rate of return that is competitive with returns on alternative investments. An increase in property taxes increases costs for a landlord/investors. Without an increase in rents, the return to landlord/investors is diminished and there is an incentive to direct investment away from rental housing and to other forms of investment. Only as rents rises and/or as the costs of supplying rental housing units declines will investments in rental housing again offer a competitive risk adjusted rate of return.

While an increase in property taxes immediately increases costs, it is less clear that landlord/investors will be able to increase rents immediately. In the short run rents should be determined by the interaction of market demand and supply. The stock of rental housing can be increased through new construction or conversion from other uses. It can be reduced through lack of maintenance, conversion to alternative uses, or demolition. However, all of these actions take some time to accomplish. As a result there can be little change in the stock of rental housing in the short run. Thus, following an increase in property taxes, there can be little change in the stock of rental housing and less room for landlord/investors to be able to charge higher rents immediately.

However, it would be a serious mistake to assume that following an increase in property taxes there would never be an impact on rents. Over time the stock of rental housing would be expected to decline as the reduced return to landlord/investors leads them to direct investment in other directions — rental housing in other parts of the country and/or investment in other sectors of the economy. As the stock of rental housing declines, market rents should rise and equilibrium would be reestablished when the return to rental housing again offers a competitive risk adjusted rate of return. Similarly, a decline in property taxes is not likely to lead to an immediate reduction in rents. Only over time, as the increased returns to rental housing induces an expansion of the stock of rental housing, will market forces come into to play to force a reduction in rents.

Do rents rise and fall dollar for dollar with changes in property taxes? The answer to this question is complicated and depends upon a number of factors. For example, if one were talking about an increase in property taxes applied to all rental housing in the country, it may well be that rents would not rise dollar for dollar as the movement of capital out of rental housing into other sectors of the economy would be expected to reduce returns to investment in these other sectors somewhat. In this case rising rents are likely to intercept declining returns in other sectors at some point short of a dollar for dollar rise. On the other hand, if one is talking about increases in property taxes in a single taxing jurisdiction, it is less clear that the outflow of investment from rental housing in that jurisdiction would be sufficient to have a measurable impact on the rate of return in other parts or sectors of the economy. In this case, it is more likely that rents will rise dollar for dollar with property taxes.<sup>6</sup>

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If, following an increase in property taxes, the cost of providing rental housing declines as the stock of rental housing declines, then in the new equilibrium it may be that rents need not increase dollar for dollar with the increase in taxes. Long run equilibrium requires only that rents offer a competitive return when measured against the cost of supplying rental housing. Major categories of costs included financing, construction materials, labor and land. The cost of financing and the prices of many construction materials are determined in national markets and are unlikely to be affected by changes in construction activity or the size of a single local market. Labor costs, even within a single state or area, are likely to be dominated by macroeconomic forces not changes in property taxes. The impact of property taxes on local land prices is the cost category where there may be a link to local property taxes. Lower land prices would reduce the cost of providing rental housing and would contribute to the re-establishment of competitive returns with a less than dollar for dollar increase in rents. Formal analysis of the links between property taxes and land prices suggests that the impact on land prices depends in a complex way on a number of factors — the price elasticities of demand and the elasticities of factor substitution, factor proportions in different sectors and jurisdictions of the economy, the movement of mobile factors between sectors and jurisdictions, the relative size of sectors and jurisdictions, productivity changes, the nature of aggregate factor supplies and opportunities for alternative land use.<sup>7</sup>

In an attempt to try and measure the relationship between rents and taxes, econometric techniques were used to see if differences in rents across cities are related to differences in property taxes.<sup>8</sup> In such an exercise one needs to be careful to control for other factors that might affect rents. For example, differences in construction costs across metropolitan areas would be expected to lead to differences in rents even if property taxes were the same in all areas. Similarly, large differences in population growth or in the construction of apartments in the recent past would also be expected to affect rents. As described below it was possible to control for some of the other factors but not others. When examining the impact of property taxes on rents, the inability to control for all other factors would not be a serious problem if variation in the unmeasured factors is uncorrelated with the variation in property taxes.

Regression equations were estimated to explain the variation in median apartment rent per square foot for a sample of 254 observations from 134 metropolitan areas as reported by the Institute for Real Estate Management (IREM). IREM collects data on specific buildings and then reports metropolitan area medians for up to four apartment types: elevator buildings, 12-24 unit low-rise apartment buildings, low-rise buildings with 25 or more units, and garden style buildings.<sup>9</sup> The data used in the regression analysis come from 4,172 apartment buildings that include 786,760 apartments. In addition to property taxes variables used to explain median rent per square foot included a measure of the differences in construction costs across metropolitan areas, operating and maintenance expenditures, the average size of apartments, and per capita income.<sup>10</sup> Complete descriptions and data sources are included in Appendix Table 9.

Property taxes, as rents, were measured per square foot. The measure of construction costs was an index of the variation in construction costs across metropolitan areas from Means Assemblies Cost Data. One would expect that apartment buildings that offer higher levels of maintenance and services would command higher rents. Operating and maintenance costs, measured on a cost per square foot basis, were included to control for these differences. Data on average apartment size was included to allow for any systematic differences that might be related to the size of an apartment.

Table 7 reports the first set of regression results. The last four columns of Table 7 report regression results for each type of building separately. For all cases except elevator buildings, the smallest sample, property taxes are statistically significant in explaining the variation in median rents. The first column combines observations on all four types of buildings into one regression while allowing for separate intercepts for

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each building type. Statistical tests are consistent with combining the separate regressions into one.<sup>11</sup> By pooling the sub samples and increasing the sample size one can increase the precision with which one estimates the impact of the separate variables.

Note that in all regressions rents vary directly with construction costs as one would expect. Higher construction costs increase the cost of investing in apartment buildings and, other things equal, require higher rents in order to provide a competitive rate of return. The coefficient on apartment size although not always statistically significant is negative suggesting that rents per square foot are somewhat smaller as apartments gets bigger. The size of the coefficient does not imply that larger apartments rent for less, but rather that an apartment that is twice as big rents for something less than twice as much. Rents vary directly with operating and maintenance expenditures as one might expect. Finally rents vary directly with property taxes. The coefficient on property taxes in the combined regression is 1.43 implying that differences in property taxes per square foot of \$1.00 are associated with differences in rents of \$1.43. The standard error for each coefficient measures the statistical imprecision of the associated estimated coefficient. Formal statistical tests make one highly confident that higher property taxes increase rents but less confident that they increase rents more than dollar for dollar.<sup>12</sup>

It was not possible to include all other variables that might be important in explaining variation in rents in the regression equations reported in Table 7. Most importantly one might wonder about land prices, capital gains and demand factors. How does the inability to include measures of these factors affect the results reported in Table 7? Land prices, like construction costs, are an important determinant of the cost of investing in apartment buildings. Other things equal, higher land prices should lead to higher rents. However there is no good measure of the variation in land prices across metropolitan areas. From a statistical viewpoint the critical question is whether land prices are correlated with any of the variables already included in the equation<sup>13</sup>. If they are then the regression may already be allowing for the influence of land prices. Given our interest in the impact of property taxes on rents, it is most important to know whether land prices are correlated with property taxes. Traditional views of property taxes suggest that higher property taxes should lead to lower land prices which in turn should lower the cost of apartment buildings and moderate somewhat the increase in rents necessary to cover the cost of higher taxes. On this view if one had data on land prices one would expect a somewhat larger coefficient on property taxes. With the inclusion of land prices, the estimated coefficient on property taxes should measure the impact on rents holding land prices constant. When data on land prices are not included in the regression equation, the coefficient on property taxes should be somewhat smaller to account for the negative correlation with land prices. All of this argues that the coefficients on property taxes reported in Table 7 may be somewhat lower than they would be if it were possible to include data on land prices.

Capital gains would be an alternative source of return for landlord/investors and, if sustained, should be associated with lower rents. Unfortunately there is no good measure of capital gains on rental properties for different metropolitan areas. It is also unclear how capital gains might be correlated with any of the included variables. As a general rule property taxes are high in the midwest where real estate prices appear to have been the most stable and low in the west and south, areas which experienced significant capital gains in real estate for much of the 1980s. From this perspective, the inclusion of a measure of capital gains might be expected to reduce the estimated coefficient on property taxes somewhat.

Imbalances between demand and supply factors could also be an important determinant of the variation in rents across metropolitan areas. Other things equal, an area with higher vacancies should have lower rents and an area with lower vacancies should have higher rents. Unfortunately it was not possible to identify an appropriate source of data on vacancies for the metropolitan areas in this sample.

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Table 8 reports results for the same regressions as Table 7 but with the inclusion of data on personal income per capita. The estimated coefficient on per capita income is statistically significant. This statistical significance is also reflected in the higher overall explanatory power of the regression as seen in the increase of the R squared statistic for the regression equations in Table 8 as compared with those in Table 7. It may be that per capita income is measuring demand factors and/or it may be that it is correlated with land prices. In either case, the inclusion of per capita income does not change any of the conclusions as regards the importance of property taxes as an important factor in explaining the variation in rents across metropolitan areas.

What do these results from differences across metropolitan areas imply about a change in property taxes within a single metropolitan area or state? Here it is important to distinguish between short run and long run effects. As argued above, rents in the short run will be determined by demand and supply. As rents rise above long run cost factors there is an incentive to expand the supply of rental housing. As rents fall below long run costs there is an incentive to reduce the supply of rental housing through conversion, demolition, and reduced construction and maintenance. Thus if property taxes are changed in a specific area, it is unlikely that there will be an immediate reduction of rents.<sup>14</sup> Rather the impact will occur over time. If rents were at equilibrium levels initially, a reduction in property taxes should, over time, induce an increase in rental housing that will in turn lower rents. It is possible that some of the reduction in rents might occur as increased maintenance without an increase in rents. That is, unchanged rents would then buy better rental housing. In a world with inflation, rents are unlikely to decline. Rather following a reduction in property taxes they should, for a period time, increase at a somewhat lower rate than otherwise. An increase in property taxes should have opposite results. That is one would expect little immediate impact as there is not enough time for any adjustment in the balance of demand and supply. Over time one would expect rents to be higher than they would otherwise have been or maintenance to be lower than it otherwise would have been as the market adjusts rents to offer landlord/investors a risk adjusted competitive rate of return.

### Property Taxes and Rental Housing in Minnesota

In 1987 the Minnesota Tax Study Commission concluded that "Minnesota has the complex property tax system in the nation."<sup>15</sup> There is no reason to change that conclusion. Under current state law property is assigned to one of 14 different classes. Subdivisions within these classes make for a total of 34 separate rate and class distinctions for taxes payable in 1993.

Even if one knows the class and rate for a particular piece of property, the determination of the actual or effective tax rate is further complicated as it depends upon the total and type of other properties within the same tax jurisdiction and upon total spending. For example, actual taxes on apartments with equivalent market values but in different taxing jurisdictions will differ as there are differences in locally financed spending and/or as there are differences in the amount and composition of other property.

Effective taxes for different types of property for 1992 are shown in Table 9. Note that for the state as a whole the effective tax rate on apartments was 4.13%, exceeding the statutory class rate of 3.5%. In 1992 apartments accounted for a little over 4% of total market value and yet paid almost 7% of total property taxes. Only commercial and industrial property had a higher effective tax rate. A small decline in the class rate for unsubsidized apartments is scheduled to become effective for taxes payable in 1993. The impact of this reduction in the class rate on effective rates is difficult to estimate as it will depend upon changes in class rates for other property as well as trends in total spending vis-a-vis trends in total tax capacity, the sum of class rates times market value for all types of property.

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How do property taxes on rental housing in Minnesota compare with those in other states? For the most part data from the Census of Government and from the Advisory Commission on Intergovernmental Relations are reported for property taxes in general. Data at this level of aggregation obscures the impact of the substantial differences in property taxes documented in Table 9. Data from IREM allows one to compare property taxes on apartments across a large number of metropolitan areas. This data shows that property taxes on apartments are significantly higher in Minnesota than in other parts of the countries. Tables 10 to 13 report data for each type of apartment building.<sup>16</sup> In each table metropolitan areas are ranked by the magnitude of median property taxes per square foot. Minnesota cities are at or very near the top of each table. For example, Table 13 shows that for garden apartments taxes in Minneapolis-St. Paul and St. Cloud rank 2nd and 20th out of 137 metropolitan areas. Property taxes on garden apartments in Minneapolis-St. Paul are over twice the average of other metropolitan areas, while in St. Cloud they are 50% greater. Similar rankings and comparisons occur for each of the three other building types.<sup>17</sup>

### Preferential Tax Classifications

With regard to property taxes payable on rental housing in Minnesota the law recognizes three major classes: residential non-homestead, apartments, and subsidized rental housing. Within the class of subsidized rental housing eligibility for preferential class rates depends upon a bewildering array of other factors including type of ownership, type of financing, tenant income and whether buildings have undergone significant rehabilitation. While well meaning this proliferation of classes and eligibility has created an extraordinarily complicated system that frustrates assessors and has the potential to undermine confidence in the equity and efficiency of the property tax system for rental housing. Appendix B contains detailed information from the Department of Revenue on preferential property classifications. This information shows ten subdivisions of class 4c or 4d that qualify for preferential class rates.

The intent of these preferential classes is to reduce the cost of providing rental housing to low income tenants. However the complexity of the system and a period of time when qualifying income limits were independent of household size have raised serious questions about the equity and efficiency of the whole system. After June 1992, income eligibility is dependent upon household size, but issues about income certification and the overall complexity of the system remain. County assessors have been responsible for income certification. Many have felt ill equipped to perform this task. An increasing use of third party certification has developed, although questions still remain about the accuracy of income information in some cases.

What differences would one expect with a system of preferential property tax rates for low income rental housing? If there is no limit on the number of rental units that can qualify for the preferential class rate, if renters can easily move between apartments, and if landlords can easily specialize in providing low income rental housing, then one would expect market competition to pass on property tax savings to renters in the form of lower rents for similar apartments. In the limit, no landlord facing similar operating, building, and land costs could provide equivalent rental housing for low income households and earn a competitive return on her investment without the preferential tax class rate. Landlords with higher taxes would need to charge higher rents to earn a competitive return. Thus one should not be surprised to see an increasing proportion of landlords attempting to qualify existing buildings for preferential tax status.

If there is a limit on the number of properties that can qualify for preferential class rates or if renters face substantial moving costs, then the forces of market competition need not work to pass the benefits of lower property taxes on to low income renters. While non-profit entities might be expected to adjust



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rents as property taxes are adjusted, it is less clear why profit seeking landlords would do so. As described in the notes to the chart of preferential tax classes in Appendix B, eligibility for some of the classes puts limits on the return landlords can earn or requires that landlords devote significant monies and/or establish reserves for upgrading and remodeling. With regard to requirements on upgrading and remodeling, the final result may be that rents are not be lower but the quality of rental housing should be greater.

If the operating and maintenance costs of low income rental projects are higher, preferential tax classifications that allow landlords to specialize in providing low income rental housing might simply offset the higher operating costs with little net impact on rents. However if operating and maintenance costs of low income rental housing are higher then rents would be even higher or quality would be lower in the absence of a preferential tax classification.

Does the Minnesota system of preferential property tax classes reduce rents for renter households? This is actually a complicated questions for which a more definitive answer was beyond the scope of this study. Perhaps the most direct way to answer the question would be to compare rents for a large sample of units with preferential classification and a large sample of units without preferential classification. Gathering the appropriate data for sufficiently large samples of units with and without preferential classifications is a significant undertaking. For example, to adequately control for important factors that affect rents within the metropolitan area one would need information on the size of apartments as well as other amenities and characteristics.<sup>18</sup> One could then do econometric work, similar in spirit to that described above and see if, after controlling for important factors unrelated to differences in tax classification, there was a significant difference in rents.

The evidence from this study is more indirect and combines the econometric evidence of the link between property taxes and rents with the discussion of basic economic principles above. Combining both pieces of information suggests that the system of preferential classification does translate into reduced rents.

Some have wondered whether the current or a somewhat expanded system of renters' credits might not substitute for the whole system of preferential classifications. This issue is similar to the national debate about cost or demand side subsidies. Demand side subsidies attempt to increase the ability of low income households to purchase better housing through unrestricted income transfers or by some form of price subsidy, for example rent stamps, that are controlled by the tenant and not limited to specific buildings. The renters' credit works as a form of price subsidy, although one that comes with a significant delay in time. To the extent that low income households are cash constrained, the ability of the renters' credit to provide an effective price subsidy is substantially reduced. Experience at the national level suggests that housing policies pursue a number of goals and that a mix of demand and supply side subsidies, rather than the use of only one or the other, is likely to be most effective.<sup>19</sup>

Data from the Department of Revenue shows the use of preferential property tax classes for rental housing since 1983. The data are presented in Figures 11 and 12. In Figure 11 the market value of residential rental property with preferential class rates is presented as a percentage of the total market value of all residential rental property. Figure 12 shows the distribution of rental property with preferential class rates across the state. Note that the highest proportionate use of preferential property tax classes is found outside the metropolitan area. For the state as a whole there was little trend over the period 1983 to 1990 with some increase in recent years. The proportion of property with preferential tax classification was 8% from 1983 through 1990. By 1992 this proportion had increased to 9.5%. The magnitude of the recent increase is exaggerated somewhat by experience in Minneapolis where one large project lost its preferential classification for several years. Preliminary data for 1993 shows little change in the use of

## Rental Housing in Minnesota: 1990

preferential property tax classes for 1993 as compared with 1992. The market value of properties with preferential property taxes grew by 3.13% while total market value of rental properties increased by 5.16%.

It is not easy to decide whether the proportions reported in Figure 11 are large or small. When measured against the proportion of low income or very low income renters the percentages appear small, although one would expect percentages based on the value of properties with lower market values to be somewhat smaller than percentages based on the number of households.<sup>20</sup>

Some have been concerned about the recent increase in the proportion of property with preferential classifications, especially increased applications by owners of existing buildings. To some extent this concern has been directed at the period of time when the qualifying levels of tenant income were independent of household size. Qualifying levels of income are now linked to household size. It is important to remember that a substantial amount of low income rental housing has traditionally come from existing buildings. Construction of new units to provide low income housing almost always requires extensive public subsidies. With an increasing proportion of low and very low income renters and with suggestions of a price/cost squeeze on landlords, an increased interest in preferential tax classifications on the part of landlord/investors, both private and nonprofit, should not be surprising. To the extent that the purpose of the preferential tax classifications is to reduce rents for eligible tenants, there should be less concern about attempts to qualify existing buildings. Rate of return restrictions, requirements for significant remodeling and competitive market forces when preferential classifications are not restricted should work lower rents to eligible tenants.

Who lives in rental housing with preferential tax classifications? It was initially hoped that this study could examine data on the income of renters in properties with preferential tax classifications. Unfortunately it was not possible to establish an appropriate database as the availability of information about renter incomes through public agencies was restricted because of concerns about data privacy. Some evidence is provided by data from the Minnesota Housing Finance Agency (MHFA). MHFA collects extensive data on projects it has financed, although even here information from individual projects may be missing data on specific items of interest.

In 1991 the market value of 252 Housing Finance Agency projects with tax adjustments was estimated at \$387 million or 31.1% of the statewide total of rental properties with preferential tax classifications. For the most part these are Section 8 or Section 236 projects. Information on average tenant incomes was available for 215 projects in 71 out of 87 counties across the state. In 1991 the overall average income for renters in these 215 MHFA projects was \$9,195. The average was somewhat higher in the metropolitan area, but less than \$10,500 for all seven metropolitan area counties. When measured against county median income from the 1990 census, these projects show a statewide average of tenant income to median county household income of 34.5% with a range from 21.73% to 56.81%.<sup>21</sup> For only 10 counties was the ratio greater than 40%.

## Conclusions and Recommendations

- ▼ Property taxes on apartments in Minnesota are among the highest in the country.
- ▼ There is good reason to believe that apartment property taxes make rents higher than they otherwise would be.
- ▼ The system of preferential tax classification for low income housing works to lower rents for low income renters.
- ▼ There has been little change in the proportion of residential rental property with preferential tax classifications. This percentage was 8% from 1983 to 1990. It rose to 9.5% in 1992. Preliminary data suggests a small decline for taxes payable in 1993.
- ▼ The Minnesota system of preferential tax classification for low income and subsidized rental housing has become extraordinarily complicated. The complexity of the system is a significant source of frustration for assessors and has the potential to undermine confidence in the equity and efficiency of the property tax system for rental housing.
- ▼ There is a strong case to be made for simplification and stability.

As documented above property taxes on apartments in Minnesota are among if not the highest in the nation. As confirmed by the statistical work reported above higher property taxes are associated with higher rents. There is no reason to believe that markets for rental housing in Minnesota would not operate in a similar fashion. The system of preferential tax classification, by lowering property taxes for qualifying projects, works to lower rents for eligible tenants. As landlords compete to provide rental housing for low income individuals it is not surprising that they will want to qualify existing buildings for preferential tax classifications. To the extent that the purpose of the preferential tax classifications is to reduce rents for eligible tenants, there should be less concern about attempts to qualify existing buildings.

At the same time there is legitimate and understandable concern about the complexity of the overall system of preferential tax classifications. A number of observers would generalize that concern to the whole property tax system. If actions to simplify the system of preferential tax classifications are seen as an opportunity to raise class rates, the result will be to increase rents for low income renters. There is much to recommend broader based plans such as the Model Revenue System of the Department of Revenue or the property tax recommendations of the recent proposal by the Minnesota Taxpayers Association. These plans eliminate preferential classes but do so as part of a plan to make effective tax rates for different types of property more equal, that is to minimize the variation in effective tax rates reported in Table 8. These proposals would dramatically simplify the administration of the property tax system for rental housing without adverse impacts on rent. Whatever direction may be taken, the legislature should avoid the temptation to tinker with the system every year. If not the result can only be increased complexity and confusion with a resulting loss of confidence.

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1 "Population Crisis in Rural Minnesota", John Fraser Hart, CURA reporter, Vol. XXII, No. 4, December 1992, pp. 7-10.

2 "Communities immediately surrounding..." refers to the Metropolitan Council's Fully Developed Area, other than Minneapolis and St. Paul, what is here called the Fully Developed Ring.

3 For example, the Annual Housing Survey uses measures of physical and operating deficiencies to measure housing quality for the 44 metropolitan areas that it surveys on a 4 year cycle.

4 Census data measures household income with a one year lag. That is household reported in the 1990 census is for 1989. Income reported by the census is a measure of cash income but does not include in-kind income including medicaid, food stamps and housing subsidies. The exclusion of these forms of income support have lead some observers to question the accuracy of poverty estimates based on census income information. Including these forms of in-kind public support reduces somewhat estimates of the incidence of poverty at a point in time. When looking at changes over the 1980's measures of poverty that include in-kind transfer show the same increase as measures that exclude in-kind transfers. That is, exclusion of in-kind transfers makes no difference as regards changes in poverty. See "Why were poverty rates so high in the 1980's", Rebecca M. Blank, National Bureau of Economic Research, Working Paper No. 3878, October 1991.

5 There is a serious question as to whether the use of the Twin Cities CPI is appropriate for the non metropolitan areas of the state. Two points may be made. 1) Even if the cost of the basket of consumer goods in the Twin Cities CPI overstates the cost of living outside the metropolitan area, the change in the cost of the Twin Cities' market basket may still closely resemble the change in the cost of living outside the metropolitan area. 2) It is unclear what alternative measure one could use. From 1979 to 1989, the cost of living as measured by the national CPI increased by 70.8%, almost as much as the increase in the Twin Cities CPI. Using the national, as opposed to the Twin Cities CPI, makes little difference as it shows a statewide increase in median real household income of only 2%.

6 For a fuller discussion of these issues and those in the next paragraph, see Peter Mieszkowski, "The Property Tax: An Excise Tax or a Profits Tax", *Journal of Public Economics*, I (1972) pp. 73-96; William C. Myslinski, "Price-Allocation Implications of Property Tax Incidence on Renters", Ph.D. thesis, University of Minnesota, June 1974; and Henry Aaron, *Who Pays the Property Tax*, The Brookings Institution: Washington DC, 1975.

7 See the discussion in Mieszkowski and Myslinski for complete details.

8 One might also try and measure the relationship between rents and taxes by looking at how the change in rents over time are correlated with changes in property taxes. As in the work reported here, one would need to control for changes in other factors that influence rents. The structure of property taxes in Minnesota mitigates against basing either analysis — one based on differences in the level of rents or one based on differences in the change in rents — on data from just Minnesota. To estimate the relationship between rents and property taxes one needs a sample with sufficient variation in property taxes. The system of property classification in Minnesota works to minimize variation in property taxes across communities within the state.

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9 The minimum number of buildings for a single observation was 3. The maximum was 152. The full IREM report contains data for 141 metropolitan areas. It was not possible to identify construction cost information for 7 metropolitan areas. The eight observations from these metropolitan areas were not included in the regression analysis.

10 It is sometime argued that IREM data reflects the upper end of the rent distribution and is thus unrepresentative of apartments as a whole. Two comments are relevant to this point. 1) For Minneapolis-St. Paul, IREM data for 1991 shows a median rent of \$507 while census data for the seven county metro area shows median rents in 1990 ranging from \$442 to \$542 and an overall median of \$483. While the IREM data is somewhat higher, it does not appear to be too dissimilar from the census median measured a year earlier. 2) We are using IREM data to measure variation across metropolitan areas. For this sort of comparison it is probably more important to measure rents from a similar point on the rent distribution in each metropolitan area and less important exactly where.

11 More specifically, the test of the hypothesis that all of the slope parameters for each type of apartment are equal yields an F statistic of 0.640 which is not significant at the .01 level.

12 More formally, at traditional levels of statistical significance one can reject the hypothesis that the coefficient on taxes is zero but one cannot reject the hypothesis that this coefficient is equal to 1.0.

13 If data on land prices were available, one would need to recognize that taxes may affect land prices and land prices might be correlated with the error term of the regression equation.

14 One possible exception might be rental housing provided by charitable nonprofit organizations who might very well pass-through any reduction in property taxes immediately.

15 Final Report of the Minnesota Tax Study Commission: Volume 1 Findings and Recommendations, (Butterworths: ST. Paul, 1986) p. 273.

16 When comparing property taxes, the eight observations for which information about construction cost was missing have been added back into the sample.

17 Tables 10 to 13 report property taxes per square foot while property taxes are usually levied on the basis of market or assessed value. Would correcting for differences in market value change the relative ranking of Minnesota taxes? Information on building costs was used to adjust data on taxes per square foot for the 134 metropolitan areas for which building cost information is available. The rankings of Minnesota cities was unchanged following this adjustment.

18 When comparing rents for a large sample of conventional apartments drawn from a large number of metropolitan areas, it is not unreasonable to expect that these factors will be uncorrelated with the variables of interest.

19 See Do Housing Allowances Work, Katherine L. Bradbury and Anthony Downs, eds., (The Brookings Institution: Washington DC) 1991, especially the comments by Henry Aaron, pp. 67-99.

20 Rental properties with 1 to 3 units, classified as non-homestead residential housing, also carry a reduced class rate vis-a-vis apartment buildings and are not included in Figure 11. Qualification for the non-homestead residential class rate depends upon the size of buildings, not tenant income. The point is not that all such units are an available source of low income rental property. Many, perhaps most, are not. Census data available to date does not allow one to identify how many of these units are providing rental housing to low income renters.

21 The use of income data for 1991 in the numerator and 1989 in the denominator will make the ratios

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larger than they would be if both were measured for the same year.

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### Figures

- 1 Growth in renter households, Minnesota counties, 1980 - 1990
- 2 Renter households as percent of total households, Minnesota counties, 1990
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- 7 Renter occupied units by gross rent, Minnesota, 1980 and 1990
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- 10 Renter occupied units by gross rent, outstate counties, 1980 and 1990
- 11 Market Value with Classification as Percent of Total Market Value: Apartments and Non Homestead Residential, 1983-1992
- 12 Market Value with Preferential Property Taxes as Percent of State Total: Non Homestead Residential Property 1983-1990

Figure 1  
Percent Change In Renter Households, 1980 to 1990

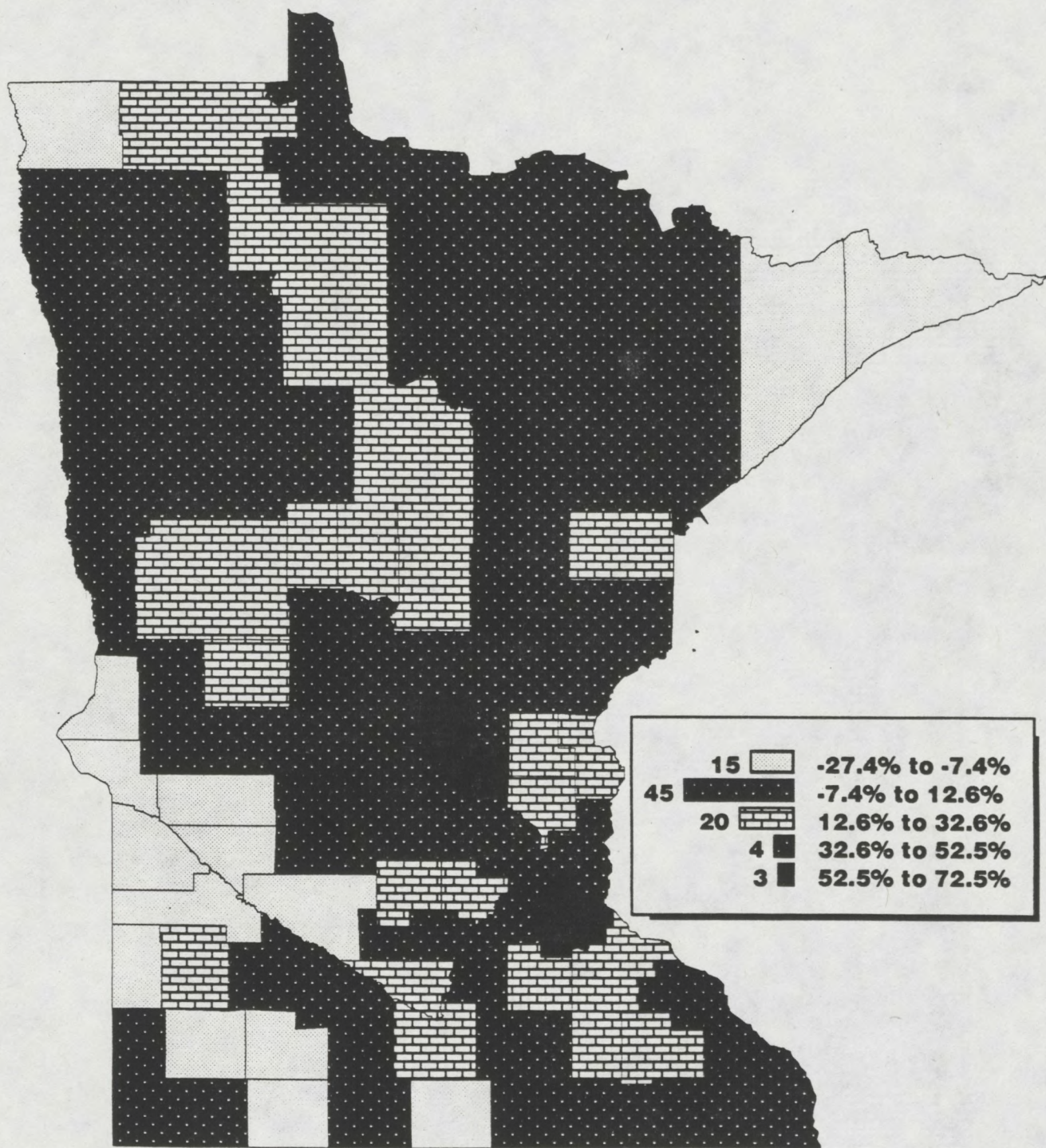
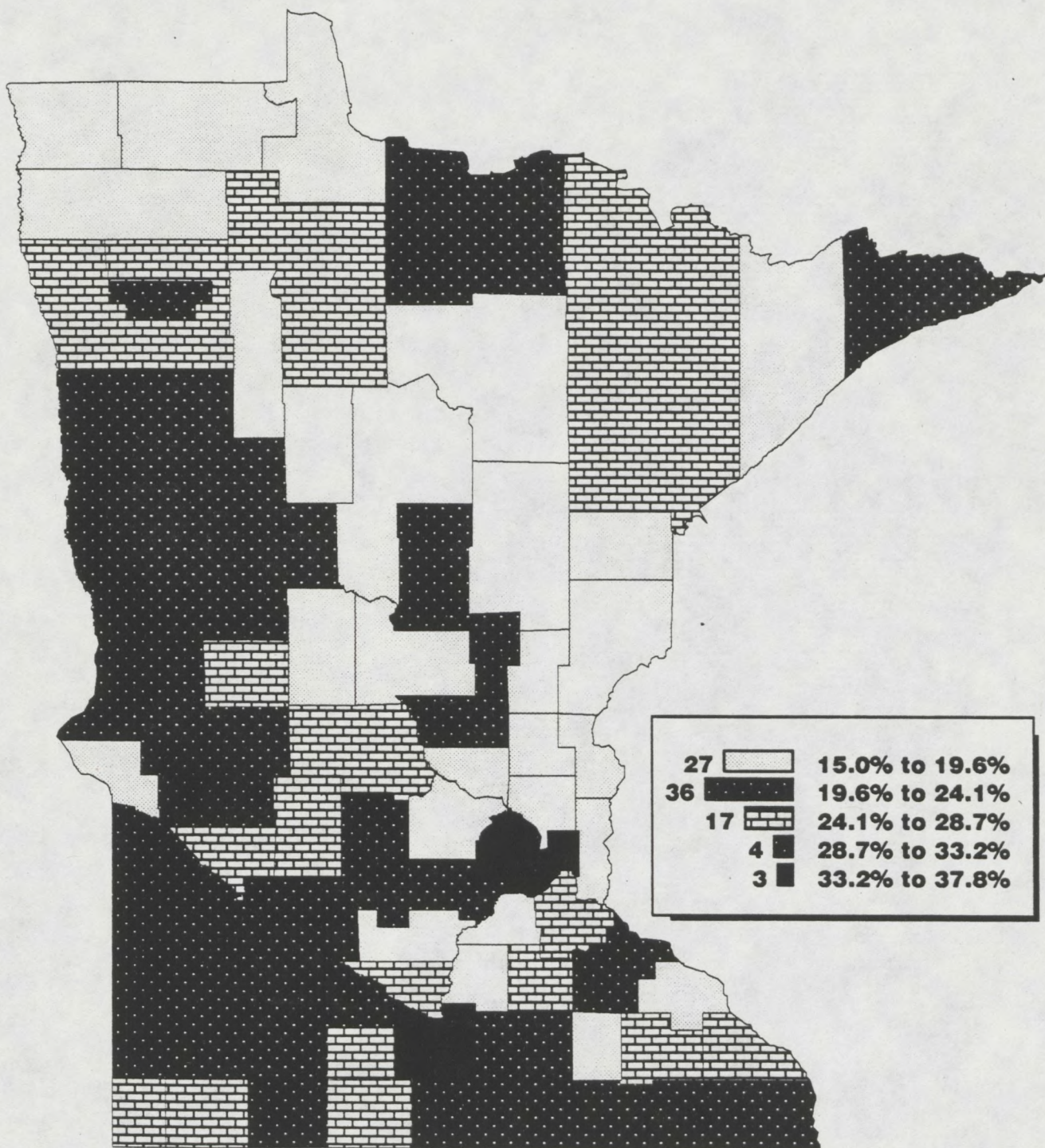




Figure 2  
Percentage of Households That Were Renters, 1990



27	White	15.0% to 19.6%
36	Black	19.6% to 24.1%
17	Brick	24.1% to 28.7%
4	Dotted	28.7% to 33.2%
3	Solid Black	33.2% to 37.8%

Median Household Income P

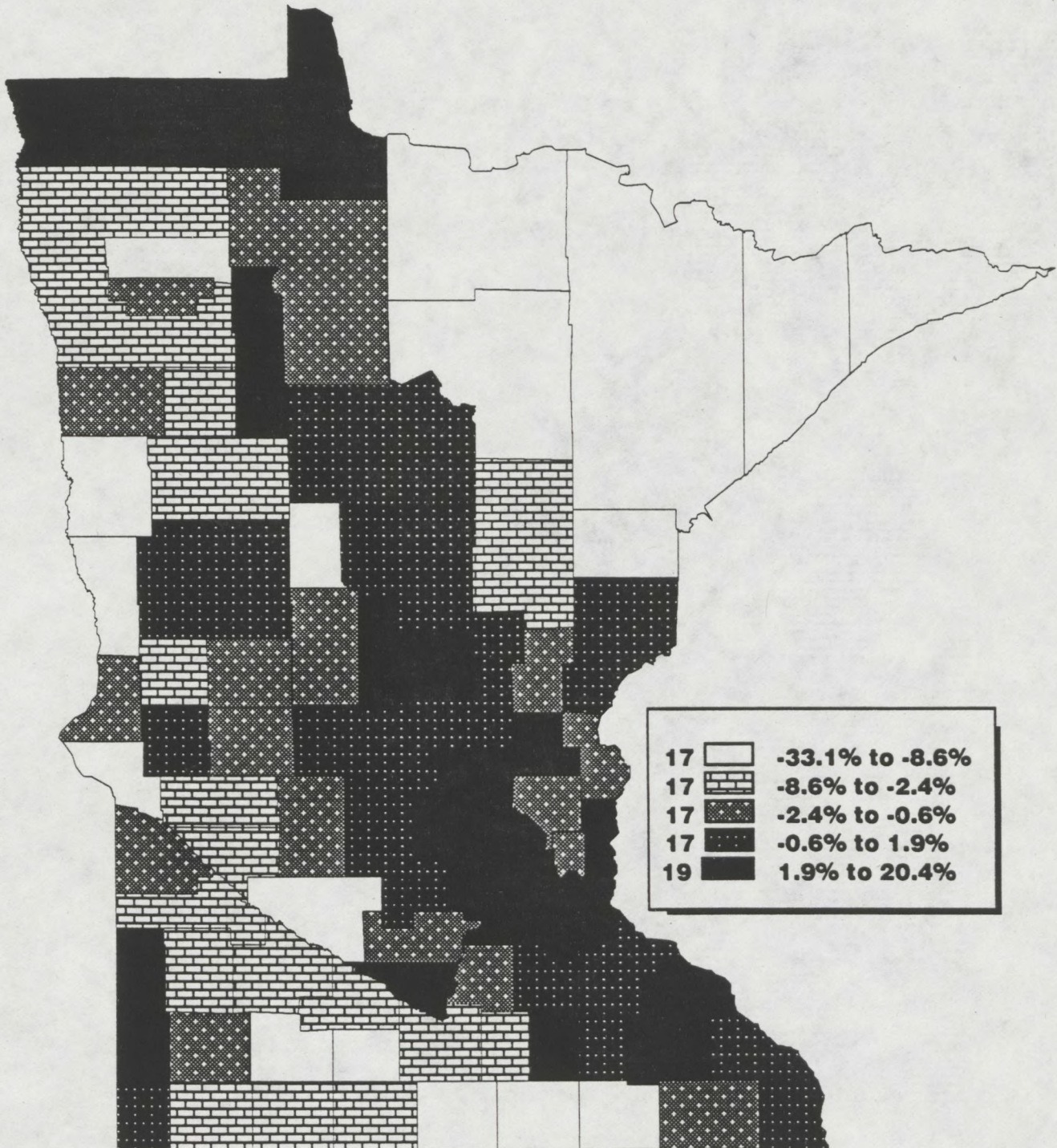


Figure 4  
Median Renter Household Income Percent Change In Real Income, 1979 to 1989

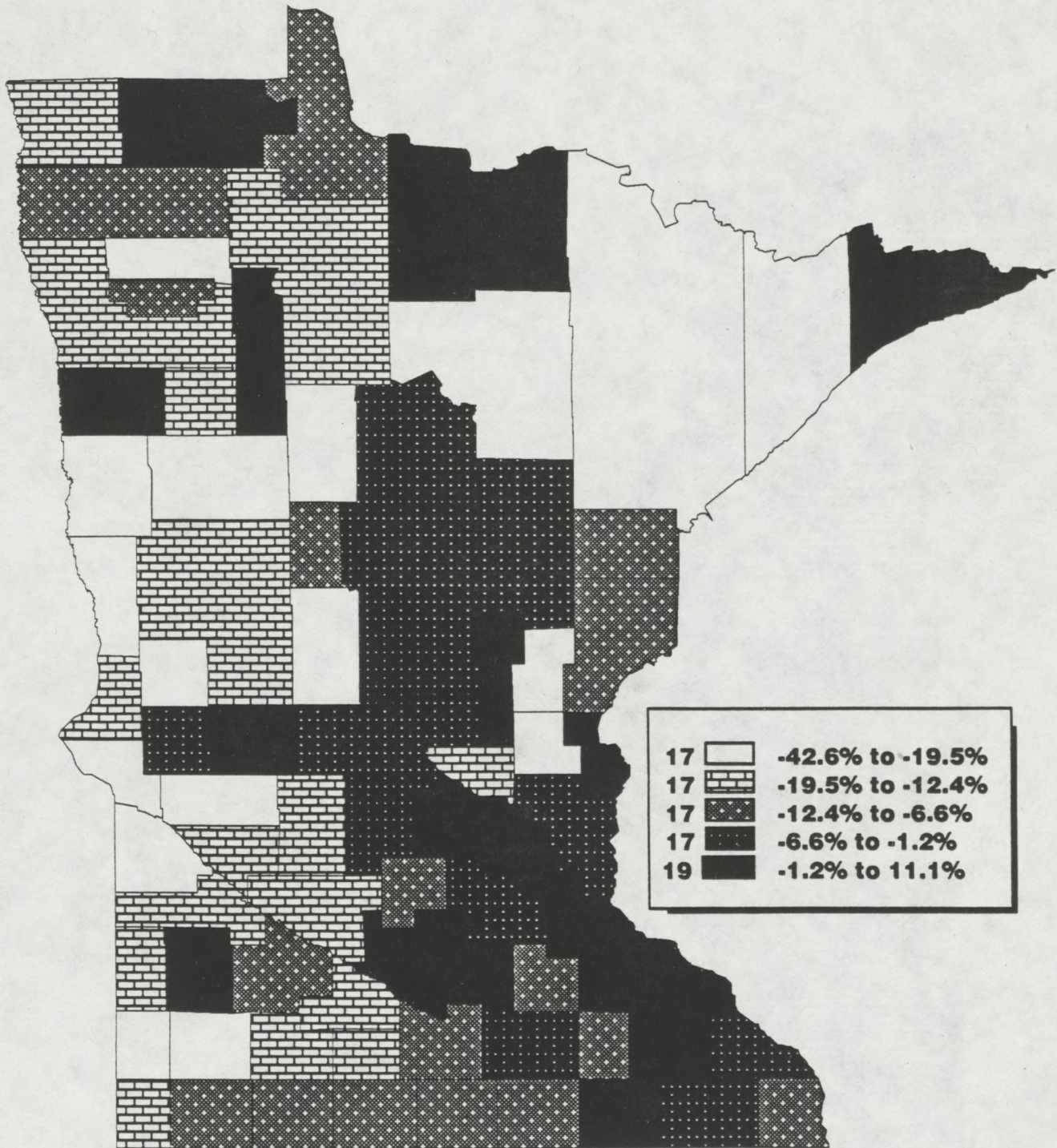


Figure 5  
Renter and Owner Households by Income

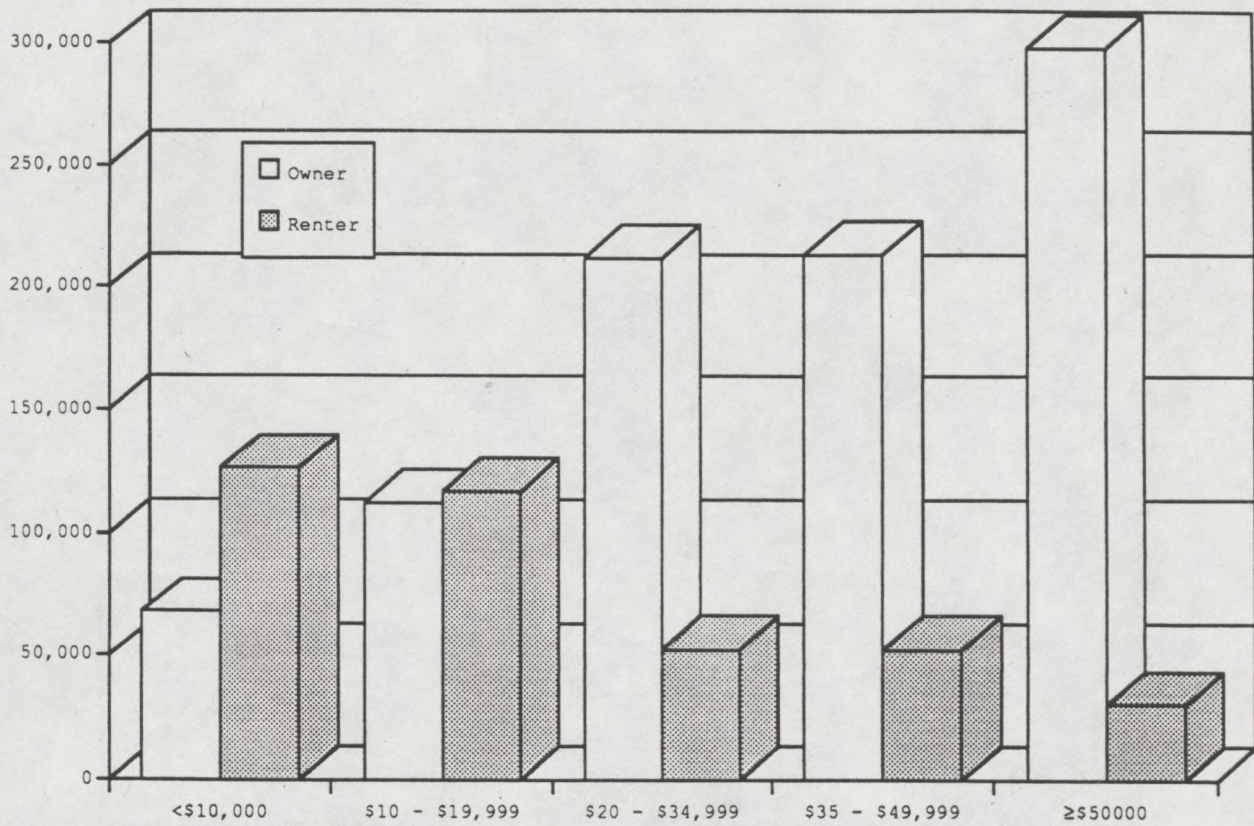
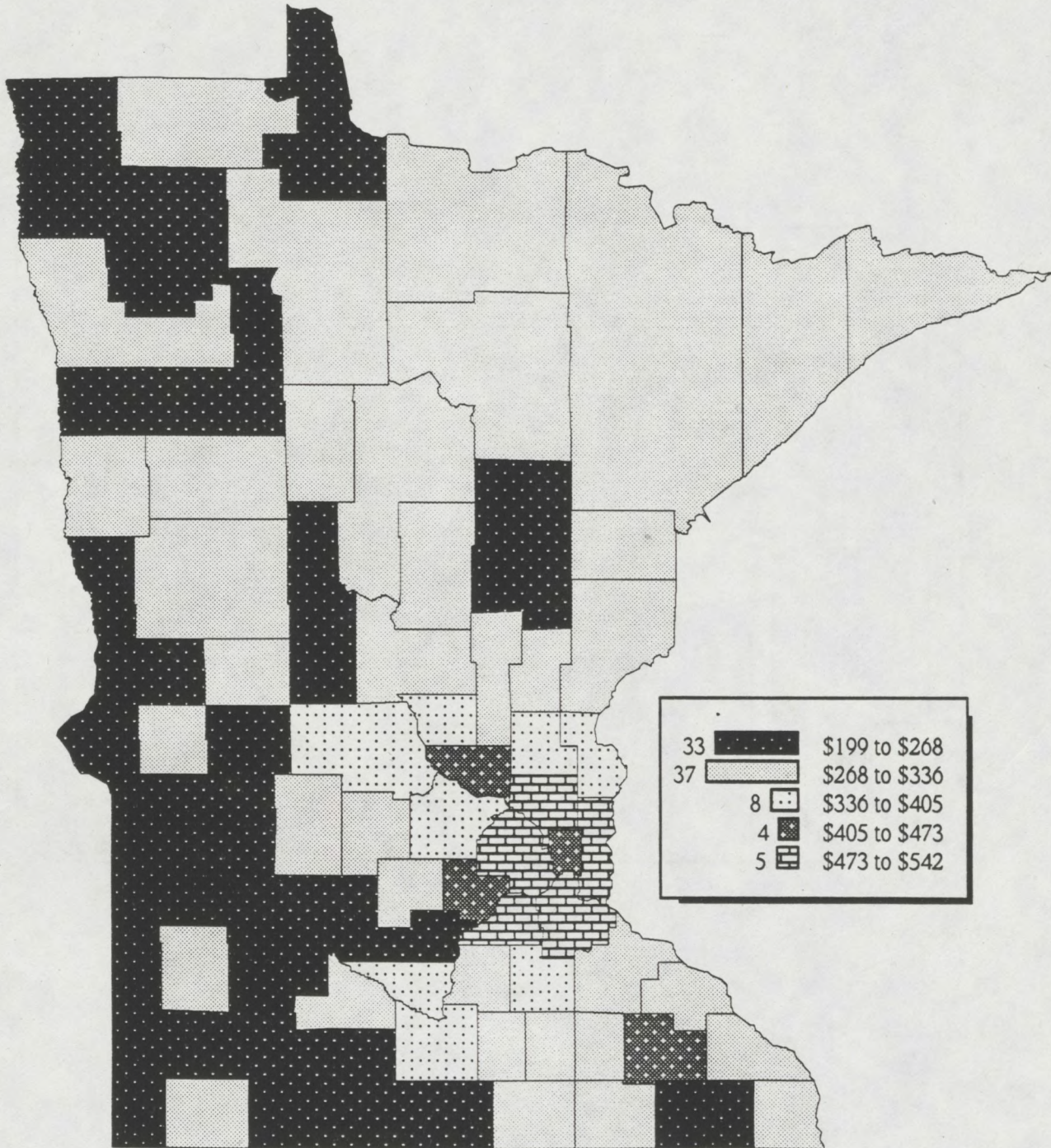


Figure 6  
Median Monthly Rent, 1990



Rental Housing in Minnesota: 1990

Figure 7  
Renter Occupied Units by Monthly Rent

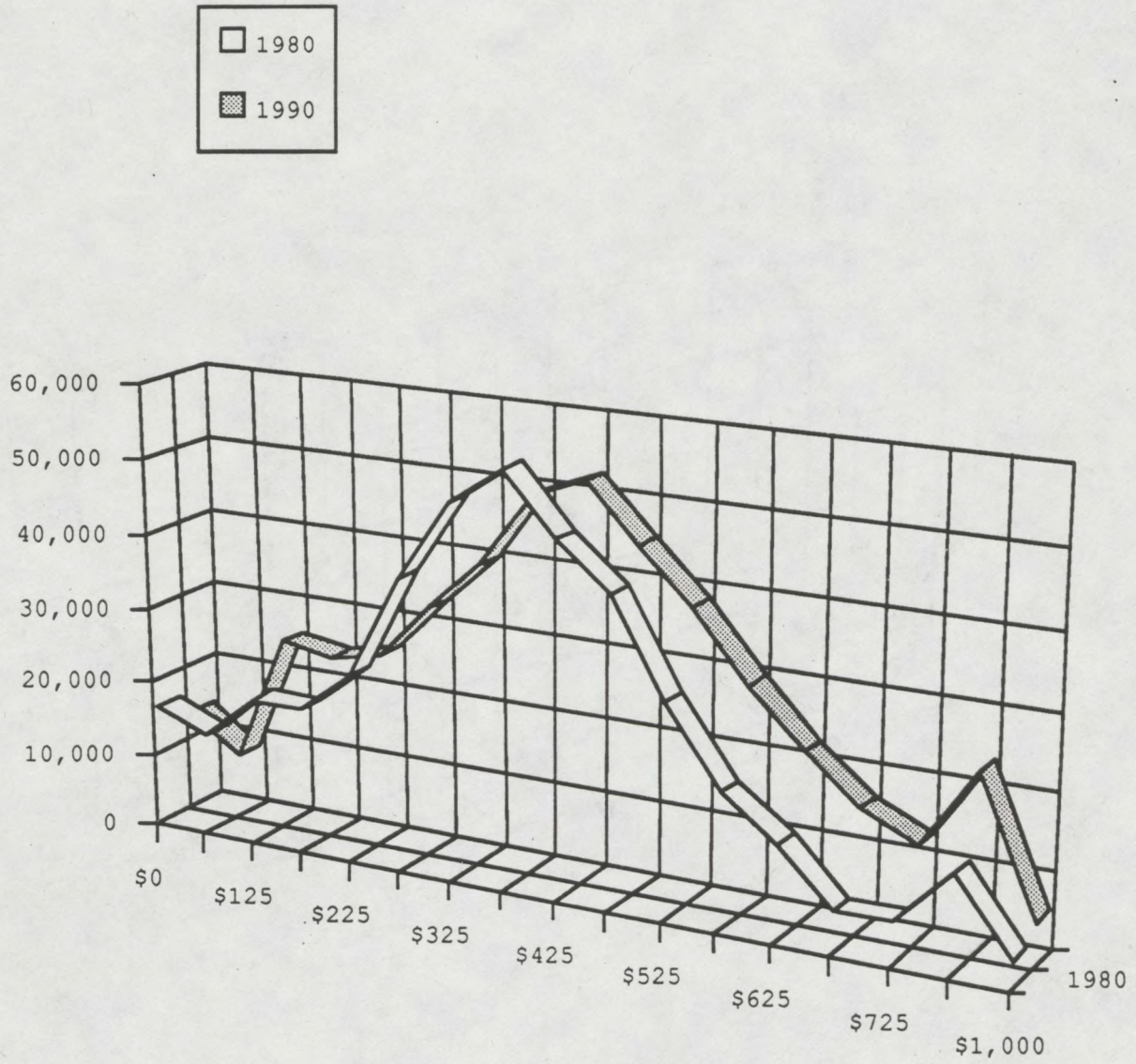
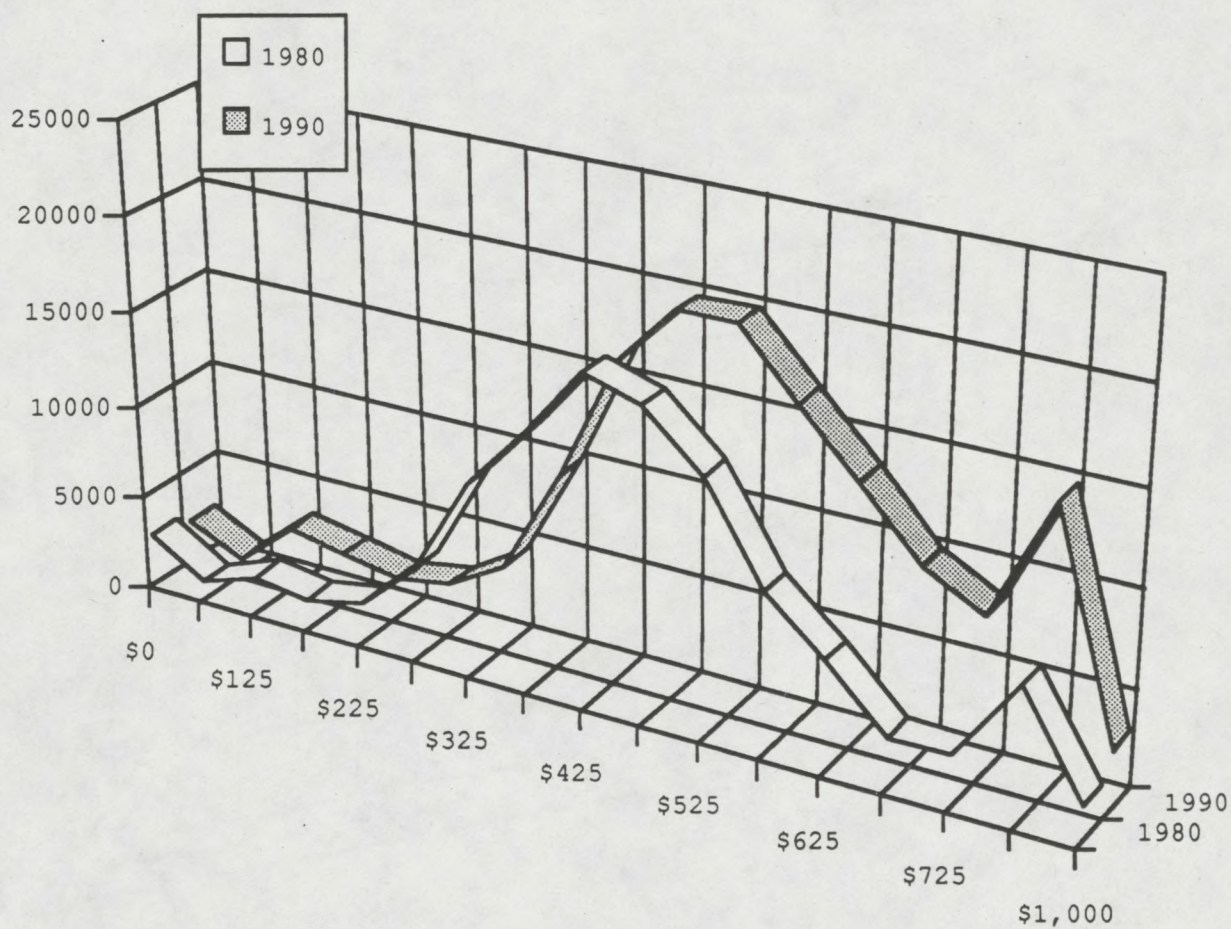


Figure 8  
Renter Occupied Units by Monthly Rent: Minneapolis and St. Paul, 1990



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Figure 9  
Renter Occupied Units by Monthly Rent Seven County Metro Area Other Than  
Minneapolis and St. Paul, 1990

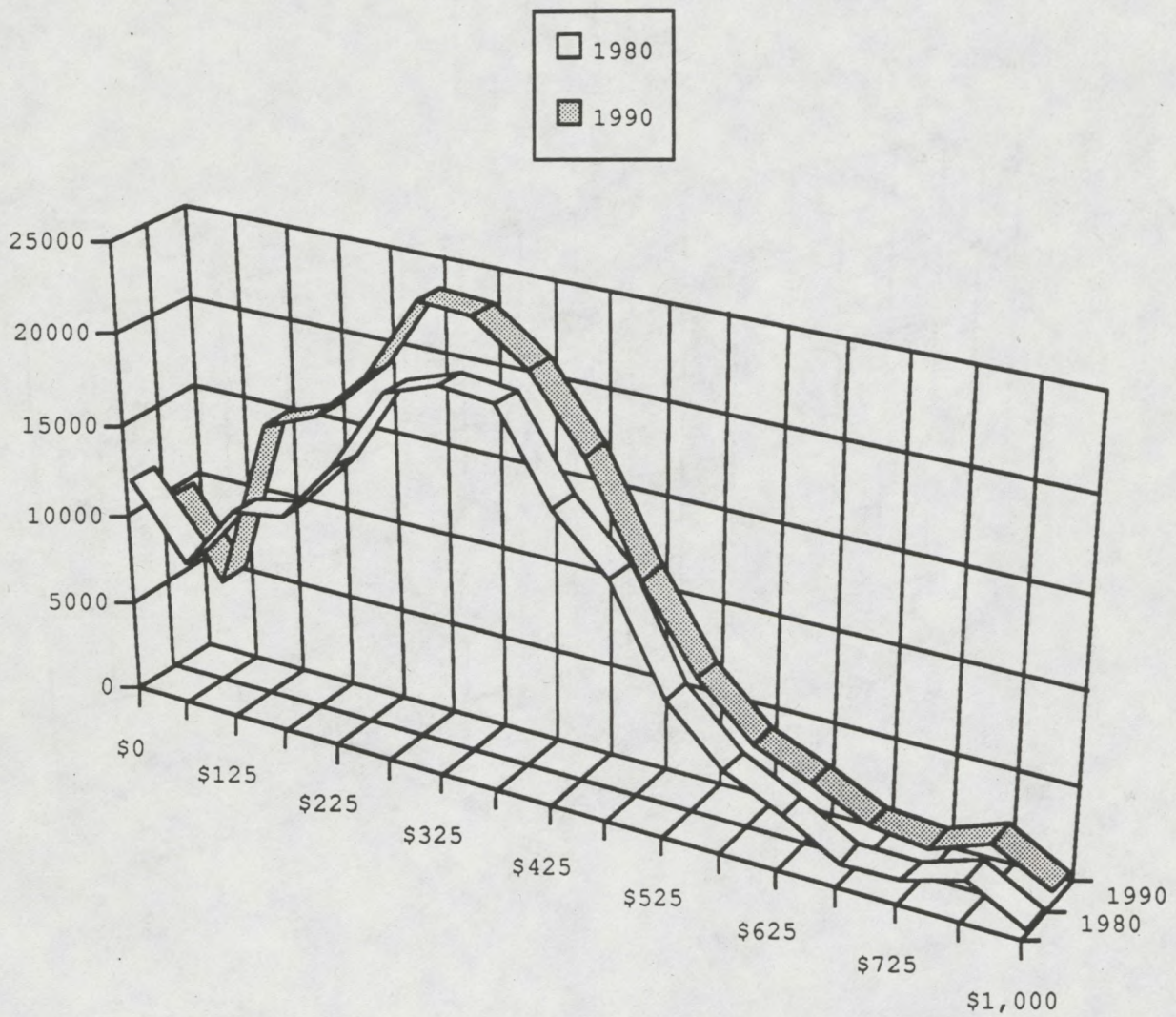




Figure 10  
Renter Occupied Units by Monthly Rent Non-Metropolitan Counties, 1990

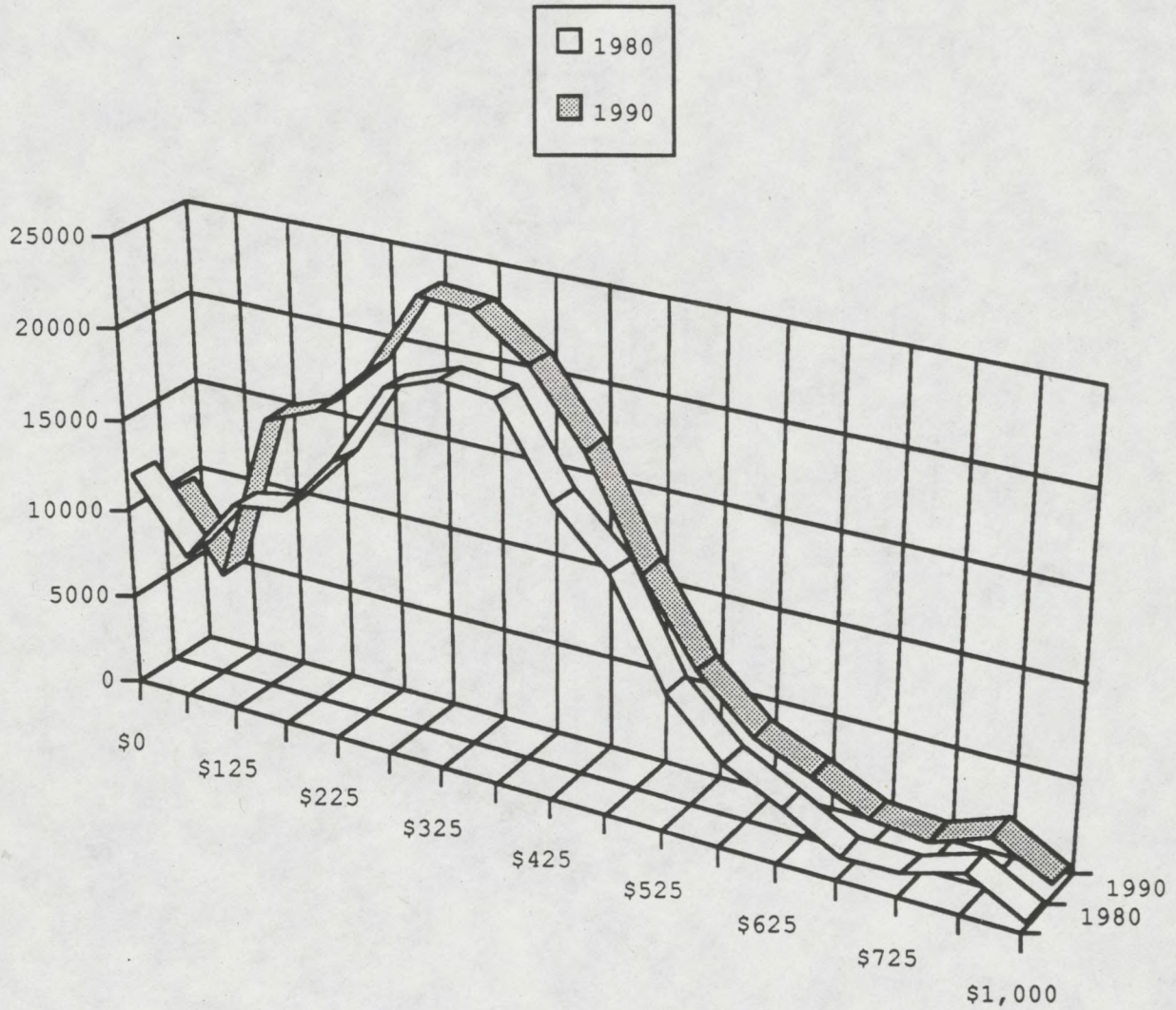


Figure 11  
Apartments and Non-homestead Residential—Market Value with Preferential  
Classification As a Percent of Total Market Value

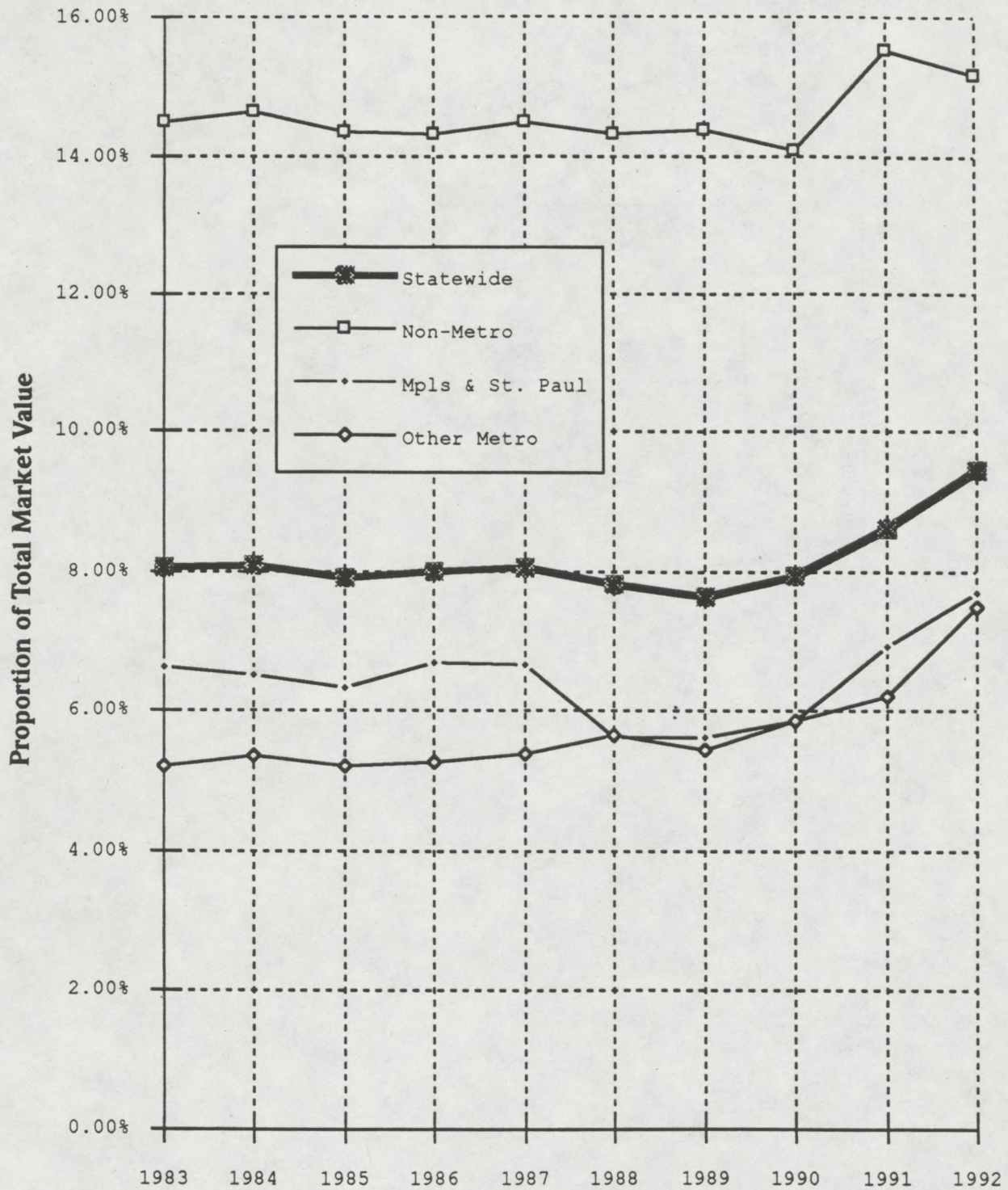
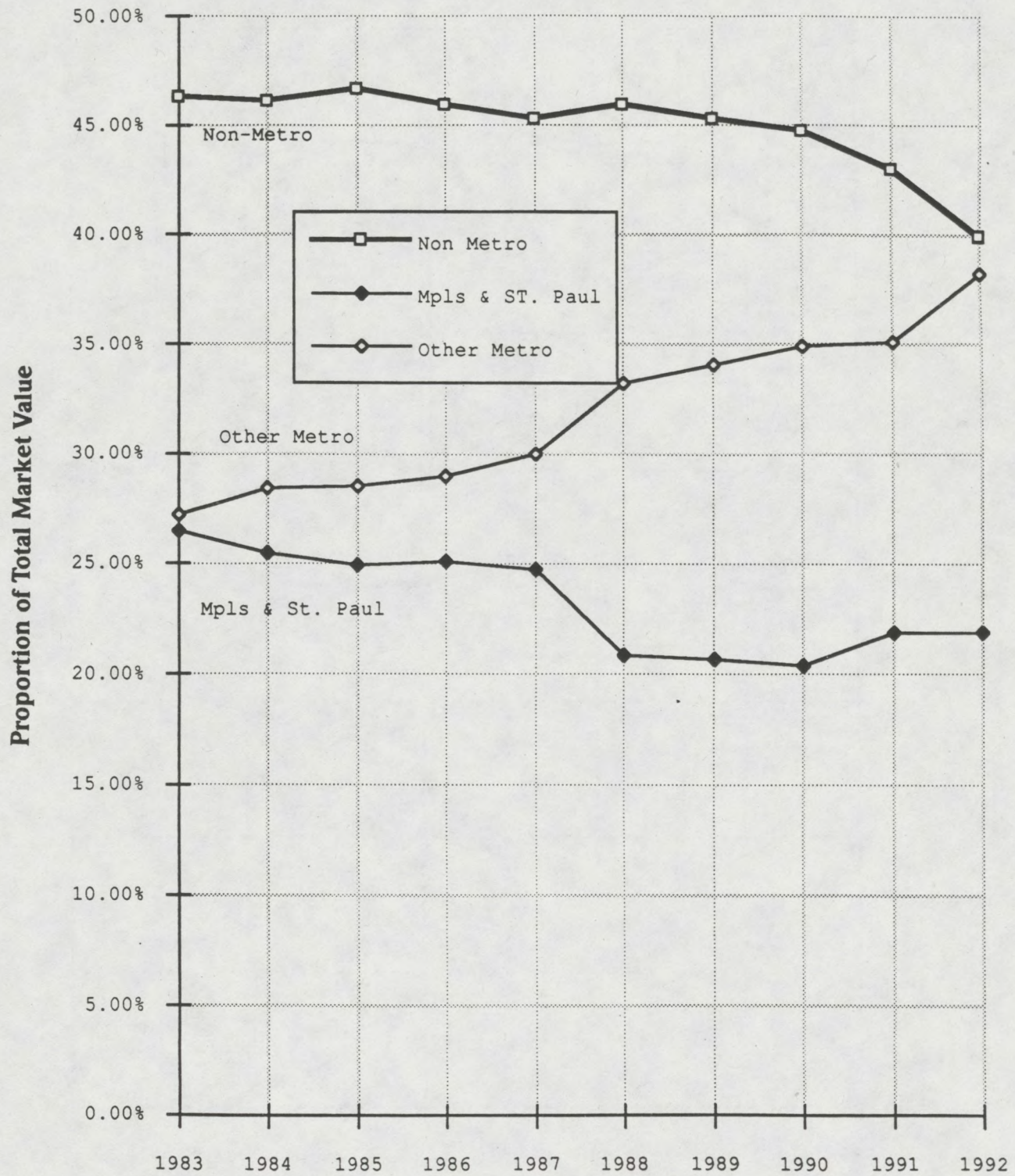


Figure 12  
Apartments and Non-homestead Residential—Market Value with Preferential  
Classification As a Percent of Total Market Value



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- 1 Estimated median year of construction, renter occupied housing units, selected counties, 1990
- 2 Proportion of renter occupied housing units built before 1940, selected counties
- 3 Proportion of renter occupied housing units built 1980 - 1990, selected counties
- 4 Growth in owner and renter households, 1980 - 1990
- 5 Counties with the largest proportions of low income renter household paying at least 30% of income for rent, 1990
- 6 Determinants of median rents, 1991 134 metropolitan areas
- 7 Determinants of median rents, 1991 134 metropolitan areas
- 8 Impact of Classification System on Property Taxes Paid , 1992
- 9 Real Estate Taxes: Elevator Buildings, 1991
- 10 Real Estate Taxes: Low Rise 12 - 24 units, 1991
- 11 Real Estate Taxes: Low Rise over 24 units, 1991
- 12 Real Estate Taxes: Garden Type Buildings, 1991

Table 1  
 Estimated Median Year of Construction, Renter Occupied Housing Units, Selected  
 Counties, 1990

	County	Estimated Median Year Of Construction Renter Occupied Housing Units
<b>Oldest</b>		
1	Sibley County	1940
2	Murray County	1945
3	Pipestone County	1945
4	Norman County	1946
5	Jackson County	1949
6	Lac qui Parle County	1949
7	Fillmore County	1949
8	Martin County	1950
9	Yellow Medicine County	1951
10	Rock County	1952
<b>Newest</b>		
1	Sherburne County	1979
2	Benton County	1978
3	Dakota County	1976
4	Stearns County	1975
5	Carver County	1975
6	Washington County	1974
7	Scott County	1974
8	Wright County	1974
9	Isanti County	1974
10	Chisago County	1974

Table 2  
 Proportion of Renter Occupied Housing Units Built Before 1940, Selected  
 Counties, 1990

	County	Proportion of Renter Occupied Housing Units Built Before 1940
	<b>Smallest</b>	
1	Anoka County	4.6%
2	Dakota County	5.2%
3	Benton County	9.4%
4	Sherburne County	9.6%
5	Clay County	10.5%
6	Hubbard County	13.0%
7	Washington County	13.7%
8	Scott County	15.9%
9	Stearns County	16.2%
10	Beltrami County	16.3%
	<b>Largest</b>	
1	Winona County	39.6%
2	Jackson County	39.8%
3	St. Louis County	40.5%
4	Rock County	41.1%
5	ac qui Parle Count	41.8%
6	Murray County	43.9%
7	Fillmore County	44.7%
8	Norman County	45.0%
9	Pipestone County	45.2%
10	Sibley County	49.2%

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Table 3

Proportion of Renter Occupied Housing Units Built Between 1980 and 1990,  
Selected Counties

	County	Proportion of Renter Occupied Housing Units Built from 1980 to 1990
<b>Smallest</b>		
1	Wilkin County	5.1%
2	Red Lake County	5.7%
3	Sibley County	6.5%
4	Rock County	6.8%
5	Big Stone County	7.0%
6	Norman County	7.7%
7	St. Louis County	8.8%
8	Yellow Medicine County	9.0%
9	Polk County	9.1%
10	Cottonwood County	9.4%
<b>Largest</b>		
1	Anoka County	31.9%
2	Isanti County	34.2%
3	Wright County	35.3%
4	Chisago County	35.4%
5	Scott County	36.6%
6	Stearns County	39.4%
7	Carver County	39.7%
8	Dakota County	40.1%
9	Benton County	47.0%
10	Sherburne County	48.3%

Table 4  
Growth in Owner and Renter Households, 1980 to 1990

Household Size	Owner Households	Renter Households
1 person	38.6%	11.0%
2 persons	24.3%	8.4%
3 persons	12.4%	16.9%
4 persons	8.8%	30.5%
5 persons	-5.1%	36.2%
6 or more	-36.3%	19.0%
Total	14.3%	13.3%



Table 5

Counties With the Largest Proportions of Low Income Renter Households Paying at Least 30 Percent of Income for Rent

Proportion of Very Low Income Renter Households Paying at least 30% of Income for Rent		Proportion of Low Income Renter Households Paying at least 30% of Income for Rent	
1	Clay County 73.03%	1	Pine County 62.27%
2	Benton County 74.97%	2	Itasca County 62.56%
3	Hennepin County 75.47%	3	Crow Wing County 62.63%
4	Blue Earth County 75.80%	4	Ramsey County 63.83%
5	Ramsey County 75.87%	5	Kanabec County 64.57%
6	Kanabec County 75.91%	6	Clay County 66.16%
7	Dakota County 77.11%	7	Blue Earth County 67.09%
8	Anoka County 79.09%	8	Benton County 68.04%
9	Beltrami County 80.79%	9	Sherburne County 68.87%
10	Sherburne County 82.94%	10	Beltrami County 73.88%

Rental Housing in Minnesota: 1990

Table 6  
Determinants of Median Rents, 1991, 134 Metropolitan Areas

	Full Sample	Elevator Buildings	Low Rise 12 -24 Units	Low Rise More Than 24 Units	Garden Apartments
Intercept	-2.953**	-4.058	-5.346**	-2.237	-2.53
	-0.853	-4.41	-1.489	-1.658	-1.326
Building Cost	0.101**	0.106**	0.115**	0.118**	0.089**
	-0.008	-0.032	-0.018	-0.015	-0.011
Apt Size	-0.0020**	-0.0019	-0.0019	-0.0046**	-0.0013
	-0.0007	-0.0029	-0.0012	-0.0015	-0.0011
Real Estate Taxes	1.431**	1.923*	1.219**	1.395**	1.506**
	-0.241	-0.89	-0.402	-0.512	-0.395
O & M	0.990**	1.328	1.219**	0.657	1.043**
	-0.21	-0.969	-0.361	-0.384	-0.386
Elev	0.504				
	-0.264				
LR12	-1.011**				
	-0.224				
LR24	-0.226				
	-0.154				
Observations	254	23	29	71	131
R squared	0.706	0.588	0.871	0.699	0.638
* significant at 5% level					
** significant at 1% level					

Table 7  
Determinants of Median Rents, 1991, 134 Metropolitan Areas

	Full Sample	Elevator Buildings	Low Rise 12 -24 Units	Low Rise Greater Than 24 Units	Garden Apartments
Intercept	-3.172**	-3.558	-5.417**	-2.741	-2.505**
	-0.787	-4.441	-1.608	-1.44	-1.207
Building Cost	0.0768**	0.084**	0.114**	0.0853**	0.064**
	-0.008	-0.038	-0.019	-0.015	-0.011
Apt Size	-0.0026**	-0.002	-0.00194	-0.00499**	-0.00219**
	-0.0006	-0.0029	-0.0013	-0.0013	-0.001
Real Estate Taxes	1.226**	1.713	1.225**	1.029**	1.226**
	-0.225	-0.916	-0.413	-0.449	-0.364
O & M	0.621**	0.906	0.985**	0.362	0.5412
	-0.201	-1.059	-0.439	-0.338	-0.365
Income	0.00190**	0.00013	0.00001	0.00024**	0.00021**
	-0.00003	-0.00013	-0.00008	-0.00005	-0.00004
Elev	0.442				
	-0.243				
LR12	-1.130**				
	-0.207				
LR24	-0.206				
	-0.142				
Observations	254	23	29	71	131
R squared	0.751	0.6102	0.872	0.778	0.702
* significant at 5% level					
** significant at 1% level					

Rental Housing in Minnesota: 1990

Table 8  
Impact of Classification System on Property Taxes Paid, 1992  
(millions)

Type of Property	Value	Percent of Total	Net Tax	Percent of Total	Effective Tax Rate	Percent of Taxes Divided by Percent of Property
Farm	\$23,937,742	15.75%	\$281,638	7.61%	1.18%	0.48
Residential	\$78,184,819	51.44%	\$1,148,672	31.05%	1.47%	0.60
Non-Homestead Residential	\$5,829,307	3.84%	\$194,098	5.25%	3.33%	1.37
Apartments	\$6,165,492	4.06%	\$254,551	6.88%	4.13%	1.70
Subsidized Apartments	\$1,376,057	0.91%	\$39,442	1.07%	2.87%	1.18
Commercial Industrial	\$24,560,755	16.16%	\$1,308,728	35.38%	5.33%	2.19
Other	\$11,934,345	7.85%	\$472,174	12.76%	3.96%	1.63
<b>Total</b>	<b>\$151,988,517</b>	<b>100.00%</b>	<b>\$3,699,303</b>	<b>100.00%</b>	<b>2.43%</b>	<b>1.00</b>
Source: Minnesota Department of Revenue						

Table 9  
Real Estate Taxes: Elevator Buildings, 1991

Rank	City	State	Real Estate Taxes per square foot
1	Minneapolis-St. Paul	MN	\$1.72
2	Chicago	IL	\$1.51
3	Portland	OR	\$1.42
4	Ft Lauderdale	FL	\$1.12
5	Hartford	CT	\$1.06
6	Los Angeles	CA	\$1.01
7	Pittsburgh	PA	\$1.00
8	San Francisco	CA	\$0.85
9	San Diego	CA	\$0.85
10	Baltimore	MD	\$0.81
11	Boston	MA	\$0.76
12	Philadelphia	PA	\$0.75
13	Miami	FL	\$0.71
14	Seattle	WA	\$0.62
15	Atlanta	GA	\$0.62
16	Cleveland	OH	\$0.58
17	Richmond	VA	\$0.56
18	Washington	DC	\$0.55
19	Dayton	OH	\$0.40
20	Salt Lake City	UT	\$0.36
21	Denver	CO	\$0.35
22	Albuquerque	NM	\$0.35
23	Memphis	TN	\$0.22

Source: Institute of Real Estate Management

Table 10  
Real Estate Taxes: Low Rise 12 to 24 Units, 1991

Rank	City	State	Real Estate Taxes per square foot
1	Binghamton	NY	\$1.40
2	Chicago	IL	\$1.39
3	Milwaukee	WI	\$1.33
4	<b>Minneapolis-St. Paul</b>	<b>MN</b>	<b>\$1.30</b>
5	Pittsburgh	PA	\$0.86
6	Los Angeles	CA	\$0.83
7	Cedar Rapids	IA	\$0.82
8	Boston	MA	\$0.77
9	Tucson	AZ	\$0.71
10	Cleveland	OH	\$0.71
11	San Francisco	CA	\$0.67
12	Lincoln	NE	\$0.64
13	Omaha	NE	\$0.64
14	Wichita	KS	\$0.62
15	Peoria	IL	\$0.53
16	San Diego	CA	\$0.52
17	Cincinnati	OH	\$0.45
18	Santa Barbara	CA	\$0.42
19	Memphis	TN	\$0.40
20	Columbus	OH	\$0.36
21	Fresno	CA	\$0.34
22	Greensboro-High Point	NC	\$0.33
23	Orange County	CA	\$0.28
24	Washington	DC	\$0.26
25	Charlotte	NC	\$0.25
26	Denver	CO	\$0.24
27	Kansas City	MO	\$0.24
28	Louisville	KY	\$0.23
29	Oxnard-Ventura	CA	\$0.22
Source: Institute of Real Estate Management			

# Rental Housing in Minnesota: 1990

## Table 11 Real Estate Taxes: Low Rise Over 24 Units, 1991

	City	State	Real Estate Taxes per square foot
1	Duluth	MN	\$1.38
2	Minneapolis-St. Paul	MN	\$1.24
3	Chicago	IL	\$1.24
4	Milwaukee	WI	\$1.15
5	Des Moines	IA	\$1.12
6	Miami	FL	\$1.00
7	Ames	IA	\$0.98
8	Portland	OR	\$0.90
9	West Palm Beach	FL	\$0.89
10	Tampa St. Pete	FL	\$0.85
11	Kalamazoo	MI	\$0.81
12	Orange County	CA	\$0.81
13	Allentown-Bethlehem	PA	\$0.77
14	Washington	DC	\$0.77
15	Binghamton	NY	\$0.76
16	San Francisco	CA	\$0.73
17	Ft Worth	TX	\$0.72
18	Detroit	MI	\$0.71
19	Pittsburgh	PA	\$0.70
20	Providence	RI	\$0.69
21	Cleveland	OH	\$0.67
22	Seattle	WA	\$0.67
23	Los Angeles	CA	\$0.67
24	Boston	MA	\$0.65
25	Lansing	MI	\$0.64
26	Indianapolis	IN	\$0.64
27	Philadelphia	PA	\$0.64
28	Bakersfield	CA	\$0.62
29	San Jose	CA	\$0.62
30	Tacoma	WA	\$0.61
31	Oakland	CA	\$0.61
32	Omaha	NE	\$0.60
33	Baltimore	MD	\$0.59
34	Atlanta	GA	\$0.58
35	Peoria	IL	\$0.56
36	Dallas	TX	\$0.56
37	Houston	TX	\$0.56
38	Gary-Hammond	IN	\$0.56
39	San Bernardino	CA	\$0.56
40	Cincinnati	OH	\$0.52
41	St. Louis	MO	\$0.51
42	Sacramento	CA	\$0.51
43	Jacksonville	FL	\$0.49
44	Dayton	OH	\$0.49
45	El Paso	TX	\$0.47
46	San Antonio	TX	\$0.47
47	Tucson	AZ	\$0.46
48	Toledo	OH	\$0.46
49	Phoenix	AZ	\$0.46
50	Akron	OH	\$0.44
51	Fresno	CA	\$0.42
52	Austin	TX	\$0.42
53	Knoxville	TN	\$0.41
54	Charlotte	NC	\$0.40
55	Kansas City	MO	\$0.40
56	Las Vegas	NV	\$0.40
57	Winston-Salem	NC	\$0.39
58	Little Rock	AR	\$0.39
59	Columbus	OH	\$0.38
60	Raleigh-Durham	NC	\$0.36
61	Memphis	TN	\$0.34
62	Wichita	KS	\$0.34
63	Salt Lake City	UT	\$0.33
64	Denver	CO	\$0.32
65	Albuquerque	NM	\$0.31
66	Lexington	KY	\$0.31
67	San Diego	CA	\$0.31
68	Oxnard-Ventura	CA	\$0.29
69	Macon	GA	\$0.27
70	Tulsa	OK	\$0.24
71	New Orleans	LA	\$0.20
72	Odessa-Midland	TX	\$0.17
73	Oklahoma City	OK	\$0.16

Source: Institute of Real Estate Management

Table 12

**Real Estate Taxes  
Garden Type Buildings**

	<u>City</u>	<u>State</u>	<u>Real Estate Taxes per square foot</u>
1	Perth Amboy	NJ	\$1.29
2	Minneapolis-St. Paul	MN	\$1.27
3	Chicago	IL	\$1.25
4	Eugene	OR	\$1.16
5	Milwaukee	WI	\$1.14
6	Ft Lauderdale	FL	\$1.12
7	Syracuse	NY	\$1.08
8	Hartford	CT	\$1.08
9	Springfield	MA	\$1.07
10	Newark	NJ	\$1.04
11	Madison	WI	\$1.03
12	Lansing	MI	\$1.02
13	Buffalo	NY	\$1.00
14	Albany-Troy	NY	\$1.00
15	Des Moines	IA	\$0.97
16	Trenton	NJ	\$0.91
17	Ann Arbor	MI	\$0.91
18	Cedar Rapids	IA	\$0.90
19	Rochester	NY	\$0.90
20	St. Cloud	MN	\$0.89
21	Grand Rapids	MI	\$0.87
22	West Palm Beach	FL	\$0.87
23	Providence	RI	\$0.87
24	Portland	OR	\$0.86
25	Miami	FL	\$0.85
26	Oxnard-Ventura	CA	\$0.82
27	Kalamazoo	MI	\$0.81
28	Boston	MA	\$0.81
29	Orlando	FL	\$0.78
30	Pittsburgh	PA	\$0.78
31	Hagerstown	MD	\$0.78
32	Peoria	IL	\$0.77
33	Champaign-Urbana	IL	\$0.77
34	Detroit	MI	\$0.77
35	Sioux City	IA	\$0.74



## Real Estate Taxes Garden Type Buildings

	<u>City</u>	<u>State</u>	<u>Real Estate Taxes per square foot</u>
36	Philadelphia	PA	\$0.74
37	Santa Rosa	CA	\$0.70
38	Tampa St. Pete	FL	\$0.68
39	Los Angeles	CA	\$0.68
40	Sarasota	FL	\$0.67
41	San Bernardino	CA	\$0.67
42	Davenport-Moline	IA	\$0.66
43	Gary-Hammond	IN	\$0.66
44	Daytona Beach	FL	\$0.65
45	Dallas	TX	\$0.65
46	Seattle	WA	\$0.65
47	San Jose	CA	\$0.65
48	Lincoln	NE	\$0.64
49	Allentown-Bethlehem	PA	\$0.64
50	Lancaster	PA	\$0.63
51	Austin	TX	\$0.63
52	San Diego	CA	\$0.63
53	Spokane	WA	\$0.61
54	Bakersfield	CA	\$0.61
55	Omaha	NE	\$0.60
56	Savannah	GA	\$0.60
57	S Bend Ft Wayne	IN	\$0.60
58	Evansville	IN	\$0.59
59	Flint	MI	\$0.59
60	Jacksonville	FL	\$0.59
61	St. Louis	MO	\$0.58
62	Ft Worth	TX	\$0.58
63	Indianapolis	IN	\$0.58
64	Houston	TX	\$0.56
65	El Paso	TX	\$0.56
66	Baltimore	MD	\$0.56
67	San Antonio	TX	\$0.55
68	Cleveland	OH	\$0.55
69	Reading	PA	\$0.55
70	Washington	DC	\$0.55
71	Oakland	CA	\$0.55
72	Tallahassee	FL	\$0.54
73	Tacoma	WA	\$0.54

## Real Estate Taxes Garden Type Buildings

	<u>City</u>	<u>State</u>	<u>Real Estate Taxes per square foot</u>
74	Tucson	AZ	\$0.53
75	Greensboro-High Point	NC	\$0.53
76	Sacramento	CA	\$0.53
77	Stockton	CA	\$0.52
78	Raleigh-Durham	NC	\$0.50
79	Dayton	OH	\$0.50
80	Gainesville	FL	\$0.49
81	Topeka	KS	\$0.49
82	San Francisco	CA	\$0.49
83	Corpus Christi	TX	\$0.48
84	Harrisburg	PA	\$0.48
85	Columbia	SC	\$0.48
86	Santa Barbara	CA	\$0.47
87	Atlanta	GA	\$0.46
88	Winston-Salem	NC	\$0.46
89	Phoenix	AZ	\$0.46
90	Charlotte	NC	\$0.45
91	Charleston	SC	\$0.44
92	Pensacola	FL	\$0.43
93	Nashville	TN	\$0.43
94	Fresno	CA	\$0.43
95	Jackson	MS	\$0.42
96	Asheville	NC	\$0.42
97	Akron	OH	\$0.42
98	Denver	CO	\$0.42
99	Wilmington	DE	\$0.42
100	Reno	NV	\$0.42
101	Wichita	KS	\$0.41
102	Columbus	OH	\$0.40
103	Greenville	SC	\$0.40
104	Kansas City	MO	\$0.39
105	Hamilton	OH	\$0.39
106	Columbus	GA	\$0.38
107	Huntsville	AL	\$0.38
108	Norfolk	VA	\$0.38
109	Orange County	CA	\$0.38
110	Knoxville	TN	\$0.37
111	Cincinnati	OH	\$0.37

## Real Estate Taxes Garden Type Buildings

	<u>City</u>	<u>State</u>	<u>Real Estate Taxes per square foot</u>
112	Shreveport	LA	\$0.36
113	Las Vegas	NV	\$0.35
114	Richmond	VA	\$0.34
115	Toledo	OH	\$0.34
116	Beaumont-Pt Art	TX	\$0.33
117	Memphis	TN	\$0.32
118	Birmingham	AL	\$0.32
119	Fayetteville	NC	\$0.32
120	Abilene	TX	\$0.31
121	Albuquerque	NM	\$0.30
122	Odessa-Midland	TX	\$0.29
123	Augusta	GA	\$0.29
124	Louisville	KY	\$0.29
125	Little Rock	AR	\$0.29
126	Roanoke	VA	\$0.28
127	Newport News	VA	\$0.28
128	Lexington	KY	\$0.27
129	Macon	GA	\$0.25
130	New Orleans	LA	\$0.25
131	Lorain-Elyria	OH	\$0.24
132	Colorado Springs	CO	\$0.22
133	Tulsa	OK	\$0.22
134	Mobile	AL	\$0.20
135	Baton Rouge	LA	\$0.19
136	Montgomery	AL	\$0.16
137	Oklahoma City	OK	\$0.15

Source: Institute of Real Estate Management

## Rental Housing in Minnesota: 1990

### Appendix Tables

- A1 Number of renter and owner households: 1980 and 1990
- A2 Renter households by race and ethnicity: 1990
- A3 Renter occupied housing units by type of structure: 1990
- A4 Year of construction for renter occupied housing units: 1990
- A5 Units lacking complete plumbing facilities and measures of crowding: 1990
- A6 Median Incomes: 1980 and 1990
- A7 Number and percent of very low income renter households paying 30% of income for rent, Minnesota counties, 1990
- A8 Number and percent of low income renter households paying 30% of income for rent, Minnesota counties, 1990
- A9 Data sources, means and standard deviations

Appendix Table 1: Number of Renter and Owner Households: 1980 and 1990

	Total Households 1980	Renter Households 1980	Owner Households 1980	Total Households 1990	Renter Households 1990	Owner Households 1990	%Δ Total Households 1980 - 1990	%Δ Renter Households 1980 - 1990	%Δ Owner Households 1980 - 1990	Renter HH/ Total HH 1980	Renter HH/ Total HH 1990
<b>MINNESOTA</b>	1,445,222	409,484	1,035,738	1,647,853	464,115	1,183,738	14.02%	13.34%	14.29%	28.33%	28.16%
<b>METRO AREA COUNTIES</b>	721,444	242,664	478,780	875,504	281,469	594,035	21.35%	15.99%	24.07%	33.64%	32.15%
Anoka County	60,716	11,790	48,926	82,437	15,459	66,978	35.77%	31.12%	36.90%	19.42%	18.75%
Carver County	12,011	2,644	9,367	16,601	3,484	13,117	38.21%	31.77%	40.03%	22.01%	20.99%
Dakota County	64,087	16,440	47,647	98,293	25,660	72,633	53.37%	56.08%	52.44%	25.65%	26.11%
Hennepin County	365,536	138,254	227,282	419,060	153,444	265,616	14.64%	10.99%	16.87%	37.82%	36.62%
Ramsey County	170,505	65,147	105,358	190,500	71,983	118,517	11.73%	10.49%	12.49%	38.21%	37.79%
Scott County	13,501	2,633	10,868	19,367	3,510	15,857	43.45%	33.31%	45.91%	19.50%	18.12%
Washington County	35,088	5,756	29,332	49,246	7,929	41,317	40.35%	37.75%	40.86%	16.40%	16.10%
<b>CENTRAL CITIES: TOTAL</b>	268,081	129,216	138,865	270,931	131,615	139,316	1.06%	1.86%	0.32%	48.20%	48.58%
Minneapolis city	161,858	82,208	79,650	160,682	80,837	79,845	-0.73%	-1.67%	0.24%	50.79%	50.31%
St. Paul city	106,223	47,008	59,215	110,249	50,778	59,471	3.79%	8.02%	0.43%	44.25%	46.06%
<b>FULLY DEVELOPED RING</b>	187,337	58,697	128,731	205,563	66,948	138,615	9.73%	14.06%	7.68%	31.33%	32.57%
<b>DEVELOPING AREAS</b>	197,749	43,150	151,507	310,539	67,452	243,087	57.04%	56.32%	60.45%	21.82%	21.72%
<b>OTHER METRO</b>	68,277	11,597	59,681	88,471	15,454	73,017	29.58%	33.26%	22.35%	16.99%	17.47%
<b>NON METRO: TOTAL</b>	723,778	166,820	556,958	772,349	182,646	589,703	6.71%	9.49%	5.88%	23.05%	23.65%
<b>SELECTED CITIES: TOTAL</b>	91,016	34,928	56,088	102,685	40,291	62,394	12.82%	15.35%	11.24%	38.38%	39.24%
Duluth city	35,363	12,547	22,816	34,563	12,288	22,275	-2.26%	-2.06%	-2.37%	35.48%	35.55%
Mankato city	9,969	4,539	5,430	11,220	5,446	5,774	12.55%	19.98%	6.34%	45.53%	48.54%
Moorhead city	9,804	3,857	5,947	11,063	4,399	6,664	12.84%	14.05%	12.06%	39.34%	39.76%
Rochester city	21,960	8,229	13,731	27,913	9,427	18,486	27.11%	14.56%	34.63%	37.47%	33.77%
St. Cloud city	13,920	5,756	8,164	17,926	8,731	9,195	28.78%	51.69%	12.63%	41.35%	48.71%
<b>OTHER NONMETRO</b>	632,762	131,892	500,870	669,664	142,355	527,309	5.83%	7.93%	5.28%	20.84%	21.26%
<b>DEVELOPMENT REGIONS</b>											
Dev Region I	34,119	7,409	26,710	33,888	7,474	26,414	-0.68%	0.88%	-1.11%	21.72%	22.06%
Dev Region II	21,201	4,502	16,699	24,096	5,347	18,749	13.66%	18.77%	12.28%	21.23%	22.19%
Dev Region III	123,859	29,566	94,293	122,229	28,272	93,957	-1.32%	-4.38%	-0.36%	23.87%	23.13%
Dev Region IV	70,598	16,881	53,717	73,460	18,620	54,840	4.05%	10.30%	2.09%	23.91%	25.35%
Dev Region V	45,457	8,515	36,942	49,472	10,151	39,321	8.83%	19.21%	6.44%	18.73%	20.52%
Dev Region VI	37,738	8,782	28,956	40,554	9,573	30,981	7.46%	9.01%	6.99%	23.27%	23.61%
Dev Region VII	22,026	5,106	16,920	20,088	4,492	15,596	-8.80%	-12.03%	-7.83%	23.18%	22.36%
Dev Region VIII	33,382	5,811	27,571	38,602	6,633	31,969	15.64%	14.15%	15.95%	17.41%	17.18%
Dev Region IX	67,785	14,631	53,154	87,367	21,775	65,592	28.89%	48.83%	23.40%	21.58%	24.92%
Dev Region X	48,973	11,848	37,125	47,224	11,671	35,553	-3.57%	-1.49%	-4.23%	24.19%	24.71%
Dev Region XI	77,756	19,725	58,031	79,947	20,753	59,194	2.82%	5.21%	2.00%	25.37%	25.96%
Dev Region XII	140,884	34,044	106,840	155,422	37,885	117,537	10.32%	11.28%	10.01%	24.16%	24.38%
Dev Region XIII	721,444	242,664	478,780	875,504	281,469	594,035	21.35%	15.99%	24.07%	33.64%	32.15%

Appendix Table 1: Number of Renter and Owner Households: 1980 and 1990

Aitkin County	5,007	878	4,129	5,126	824	4,302	2.38%	-6.15%	4.19%	17.54%	16.07%
Anoka County	60,716	11,790	48,926	82,437	15,459	66,978	35.77%	31.12%	36.90%	19.42%	18.75%
Becker County	10,112	2,197	7,915	10,477	2,327	8,150	3.61%	5.92%	2.97%	21.73%	22.21%
Bellrami County	10,023	2,475	7,548	11,870	3,190	8,680	18.43%	28.89%	15.00%	24.69%	26.87%
Benton County	8,275	2,089	6,186	10,935	3,604	7,331	32.15%	72.52%	18.51%	25.24%	32.96%
Big Stone County	2,873	647	2,226	2,463	470	1,993	-14.27%	-27.36%	-10.47%	22.52%	19.08%
Blue Earth County	18,011	6,105	11,906	19,277	6,949	12,328	7.03%	13.82%	3.54%	33.90%	36.05%
Brown County	9,988	2,181	7,807	10,321	2,342	7,979	3.33%	7.38%	2.20%	21.84%	22.69%
Carlton County	10,108	1,795	8,313	10,842	2,044	8,798	7.26%	13.87%	5.83%	17.76%	18.85%
Carver County	12,011	2,644	9,367	16,601	3,484	13,117	38.21%	31.77%	40.03%	22.01%	20.99%
Cass County	7,444	1,240	6,204	8,302	1,420	6,882	11.53%	14.52%	10.93%	16.66%	17.10%
Chippewa County	5,583	1,418	4,165	5,245	1,290	3,955	-6.05%	-9.03%	-5.04%	25.40%	24.59%
Chisago County	8,347	1,251	7,096	10,551	1,587	8,964	26.40%	26.86%	26.32%	14.99%	15.04%
Clay County	16,199	4,932	11,267	17,490	5,542	11,948	7.97%	12.37%	6.04%	30.45%	31.69%
Clearwater County	2,980	510	2,470	3,064	564	2,500	2.82%	10.59%	1.21%	17.11%	18.41%
Cook County	1,583	453	1,130	1,632	382	1,250	3.10%	-15.67%	10.62%	28.62%	23.41%
Cottonwood County	5,476	1,233	4,243	5,060	1,135	3,925	-7.60%	-7.95%	-7.49%	22.52%	22.43%
Crow Wing County	15,171	3,117	12,054	17,204	4,016	13,188	13.40%	28.84%	9.41%	20.55%	23.34%
Dakota County	64,087	16,440	47,647	98,293	25,660	72,633	53.37%	56.08%	52.44%	25.65%	26.11%
Dodge County	4,995	838	4,157	5,538	1,056	4,482	10.87%	26.01%	7.82%	16.78%	19.07%
Douglas County	9,991	2,416	7,575	10,988	2,839	8,149	9.98%	17.51%	7.58%	24.18%	25.84%
Faribault County	7,378	1,764	5,614	6,772	1,437	5,335	-8.21%	-18.54%	-4.97%	23.91%	21.22%
Fillmore County	7,828	1,603	6,225	7,822	1,713	6,109	-0.08%	6.86%	-1.86%	20.48%	21.90%
Freeborn County	13,224	3,143	10,081	13,029	3,036	9,993	-1.47%	-3.40%	-0.87%	23.77%	23.30%
Goodhue County	13,828	3,028	10,800	15,198	3,576	11,622	11.52%	18.10%	9.64%	22.22%	23.53%
Grant County	2,654	475	2,179	2,454	502	1,952	-7.54%	5.68%	-10.42%	17.90%	20.46%
Hennepin County	365,536	138,254	227,282	419,060	153,444	265,616	14.64%	10.99%	16.87%	37.82%	36.62%
Houston County	6,336	1,282	5,054	6,844	1,393	5,451	8.02%	8.66%	7.86%	20.23%	20.35%
Hubbard County	5,027	928	4,099	5,781	977	4,804	15.00%	5.28%	17.20%	18.46%	16.90%
Isanti County	7,503	1,297	6,206	8,810	1,489	7,321	17.42%	14.80%	17.97%	17.29%	16.90%
Itasca County	14,970	2,599	12,371	15,461	2,806	12,855	3.28%	0.27%	3.91%	17.36%	16.86%
Jackson County	4,988	1,207	3,781	4,560	1,083	3,477	-8.58%	-10.27%	-8.04%	24.20%	23.75%
Kanabec County	4,250	752	3,498	4,753	828	3,925	11.84%	10.11%	12.21%	17.69%	17.42%
Kandiyohi County	12,871	3,448	9,423	14,298	3,880	10,418	11.09%	12.53%	10.56%	26.79%	27.14%
Kittson County	2,485	462	2,023	2,274	414	1,860	-8.49%	-10.39%	-8.06%	18.59%	18.21%
Koochiching County	6,131	1,263	4,868	6,025	1,330	4,695	-1.73%	5.30%	-3.55%	20.60%	22.07%
Lac qui Parle County	3,885	829	3,056	3,505	740	2,765	-9.78%	-10.74%	-9.52%	21.34%	21.11%
Lake County	4,578	824	3,754	4,242	726	3,516	-7.34%	-11.89%	-6.34%	18.00%	17.11%
Lake of the Woods County	1,389	250	1,139	1,576	244	1,332	13.46%	-2.40%	16.94%	18.00%	15.48%
Le Sueur County	8,033	1,469	6,564	8,468	1,522	6,946	5.42%	3.61%	5.82%	18.29%	17.97%
Lincoln County	2,928	605	2,323	2,704	543	2,161	-7.65%	-10.25%	-6.97%	20.66%	20.08%
Lyon County	8,679	2,476	6,203	9,073	2,866	6,207	4.54%	15.75%	0.06%	28.53%	31.59%
McLeod County	10,376	2,308	8,068	11,815	2,722	9,093	13.87%	17.94%	12.70%	22.24%	23.04%
Mahnomen County	1,782	339	1,443	1,805	372	1,433	1.29%	9.73%	-0.69%	19.02%	20.61%
Marshall County	4,463	739	3,724	4,194	751	3,443	-6.03%	1.62%	-7.55%	16.56%	17.91%

Appendix Table 1: Number of Renter and Owner Households: 1980 and 1990

Martin County	9,321	2,460	6,861	9,129	2,292	6,837	-2.06%	-6.83%	-0.35%	26.39%	25.11%
Meeker County	7,178	1,460	5,718	7,651	1,559	6,092	6.59%	6.78%	6.54%	20.34%	20.38%
Mille Lacs County	6,431	1,296	5,135	6,911	1,404	5,507	7.46%	8.33%	7.24%	20.15%	20.32%
Morrison County	9,505	1,691	7,814	10,399	1,896	8,503	9.41%	12.12%	8.82%	17.79%	18.23%
Mower County	14,969	3,135	11,834	15,028	3,405	11,623	0.39%	8.61%	-1.78%	20.94%	22.66%
Murray County	4,036	855	3,181	3,758	776	2,982	-6.89%	-9.24%	-6.26%	21.18%	20.65%
Nicollet County	8,580	2,204	6,376	9,478	2,573	6,905	10.47%	16.74%	8.30%	25.69%	27.15%
Nobles County	7,812	1,886	5,926	7,683	1,892	5,791	-1.65%	0.32%	-2.28%	24.14%	24.63%
Norman County	3,431	649	2,782	3,118	620	2,498	-9.12%	-4.47%	-10.21%	18.92%	19.88%
Olmsted County	32,677	9,651	23,026	40,058	11,046	29,012	22.59%	14.45%	26.00%	29.53%	27.58%
Otter Tail County	18,549	3,753	14,796	19,510	4,275	15,235	5.18%	13.91%	2.97%	20.23%	21.91%
Pennington County	5,437	1,337	4,100	5,173	1,345	3,828	-4.86%	0.60%	-6.63%	24.59%	26.00%
Pine County	6,851	1,215	5,636	7,577	1,325	6,252	10.60%	9.05%	10.93%	17.73%	17.49%
Pipestone County	4,357	999	3,358	4,078	949	3,129	-6.40%	-5.01%	-6.82%	22.93%	23.27%
Polk County	12,154	3,118	9,036	11,984	3,034	8,950	-1.40%	-2.69%	-0.95%	25.65%	25.32%
Pope County	4,241	871	3,370	4,135	881	3,254	-2.50%	1.15%	-3.44%	20.54%	21.31%
Ramsey County	170,505	65,147	105,358	190,500	71,983	118,517	11.73%	10.49%	12.49%	38.21%	37.79%
Red Lake County	1,818	371	1,447	1,730	367	1,363	-4.84%	-1.08%	-5.81%	20.41%	21.21%
Redwood County	6,842	1,600	5,242	6,554	1,499	5,055	-4.21%	-6.31%	-3.57%	23.38%	22.87%
Renville County	7,313	1,566	5,747	6,790	1,412	5,378	-7.15%	-9.83%	-6.42%	21.41%	20.80%
Rice County	14,276	3,382	10,894	16,347	4,007	12,340	14.51%	18.48%	13.27%	23.69%	24.51%
Rock County	3,855	987	2,868	3,754	928	2,826	-2.62%	-5.98%	-1.46%	25.60%	24.72%
Roseau County	4,331	733	3,598	5,415	943	4,472	25.03%	28.65%	24.29%	16.92%	17.41%
St. Louis County	81,482	21,754	59,728	78,901	20,360	58,541	-3.17%	-6.41%	-1.99%	26.70%	25.80%
Scott County	13,501	2,633	10,868	19,367	3,510	15,857	43.45%	33.31%	45.91%	19.50%	18.12%
Sherburne County	8,971	1,564	7,407	13,643	2,666	10,977	52.08%	70.46%	48.20%	17.43%	19.54%
Sibley County	5,340	1,043	4,297	5,323	984	4,339	-0.32%	-5.66%	0.98%	19.53%	18.49%
Stearns County	32,113	8,078	24,035	39,776	11,358	28,418	23.86%	40.60%	18.24%	25.15%	28.55%
Steele County	10,600	2,481	8,119	11,342	2,596	8,746	7.00%	4.64%	7.72%	23.41%	22.89%
Stevens County	3,881	1,148	2,733	3,823	1,254	2,569	-1.49%	9.23%	-6.00%	29.58%	32.80%
Swift County	4,694	1,060	3,634	4,268	975	3,293	-9.08%	-8.02%	-9.38%	22.58%	22.84%
Todd County	8,514	1,470	7,044	8,589	1,645	6,944	0.88%	11.90%	-1.42%	17.27%	19.15%
Traverse County	2,038	444	1,594	1,778	373	1,405	-12.76%	-15.99%	-11.86%	21.79%	20.98%
Wabasha County	6,745	1,271	5,474	7,286	1,332	5,954	8.02%	4.80%	8.77%	18.84%	18.28%
Wadena County	4,823	997	3,826	4,978	1,174	3,804	3.21%	17.75%	-0.58%	20.67%	23.58%
Waseca County	6,469	1,423	5,046	6,649	1,511	5,138	2.78%	6.18%	1.82%	22.00%	22.73%
Washington County	35,088	5,756	29,332	49,246	7,929	41,317	40.35%	37.75%	40.86%	16.40%	16.10%
Watonwan County	4,636	1,076	3,560	4,530	1,143	3,387	-2.29%	6.23%	-4.86%	23.21%	25.23%
Wilkin County	2,933	645	2,288	2,805	627	2,178	-4.36%	-2.79%	-4.81%	21.99%	22.35%
Winona County	15,606	4,230	11,376	16,930	4,725	12,205	8.48%	11.70%	7.29%	27.10%	27.91%
Wright County	18,426	2,900	15,526	23,013	4,147	18,866	24.89%	43.00%	21.51%	15.74%	18.02%
Yellow Medicine County	4,991	1,152	3,839	4,607	1,017	3,590	-7.69%	-11.72%	-6.49%	23.08%	22.08%

Appendix Table 2: Renter Households by Race and Ethnicity: 1990

	Number of Renter Households								Renter Households as Percent of Total Households									
	TOTAL	Non white							Hispanic all races	TOTAL	Non White							Hispanic all races
		White	Total	Black	Am Ind	Asian Am	Other	White			Total	Black	Am Ind	Asian Am	Other			
MINNESOTA	464,115	421,823	42,292	21,288	7,956	9,876	3,172	6,435	28.16%	26.67%	63.82%	69.92%	57.13%	59.27%	60.68%	34.58%		
METRO AREA COUNTIES	281,469	245,945	35,524	20,556	4,435	8,490	2,043	4,411	32.15%	29.92%	66.26%	70.30%	68.92%	59.04%	57.42%	34.01%		
Anoka County	15,459	14,989	470	214	152	72	32	137	18.75%	18.50%	32.73%	61.85%	31.15%	15.00%	26.23%	27.18%		
Carver County	3,484	3,424	60	9	25	15	11	18	20.99%	20.78%	48.39%	29.03%	78.13%	33.33%	68.75%	21.95%		
Dakota County	25,660	24,491	1,169	471	120	381	197	371	26.11%	25.62%	43.03%	50.48%	41.96%	34.14%	51.57%	27.26%		
Hennepin County	153,444	130,670	22,774	14,606	3,160	4,145	863	1,996	36.62%	33.83%	69.41%	72.31%	76.68%	58.05%	64.02%	36.83%		
Ramsey County	71,983	61,223	10,760	5,160	898	3,806	896	1,756	37.79%	34.97%	69.78%	69.77%	70.65%	72.86%	58.64%	35.65%		
Scott County	3,510	3,451	59	12	14	31	2	14	18.12%	18.05%	23.51%	27.27%	12.96%	42.47%	7.69%	13.73%		
Washington County	7,929	7,697	232	84	66	40	42	119	16.10%	15.91%	27.10%	28.87%	51.16%	13.33%	30.88%	20.62%		
CENTRAL CITIES: TOTAL	131,615	103,732	27,883	16,551	3,537	6,332	1,463	2,929	48.58%	44.43%	74.48%	72.00%	80.90%	81.44%	63.58%	38.17%		
Minneapolis city	80,837	62,388	18,449	11,836	2,776	3,199	638	1,409	50.31%	45.83%	75.19%	72.77%	81.84%	80.38%	70.89%	40.41%		
St. Paul city	50,778	41,344	9,434	4,715	761	3,133	825	1,520	46.06%	42.47%	73.14%	70.14%	77.65%	82.56%	58.89%	36.30%		
FULLY DEVELOPED RING	66,951	62,893	4,058	2,146	412	1,179	321	764	32.56%	31.70%	56.52%	75.06%	58.36%	38.86%	55.25%	34.32%		
DEVELOPING AREAS	68,131	64,800	3,331	1,807	387	915	222	657	22.32%	21.81%	40.86%	56.05%	38.35%	27.27%	39.29%	24.74%		
OTHER METRO	14,772	14,520	252	52	99	64	37	61	15.75%	15.63%	29.89%	30.77%	28.45%	29.77%	33.33%	14.73%		
NON METRO: TOTAL	182,646	175,878	6,768	732	3,521	1,386	1,129	2,024	23.65%	23.15%	53.49%	60.65%	47.00%	60.66%	67.65%	35.90%		
SELECTED CITIES: TOTAL	40,291	38,138	2,153	435	637	839	242	457	39.24%	38.27%	70.87%	65.61%	72.97%	69.05%	84.32%	41.25%		
Duluth city	12,288	11,512	776	175	444	148	9	55	35.55%	34.45%	67.42%	58.92%	69.92%	75.51%	39.13%	31.61%		
Mankato city	5,446	5,210	236	76	8	119	33	57	48.54%	47.56%	88.72%	93.83%	100.00%	88.15%	78.57%	41.01%		
Moorhead city	4,399	4,081	318	23	113	56	126	170	39.76%	38.20%	83.91%	62.16%	85.61%	69.14%	97.67%	47.22%		
Rochester city	9,427	8,849	578	84	12	447	35	89	33.77%	32.83%	60.21%	52.17%	63.16%	61.57%	64.81%	36.03%		
St. Cloud city	8,731	8,486	245	77	60	69	39	86	48.71%	48.10%	86.88%	88.51%	75.95%	89.61%	100.00%	45.74%		
OTHER NON METRO	142,355	137,740	4,615	297	2,884	547	887	1,567	21.26%	20.87%	48.00%	54.60%	43.58%	51.12%	64.18%	34.59%		
DEVELOPMENT REGIONS																		
Dev Region I	7,474	7,223	251	4	117	10	120	220	22.06%	21.59%	58.92%	100.00%	50.43%	40.00%	72.73%	39.43%		
Dev Region II	5,347	4,458	889	12	863	14	0	18	22.19%	20.30%	41.68%	63.16%	41.27%	60.87%		36.73%		
Dev Region III	28,272	26,784	1,488	205	1,073	160	50	176	23.13%	22.43%	52.38%	54.81%	50.59%	58.82%	67.57%	34.31%		
Dev Region IV	18,620	17,854	766	69	421	111	165	280	25.35%	24.75%	57.38%	72.63%	49.76%	60.00%	78.95%	42.04%		
Dev Region V	10,151	9,709	442	7	397	23	15	51	20.52%	20.02%	45.43%	23.33%	46.00%	44.23%	53.57%	30.91%		
Dev Region VI	9,573	9,385	188	0	49	9	130	224	23.61%	23.33%	58.20%	0.00%	62.82%	25.71%	67.36%	38.29%		
Dev Region VII	4,492	4,452	40	0	32	0	8	15	22.36%	22.28%	37.38%	0.00%	59.26%	0.00%	25.00%	24.19%		
Dev Region VIII	6,633	6,507	126	9	107	2	8	17	17.18%	17.04%	30.00%	22.50%	32.72%	6.45%	36.36%	17.00%		
Dev Region IX	21,775	21,359	416	95	148	111	62	155	24.92%	24.64%	60.64%	71.43%	51.57%	62.36%	70.45%	32.22%		
Dev Region X	11,671	11,310	361	37	100	113	111	136	24.71%	24.20%	73.52%	88.10%	61.73%	76.35%	79.86%	41.34%		
Dev Region XI	20,753	20,230	523	114	65	163	181	258	25.96%	25.54%	69.64%	83.82%	60.75%	71.81%	64.41%	35.25%		
Dev Region XII	37,885	36,607	1,278	180	149	670	279	474	24.38%	23.89%	59.00%	57.51%	46.13%	61.36%	63.70%	33.91%		
Dev Region XIII	281,469	245,945	35,524	20,556	4,435	8,490	2,043	4,411	32.15%	29.92%	66.26%	70.30%	68.92%	59.04%	57.42%	34.01%		



Appendix Table 2: Renter Households by Race and Ethnicity: 1990

	Number of Renter Households								Renter Households as Percent of Total Households									
	TOTAL	Non white							Hispanic all races	TOTAL	Non White							Hispanic all races
		White	Total	Black	Am Ind	Asian Am	Other	White			Total	Black	Am Ind	Asian Am	Other			
Aitkin County	824	808	16	2	14	0	0	2	16.07%	15.95%	26.67%	28.57%	27.45%		0.00%	14.29%		
Anoka County	15,459	14,989	470	214	152	72	32	137	18.75%	18.50%	32.73%	61.85%	31.15%	15.00%	26.23%	27.18%		
Becker County	2,327	2,084	243	11	219	13	0	18	22.21%	21.02%	43.09%	100.00%	41.48%	86.67%	0.00%	40.91%		
Beltrami County	3,190	2,558	632	12	606	14	0	18	26.87%	24.69%	41.91%	63.16%	41.14%	87.50%		50.00%		
Benton County	3,604	3,543	61	22	17	2	20	22	32.96%	32.67%	67.03%	100.00%	45.95%	28.57%	80.00%	28.95%		
Big Stone County	470	468	2	0	2	0	0	0	19.08%	19.07%	22.22%	0.00%	33.33%	0.00%				
Blue Earth County	6,949	6,687	262	83	13	124	42	69	36.05%	35.26%	83.44%	90.22%	76.47%	82.67%	76.36%	36.90%		
Brown County	2,342	2,324	18	0	11	2	5	5	22.69%	22.59%	51.43%		78.57%	14.29%	71.43%	31.25%		
Carlton County	2,044	1,871	173	0	166	7	0	18	18.85%	17.90%	44.13%	0.00%	43.46%	77.78%		41.86%		
Carver County	3,484	3,424	60	9	25	15	11	18	20.99%	20.78%	48.39%	29.03%	78.13%	33.33%	68.75%	21.95%		
Cass County	1,420	1,106	314	2	308	2	2	14	17.10%	14.63%	42.38%	50.00%	42.31%	100.00%	28.57%	32.56%		
Chippewa County	1,290	1,275	15	0	10	0	5	8	24.59%	24.48%	40.54%		100.00%	0.00%	35.71%	20.51%		
Chisago County	1,587	1,574	13	0	9	2	2	5	15.04%	15.03%	17.11%	0.00%	27.27%	12.50%	14.29%	15.63%		
Clay County	5,542	5,204	338	23	118	56	141	191	31.69%	30.55%	74.12%	58.97%	72.39%	62.22%	85.98%	44.73%		
Clearwater County	564	484	80	0	80	0	0	0	18.41%	16.81%	43.48%		43.48%			0.00%		
Cook County	382	357	25	0	25	0	0	0	23.41%	23.35%	24.27%	0.00%		25.25%				
Cottonwood County	1,135	1,118	17	11	0	6	0	0	22.43%	22.19%	77.27%	100.00%		85.71%	0.00%	0.00%		
Crow Wing County	4,016	3,922	94	5	62	21	6	24	23.34%	22.98%	69.63%	27.78%	78.48%	65.63%	100.00%	40.68%		
Dakota County	25,660	24,491	1,169	471	120	381	197	371	26.11%	25.62%	43.03%	50.48%	41.96%	34.14%	51.57%	27.26%		
Dodge County	1,056	1,033	23	2	6	2	13	15	19.07%	18.79%	56.10%	100.00%	31.58%	100.00%	72.22%	35.71%		
Douglas County	2,839	2,809	30	0	21	9	0	20	25.84%	25.67%	63.83%	0.00%	67.74%	81.82%	0.00%	35.71%		
Faribault County	1,437	1,409	28	0	2	6	20	34	21.22%	20.97%	52.83%	0.00%	25.00%	100.00%	58.82%	35.42%		
Fillmore County	1,713	1,709	4	0	2	2	0	6	21.90%	21.88%	36.36%	0.00%	28.57%	100.00%		42.86%		
Freeborn County	3,036	2,873	163	8	8	17	130	172	23.30%	22.52%	59.93%	80.00%	38.10%	34.69%	67.71%	35.83%		
Goodhue County	3,576	3,493	83	8	41	16	18	24	23.53%	23.18%	64.84%	100.00%	50.00%	88.89%	90.00%	33.80%		
Grant County	502	499	3	0	3	0	0	0	20.46%	20.38%	60.00%		60.00%					
Hennepin County	153,444	130,670	22,774	14,606	3,160	4,145	863	1,996	36.62%	33.83%	69.41%	72.31%	76.68%	58.05%	64.02%	36.83%		
Houston County	1,393	1,387	6	2	4	0	0	0	20.35%	20.33%	28.57%	66.67%	25.00%		0.00%	0.00%		
Hubbard County	977	930	47	0	47	0	0	0	16.90%	16.33%	55.29%		60.26%	0.00%		0.00%		
Isanti County	1,489	1,478	11	0	11	0	0	0	16.90%	16.86%	24.44%	0.00%	35.48%	0.00%		0.00%		
Itasca County	2,606	2,477	129	0	126	0	3	25	16.86%	16.38%	37.94%	0.00%	38.41%	0.00%	100.00%	35.21%		
Jackson County	1,083	1,061	22	0	1	15	6	11	23.75%	23.45%	61.11%		100.00%	57.69%	66.67%	44.00%		
Kanabec County	828	818	10	0	8	0	2	4	17.42%	17.29%	43.48%		38.10%		100.00%	23.53%		
Kandiyohi County	3,880	3,762	118	0	28	0	90	150	27.14%	26.61%	72.84%	0.00%	90.32%	0.00%	78.26%	39.06%		
Kittson County	414	410	4	0	2	0	2	2	18.21%	18.06%	100.00%		100.00%		100.00%	33.33%		
Koochiching County	1,330	1,236	94	12	49	0	33	50	22.07%	21.07%	59.49%	100.00%	46.23%	0.00%	100.00%	47.17%		
Lac qui Parle County	740	740	0	0	0	0	0	0	21.11%	21.11%	#DIV/0!					0.00%		
Lake County	726	721	5	0	5	0	0	0	17.11%	17.07%	27.78%		38.46%	0.00%		0.00%		
Lake of the Woods County	244	244	0	0	0	0	0	0	15.48%	15.48%	#DIV/0!					0.00%		
Le Sueur County	1,522	1,511	11	7	0	2	2	9	17.97%	17.90%	44.00%	100.00%	0.00%	66.67%	25.00%	28.13%		
Lincoln County	543	536	7	1	3	0	3	3	20.08%	19.87%	100.00%	100.00%	100.00%		100.00%	50.00%		
Lyon County	2,866	2,822	44	8	0	12	24	31	31.59%	31.31%	74.58%	100.00%		60.00%	77.42%	41.33%		
McLeod County	2,722	2,688	34	0	7	9	18	35	23.04%	22.93%	36.56%	0.00%	28.00%	56.25%	47.37%	37.63%		
Mahnomen County	372	242	130	0	130	0	0	0	20.61%	16.70%	36.52%		36.52%			0.00%		

Appendix Table 2: Renter Households by Race and Ethnicity: 1990

	Number of Renter Households								Renter Households as Percent of Total Households								
	TOTAL	Non white		Black	Am Ind	Asian Am	Other	Hispanic all races	TOTAL	Non White			Black	Am Ind	Asian Am	Other	Hispanic all races
		White	Total							White	Total	Total					
Marshall County	751	742	9	0	0	0	9	15	17.91%	17.76%	56.25%		0.00%		100.00%	42.86%	
Marlin County	2,292	2,266	26	0	15	2	9	11	25.11%	24.98%	44.83%		50.00%	25.00%	45.00%	29.73%	
Meeker County	1,559	1,547	12	0	6	0	6	15	20.38%	20.29%	46.15%	0.00%	100.00%	0.00%	37.50%	37.50%	
Mille Lacs County	1,404	1,366	38	0	36	0	2	4	20.32%	20.23%	24.20%	0.00%	25.17%	0.00%	100.00%	30.77%	
Morrison County	1,896	1,885	11	0	6	0	5	5	18.23%	18.21%	22.00%	0.00%	31.58%	0.00%	55.56%	17.24%	
Mower County	3,405	3,333	72	0	0	57	15	25	22.66%	22.33%	72.73%	0.00%	0.00%	96.61%	68.18%	36.23%	
Murray County	776	774	2	0	0	2	0	0	20.65%	20.61%	100.00%			100.00%			
Nicollet County	2,573	2,512	61	14	18	22	7	18	27.15%	26.77%	65.59%	100.00%	100.00%	75.86%	21.88%	28.57%	
Nobles County	1,892	1,708	184	17	23	73	71	79	24.63%	22.85%	88.89%	94.44%	92.00%	92.41%	83.53%	42.02%	
Norman County	620	616	4	0	2	0	2	4	19.88%	19.87%	22.22%		13.33%		66.67%	22.22%	
Olmsted County	11,046	10,452	594	84	17	458	35	93	27.58%	26.79%	56.79%	50.60%	38.64%	59.33%	54.69%	31.63%	
Otter Tail County	4,275	4,226	49	8	29	10	2	19	21.91%	21.79%	42.61%	66.67%	44.62%	32.26%	28.57%	27.94%	
Pennington County	1,345	1,286	59	0	16	7	36	44	26.00%	25.23%	77.63%		64.00%	77.78%	85.71%	41.12%	
Pine County	1,325	1,271	54	9	43	0	2	4	17.49%	17.04%	45.38%	69.23%	43.43%	0.00%	50.00%	40.00%	
Pipestone County	949	919	30	0	22	3	5	5	23.27%	22.83%	57.69%	0.00%	61.11%	33.33%	100.00%	50.00%	
Polk County	3,034	2,889	145	4	78	1	62	146	25.32%	24.59%	62.23%	100.00%	58.65%	50.00%	65.96%	39.67%	
Pope County	881	877	4	0	4	0	0	0	21.31%	21.23%	100.00%		100.00%				
Ramsey County	71,983	61,223	10,760	5,160	898	3,806	896	1,756	37.79%	34.97%	69.78%	69.77%	70.65%	72.86%	58.64%	35.65%	
Red Lake County	367	359	8	0	1	0	7	7	21.21%	20.92%	57.14%		100.00%		53.85%	35.00%	
Redwood County	1,499	1,455	44	0	42	0	2	7	22.87%	22.53%	46.32%	0.00%	47.73%	0.00%	100.00%	36.84%	
Renville County	1,412	1,388	24	0	8	0	16	24	20.80%	20.57%	57.14%		50.00%	0.00%	66.67%	35.29%	
Rice County	4,007	3,947	60	11	11	35	3	31	24.51%	24.31%	55.05%	44.00%	42.31%	79.55%	21.43%	31.96%	
Rock County	928	917	11	0	9	2	0	0	24.72%	24.50%	100.00%		100.00%	100.00%		0.00%	
Roseau County	943	921	22	0	18	2	2	2	17.41%	17.21%	33.85%		36.73%	14.29%	100.00%	50.00%	
St. Louis County	20,360	19,314	1,046	191	688	153	14	81	25.80%	25.04%	59.10%	55.36%	60.25%	61.94%	38.89%	29.89%	
Scott County	3,510	3,451	59	12	14	31	2	14	18.12%	18.05%	23.51%	27.27%	12.96%	42.47%	7.69%	13.73%	
Sherburne County	2,666	2,593	73	10	54	0	9	39	19.54%	19.18%	59.35%	100.00%	62.79%	0.00%	50.00%	33.91%	
Sibley County	984	972	12	2	0	3	7	17	18.49%	18.33%	60.00%	100.00%	0.00%	75.00%	63.64%	39.53%	
Stearns County	11,358	11,102	256	63	64	104	25	73	28.55%	28.15%	75.07%	67.02%	64.00%	90.43%	78.13%	35.78%	
Steele County	2,596	2,498	98	26	13	9	50	57	22.89%	22.38%	53.85%	59.09%	48.15%	25.00%	66.67%	31.15%	
Stevens County	1,254	1,190	64	27	6	23	8	14	32.80%	31.81%	78.05%	90.00%	75.00%	67.65%	80.00%	43.75%	
Swift County	975	972	3	0	0	0	3	7	22.84%	22.84%	25.00%	0.00%	0.00%	0.00%	60.00%	38.89%	
Todd County	1,645	1,627	18	0	16	0	2	8	19.15%	19.03%	46.15%		55.17%	0.00%	33.33%	30.77%	
Traverse County	373	355	18	0	18	0	0	2	20.98%	20.43%	45.00%		50.00%	0.00%		50.00%	
Wabasha County	1,332	1,310	22	0	3	19	0	0	18.28%	18.09%	51.16%	0.00%	18.75%	76.00%		0.00%	
Wadena County	1,174	1,169	5	0	5	0	0	0	23.58%	23.52%	62.50%		62.50%			0.00%	
Waseca County	1,511	1,498	13	8	2	0	3	11	22.73%	22.65%	38.24%	80.00%	33.33%	0.00%	18.75%	17.19%	
Washington County	7,929	7,697	232	84	66	40	42	119	16.10%	15.91%	27.10%	28.87%	51.16%	13.33%	30.88%	20.62%	
Watsonwan County	1,143	1,051	92	0	4	2	86	84	25.23%	23.83%	77.31%	0.00%	100.00%	18.18%	87.76%	43.30%	
Wilkin County	627	610	17	0	3	0	14	16	22.35%	21.92%	77.27%		50.00%		87.50%	45.71%	
Winona County	4,725	4,572	153	39	44	55	15	51	27.91%	27.35%	71.50%	90.70%	80.00%	64.71%	48.39%	38.06%	
Wright County	4,147	4,121	26	0	13	5	8	21	18.02%	18.01%	19.85%	0.00%	20.31%	10.64%	61.54%	24.42%	
Yellow Medicine County	1,017	997	20	0	20	0	0	0	22.08%	21.87%	40.82%		55.56%		0.00%	0.00%	

Appendix Table 3: Renter Occupied Housing Units by Type of Structure: 1990

	Rental Units by Structure Type as Percent of Total Rental Units							Rental Units as Percent of Total Occupied Units for each Structure Type					
	Single Unit Detached	Single Unit Attached	2 units	3 to 4 Units	5 to 49 Units	≥50 Units	Mobile Homes	Single Unit Detached	Single Unit Attached	2 to 4 Units	5 to 49 Units	≥ 50 Units	Mobile Homes
MINNESOTA	16.69%	4.56%	9.84%	7.83%	40.94%	16.99%	1.79%	7.00%	32.55%	78.40%	93.51%	88.73%	12.33%
METRO AREA COUNTIES	7.90%	6.30%	9.74%	6.74%	44.57%	23.39%	0.25%	4.22%	32.12%	76.18%	91.97%	87.23%	4.57%
Anoka County	11.21%	10.75%	6.48%	5.97%	50.78%	13.20%	0.74%	2.93%	29.55%	77.27%	96.87%	85.82%	2.65%
Carver County	17.19%	7.95%	9.41%	5.22%	49.14%	7.20%	1.49%	5.04%	31.16%	76.58%	96.78%	100.00%	5.31%
Dakota County	6.65%	9.45%	4.30%	6.70%	43.39%	27.92%	0.82%	2.85%	24.49%	77.85%	86.72%	90.07%	5.89%
Hennepin County	7.43%	5.84%	10.77%	6.08%	42.76%	25.92%	0.07%	4.80%	35.87%	76.41%	91.41%	85.68%	8.00%
Ramsey County	6.88%	4.24%	10.47%	7.84%	48.41%	21.02%	0.11%	4.71%	32.99%	75.40%	93.63%	89.21%	2.47%
Scott County	16.61%	10.51%	8.83%	11.74%	34.87%	12.17%	2.59%	3.89%	41.93%	83.66%	97.45%	100.00%	11.94%
Washington County	15.75%	12.40%	7.73%	9.75%	38.74%	13.09%	0.72%	3.34%	26.83%	71.11%	89.25%	96.65%	4.03%
CENTRAL CITIES: TOTAL	7.63%	3.46%	16.52%	9.49%	42.09%	19.41%	0.02%	7.79%	55.72%	77.41%	95.18%	88.89%	39.06%
Minneapolis city	7.86%	3.41%	18.05%	9.28%	41.02%	18.92%	0.02%	8.68%	56.73%	78.11%	95.29%	85.36%	35.14%
St. Paul city	7.25%	3.53%	14.07%	9.84%	43.80%	20.19%	0.02%	6.61%	54.23%	76.16%	95.01%	94.75%	44.44%
FULLY DEVELOPED RING	5.43%	6.80%	3.83%	2.58%	51.94%	28.47%	0.13%	2.94%	40.56%	73.49%	89.87%	82.39%	4.20%
DEVELOPING AREAS	7.83%	11.12%	2.30%	4.54%	43.97%	29.18%	0.42%	2.67%	22.89%	68.93%	88.69%	89.34%	3.40%
OTHER METRO	21.77%	7.07%	10.40%	11.24%	35.97%	9.06%	2.12%	4.33%	38.93%	78.66%	92.19%	100.00%	6.22%
NON METRO: TOTAL	30.23%	1.89%	9.99%	9.50%	35.36%	7.12%	4.17%	9.52%	34.92%	81.51%	96.66%	97.23%	14.65%
SELECTED CITIES: TOTAL	9.75%	2.45%	12.24%	13.85%	46.14%	13.16%	1.10%	6.77%	32.39%	81.90%	95.54%	93.97%	15.27%
Duluth city	12.02%	2.38%	18.48%	14.36%	32.10%	17.94%	1.79%	6.78%	49.16%	78.74%	97.89%	99.77%	33.08%
Mankato city	10.74%	1.47%	13.11%	14.78%	43.17%	13.13%	1.40%	10.96%	48.19%	87.85%	98.66%	94.33%	10.81%
Moorhead city	8.52%	4.80%	5.75%	12.34%	56.19%	8.41%	1.70%	6.35%	34.14%	81.64%	95.85%	89.16%	18.43%
Rochester city	9.38%	2.76%	11.19%	19.48%	44.04%	11.67%	0.24%	5.46%	20.77%	82.62%	88.51%	81.66%	3.07%
St. Cloud city	6.95%	1.67%	7.31%	7.22%	64.95%	10.45%	0.56%	6.90%	34.52%	84.36%	98.20%	100.00%	12.96%
OTHER NON METRO	36.03%	1.74%	9.35%	8.27%	32.31%	5.41%	5.04%	9.82%	36.05%	81.34%	97.12%	99.60%	14.62%
DEVELOPMENT REGIONS													
Dev Region I	36.11%	1.35%	8.26%	6.36%	35.26%	5.23%	5.33%	10.55%	42.62%	87.15%	99.32%	100.00%	11.21%
Dev Region II	42.45%	1.85%	7.61%	5.57%	26.65%	5.65%	8.29%	12.83%	51.56%	87.80%	99.16%	100.00%	12.77%
Dev Region III	23.91%	1.98%	13.73%	11.29%	31.27%	12.08%	4.04%	7.47%	43.58%	78.37%	98.04%	99.85%	14.16%
Dev Region IV	31.31%	2.49%	7.73%	8.27%	37.80%	6.17%	4.74%	10.75%	36.92%	83.40%	95.31%	96.23%	16.86%
Dev Region V	38.58%	1.95%	8.56%	8.00%	25.78%	7.38%	8.12%	10.16%	45.94%	83.92%	96.96%	100.00%	17.85%
Dev Region VI	32.92%	1.18%	10.15%	8.38%	35.99%	5.07%	4.50%	10.14%	21.44%	83.44%	97.10%	100.00%	17.55%
Dev Region VII	51.60%	0.58%	6.48%	4.92%	28.56%	3.87%	2.83%	13.65%	17.69%	84.35%	99.77%	100.00%	17.19%
Dev Region VIII	32.85%	2.70%	8.05%	7.39%	33.70%	4.28%	8.83%	7.32%	43.24%	80.95%	97.17%	100.00%	13.77%
Dev Region IX	18.47%	2.14%	6.90%	6.14%	55.20%	6.82%	2.80%	6.44%	33.55%	81.18%	98.20%	100.00%	10.84%
Dev Region X	48.31%	1.60%	6.19%	6.33%	29.47%	3.88%	2.69%	14.34%	43.59%	83.35%	98.57%	100.00%	22.27%
Dev Region XI	32.90%	1.48%	10.96%	10.80%	33.05%	5.84%	2.98%	11.25%	38.60%	82.86%	96.67%	96.57%	16.06%
Dev Region XII	25.36%	2.01%	12.50%	13.75%	33.64%	7.68%	3.26%	8.48%	27.11%	80.69%	93.27%	91.27%	14.25%
Dev Region XIII	7.90%	6.30%	9.74%	6.74%	44.57%	23.39%	0.25%	4.22%	32.12%	76.18%	91.97%	87.23%	4.57%

Appendix Table 3: Renter Occupied Housing Units by Type of Structure: 1990

	Rental Units by Structure Type as Percent of Total Rental Units							Rental Units as Percent of Total Occupied Units for each Structure Type					
	Single Unit Detached	Single Unit Attached	2 units	3 to 4 Units	5 to 49 Units	≥50 Units	Mobile Homes	Single Unit Detached	Single Unit Attached	2 to 4 Units	5 to 49 Units	≥ 50 Units	Mobile Homes
Aitkin County	45.63%	0.36%	7.04%	3.88%	27.06%	7.16%	7.65%	9.46%	13.04%	78.95%	96.12%	100.00%	9.08%
Anoka County	11.21%	10.75%	6.48%	5.97%	50.78%	13.20%	0.74%	2.93%	29.55%	77.27%	96.87%	85.82%	2.65%
Becker County	41.34%	1.72%	8.29%	5.59%	26.21%	8.25%	7.61%	12.25%	36.70%	82.61%	89.31%	100.00%	14.70%
Beltrami County	37.87%	2.70%	10.06%	6.43%	28.43%	4.76%	7.65%	14.72%	72.88%	86.94%	99.23%	100.00%	13.89%
Benton County	11.96%	2.30%	4.97%	5.24%	54.27%	14.43%	4.97%	6.71%	62.41%	77.80%	99.19%	100.00%	14.03%
Big Stone County	45.11%	1.06%	3.83%	3.62%	40.21%		2.55%	10.48%	31.25%	61.40%	100.00%		7.89%
Blue Earth County	20.25%	1.51%	11.53%	13.01%	38.71%	10.29%	2.65%	11.67%	47.73%	86.68%	98.53%	94.33%	13.72%
Brown County	36.68%	0.73%	15.37%	10.12%	25.45%	5.89%	4.01%	10.52%	35.42%	80.78%	91.41%	100.00%	19.07%
Carlton County	35.23%	1.81%	7.49%	11.01%	28.47%	7.53%	6.56%	8.42%	37.37%	85.71%	100.00%	100.00%	14.35%
Carver County	17.19%	7.95%	9.41%	5.22%	49.14%	7.20%	1.49%	5.04%	31.16%	76.58%	96.78%	100.00%	5.31%
Cass County	53.38%	1.62%	5.70%	4.37%	19.86%		12.89%	11.54%	29.87%	76.47%	94.00%		16.96%
Chippewa County	46.82%	0.85%	8.84%	6.12%	25.66%	8.29%	2.48%	13.92%	15.07%	87.73%	100.00%	100.00%	22.70%
Chisago County	29.49%	4.85%	5.92%	7.18%	40.45%	3.65%	6.81%	5.55%	47.53%	76.19%	95.11%	100.00%	12.03%
Clay County	14.71%	4.38%	5.47%	11.58%	51.46%	7.60%	2.58%	7.40%	35.47%	82.03%	95.54%	90.34%	14.42%
Clearwater County	53.37%	0.00%	3.72%	4.61%	28.55%		9.40%	12.52%	0.00%	94.00%	99.38%		12.83%
Cook County	63.09%	0.00%	6.81%	3.40%	16.23%		2.88%	18.12%	0.00%	66.10%	83.78%		9.48%
Cottonwood County	56.04%	1.41%	6.78%	5.81%	19.47%	5.55%	1.85%	14.58%	25.00%	75.66%	96.51%	100.00%	21.43%
Crow Wing County	34.29%	1.17%	8.89%	8.44%	29.61%	10.66%	6.13%	10.55%	33.81%	82.86%	95.73%	100.00%	17.46%
Dakota County	6.65%	9.45%	4.30%	6.70%	43.39%	27.92%	0.82%	2.85%	24.49%	77.85%	86.72%	90.07%	5.89%
Dodge County	37.97%	1.42%	7.48%	6.53%	38.83%	0.00%	4.64%	8.94%	37.50%	86.05%	100.00%		13.35%
Douglas County	33.89%	2.61%	10.78%	8.84%	30.40%	6.66%	5.42%	11.77%	35.75%	83.26%	93.60%	100.00%	20.67%
Faribault County	55.46%	1.32%	10.23%	9.12%	17.75%	3.55%	1.67%	13.51%	42.22%	82.49%	98.08%	100.00%	18.46%
Fillmore County	52.42%	0.41%	9.40%	9.63%	21.72%		4.73%	13.85%	14.29%	77.62%	98.15%		19.52%
Freeborn County	36.66%	1.91%	16.40%	8.43%	18.74%	12.52%	3.06%	10.83%	29.59%	80.38%	87.40%	92.46%	23.02%
Goodhue County	27.18%	1.26%	14.49%	12.58%	30.62%	8.08%	3.91%	8.72%	22.73%	78.70%	90.95%	100.00%	14.07%
Grant County	54.38%	0.40%	9.56%	4.98%	26.69%		2.39%	12.87%	50.00%	90.12%	100.00%		12.63%
Hennepin County	7.43%	5.84%	10.77%	6.08%	42.76%	25.92%	0.07%	4.80%	35.87%	76.41%	91.41%	85.68%	8.00%
Houston County	39.55%	0.07%	8.69%	15.36%	29.94%		4.67%	10.09%	5.56%	89.10%	98.82%		13.05%
Hubbard County	43.30%	0.92%	2.56%	3.79%	20.68%	15.35%	10.85%	9.47%	21.95%	84.93%	98.06%	100.00%	13.22%
Isanti County	27.07%	5.17%	9.67%	7.39%	39.49%	3.76%	6.11%	5.68%	52.74%	78.88%	95.61%	100.00%	17.95%
Itasca County	34.42%	1.00%	8.83%	7.41%	34.00%	2.69%	9.71%	7.48%	24.76%	85.11%	97.47%	100.00%	14.47%
Jackson County	57.62%	1.66%	7.11%	6.74%	25.12%		0.92%	15.67%	54.55%	83.33%	99.63%		14.93%
Kanabec County	33.94%	0.00%	6.88%	5.68%	33.82%		18.36%	8.25%	0.00%	81.25%	98.94%		17.27%
Kandiyohi County	26.49%	0.80%	13.20%	9.15%	39.56%	4.82%	4.56%	9.88%	21.68%	84.34%	96.72%	100.00%	20.97%
Kittson County	50.72%	0.00%	3.38%	4.83%	31.40%		8.21%	11.08%	0.00%	89.47%	100.00%		18.99%
Koochiching County	35.19%	4.06%	5.41%	11.58%	24.74%	10.08%	7.37%	10.52%	55.67%	87.60%	98.21%	100.00%	13.96%
Lac qui Parle County	58.51%	0.27%	6.35%	2.57%	28.24%		3.51%	14.15%	16.67%	83.54%	100.00%		22.41%
Lake County	41.05%	1.38%	19.70%	4.27%	20.80%	8.68%	1.65%	8.61%	66.67%	70.73%	93.79%	100.00%	4.56%
Lake of the Woods County	50.00%	0.00%	6.56%	4.10%	28.69%		6.97%	10.67%	0.00%	89.66%	100.00%		5.65%
Le Sueur County	38.37%	1.97%	11.04%	7.75%	34.56%		3.88%	8.40%	25.21%	81.71%	97.95%		14.43%
Lincoln County	54.51%	0.92%	3.87%	3.87%	31.12%		3.87%	12.44%	27.78%	93.33%	100.00%		32.81%
Lyon County	28.65%	1.47%	5.62%	7.92%	43.61%	5.58%	5.09%	12.34%	51.85%	87.00%	98.89%	100.00%	37.53%
McLeod County	24.17%	2.17%	9.11%	9.07%	43.57%	6.25%	4.34%	7.53%	20.56%	80.75%	97.37%	100.00%	16.76%
Mahnomen County	58.06%	1.08%	6.45%	5.38%	22.85%		6.18%	14.71%	44.44%	95.65%	100.00%		11.79%
Marshall County	47.14%	0.00%	8.79%	2.93%	28.10%	5.86%	5.33%	10.45%	0.00%	78.57%	100.00%	100.00%	9.85%

Appendix Table 3: Renter Occupied Housing Units by Type of Structure: 1990

	Rental Units by Structure Type as Percent of Total Rental Units							Rental Units as Percent of Total Occupied Units for each Structure Type					
	Single Unit Detached	Single Unit Attached	2 units	3 to 4 Units	5 to 9 Units	≥ 50 Units	Mobile Homes	Single Unit Detached	Single Unit Attached	2 to 4 Units	5 to 9 Units	≥ 50 Units	Mobile Homes
Martin County	48.82%	0.70%	6.28%	9.08%	28.66%	2.31%	1.22%	14.90%	17.20%	83.02%	92.28%	100.00%	12.67%
Meeker County	40.35%	1.15%	10.13%	8.47%	22.64%	8.21%	5.45%	10.27%	28.57%	86.31%	98.60%	100.00%	14.96%
Mille Lacs County	31.84%	1.00%	7.98%	7.41%	32.41%	7.62%	6.62%	8.82%	20.29%	80.90%	99.56%	100.00%	10.95%
Morrison County	34.34%	2.64%	9.97%	9.49%	27.37%	7.81%	6.49%	7.99%	48.08%	86.82%	99.24%	100.00%	13.36%
Mower County	34.71%	2.03%	11.01%	10.40%	23.41%	14.30%	2.06%	9.87%	40.59%	76.98%	92.78%	100.00%	17.28%
Murray County	71.13%	0.26%	5.67%	2.06%	19.07%		1.42%	16.24%	13.33%	80.00%	100.00%		12.22%
Nicollet County	20.21%	2.80%	13.25%	12.98%	40.54%	5.75%	2.60%	7.92%	43.64%	79.79%	96.22%	100.00%	11.57%
Nobles County	46.67%	1.96%	7.24%	8.83%	29.39%	2.70%	2.59%	13.81%	47.44%	86.12%	98.93%	100.00%	23.00%
Norman County	63.06%	0.97%	4.52%	3.87%	23.23%		2.10%	14.26%	46.15%	100.00%	98.63%		9.09%
Olmsted County	15.00%	2.50%	10.66%	18.07%	40.72%	9.96%	1.72%	6.35%	20.47%	82.65%	89.30%	81.66%	8.88%
Otter Tail County	35.56%	1.38%	8.12%	7.20%	34.57%	5.71%	6.29%	10.04%	44.36%	85.18%	95.17%	100.00%	17.47%
Pennington County	25.06%	0.45%	8.55%	8.10%	45.13%	4.98%	7.21%	9.26%	31.58%	80.87%	99.02%	100.00%	17.80%
Pine County	43.77%	0.83%	9.58%	8.68%	20.38%	4.75%	10.72%	10.03%	47.83%	88.00%	100.00%	100.00%	12.67%
Pipestone County	56.59%	2.85%	8.75%	4.95%	17.70%	7.17%	1.26%	15.26%	67.50%	83.87%	93.85%	100.00%	13.48%
Polk County	30.82%	1.68%	10.09%	8.17%	36.52%	7.51%	3.13%	10.39%	42.15%	90.52%	99.55%	100.00%	11.32%
Pope County	42.11%	2.50%	10.10%	8.51%	30.87%		4.43%	10.98%	40.74%	86.77%	99.27%		17.26%
Ramsey County	6.88%	4.24%	10.47%	7.84%	48.41%	21.02%	0.11%	4.71%	32.99%	75.40%	93.63%	89.21%	2.47%
Red Lake County	37.33%	0.27%	14.71%	4.09%	35.97%		4.90%	10.49%	10.00%	92.00%	100.00%		9.18%
Redwood County	57.04%	2.07%	4.14%	5.00%	25.62%	2.80%	2.40%	15.45%	38.27%	80.12%	100.00%	100.00%	12.00%
Renville County	59.21%	0.35%	3.82%	4.82%	26.27%		3.61%	14.40%	14.71%	81.88%	96.36%		15.00%
Rice County	18.67%	2.87%	12.40%	9.71%	42.18%	7.36%	4.87%	6.50%	37.10%	75.79%	97.86%	100.00%	16.60%
Rock County	46.77%	0.97%	6.57%	5.06%	29.20%	7.44%	0.86%	14.02%	47.37%	77.14%	96.44%	100.00%	8.00%
Roseau County	35.52%	3.92%	3.61%	3.92%	32.13%	5.51%	10.71%	9.28%	77.08%	81.61%	98.38%	100.00%	8.13%
St. Louis County	18.47%	2.11%	15.72%	12.50%	32.46%	14.42%	2.81%	6.63%	45.79%	77.50%	98.26%	99.83%	15.83%
Scott County	16.61%	10.51%	8.83%	11.74%	34.87%	12.17%	2.59%	3.89%	41.93%	83.66%	97.45%	100.00%	11.94%
Sherburne County	21.83%	2.55%	4.95%	3.71%	60.99%	4.16%	1.16%	5.32%	34.34%	76.49%	97.54%	100.00%	8.56%
Sibley County	54.17%	1.63%	7.11%	10.57%	23.07%		1.22%	11.65%	45.71%	81.69%	99.13%		5.41%
Stearns County	16.25%	1.63%	7.50%	6.95%	56.83%	7.53%	1.95%	6.67%	27.65%	82.38%	98.01%	100.00%	13.18%
Steele County	22.03%	3.39%	18.57%	11.25%	39.06%	2.20%	2.50%	6.64%	59.06%	86.38%	95.12%	100.00%	13.71%
Stevens County	34.45%	1.20%	9.09%	3.67%	41.23%	4.86%	3.91%	15.35%	41.67%	87.91%	100.00%	100.00%	30.63%
Swift County	49.23%	0.00%	5.23%	6.46%	27.49%	6.87%	3.49%	13.40%	0.00%	96.61%	99.26%	100.00%	17.44%
Todd County	41.70%	2.31%	8.02%	6.32%	25.84%	3.83%	9.85%	9.92%	66.67%	81.38%	99.07%	100.00%	20.96%
Traverse County	64.61%	0.80%	1.61%	0.00%	30.83%		2.14%	15.34%	60.00%	46.15%	99.14%		11.76%
Wabasha County	37.69%	1.28%	12.61%	9.98%	26.65%		10.89%	8.93%	25.00%	85.03%	98.89%		17.92%
Wadena County	37.82%	3.41%	9.37%	10.82%	17.21%	9.37%	9.37%	11.48%	74.07%	90.80%	98.54%	100.00%	25.29%
Waseca County	31.50%	1.19%	9.46%	9.53%	37.19%	2.98%	6.68%	9.09%	42.86%	79.72%	96.07%	100.00%	30.98%
Washington County	15.75%	12.40%	7.73%	9.75%	38.74%	13.09%	0.72%	3.34%	26.83%	71.11%	89.25%	96.65%	4.03%
Watsonwan County	46.63%	1.31%	8.75%	5.42%	26.42%	5.42%	4.29%	14.28%	48.39%	75.70%	99.02%	100.00%	38.89%
Wilkin County	40.51%	0.80%	5.42%	9.89%	31.58%	6.70%	5.10%	11.64%	23.81%	76.19%	98.51%	100.00%	15.38%
Winona County	21.44%	1.48%	13.93%	18.88%	32.30%	6.35%	3.01%	8.69%	26.82%	78.20%	98.52%	100.00%	14.40%
Wright County	28.04%	3.11%	8.20%	6.25%	47.82%		4.32%	6.69%	33.42%	82.05%	98.41%		7.74%
Yellow Medicine County	57.92%	0.79%	6.00%	4.23%	28.12%		2.26%	14.79%	27.59%	78.20%	99.65%		17.04%

Appendix Table 4: Year of Construction for Renter Occupied Housing Units: 1990

	Median Age Total Housing Stock	Estimated Median Age Rental Units	Distribution of Rental Housing by Year of Construction					pre 40
			80 - 90	70 - 79	60 - 69	50 - 59	40 - 49	
MINNESOTA	1963	1967	20.18%	25.39%	17.22%	8.38%	5.48%	23.35%
METRO AREA COUNTIES	1965	1967	20.31%	24.44%	20.62%	8.90%	5.03%	20.69%
Anoka County	1973	1973	31.88%	27.29%	23.61%	8.86%	3.73%	4.63%
Carver County	1973	1975	39.67%	22.22%	9.33%	6.57%	2.35%	19.86%
Dakota County	1976	1976	40.07%	32.70%	16.90%	3.23%	1.86%	5.24%
Hennepin County	1961	1965	17.75%	22.14%	21.17%	9.86%	5.86%	23.22%
Ramsey County	1958	1964	13.43%	24.78%	22.06%	9.37%	5.06%	25.32%
Scott County	1974	1974	36.64%	24.07%	12.11%	7.15%	4.16%	15.87%
Washington County	1973	1974	30.21%	34.66%	11.96%	6.38%	3.13%	13.67%
CENTRAL CITIES: TOTAL	1939	1953	7.87%	17.29%	18.32%	9.81%	7.52%	39.19%
Minneapolis	1939	1949	6.57%	15.69%	17.54%	9.94%	8.31%	41.95%
St Paul	1944	1959	9.94%	19.85%	19.56%	9.60%	6.28%	34.78%
FULLY DEVELOPED RING	1963	1969	19.84%	29.85%	31.68%	11.99%	4.00%	2.64%
DEVELOPING AREAS	1976	1977	42.26%	32.52%	16.25%	4.58%	1.51%	2.88%
OTHER METRO	1973	1973	32.12%	26.26%	11.24%	6.80%	3.72%	19.87%
NON METRO: TOTAL	1961	1967	19.98%	26.87%	11.98%	7.57%	6.16%	27.44%
SELECTED CITIES: TOTAL	1959	1968	21.49%	26.25%	14.70%	6.93%	4.69%	25.95%
Duluth city	1939	1942	6.99%	24.90%	8.11%	5.86%	5.71%	48.43%
Mankato city	1960	1968	24.05%	23.32%	15.42%	7.20%	3.45%	26.55%
Moorhead city	1965	1969	16.23%	31.78%	30.46%	9.73%	4.00%	7.80%
Rochester city	1966	1968	18.84%	27.67%	19.67%	10.18%	6.14%	17.50%
St. Cloud city	1970	1978	45.79%	25.64%	10.24%	3.34%	2.79%	12.19%
OTHER NON METRO	1962	1966	19.56%	27.04%	11.20%	7.76%	6.57%	27.86%
DEVELOPMENT REGIONS								
Dev Region I	1959	1966	11.57%	33.26%	15.28%	6.58%	7.31%	26.00%
Dev Region II	1970	1971	24.24%	30.54%	11.37%	8.79%	7.09%	17.97%
Dev Region III	1957	1958	12.29%	27.21%	9.46%	8.55%	6.28%	36.23%
Dev Region IV	1963	1968	16.87%	29.71%	17.45%	7.58%	6.17%	22.22%
Dev Region V	1968	1969	20.62%	28.47%	12.18%	6.76%	6.03%	25.95%
Dev Region VI	1961	1969	21.96%	27.95%	10.51%	7.95%	6.53%	25.10%
Dev Region VII	1946	1959	10.62%	26.67%	12.09%	8.30%	9.15%	33.17%
Dev Region VIII	1970	1973	29.31%	30.42%	9.72%	5.02%	3.32%	22.21%
Dev Region IX	1972	1976	40.98%	25.77%	10.98%	4.22%	3.40%	14.65%
Dev Region X	1952	1960	14.97%	25.59%	10.38%	8.45%	8.49%	32.11%
Dev Region XI	1955	1962	18.00%	23.33%	11.90%	8.48%	6.68%	31.62%
Dev Region XII	1958	1964	17.69%	25.09%	12.41%	8.52%	6.39%	29.91%
Dev Region XIII	1965	1967	20.31%	24.44%	20.62%	8.90%	5.03%	20.69%

Appendix Table 4: Year of Construction for Renter Occupied Housing Units: 1990

	Median Age	Estimated	Distribution of Rental Housing by Year of Construction					
	Total Housing Stock	Median Age Rental Units	80 - 90	70 - 79	60 - 69	50 - 59	40 - 49	
Aitkin County	1970	1972	15.29%	43.45%	5.70%	7.77%	2.91%	24.88%
Anoka County	1973	1973	31.88%	27.29%	23.61%	8.86%	3.73%	4.63%
Becker County	1967	1967	18.18%	27.76%	14.14%	9.11%	9.37%	21.44%
Beltrami County	1971	1971	28.24%	26.43%	11.82%	9.59%	7.65%	16.27%
Benton County	1973	1978	46.98%	28.50%	9.85%	2.94%	2.33%	9.41%
Big Stone County	1945	1965	7.02%	38.30%	10.85%	9.15%	4.04%	30.64%
Blue Earth County	1959	1966	21.72%	23.69%	14.84%	8.09%	3.99%	27.69%
Brown County	1951	1953	16.91%	18.74%	7.64%	9.99%	9.99%	36.72%
Carlton County	1960	1970	24.46%	26.71%	12.57%	10.32%	6.41%	19.52%
Carver County	1973	1975	39.67%	22.22%	9.33%	6.57%	2.35%	19.86%
Cass County	1972	1971	24.23%	29.86%	17.46%	6.55%	5.00%	16.90%
Chippewa County	1950	1963	11.01%	26.98%	18.45%	8.76%	8.76%	26.05%
Chisago County	1972	1974	35.41%	24.89%	10.14%	3.78%	3.78%	21.99%
Clay County	1965	1969	17.03%	31.23%	27.50%	9.58%	4.13%	10.52%
Clearwater County	1965	1967	19.68%	28.19%	10.46%	6.91%	5.67%	29.08%
Cook County	1967	1964	15.71%	25.13%	17.80%	12.04%	9.16%	20.16%
Cottonwood County	1950	1956	9.43%	21.76%	14.89%	11.89%	9.96%	32.07%
Crow Wing County	1969	1968	23.16%	25.55%	11.50%	9.44%	8.07%	22.29%
Dakota County	1976	1976	40.07%	32.70%	16.90%	3.23%	1.86%	5.24%
Dodge County	1959	1967	23.11%	24.53%	10.80%	5.68%	6.91%	28.98%
Douglas County	1968	1970	20.36%	30.05%	9.65%	7.47%	6.83%	25.64%
Faribault County	1946	1954	9.46%	25.54%	7.79%	12.46%	8.91%	35.84%
Fillmore County	1939	1949	16.05%	18.27%	6.71%	8.46%	5.84%	44.66%
Freeborn County	1952	1954	9.88%	25.86%	8.07%	11.43%	10.84%	33.93%
Goodhue County	1959	1970	26.85%	23.35%	9.26%	5.40%	2.13%	33.03%
Grant County	1950	1958	19.72%	22.11%	7.17%	9.16%	4.78%	37.05%
Hennepin County	1961	1965	17.75%	22.14%	21.17%	9.86%	5.86%	23.22%
Houston County	1958	1966	24.62%	23.04%	6.60%	7.68%	5.31%	32.74%
Hubbard County	1971	1972	16.27%	46.26%	10.34%	9.21%	4.91%	13.00%
Isanti County	1971	1974	34.18%	28.48%	12.83%	3.56%	2.55%	18.40%
Itasca County	1969	1971	23.83%	31.89%	9.08%	7.21%	4.03%	23.98%
Jackson County	1948	1949	13.94%	23.08%	2.12%	9.88%	11.17%	39.80%
Kanabec County	1967	1972	25.85%	31.64%	6.88%	13.29%	1.45%	20.89%
Kandiyohi County	1966	1971	22.53%	30.85%	8.51%	8.12%	7.89%	22.11%
Kittson County	1954	1971	11.59%	44.20%	6.52%	6.52%	6.52%	24.64%
Koochiching County	1962	1964	21.95%	21.28%	12.86%	5.79%	7.37%	30.75%
Lac qui Parle County	1939	1949	9.73%	22.30%	9.05%	8.24%	8.92%	41.76%
Lake County	1958	1953	10.61%	15.29%	12.81%	18.04%	4.13%	39.12%
Lake of the Woods County	1970	1963	14.34%	32.38%	5.33%	10.25%	9.84%	27.87%
Le Sueur County	1959	1962	13.80%	27.20%	12.68%	7.75%	7.16%	31.41%
Lincoln County	1947	1966	9.58%	39.04%	3.87%	3.68%	13.08%	30.76%
Lyon County	1962	1971	21.56%	34.72%	13.78%	6.77%	5.20%	17.97%
McLeod County	1962	1972	30.71%	25.83%	9.66%	5.14%	5.44%	23.22%
Mahnomen County	1964	1970	24.19%	26.88%	15.59%	2.69%	8.33%	22.31%

Appendix Table 4: Year of Construction for Renter Occupied Housing Units: 1990

	Median Age Total Housing Stock	Estimated Median Age Rental Units	Distribution of Rental Housing by Year of Construction					
			80 - 90	70 - 79	60 - 69	50 - 59	40 - 49	pre 40
Marshall County	1954	1966	16.64%	30.09%	8.66%	6.79%	7.19%	30.63%
Martin County	1950	1950	13.87%	17.28%	7.02%	12.61%	11.13%	38.09%
Meeker County	1961	1965	15.84%	25.27%	19.69%	9.75%	3.78%	25.66%
Mille Lacs County	1967	1973	26.14%	37.46%	6.62%	3.92%	3.28%	22.58%
Morrison County	1963	1968	18.20%	29.91%	12.55%	4.91%	5.54%	28.90%
Mower County	1950	1957	10.16%	27.43%	9.40%	14.10%	8.34%	30.57%
Murray County	1950	1945	10.82%	19.97%	5.15%	9.28%	10.82%	43.94%
Nicollet County	1964	1970	22.04%	30.63%	14.07%	5.75%	4.24%	23.28%
Nobles County	1951	1958	16.91%	21.04%	10.73%	8.30%	11.15%	31.87%
Norman County	1942	1946	7.74%	20.81%	12.74%	6.45%	7.26%	45.00%
Olmsted County	1967	1967	18.63%	27.24%	18.57%	9.89%	5.88%	19.78%
Otter Tail County	1963	1967	15.84%	30.76%	13.19%	5.64%	6.78%	27.79%
Pennington County	1962	1966	12.12%	30.63%	20.37%	7.66%	10.11%	19.11%
Pine County	1970	1970	22.04%	31.02%	10.79%	4.15%	4.83%	27.17%
Pipestone County	1947	1945	9.80%	17.07%	7.59%	12.12%	8.22%	45.21%
Polk County	1959	1967	9.10%	35.66%	18.19%	6.10%	5.34%	25.61%
Pope County	1953	1963	17.48%	25.65%	10.22%	4.54%	3.29%	38.82%
Ramsey County	1958	1964	13.43%	24.78%	22.06%	9.37%	5.06%	25.32%
Red Lake County	1954	1964	5.72%	35.42%	14.99%	6.54%	4.63%	32.70%
Redwood County	1951	1960	17.28%	20.55%	13.41%	7.81%	6.47%	34.49%
Renville County	1950	1955	10.27%	27.05%	7.51%	10.91%	7.93%	36.33%
Rice County	1962	1968	21.34%	27.30%	10.58%	5.96%	5.59%	29.22%
Rock County	1952	1952	6.79%	28.02%	9.48%	7.44%	7.22%	41.06%
Roseau County	1971	1971	19.51%	34.36%	9.54%	6.57%	11.13%	18.88%
St. Louis County	1952	1953	8.83%	26.86%	8.85%	8.35%	6.62%	40.49%
Scott County	1974	1974	36.64%	24.07%	12.11%	7.15%	4.16%	15.87%
Sherburne County	1975	1979	48.27%	19.62%	13.62%	4.65%	4.24%	9.60%
Sibley County	1947	1940	6.50%	22.26%	7.11%	6.30%	8.64%	49.19%
Stearns County	1970	1975	39.44%	26.20%	11.30%	3.45%	3.42%	16.19%
Steele County	1958	1962	17.37%	24.50%	11.56%	7.47%	6.51%	32.59%
Stevens County	1956	1966	13.88%	28.31%	22.97%	4.23%	7.50%	23.13%
Swift County	1946	1959	14.15%	23.28%	12.10%	7.28%	10.97%	32.21%
Todd County	1961	1970	16.17%	35.20%	6.14%	3.53%	3.22%	35.74%
Traverse County	1942	1954	16.09%	23.32%	2.95%	13.14%	9.38%	35.12%
Wabasha County	1960	1964	15.77%	28.90%	9.76%	5.26%	4.05%	36.26%
Wadena County	1962	1965	17.72%	25.04%	15.93%	5.37%	5.03%	30.92%
Waseca County	1957	1965	17.67%	24.82%	15.88%	3.84%	8.07%	29.72%
Washington County	1973	1974	30.21%	34.66%	11.96%	6.38%	3.13%	13.67%
Watonwan County	1949	1961	23.45%	17.32%	10.59%	9.54%	5.86%	33.25%
Wilkin County	1950	1964	5.10%	33.17%	21.21%	4.47%	5.58%	30.46%
Winona County	1950	1953	13.95%	19.79%	12.23%	6.31%	8.17%	39.56%
Wright County	1972	1974	35.30%	26.19%	9.38%	7.14%	3.74%	18.25%
Yellow Medicine County	1947	1951	9.05%	27.34%	6.78%	8.36%	10.42%	38.05%



Appendix Table 5: Units Lacking Complete Plumbing Facilities and Measures of Crowding: 1990

	Percent without Complete Plumbing Facilities			Percent crowded: people per room					
	Total	Own	Rent	Total ≥ 1	Total ≥ 1.5	Own ≥ 1	Own > 1.5	Rent ≥ 1	Rent > 1.5
MINNESOTA	0.57%	0.52%	0.69%	1.92%	0.61%	1.20%	0.24%	3.76%	1.53%
METRO AREA COUNTIES	0.28%	0.15%	0.55%	2.08%	0.79%	1.00%	0.24%	4.35%	1.94%
Anoka County	0.15%	0.11%	0.33%	1.70%	0.40%	1.15%	0.18%	4.11%	1.37%
Carver County	0.33%	0.31%	0.37%	1.49%	0.33%	1.08%	0.30%	3.01%	0.43%
Dakota County	0.18%	0.11%	0.39%	1.63%	0.51%	1.08%	0.20%	3.20%	1.39%
Hennepin County	0.30%	0.14%	0.57%	2.01%	0.82%	0.85%	0.24%	4.01%	1.83%
Ramsey County	0.35%	0.16%	0.66%	2.92%	1.25%	1.14%	0.33%	5.84%	2.78%
Scott County	0.37%	0.39%	0.28%	1.80%	0.26%	1.52%	0.18%	3.08%	0.66%
Washington County	0.22%	0.20%	0.28%	1.27%	0.23%	0.99%	0.15%	2.70%	0.63%
CENTRAL CITIES: TOTAL	0.54%	0.19%	0.91%	3.59%	1.67%	1.25%	0.39%	6.07%	3.02%
Minneapolis	0.58%	0.20%	0.95%	3.29%	1.53%	1.04%	0.32%	5.52%	2.73%
St Paul	0.48%	0.17%	0.84%	4.03%	1.86%	1.54%	0.48%	6.94%	3.49%
OTHER FULLY DEVELOPED	0.11%	0.08%	0.18%	1.36%	0.45%	0.78%	0.23%	2.56%	0.90%
DEVELOPING AREAS	0.14%	0.12%	0.20%	1.40%	0.40%	0.91%	0.20%	3.08%	1.12%
OTHER METRO	0.35%	0.29%	0.66%	1.49%	0.24%	1.21%	0.14%	3.01%	0.79%
NON METRO: TOTAL	0.90%	0.90%	0.90%	1.75%	0.40%	1.41%	0.25%	2.86%	0.91%
SELECTED CITIES: TOTAL	0.24%	0.17%	0.35%	1.69%	0.57%	0.91%	0.20%	2.89%	1.15%
Duluth city	0.25%	0.17%	0.41%	1.06%	0.30%	0.74%	0.18%	1.64%	0.51%
Mankato city	0.25%	0.17%	0.33%	2.49%	0.66%	1.18%	0.14%	3.87%	1.21%
Moorhead city	0.11%	0.00%	0.27%	2.81%	0.97%	0.84%	0.00%	5.80%	2.43%
Rochester city	0.23%	0.20%	0.29%	1.77%	0.75%	1.06%	0.38%	3.17%	1.47%
St. Cloud city	0.31%	0.23%	0.39%	1.56%	0.53%	0.88%	0.07%	2.27%	1.02%
OTHER NON METRO	1.00%	0.98%	1.06%	1.76%	0.38%	1.46%	0.25%	2.85%	0.84%
DEVELOPMENT REGIONS									
Dev Region I	0.94%	1.01%	0.72%	1.61%	0.32%	1.31%	0.18%	2.65%	0.80%
Dev Region II	1.79%	1.74%	1.98%	3.66%	0.79%	3.18%	0.51%	5.37%	1.80%
Dev Region III	1.33%	1.32%	1.35%	1.63%	0.41%	1.41%	0.31%	2.35%	0.75%
Dev Region IV	0.80%	0.81%	0.78%	1.94%	0.40%	1.38%	0.18%	3.59%	1.04%
Dev Region V	1.35%	1.45%	0.99%	2.34%	0.35%	2.21%	0.30%	2.87%	0.58%
Dev Region VI	0.73%	0.71%	0.80%	1.70%	0.57%	1.21%	0.31%	3.31%	1.43%
Dev Region VII	0.87%	1.04%	0.29%	0.86%	0.07%	0.75%	0.06%	1.22%	0.11%
Dev Region VIII	1.31%	1.35%	1.10%	2.39%	0.47%	2.11%	0.35%	3.72%	1.04%
Dev Region IX	0.55%	0.55%	0.55%	2.04%	0.42%	1.68%	0.24%	3.15%	0.95%
Dev Region X	0.76%	0.73%	0.85%	1.17%	0.24%	0.86%	0.07%	2.13%	0.75%
Dev Region XI	0.72%	0.66%	0.88%	1.23%	0.26%	0.80%	0.11%	2.46%	0.66%
Dev Region XII	0.59%	0.53%	0.77%	1.54%	0.48%	1.15%	0.30%	2.76%	1.05%
Dev Region XIII	0.28%	0.15%	0.55%	2.08%	0.79%	1.00%	0.24%	4.35%	1.94%

Appendix Table 5: Units Lacking Complete Plumbing Facilities and Measures of Crowding: 1990

	Percent without			Percent crowded: people per room					
	Complete Plumbing Facilities			Total	Total	Own	Own	Rent	Rent
	Total	Own	Rent	≥ 1	≥ 1.5	≥ 1	> 1.5	≥ 1	> 1.5
Aitkin County	2.91%	2.67%	4.13%	1.83%	0.51%	1.60%	0.44%	3.03%	0.85%
Anoka County	0.15%	0.11%	0.33%	1.70%	0.40%	1.15%	0.18%	4.11%	1.37%
Becker County	1.16%	1.20%	1.03%	2.82%	0.44%	2.50%	0.32%	3.91%	0.86%
Beltrami County	1.79%	1.84%	1.63%	4.41%	1.13%	3.63%	0.78%	6.52%	2.07%
Benton County	0.62%	0.79%	0.28%	2.11%	0.32%	1.75%	0.22%	2.86%	0.53%
Big Stone County	0.45%	0.55%	0.00%	1.02%	0.00%	0.95%	0.00%	1.28%	0.00%
Blue Earth County	0.42%	0.45%	0.36%	1.90%	0.45%	1.03%	0.13%	3.45%	1.02%
Brown County	1.02%	0.85%	1.58%	0.98%	0.09%	0.78%	0.05%	1.67%	0.21%
Carlton County	1.96%	1.78%	2.74%	1.50%	0.30%	1.28%	0.20%	2.45%	0.73%
Carver County	0.33%	0.31%	0.37%	1.49%	0.33%	1.08%	0.30%	3.01%	0.43%
Cass County	2.08%	2.11%	1.97%	3.05%	0.63%	2.76%	0.49%	4.44%	1.27%
Chippewa County	0.53%	0.63%	0.23%	0.84%	0.06%	0.76%	0.05%	1.09%	0.08%
Chisago County	0.45%	0.47%	0.32%	1.43%	0.23%	1.25%	0.17%	2.46%	0.57%
Clay County	0.41%	0.38%	0.49%	2.56%	0.94%	1.18%	0.26%	5.54%	2.42%
Clearwater County	3.20%	3.04%	3.90%	4.54%	0.75%	4.20%	0.36%	6.03%	2.48%
Cook County	7.17%	7.04%	7.59%	2.57%	1.41%	2.40%	1.20%	3.14%	2.09%
Coltonwood County	0.73%	0.76%	0.62%	0.47%	0.04%	0.36%	0.05%	0.88%	0.00%
Crow Wing County	0.92%	0.97%	0.77%	1.76%	0.35%	1.35%	0.17%	3.11%	0.95%
Dakota County	0.18%	0.11%	0.39%	1.63%	0.51%	1.08%	0.20%	3.20%	1.39%
Dodge County	0.36%	0.40%	0.19%	1.72%	0.51%	1.32%	0.42%	3.41%	0.85%
Douglas County	0.72%	0.91%	0.18%	1.61%	0.33%	1.33%	0.15%	2.43%	0.85%
Faribault County	0.34%	0.43%	0.00%	1.02%	0.24%	0.67%	0.19%	2.30%	0.42%
Fillmore County	2.43%	2.26%	3.04%	1.59%	0.46%	1.46%	0.49%	2.04%	0.35%
Freeborn County	0.45%	0.51%	0.23%	1.30%	0.31%	0.90%	0.34%	2.64%	0.23%
Goodhue County	0.47%	0.34%	0.89%	1.03%	0.19%	0.89%	0.15%	1.48%	0.31%
Grant County	0.77%	0.67%	1.20%	1.22%	0.24%	1.08%	0.20%	1.79%	0.40%
Hennepin County	0.30%	0.14%	0.57%	2.01%	0.82%	0.85%	0.24%	4.01%	1.83%
Houston County	0.61%	0.46%	1.22%	1.49%	0.29%	1.32%	0.24%	2.15%	0.50%
Hubbard County	1.16%	1.12%	1.33%	1.87%	0.38%	1.83%	0.33%	2.05%	0.61%
Isanti County	0.89%	0.90%	0.81%	2.45%	0.58%	2.13%	0.46%	4.03%	1.14%
Itasca County	1.31%	1.33%	1.19%	2.46%	0.63%	2.17%	0.50%	3.91%	1.30%
Jackson County	1.07%	0.92%	1.57%	1.29%	0.20%	1.06%	0.03%	2.03%	0.74%
Kanabec County	2.42%	2.62%	1.45%	1.96%	0.44%	2.22%	0.54%	0.72%	0.00%
Kandiyohi County	0.59%	0.50%	0.85%	1.94%	0.96%	1.44%	0.54%	3.30%	2.09%
Kittson County	1.01%	1.18%	0.24%	1.10%	0.00%	0.81%	0.00%	2.42%	0.00%
Koochiching County	1.59%	1.68%	1.28%	3.32%	1.08%	1.94%	0.34%	8.20%	3.68%
Lac qui Parle County	1.63%	1.95%	0.41%	0.57%	0.11%	0.58%	0.07%	0.54%	0.27%
Lake County	2.26%	2.10%	3.03%	1.77%	0.52%	1.68%	0.51%	2.20%	0.55%
Lake of the Woods County	1.33%	0.98%	3.28%	3.43%	0.00%	3.60%	0.00%	2.46%	0.00%
Le Sueur County	1.42%	1.38%	1.58%	1.15%	0.32%	0.96%	0.29%	1.97%	0.46%
Lincoln County	1.18%	1.16%	1.29%	0.41%	0.00%	0.46%	0.00%	0.18%	0.00%
Lyon County	0.60%	0.66%	0.45%	1.33%	0.48%	0.81%	0.05%	2.48%	1.43%
McLeod County	0.56%	0.60%	0.40%	1.32%	0.35%	0.86%	0.10%	2.87%	1.18%
Mahnomen County	1.88%	1.61%	2.96%	3.27%	0.66%	2.79%	0.14%	5.11%	2.69%

Appendix Table 5: Units Lacking Complete Plumbing Facilities and Measures of Crowding: 1990

	Percent without			Percent crowded: people per room					
	Complete Plumbing Facilities			Total	Total	Own	Own	Rent	Rent
	Total	Own	Rent	≥ 1	≥ 1.5	≥ 1	> 1.5	≥ 1	> 1.5
Marshall County	1.93%	2.15%	0.93%	1.29%	0.29%	1.39%	0.26%	0.80%	0.40%
Martin County	0.59%	0.37%	1.27%	0.64%	0.03%	0.41%	0.00%	1.31%	0.13%
Meeke County	0.86%	0.67%	1.60%	2.05%	0.41%	1.36%	0.25%	4.75%	1.03%
Mille Lacs County	1.01%	1.05%	0.85%	3.37%	0.67%	2.45%	0.33%	6.98%	1.99%
Morrison County	1.44%	1.53%	1.05%	3.13%	0.29%	3.16%	0.34%	2.95%	0.05%
Mower County	0.42%	0.38%	0.56%	1.28%	0.43%	0.75%	0.09%	3.11%	1.62%
Murray County	0.82%	0.84%	0.77%	0.72%	0.16%	0.64%	0.00%	1.03%	0.77%
Nicollet County	0.70%	0.48%	1.28%	1.24%	0.27%	1.10%	0.12%	1.63%	0.70%
Nobles County	0.47%	0.33%	0.90%	1.91%	0.52%	1.30%	0.26%	3.81%	1.32%
Norman County	0.67%	0.84%	0.00%	1.09%	0.22%	1.00%	0.20%	1.45%	0.32%
Olmsted County	0.39%	0.31%	0.60%	1.72%	0.62%	1.17%	0.33%	3.17%	1.37%
Otter Tail County	1.12%	0.98%	1.61%	1.29%	0.13%	1.24%	0.11%	1.45%	0.21%
Pennington County	0.73%	0.76%	0.67%	1.22%	0.52%	0.78%	0.10%	2.45%	1.71%
Pine County	2.56%	2.59%	2.42%	3.01%	0.50%	2.94%	0.37%	3.32%	1.13%
Pipestone County	1.03%	0.86%	1.58%	1.08%	0.07%	1.12%	0.10%	0.95%	0.00%
Polk County	0.68%	0.65%	0.76%	1.42%	0.25%	0.84%	0.04%	3.13%	0.86%
Pope County	0.82%	0.98%	0.23%	1.33%	0.22%	0.86%	0.22%	3.06%	0.23%
Ramsey County	0.35%	0.16%	0.66%	2.92%	1.25%	1.14%	0.33%	5.84%	2.78%
Red Lake County	1.04%	1.03%	1.09%	2.02%	0.12%	1.83%	0.15%	2.72%	0.00%
Redwood County	0.81%	0.79%	0.87%	1.21%	0.11%	0.81%	0.00%	2.54%	0.47%
Renville County	1.16%	1.32%	0.57%	1.47%	0.34%	1.17%	0.28%	2.62%	0.57%
Rice County	0.45%	0.41%	0.55%	1.64%	0.51%	1.35%	0.30%	2.52%	1.17%
Rock County	0.67%	0.74%	0.43%	1.12%	0.00%	0.85%	0.00%	1.94%	0.00%
Roseau County	1.07%	1.07%	1.06%	3.01%	0.54%	2.86%	0.51%	3.71%	0.64%
St. Louis County	0.96%	0.96%	0.95%	1.31%	0.30%	1.17%	0.24%	1.72%	0.47%
Scott County	0.37%	0.39%	0.28%	1.80%	0.26%	1.52%	0.18%	3.08%	0.66%
Sherburne County	0.45%	0.36%	0.83%	2.36%	0.69%	1.59%	0.24%	5.55%	2.55%
Sibley County	1.11%	1.06%	1.32%	1.15%	0.24%	0.88%	0.21%	2.34%	0.41%
Stearns County	0.57%	0.56%	0.59%	1.87%	0.40%	1.59%	0.18%	2.55%	0.94%
Steele County	0.61%	0.46%	1.12%	1.19%	0.55%	0.86%	0.35%	2.31%	1.19%
Stevens County	0.76%	0.62%	1.04%	2.54%	0.08%	0.70%	0.00%	6.30%	0.24%
Swift County	1.01%	1.15%	0.51%	0.82%	0.14%	0.61%	0.12%	1.54%	0.21%
Todd County	1.40%	1.44%	1.22%	2.11%	0.22%	2.25%	0.24%	1.52%	0.12%
Traverse County	0.56%	0.71%	0.00%	0.56%	0.00%	0.71%	0.00%	0.00%	0.00%
Wabasha County	0.93%	0.91%	1.05%	1.65%	0.25%	1.23%	0.30%	3.53%	0.00%
Wadena County	1.37%	1.74%	0.17%	1.95%	0.26%	1.97%	0.34%	1.87%	0.00%
Waseca County	0.69%	0.74%	0.53%	0.84%	0.18%	0.29%	0.00%	2.71%	0.79%
Washington County	0.22%	0.20%	0.28%	1.27%	0.23%	0.99%	0.15%	2.70%	0.63%
Watonwan County	0.46%	0.21%	1.22%	1.28%	0.24%	0.74%	0.00%	2.89%	0.96%
Wilkin County	0.29%	0.37%	0.00%	2.25%	0.07%	1.74%	0.09%	3.99%	0.00%
Winona County	0.60%	0.57%	0.68%	2.06%	0.67%	1.64%	0.34%	3.15%	1.52%
Wright County	0.54%	0.56%	0.48%	2.13%	0.33%	1.83%	0.34%	3.52%	0.31%
Yellow Medicine County	0.78%	0.95%	0.20%	1.04%	0.04%	0.89%	0.06%	1.57%	0.00%

Appendix Table 6: Median Incomes: 1980 and 1990

	Median Household Income 1979	Estimated Median Renter HH Income 1979	Median Household Income 1989	Estimated Median Owner HH Income 1989	Estimated Median Renter HH Income 1989	Median Renter Household Income as a Proportion of			%Δ 1980 - 1990 Change		%Δ 1980 - 1990 Change	
						Overall	Overall	Owner	Nominal	Nominal	Real	Real
						Median 1979	Median 1989	Median 1989	Median HH Income	Median Renter HH Income	Median HH Income	Median Renter HH Income
MINNESOTA	\$17,761	\$11,007	\$30,909	\$39,220	\$18,277	61.97%	59.13%	46.60%	74.03%	66.05%	1.00%	-3.63%
METRO AREA COUNTIES		\$12,219		\$46,033	\$21,436			46.57%		75.43%		1.82%
Anoka County	\$23,394	\$13,613	\$40,076	\$44,902	\$22,372	58.19%	55.82%	49.82%	71.31%	64.34%	-0.58%	-4.62%
Carver County	\$20,471	\$13,304	\$39,188	\$45,996	\$21,708	64.99%	55.39%	47.20%	91.43%	63.17%	11.10%	-5.30%
Dakota County	\$23,587	\$14,098	\$42,218	\$49,748	\$26,560	59.77%	62.91%	53.39%	78.99%	88.39%	3.88%	9.34%
Hennepin County	\$20,077	\$11,970	\$35,659	\$46,386	\$21,404	59.62%	60.02%	46.14%	77.61%	78.81%	3.08%	3.78%
Ramsey County	\$18,939	\$11,837	\$32,043	\$42,820	\$19,246	62.50%	60.06%	44.95%	69.19%	62.59%	-1.80%	-5.63%
Scott County	\$22,468	\$13,325	\$40,798	\$44,914	\$22,545	59.31%	55.26%	50.20%	81.58%	69.20%	5.39%	-1.80%
Washington County	\$24,257	\$13,804	\$44,122	\$48,788	\$23,039	56.91%	52.22%	47.22%	81.89%	66.90%	5.57%	-3.13%
CENTRAL CITIES: TOTAL		\$10,220		\$36,828	\$17,208			46.73%		68.38%		-2.27%
Minneapolis city	\$14,351	\$9,934	\$25,324	\$36,891	\$17,117	69.22%	67.59%	46.40%	76.46%	72.31%	2.42%	0.00%
St. Paul city	\$16,029	\$10,708	\$26,498	\$36,753	\$17,353	66.80%	65.49%	47.22%	65.31%	62.06%	-4.06%	-5.95%
FULLY DEVELOPED RING		\$14,249		\$46,064	\$24,314			52.78%		70.63%		-0.97%
DEVELOPING AREAS		\$15,001		\$50,894	\$27,872			54.76%		85.80%		7.83%
OTHER METRO		\$12,303		\$45,259	\$20,856			46.08%		69.52%		-1.61%
NON METRO: TOTAL		\$9,103		\$30,563	\$14,176			46.38%		55.73%		-9.62%
SELECTED CITIES: TOTAL		\$9,727		\$36,757	\$15,343			41.74%		57.74%		-8.45%
Duluth city	\$15,232	\$8,565	\$23,370	\$31,459	\$12,587	56.23%	53.86%	40.01%	53.43%	46.95%	-10.95%	-14.71%
Mankato city	\$14,431	\$9,329	\$22,480	\$34,705	\$15,233	64.65%	67.76%	43.89%	55.78%	63.28%	-9.59%	-5.23%
Moorhead city	\$16,408	\$9,359	\$24,265	\$37,087	\$11,079	57.04%	45.66%	29.86%	47.89%	18.38%	-14.17%	-31.30%
Rochester city	\$19,648	\$12,046	\$34,922	\$45,023	\$21,148	61.31%	60.56%	46.97%	77.74%	75.56%	3.16%	1.89%
St. Cloud city	\$15,367	\$10,046	\$24,004	\$35,079	\$16,460	65.37%	68.57%	46.92%	56.20%	63.84%	-9.34%	-4.91%
OTHER NON METRO		\$8,902		\$29,694	\$13,783			46.42%		54.83%		-10.14%
DEVELOPMENT REGIONS												
Dev Region I		\$8,004		\$27,263	\$11,000			40.35%		37.43%		-20.24%
Dev Region II		\$7,326		\$24,716	\$10,217			41.34%		39.46%		-19.06%
Dev Region III		\$8,833		\$28,919	\$11,964			41.37%		35.45%		-21.39%
Dev Region IV		\$8,555		\$28,429	\$11,428			40.20%		33.58%		-22.47%
Dev Region V		\$7,217		\$24,568	\$11,472			46.70%		58.96%		-7.74%
Dev Region VI		\$9,389		\$31,018	\$14,253			45.95%		51.81%		-11.89%
Dev Region VII		\$8,138		\$23,153	\$11,293			48.77%		38.77%		-19.46%
Dev Region VIII		\$8,605		\$31,531	\$13,470			42.72%		56.54%		-9.15%
Dev Region VIIW		\$10,533		\$36,743	\$17,396			47.35%		65.16%		-4.14%
Dev Region VIII		\$8,989		\$25,632	\$14,093			54.98%		56.78%		-9.01%
Dev Region IX		\$9,447		\$30,592	\$15,334			50.12%		62.31%		-5.80%
Dev Region X		\$9,986		\$34,900	\$16,770			48.05%		67.94%		-2.53%
Dev Region XI		\$12,219		\$46,033	\$21,436			46.57%		75.43%		1.82%

Appendix Table 6: Median Incomes: 1980 and 1990

	Estimated Median Household Income 1979	Estimated Median Renter HH Income 1979	Estimated Median Household Income 1989	Estimated Median Owner HH Income 1989	Estimated Median Renter HH Income 1989	Median Renter Household Income as a Proportion of			%Δ 1980 - 1990 Change		%Δ 1980 - 1990 Change	
						Overall Median 1979	Overall Median 1989	Owner Median 1989	Nominal Median HH Income	Nominal Renter HH Income	Real Median HH Income	Real Renter HH Income
						Overall 1979	Overall 1989	Owner 1989	Nominal Median HH Income	Nominal Renter HH Income	Real Median HH Income	Real Renter HH Income
Aitkin County	\$10,663	\$5,477	\$17,564	\$19,202	\$9,322	51.36%	53.08%	48.55%	64.72%	70.21%	-4.40%	-1.21%
Anoka County	\$23,394	\$13,613	\$40,076	\$44,902	\$22,372	58.19%	55.82%	49.82%	71.31%	64.34%	-0.58%	-4.62%
Becker County	\$12,678	\$8,348	\$20,920	\$26,064	\$10,070	65.85%	48.13%	38.63%	65.01%	20.62%	-4.23%	-29.99%
Beltrami County	\$12,244	\$7,859	\$20,925	\$27,086	\$10,986	64.19%	52.50%	40.56%	70.90%	39.79%	-0.81%	-18.87%
Benton County	\$15,517	\$10,615	\$26,619	\$35,281	\$17,798	68.41%	66.86%	50.45%	71.55%	67.67%	-0.44%	-2.69%
Big Stone County	\$12,318	\$7,047	\$19,408	\$21,658	\$9,540	57.21%	49.16%	44.05%	57.56%	35.38%	-8.56%	-21.43%
Blue Earth County	\$15,610	\$9,528	\$25,366	\$33,872	\$15,305	61.04%	60.34%	45.19%	62.50%	60.63%	-5.69%	-6.77%
Brown County	\$15,403	\$10,160	\$25,032	\$29,622	\$14,357	65.96%	67.35%	48.47%	62.51%	41.31%	-5.68%	-17.99%
Carlton County	\$16,420	\$7,772	\$24,900	\$29,311	\$11,960	47.33%	48.03%	40.80%	51.64%	53.89%	-11.99%	-10.68%
Carver County	\$20,471	\$13,304	\$39,188	\$45,996	\$21,708	64.99%	55.39%	47.20%	91.43%	63.17%	11.10%	-5.30%
Cass County	\$10,926	\$6,666	\$18,732	\$22,566	\$10,746	61.01%	57.36%	47.62%	71.44%	61.20%	-0.50%	-6.44%
Chippewa County	\$13,369	\$8,749	\$22,227	\$25,331	\$12,730	65.44%	57.27%	50.25%	66.26%	45.50%	-3.51%	-15.56%
Chisago County	\$18,497	\$8,858	\$31,281	\$36,079	\$15,488	47.89%	49.51%	42.93%	69.11%	74.84%	-1.85%	1.48%
Clay County	\$16,578	\$9,407	\$25,891	\$35,142	\$11,184	56.74%	43.20%	31.83%	56.18%	18.89%	-9.36%	-31.00%
Clearwater County	\$10,099	\$4,910	\$17,752	\$18,505	\$8,835	48.62%	49.77%	47.74%	75.78%	79.94%	2.02%	4.43%
Cook County	\$14,641	\$9,758	\$22,908	\$26,320	\$18,673	66.65%	81.51%	70.95%	56.46%	91.36%	-9.19%	11.06%
Cottonwood County	\$14,121	\$9,012	\$21,681	\$23,900	\$12,750	63.82%	58.86%	53.35%	53.40%	41.47%	-10.97%	-17.89%
Crow Wing County	\$12,685	\$7,810	\$22,250	\$27,360	\$13,004	61.57%	58.45%	47.53%	75.40%	66.51%	1.80%	-3.36%
Dakota County	\$23,587	\$14,098	\$42,218	\$49,748	\$26,560	59.77%	62.91%	53.39%	78.99%	88.39%	3.88%	9.34%
Dodge County	\$16,800	\$9,759	\$29,071	\$33,185	\$15,387	58.09%	52.93%	46.37%	73.04%	57.67%	0.43%	-8.49%
Douglas County	\$13,075	\$8,135	\$22,067	\$27,606	\$11,497	62.22%	62.10%	41.65%	68.77%	41.33%	-2.05%	-17.97%
Faribault County	\$14,417	\$8,999	\$22,421	\$24,567	\$13,871	62.42%	61.87%	56.46%	55.52%	54.14%	-9.74%	-10.54%
Fillmore County	\$13,133	\$8,031	\$22,155	\$25,038	\$13,546	61.15%	61.14%	54.10%	68.70%	68.68%	-2.09%	-2.10%
Freeborn County	\$16,475	\$8,467	\$24,764	\$28,228	\$13,260	51.39%	53.55%	46.97%	50.31%	56.61%	-12.76%	-9.11%
Goodhue County	\$17,041	\$8,871	\$29,237	\$35,024	\$15,311	52.06%	52.37%	43.72%	71.57%	72.60%	-0.42%	0.17%
Grant County	\$12,034	\$8,688	\$19,773	\$20,369	\$9,629	72.20%	48.70%	47.27%	64.31%	10.83%	-4.64%	-35.68%
Hennepin County	\$20,077	\$11,970	\$35,659	\$46,386	\$21,404	59.62%	60.02%	46.14%	77.61%	78.81%	3.08%	3.78%
Houston County	\$15,005	\$9,776	\$25,846	\$29,490	\$15,293	65.15%	59.17%	51.86%	72.25%	56.43%	-0.03%	-9.21%
Hubbard County	\$11,647	\$6,530	\$20,151	\$23,175	\$9,033	56.07%	44.83%	38.98%	73.01%	38.33%	0.41%	-19.72%
Isanti County	\$17,550	\$10,617	\$31,308	\$35,376	\$13,959	60.50%	44.59%	39.46%	78.39%	31.48%	3.54%	-23.69%
Itasca County	\$16,157	\$8,925	\$22,442	\$26,743	\$11,323	55.24%	50.46%	42.34%	38.90%	26.87%	-19.39%	-26.37%
Jackson County	\$14,246	\$8,821	\$23,157	\$25,434	\$13,371	61.92%	57.74%	52.67%	62.55%	51.58%	-5.66%	-12.03%
Kanabec County	\$13,374	\$8,908	\$22,495	\$27,953	\$11,732	66.61%	52.15%	41.97%	68.20%	31.70%	-2.38%	-23.56%
Kandiyohi County	\$14,877	\$9,195	\$25,368	\$31,441	\$13,174	61.81%	51.93%	41.90%	70.52%	43.27%	-1.03%	-16.85%
Kittson County	\$13,193	\$8,397	\$23,518	\$25,081	\$12,538	63.65%	53.31%	49.99%	78.26%	49.32%	3.46%	-13.34%
Koochiching County	\$16,015	\$8,007	\$23,411	\$28,231	\$15,300	50.00%	65.35%	54.20%	46.18%	91.09%	-15.16%	10.90%
Lac qui Parle County	\$12,676	\$8,315	\$21,646	\$23,644	\$11,224	65.60%	51.85%	47.47%	70.76%	34.98%	-0.89%	-21.66%
Lake County	\$20,382	\$13,393	\$23,478	\$25,964	\$13,373	65.71%	56.96%	51.51%	15.18%	-0.15%	-33.15%	-42.05%
Lake of the Woods County	\$11,754	\$8,888	\$24,383	\$28,306	\$14,079	75.62%	57.74%	49.74%	107.44%	58.40%	20.40%	-8.07%
Le Sueur County	\$16,246	\$8,985	\$27,706	\$31,200	\$16,350	55.31%	59.01%	52.40%	70.54%	81.97%	-1.02%	5.61%
Lincoln County	\$10,358	\$6,476	\$19,211	\$19,381	\$9,630	62.52%	50.13%	49.69%	85.47%	48.70%	7.64%	-13.70%
Lyon County	\$14,830	\$9,067	\$24,689	\$29,200	\$15,488	61.14%	62.73%	53.04%	66.48%	70.82%	-3.38%	-0.86%
McLeod County	\$16,885	\$10,519	\$29,549	\$35,123	\$16,713	62.30%	56.56%	47.58%	75.00%	58.89%	1.57%	-7.79%
Mahnomen County	\$10,485	\$7,166	\$16,924	\$19,036	\$9,969	68.35%	58.91%	52.37%	61.41%	39.12%	-6.32%	-19.26%

Appendix Table 6: Median Incomes: 1980 and 1990

	Estimated					Median Renter Household Income			%Δ 1980 - 1990 Change		%Δ 1980 - 1990 Change	
	Median	Median	Median	Median	Median	as a Proportion of			Nominal	Nominal	Real	Real
	Household Income 1979	Renter HH Income 1979	Household Income 1989	Owner HH Income 1989	Renter HH Income 1989	Overall Median 1979	Overall Median 1989	Owner Median 1989	Nominal Median HH Income	Renter HH Income	Median HH Income	Renter HH Income
Marshall County	\$12,916	\$6,861	\$21,707	\$25,057	\$10,364	53.12%	47.74%	41.36%	68.06%	51.05%	-2.46%	-12.33%
Martin County	\$15,302	\$9,140	\$24,414	\$27,633	\$14,683	59.73%	60.14%	53.14%	59.55%	60.65%	-7.40%	-6.76%
Meeker County	\$14,035	\$8,012	\$24,516	\$28,833	\$13,435	57.09%	54.80%	46.60%	74.68%	67.68%	1.38%	-2.68%
Mille Lacs County	\$13,187	\$7,344	\$22,689	\$26,988	\$12,657	55.69%	55.78%	46.90%	72.06%	72.34%	-0.14%	0.02%
Morrison County	\$12,073	\$7,190	\$22,102	\$25,308	\$12,106	59.55%	54.77%	47.83%	83.07%	68.37%	6.25%	-2.28%
Mower County	\$16,218	\$8,138	\$23,763	\$27,051	\$13,890	50.18%	58.45%	51.35%	46.52%	70.68%	-14.96%	-0.94%
Murray County	\$13,241	\$9,631	\$22,673	\$24,388	\$12,336	72.74%	54.41%	50.58%	71.23%	28.08%	-0.62%	-25.66%
Nicollet County	\$17,063	\$9,872	\$30,491	\$38,159	\$17,838	57.86%	58.50%	46.75%	78.70%	80.70%	3.71%	4.87%
Nobles County	\$14,529	\$9,981	\$22,942	\$25,873	\$15,788	68.58%	68.82%	61.02%	57.90%	58.49%	-8.35%	-8.01%
Norman County	\$12,410	\$7,626	\$21,238	\$22,280	\$13,284	61.45%	62.55%	59.63%	71.14%	74.20%	-0.68%	1.10%
Olmsted County	\$20,066	\$12,107	\$35,789	\$45,288	\$20,959	60.34%	58.56%	46.28%	78.36%	73.11%	3.52%	0.47%
Otter Tail County	\$12,575	\$8,077	\$21,909	\$26,997	\$11,784	64.23%	53.79%	43.65%	74.23%	45.89%	1.12%	-15.33%
Pennington County	\$14,622	\$9,104	\$21,571	\$27,471	\$9,001	62.26%	41.73%	32.76%	47.52%	-1.14%	-14.38%	-42.62%
Pine County	\$12,252	\$7,681	\$21,191	\$24,300	\$12,183	62.69%	57.49%	50.14%	72.96%	58.62%	0.38%	-7.94%
Pipestone County	\$11,681	\$7,286	\$20,737	\$23,798	\$9,213	62.37%	44.43%	38.71%	77.53%	26.44%	3.03%	-26.61%
Polk County	\$14,200	\$7,792	\$22,559	\$29,369	\$10,853	54.87%	48.11%	36.95%	58.87%	39.28%	-7.80%	-19.16%
Pope County	\$11,878	\$7,364	\$20,131	\$21,717	\$12,676	62.00%	62.97%	58.37%	69.48%	72.13%	-1.64%	-0.10%
Ramsey County	\$18,939	\$11,837	\$32,043	\$42,820	\$19,246	62.50%	60.06%	44.95%	69.19%	62.59%	-1.80%	-5.63%
Red Lake County	\$11,653	\$6,000	\$19,926	\$20,897	\$9,363	51.49%	46.99%	44.81%	70.99%	56.05%	-0.76%	-9.43%
Redwood County	\$13,571	\$9,079	\$22,827	\$25,198	\$14,411	66.90%	63.13%	57.19%	68.20%	58.73%	-2.38%	-7.87%
Renville County	\$14,789	\$9,936	\$23,278	\$25,321	\$13,970	67.19%	60.01%	55.17%	57.40%	40.60%	-8.65%	-18.40%
Rice County	\$16,945	\$10,254	\$29,596	\$36,928	\$16,218	60.51%	54.80%	43.92%	74.66%	58.17%	1.37%	-8.20%
Rock County	\$14,220	\$9,162	\$24,483	\$27,258	\$13,812	64.43%	56.42%	50.67%	72.17%	50.76%	-0.07%	-12.50%
Roseau County	\$13,324	\$8,905	\$25,910	\$29,875	\$15,641	66.83%	60.37%	52.35%	94.46%	75.64%	12.86%	1.94%
St. Louis County	\$17,264	\$8,953	\$24,093	\$29,948	\$11,805	51.86%	49.00%	39.42%	39.56%	31.86%	-19.00%	-23.47%
Scott County	\$22,468	\$13,325	\$40,798	\$44,914	\$22,545	59.31%	55.26%	50.20%	81.58%	69.20%	5.39%	-1.80%
Sherburne County	\$19,437	\$12,173	\$35,585	\$40,460	\$18,019	62.63%	50.64%	44.54%	83.08%	48.03%	6.26%	-14.09%
Sibley County	\$14,735	\$8,584	\$24,957	\$26,408	\$14,623	58.26%	58.59%	55.37%	69.37%	70.36%	-1.70%	-1.13%
Stearns County	\$16,027	\$10,434	\$27,512	\$34,029	\$17,083	65.10%	62.09%	50.20%	71.66%	63.72%	-0.37%	-4.98%
Steele County	\$16,866	\$11,287	\$30,571	\$36,505	\$18,918	66.92%	61.88%	51.82%	81.26%	67.61%	5.20%	-2.72%
Stevens County	\$12,552	\$7,840	\$21,921	\$28,758	\$13,005	62.46%	59.33%	45.22%	74.64%	65.88%	1.36%	-3.73%
Swift County	\$11,899	\$7,914	\$18,740	\$20,925	\$10,112	66.51%	53.96%	48.33%	57.49%	27.77%	-8.59%	-25.84%
Todd County	\$11,151	\$6,747	\$18,836	\$21,355	\$9,036	60.51%	47.97%	42.31%	68.92%	33.93%	-1.96%	-22.27%
Traverse County	\$12,135	\$9,444	\$20,746	\$21,347	\$13,976	77.82%	67.36%	65.47%	70.96%	47.98%	-0.78%	-14.11%
Wabasha County	\$15,101	\$8,884	\$26,998	\$30,568	\$15,220	58.83%	56.38%	49.79%	78.78%	71.32%	3.76%	-0.57%
Wadena County	\$11,148	\$6,294	\$17,333	\$19,784	\$9,776	56.46%	56.40%	49.41%	55.48%	55.32%	-9.76%	-9.86%
Waseca County	\$16,252	\$9,427	\$26,992	\$31,819	\$15,788	58.01%	58.49%	49.62%	68.08%	67.48%	-3.61%	-2.80%
Washington County	\$24,257	\$13,804	\$44,122	\$48,788	\$23,039	56.91%	52.22%	47.22%	81.89%	66.90%	5.57%	-3.13%
Watsonwan County	\$14,758	\$9,504	\$22,496	\$26,753	\$13,662	64.40%	60.73%	51.07%	52.43%	43.75%	-11.53%	-16.57%
Wilkin County	\$15,463	\$9,341	\$23,081	\$25,982	\$10,610	60.41%	45.97%	40.83%	49.27%	13.58%	-13.37%	-34.08%
Winona County	\$15,142	\$8,994	\$25,937	\$32,805	\$15,081	59.40%	58.14%	45.97%	71.29%	67.68%	-0.59%	-2.68%
Wright County	\$18,662	\$9,930	\$33,456	\$39,246	\$17,643	53.21%	52.74%	44.96%	79.27%	77.68%	4.05%	3.12%
Yellow Medicine County	\$12,867	\$7,862	\$21,537	\$23,408	\$11,217	61.10%	52.08%	47.92%	67.38%	42.68%	-2.85%	-17.19%

Appendix Table 7: Very Low Income Renter Households: 1980 and 1990

**Very Low Income Renter Households:  
Income less than 50% of Median County Household Income**

	<u>Number</u>		<u>As Percent of Total Renter Households</u>		<u>Proportion paying at least 30% of Income for Rent</u>	
	<u>1980</u>	<u>1990</u>	<u>1980</u>	<u>1990</u>	<u>1980</u>	<u>1990</u>
Aitkin County	341	318	49.19%	47.10%	62.91%	64.09%
Anoka County	4,805	6,849	41.60%	44.99%	69.11%	79.09%
Becker County	707	1,053	38.28%	51.09%	71.14%	70.18%
Beltrami County	900	1,457	40.09%	48.71%	73.85%	80.79%
Benton County	693	1,303	36.29%	37.88%	70.12%	74.97%
Big Stone County	233	201	45.93%	50.86%	63.23%	66.84%
Blue Earth County	2,236	2,705	40.10%	40.76%	76.62%	75.80%
Brown County	685	935	37.94%	44.66%	62.11%	64.89%
Carlton County	861	976	52.40%	51.24%	62.45%	61.33%
Carver County	886	1,476	37.91%	45.53%	68.38%	63.45%
Cass County	423	552	43.47%	44.89%	60.27%	69.78%
Chippewa County	436	512	37.55%	44.91%	51.86%	60.70%
Chisago County	548	730	51.96%	50.44%	71.15%	68.13%
Clay County	2,055	2,965	43.87%	55.33%	74.39%	73.03%
Clearwater County	198	233	51.15%	50.23%	57.50%	64.38%
Cook County	165	93	40.13%	28.43%	63.98%	63.80%
Cottonwood County	338	414	37.74%	44.26%	49.07%	63.51%
Crow Wing County	1,178	1,701	41.71%	44.38%	67.30%	69.51%
Dakota County	6,383	9,543	39.93%	37.82%	69.71%	77.11%
Dodge County	237	428	42.83%	47.44%	71.25%	54.29%
Douglas County	869	1,295	40.46%	48.68%	64.73%	70.57%
Faribault County	527	501	41.52%	42.17%	68.90%	61.30%
Fillmore County	460	524	42.39%	42.50%	70.28%	58.08%
Freeborn County	1,330	1,293	48.83%	47.71%	74.23%	66.97%
Goodhue County	1,233	1,550	48.01%	48.07%	56.67%	59.65%
Grant County	97	214	29.88%	51.34%	66.68%	64.13%
Hennepin County	57,214	64,292	41.72%	42.04%	72.84%	75.47%
Houston County	377	492	38.95%	43.25%	69.25%	68.46%
Hubbard County	355	477	46.38%	55.50%	62.45%	61.56%
Isanti County	456	733	41.60%	54.68%	64.55%	63.08%
Itasca County	1,038	1,208	45.37%	49.74%	65.04%	68.85%
Jackson County	305	352	39.30%	44.94%	76.12%	61.42%
Kanabec County	226	361	36.88%	48.83%	72.12%	75.91%
Kandiyohi County	1,221	1,739	40.41%	48.45%	63.34%	68.24%
Kittson County	148	174	42.02%	47.25%	56.29%	47.65%
Koochiching County	584	538	50.00%	42.46%	59.29%	66.26%
Lac qui Parle County	204	264	39.44%	48.94%	52.83%	63.98%
Lake County	281	308	37.19%	44.17%	56.76%	59.65%
Lake of the Woods Co	71	93	36.17%	43.30%	53.05%	45.43%
Le Sueur County	559	597	45.40%	43.65%	60.99%	58.25%
Lincoln County	164	195	42.87%	49.87%	58.96%	50.28%
Lyon County	843	1,065	39.95%	40.87%	59.23%	62.50%
McLeod County	808	1,109	40.87%	44.75%	58.41%	57.27%
Mahnomen County	93	142	36.47%	42.44%	71.74%	61.49%
Marshall County	271	313	48.04%	51.33%	54.73%	57.70%
Martin County	767	824	40.48%	42.19%	57.13%	65.64%
Meeker County	502	624	43.89%	46.42%	71.13%	66.54%
Mille Lacs County	496	578	45.78%	46.01%	61.25%	64.24%
Morrison County	614	781	44.23%	46.83%	58.77%	68.49%
Mower County	1,379	1,372	49.84%	43.36%	61.28%	66.33%
Murray County	159	249	33.57%	47.40%	58.95%	59.38%
Nicollet County	839	1,040	42.99%	42.77%	61.30%	71.58%
Nobles County	506	563	35.22%	34.08%	59.68%	64.66%

Appendix Table 7: Very Low Income Renter Households: 1980 and 1990

**Very Low Income Renter Households:  
Income less than 50% of Median County Household Income**

	<u>Number</u>		<u>As Percent of Total Renter Households</u>		<u>Proportion paying at least 30% of Income for Rent</u>	
	<u>1980</u>	<u>1990</u>	<u>1980</u>	<u>1990</u>	<u>1980</u>	<u>1990</u>
Norman County	197	215	41.70%	42.75%	52.51%	59.22%
Olmsted County	3,707	4,529	40.43%	42.64%	73.46%	66.76%
Otter Tail County	1,199	1,783	39.17%	47.58%	66.98%	68.76%
Pennington County	518	722	40.91%	57.19%	55.77%	58.01%
Pine County	391	500	41.38%	45.44%	65.49%	68.45%
Pipestone County	340	431	43.87%	54.89%	69.71%	66.84%
Polk County	1,261	1,423	46.06%	51.24%	67.80%	68.67%
Pope County	269	311	41.15%	42.42%	67.03%	61.07%
Ramsey County	25,520	29,715	39.39%	41.38%	68.80%	75.87%
Red Lake County	144	172	49.17%	53.20%	47.72%	65.19%
Redwood County	397	487	37.15%	42.08%	57.09%	54.74%
Renville County	396	479	38.30%	43.52%	61.05%	61.10%
Rice County	1,241	1,721	41.00%	45.61%	63.18%	64.41%
Rock County	262	331	38.08%	45.29%	40.81%	49.77%
Roseau County	226	358	38.88%	43.85%	57.63%	63.66%
St. Louis County	10,191	10,073	48.37%	50.69%	65.38%	70.41%
Scott County	946	1,520	39.15%	45.75%	70.02%	65.49%
Sherburne County	560	1,219	40.08%	49.41%	88.32%	82.94%
Sibley County	294	310	42.32%	43.24%	53.22%	48.05%
Stearns County	2,813	4,310	37.71%	39.80%	72.62%	72.43%
Steele County	812	954	36.64%	39.17%	65.96%	58.12%
Stevens County	387	501	39.47%	43.42%	72.18%	71.34%
Swift County	320	376	38.79%	46.56%	46.40%	48.79%
Todd County	500	714	44.04%	52.11%	74.34%	63.86%
Traverse County	106	129	33.01%	40.60%	65.56%	58.98%
Wabasha County	436	500	43.13%	44.45%	68.75%	54.46%
Wadena County	399	465	46.68%	44.33%	67.57%	67.89%
Waseca County	526	589	43.01%	42.55%	61.14%	69.59%
Washington County	2,351	3,661	43.84%	48.00%	70.96%	70.25%
Watsonwan County	293	414	38.88%	42.26%	45.11%	52.99%
Wilkin County	222	300	40.97%	51.98%	54.71%	67.60%
Winona County	1,608	1,895	41.48%	43.19%	66.73%	66.43%
Wright County	1,128	1,774	46.92%	47.37%	71.32%	62.92%
Yellow Medicine Count	339	384	42.37%	48.90%	63.41%	64.43%
Minnesota	159,601	193,574	41.63%	43.42%	69.37%	72.31%



Appendix Table 8: Low Income Renter Households: 1980 and 1990

**Low Income Renter Households:  
Income less than 80% of Median County Household Income**

	<u>Number</u>		<u>As Percent of Total Renter Households</u>		<u>Proportion paying at least 30% of Income for Rent</u>	
	<u>1980</u>	<u>1990</u>	<u>1980</u>	<u>1990</u>	<u>1980</u>	<u>1990</u>
Aitkin County	485	434	67.10%	64.31%	61.78%	58.08%
Anoka County	8,071	10,774	69.87%	70.78%	49.20%	57.20%
Becker County	1,113	1,414	60.24%	68.58%	62.70%	59.85%
Beltrami County	1,370	2,029	61.04%	67.85%	70.55%	73.88%
Benton County	1,098	2,045	57.49%	59.44%	61.55%	68.04%
Big Stone County	319	264	62.84%	66.82%	61.73%	56.56%
Blue Earth County	3,522	4,447	63.16%	67.00%	64.45%	67.09%
Brown County	1,085	1,390	60.11%	66.40%	49.24%	51.89%
Carlton County	1,163	1,336	70.79%	70.14%	57.07%	56.36%
Carver County	1,453	2,256	62.21%	69.60%	50.55%	46.31%
Cass County	597	760	61.24%	61.80%	57.56%	62.23%
Chippewa County	703	751	60.54%	65.91%	48.33%	50.30%
Chisago County	759	1,020	71.92%	70.46%	59.35%	60.75%
Clay County	3,175	4,151	67.79%	77.45%	62.08%	66.16%
Clearwater County	256	320	66.18%	69.20%	56.24%	57.48%
Cook County	237	161	57.83%	48.98%	56.55%	45.65%
Cottonwood County	543	596	60.66%	63.70%	43.43%	48.10%
Crow Wing County	1,777	2,465	62.90%	64.33%	60.38%	62.63%
Dakota County	10,704	16,686	66.96%	66.12%	51.77%	54.12%
Dodge County	358	628	64.55%	69.66%	57.36%	42.63%
Douglas County	1,353	1,797	62.99%	67.54%	58.67%	60.66%
Faribault County	784	737	61.84%	61.97%	58.65%	47.84%
Fillmore County	673	774	61.96%	62.69%	58.13%	45.33%
Freeborn County	1,867	1,819	68.56%	67.08%	63.50%	56.25%
Goodhue County	1,769	2,205	68.89%	68.37%	48.10%	49.98%
Grant County	185	277	57.07%	66.61%	54.35%	56.45%
Hennepin County	90,846	97,247	66.24%	63.59%	57.33%	61.00%
Houston County	581	732	60.08%	64.38%	55.92%	55.98%
Hubbard County	492	583	64.26%	67.73%	55.67%	55.99%
Isanti County	707	1,003	64.42%	74.82%	51.19%	54.88%
Itasca County	1,453	1,620	63.47%	66.71%	60.05%	62.56%
Jackson County	483	505	62.36%	64.55%	63.49%	46.85%
Kanabec County	368	482	60.05%	65.15%	62.92%	64.57%
Kandiyohi County	1,893	2,585	62.67%	72.04%	56.28%	58.60%
Kittson County	208	266	59.21%	72.17%	53.87%	38.62%
Koochiching County	820	725	70.29%	57.19%	51.50%	59.13%
Lac qui Parle County	308	357	59.59%	66.17%	47.31%	53.06%
Lake County	454	484	60.16%	69.30%	39.32%	46.67%
Lake of the Woods Co	103	148	52.36%	69.28%	48.19%	33.36%
Le Sueur County	852	869	69.18%	63.52%	49.55%	46.50%
Lincoln County	229	255	59.95%	65.24%	52.39%	42.56%
Lyon County	1,319	1,626	62.56%	62.38%	51.67%	51.92%
McLeod County	1,291	1,615	65.30%	65.14%	46.56%	46.69%
Mahnomen County	150	202	58.59%	60.29%	58.33%	54.72%
Marshall County	376	421	66.58%	68.94%	52.88%	45.32%
Martin County	1,243	1,275	65.65%	65.29%	46.66%	48.54%
Meeker County	764	925	66.87%	68.79%	61.08%	56.70%
Mille Lacs County	725	838	66.92%	66.70%	57.00%	60.63%
Morrison County	865	1,113	62.34%	66.76%	53.55%	57.59%
Mower County	1,936	2,117	69.99%	66.92%	52.03%	55.59%
Murray County	260	342	54.89%	65.11%	52.16%	49.68%
Nicollet County	1,330	1,551	68.13%	63.78%	49.17%	58.85%
Nobles County	824	982	57.27%	59.46%	52.95%	50.48%

Appendix Table 8: Low Income Renter Households: 1980 and 1990

**Low Income Renter Households:  
Income less than 80% of Median County Household Income**

	<u>Number</u>		<u>As Percent of Total Renter Households</u>		<u>Proportion paying at least 30% of Income for Rent</u>	
	<u>1980</u>	<u>1990</u>	<u>1980</u>	<u>1990</u>	<u>1980</u>	<u>1990</u>
Norman County	300	303	63.43%	60.07%	49.66%	46.02%
Olmsted County	6,096	6,948	66.49%	65.40%	54.29%	49.67%
Otter Tail County	1,898	2,502	61.99%	66.75%	63.91%	57.75%
Pennington County	781	893	61.61%	70.73%	48.64%	52.05%
Pine County	584	701	61.76%	63.70%	59.92%	62.27%
Pipestone County	455	513	58.72%	65.35%	61.04%	60.02%
Polk County	1,834	1,970	67.00%	70.97%	61.81%	57.87%
Pope County	414	440	63.27%	59.95%	59.33%	49.37%
Ramsey County	41,805	45,195	64.52%	62.93%	53.59%	63.83%
Red Lake County	193	222	65.93%	68.61%	46.93%	52.47%
Redwood County	630	697	58.95%	60.17%	49.18%	45.59%
Renville County	594	693	57.48%	62.93%	49.32%	47.95%
Rice County	1,935	2,538	63.94%	67.28%	51.39%	57.04%
Rock County	412	492	59.85%	67.30%	34.73%	37.97%
Roseau County	338	501	58.19%	61.28%	52.74%	58.38%
St. Louis County	14,368	14,189	68.19%	71.40%	56.69%	61.88%
Scott County	1,638	2,326	67.78%	69.99%	51.93%	49.25%
Sherburne County	879	1,697	62.90%	68.81%	66.93%	68.87%
Sibley County	458	479	65.94%	66.84%	42.76%	37.67%
Stearns County	4,571	6,799	61.28%	62.78%	60.48%	61.80%
Steele County	1,333	1,548	60.13%	63.58%	50.48%	44.80%
Stevens County	635	745	64.71%	64.58%	64.14%	60.02%
Swift County	487	512	59.15%	63.48%	44.26%	42.97%
Todd County	694	944	61.06%	68.87%	68.50%	58.08%
Traverse County	165	181	51.33%	56.84%	61.76%	47.39%
Wabasha County	649	766	64.23%	68.17%	59.86%	45.30%
Wadena County	530	651	62.11%	62.01%	60.94%	59.27%
Waseca County	797	919	65.19%	66.37%	48.14%	55.33%
Washington County	3,686	6,921	68.73%	90.73%	53.00%	43.10%
Watsonwan County	449	626	59.64%	63.89%	35.37%	40.40%
Wilkin County	352	385	64.89%	66.74%	47.30%	59.31%
Winona County	2,535	2,944	65.39%	67.10%	56.22%	57.58%
Wright County	1,707	2,607	70.97%	69.62%	56.76%	52.02%
Yellow Medicine Count	501	509	62.52%	64.78%	54.41%	50.92%
Minnesota	250,979	292,759	65.47%	65.66%	55.72%	58.87%

## Appendix Table 9 Data Sources, Means and Standard Deviations

### Median rent per square foot

Unfurnished apartments

Income Expense Analysis: Conventional Apartments, Institute of Real Estate Management, 1992, pp 46 - 144.

### Median operating plus median maintenance expenditures per square foot

Unfurnished apartments

Income Expense Analysis: Conventional Apartments, Institute of Real Estate Management, 1992, pp 46 - 144.

### Median Property Taxes per square foot

Unfurnished apartments

Income Expense Analysis: Conventional Apartments, Institute of Real Estate Management, 1992, pp 46 - 144.

### Average Apartment Size

Calculated by dividing the total of rentable square feet by the number of apartments

Income Expense Analysis: Conventional Apartments, Institute of Real Estate Management, 1992, pp 46 - 144.

The 1992 edition of Income Expense Analysis: Conventional Apartments reports data for the year 1991.

### Construction Cost Index

Total weighted average for building systems from city cost indexes, pp. 479-485, Means Assemblies Cost Data, 1991.

The 1991 edition of Means Assemblies Cost Data estimates construction costs as of January 1991 for 199 metropolitan areas. The index is reported against a 30 city average of 100. A value of the index less than 100 means construction costs are less than the 30 city average. A value of the index more than 100 means construction costs are greater than the 30 city average. It included data for 121 of the 134 metropolitan areas from the IREM sample. Data for the remaining metropolitan areas was interpolated using data from 1992 National Construction Estimator, Craftsman Book Company, 1992. Interpolations were based on data for common cities within a single state. To the extent that the pattern of differences in construction costs across metropolitan areas did not change significantly from 1991 to 1992, interpolations based on data from 1992 should pose little problem.

### Income per capita

Personal income per capita from Survey of Current Business, April 1992, United States Department of Commerce, pp. 85 - 86. In 1992, the most recent data on personal income per capita for metropolitan areas was for 1990. To the extent that the pattern of income differences across metropolitan areas did not change significantly from 1990 to 1991, the use of data from 1990 should pose little problem.

Variable (all observations, N =254)	Mean	Standard Deviation
Median Rent per square foot	\$7.08	\$1.88
Construction Cost Index	95.35	10.50
Median Property Taxes per square foot	\$0.60	\$0.29
Median Operating and Maintenance Costs per square foot	\$1.33	\$0.41
Average Apartment Size, square feet	819.06	98.55
Personal Income per capita	\$19,102.95	\$2,935.52
<b>Elevator Buildings (N = 23)</b>		
Median Rent	\$8.98	\$1.94
Median Property Taxes	\$0.79	\$0.39
Median Op & Maintenance Costs	\$1.85	\$0.32
Average Size	790.67	110.64
<b>Low Rise 12 - 24 units (N = 29)</b>		
Median Rent	\$6.79	\$1.97
Median Property Taxes	\$0.61	\$0.36
Median Op & Maintenance Costs	\$1.49	\$0.57
Average Size	749.80	122.57
<b>Low Rise 25 or more units (N = 71)</b>		
Median Rent	\$7.01	\$1.83
Median Property Taxes	\$0.57	\$0.48
Median Op & Maintenance Costs	\$1.32	\$0.39
Average Size	824.15	86.10
<b>Garden Apartments (N = 131)</b>		
Median Rent	\$6.85	\$1.69
Median Property Taxes	\$0.58	\$0.25
Median Op & Maintenance Costs	\$1.21	\$0.30
Average Size	836.62	89.79

**Appendix B**

**Description of  
System of Preferential Tax Classifications  
for Subsidized Rental Housing**

Source: Minnesota Department of Revenue



4c(1)(i)

- (1) Only the structure is eligible for the 2% or 2.3% class rate. The land has a class rate of 2.5% if the structure contains three units or less or a class rate of 3.4% if the structure contains 4 or more units. For projects built prior to January 1984, the 2% or 2.3% class rate applies to the entire rental residential structure. For projects built after 1984, the 2% or 2.3% class rates apply only in proportion to the occupancy of the structure by elderly or handicapped persons or low and moderate income families.
- (2) The classification is limited to only those projects which are owned by Non-Profit or Limited Dividend entities.
- (3) For projects receiving this classification for taxes payable in 1993 and before, the definition of Low and Moderate Income Families upon which the classification is based varies according to the specific program under which the project is regulated. For projects not classified as class 4c for taxes payable in 1993 in which an application is made for the 4c classification for taxes payable in 1994 and thereafter, the tenant income limitation is 100% of the county or area median income, adjusted for family size as determined by the Department of Housing and Urban Development. However, for those in which a formal application for financing, refinancing, or insurance is received by the local, state or federal agency before July 1, 1992, the income limitation is 100% or less of the county or area median income not adjusted for family size as determined by the Department of Housing and Urban Development.

For projects built after January 1984, a governmental agency providing financing or mortgage insurance for a building qualifying for the 4c or 4d classification or other entity must annually review income records maintained by the owner of the property to determine the number of units that qualify for the 4c or 4d classification and report such to the assessor responsible assessing the property. The income records must reflect household income at the commencement of the tenancy, and thereafter, when household composition changes.

- (4) The agency administering the programs for these housing projects usually establishes rent restrictions in the management agreement between the agency and the owner of the property.
- (5) These classification are restricted to new structures or structures which have been substantially rehabilitated. The duration of the classification is for 15 years after the construction or substantial rehabilitation has been completed or the term of the loan.

4c(1)(11)

- (1) Only the structure is eligible for the 2% or 2.3% class rate. The land has a class rate of 2.5% if the structure contains three units or less or a class rate of 3.4% if the structure contains 4 or more units. For projects built prior to January 1984, the 2% or 2.3% class rate applies to the entire rental residential structure. For projects built after 1984, the 2% or 2.3% class rates apply only in proportion to the occupancy of the structure by elderly or handicapped persons or low and moderate income families.
- (2) The classification is limited to only those projects which are owned by Non-Profit or Limited Dividend entities.
- (3) For projects receiving this classification for taxes payable in 1993 and before, the definition of Low and Moderate Income Families upon which the classification is based varies according to the specific program under which the project is regulated. For projects not classified as class 4c for taxes payable in 1993 in which an application is made for the 4c classification for taxes payable in 1994 and thereafter, the tenant income limitation is 100% of the county or area median income, adjusted for family size as determined by the Department of Housing and Urban Development. However, for those in which a formal application for financing, refinancing, or insurance is received by the local, state or federal agency before July 1, 1992, the income limitation is 100% or less of the county or area median income not adjusted for family size as determined by the Department of Housing and Urban Development.

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- (4) The agency administering the programs for these housing projects usually establishes rent restrictions in the management agreement between the agency and the owner of the property.
- (5) These classification are restricted to new structures or structures which have been substantially rehabilitated. The duration of the classification is for 15 years after the construction or substantial rehabilitation has been completed or the term of the loan.
- (19) The market value of the property must be based upon the normal approach to value using normal unrestricted rents. However, for projects located in the counties of Beltrami, Dakota, Hennepin, Ramsey, and St. Louis, the owner may apply for assessment using restricted rents instead of unrestricted rents in determining the value of the property and the class rates for class 4a or 4b property, whichever is applicable, for the taxes payable in 1993, 1994, and 1995 only. This special law contains restrictions in ownership, operation of the property and use of the tax savings which is similar to those contained in the leasehold cooperative homestead classification.

It should be noted that the valuation based upon restricted rents includes Neighborhood Real Estate Trust property. However, the statute regarding such trusts does not require the trust to have rent restrictions.



4c(2)

- (1) Only the structure is eligible for the 2% or 2.3% class rate. The land has a class rate of 2.5% if the structure contains three units or less or a class rate of 3.4% if the structure contains 4 or more units. For projects built prior to January 1984, the 2% or 2.3% class rate applies to the entire rental residential structure. For projects built after 1984, the 2% or 2.3% class rates apply only in proportion to the occupancy of the structure by elderly or handicapped persons or low and moderate income families.
- (4) The agency administering the programs for these housing projects usually establishes rent restrictions in the management agreement between the agency and the owner of the property.
- (6) This classification is for structures which are occupied by elderly, handicapped, or lower income families as defined in Section 8 of the U.S. Housing Act of 1971 and in which the owner has entered into a housing assistance payments under Section 8 for 100% of the dwelling units in the structure. The duration of this classification is for the term of the housing assistance payments contract, including all renewals, or for the term of its permanent financing, whichever is shorter.

4c(3)

- (1) Only the structure is eligible for the 2% or 2.3% class rate. The land has a class rate of 2.5% if the structure contains three units or less or a class rate of 3.4% if the structure contains 4 or more units. For projects built prior to January 1984, the 2% or 2.3% class rate applies to the entire rental residential structure. For projects built after 1984, the 2% or 2.3% class rates apply only in proportion to the occupancy of the structure by elderly or handicapped persons or low and moderate income families.
- (7) This classification is limited to buildings that either receives a low income housing credit under Section 42 of the IRS Code, or meets the requirements of that section and receives public financing, except that provided under M.S. 469.174 to 469.179, or meets the requirements under M.S. 273.1317, which is approximately the same as those under Section 42. At the irrevocable election of the taxpayer, either 20% or more of the residential units in the project must be both rent restricted and occupied by individuals whose income is 50% or less of the area median gross income or 40% or more of the units in the project must be both rent restricted and occupied by individuals whose income is 60% or less of the area median gross income. To qualify for this classification under M.S. 273.1317, the owner or developer must execute an agreement with the local housing and redevelopment authority, the county housing and redevelopment authority or the administrator of section 8 certificates, that the project will meet the income and rent restriction requirements for a term of 15 years. The authority will annually review the income and rental information held by the owner or developer to determine compliance and will report to the assessor responsible for assessing the property.
- (8) The building must new, the original use of which begins with the owners or developers of the building, or an existing building with respect to which rehabilitation expenditures, which meets the requirements of Section 42, have been paid or incurred by the owner or developer. The term of the classification is limited to 15 years.
- (19) The market value of the property must be based upon the normal approach to value using normal unrestricted rents. However, for projects located in the counties of Beltrami, Dakota, Hennepin, Ramsey, and St. Louis, the owner may apply for assessment using restricted rents instead of unrestricted rents in determining the value of the property and the class rates for class 4a or 4b property, whichever is applicable, for the taxes payable in 1993, 1994, and 1995 only. This special law contains restrictions in ownership, operation of the property and use of the tax savings which is similar to those contained in the leasehold cooperative homestead classification.

It should be noted that the valuation based upon restricted rents includes Neighborhood Real Estate Trust property. However, the statute regarding such trusts does not require the trust to have rent restrictions.

4c(4)

- (9) A Neighborhood Real Estate Trust is an entity which is certified by the governing body of the municipality in which it is located to have the following characteristics:
- a) it is a non-profit organization;
  - b) it has as its principal purpose to provide housing for lower income families in a specific geographic community designated in its articles or by-laws;
  - c) it limits its membership with voting rights to residents of the designated community; and
  - d) it has a board of directors consisting of at least seven directors, 60% of whom are members with voting rights and to the extent feasible, 25 percent of whom are elected by resident members of the building owned by the trust.
- (10) At least 60% of the dwelling units are leased to or occupied by lower income families or individuals whose income is 65% or less of the respective area median family or area median individual income as determined by the U.S. Secretary of Housing and Urban Development. There is no provision requiring rent restrictions.
- (19) The market value of the property must be based upon the normal approach to value using normal unrestricted rents. However, for projects located in the counties of Beltrami, Dakota, Hennepin, Ramsey, and St. Louis, the owner may apply for assessment using restricted rents instead of unrestricted rents in determining the value of the property and the class rates for class 4a or 4b property, whichever is applicable, for the taxes payable in 1993, 1994, and 1995 only. This special law contains restrictions in ownership, operation of the property and use of the tax savings which is similar to those contained in the leasehold cooperative homestead classification.

It should be noted that the valuation based upon restricted rents includes Neighborhood Real Estate Trust property. However, the statute regarding such trusts does not require the trust to have rent restrictions.

4d(1)

- (1) Only the structure is eligible for the 2% or 2.3% class rate. The land has a class rate of 2.5% if the structure contains three units or less or a class rate of 3.4% if the structure contains 4 or more units. For projects built prior to January 1984, the 2% or 2.3% class rate applies to the entire rental residential structure. For projects built after 1984, the 2% or 2.3% class rates apply only in proportion to the occupancy of the structure by elderly or handicapped persons or low and moderate income families.
- (2) The classification is limited to only those projects which are owned by Non-Profit or Limited Dividend entities.
- (3) For projects receiving this classification for taxes payable in 1993 and before, the definition of Low and Moderate Income Families upon which the classification is based varies according to the specific program under which the project is regulated. For projects not classified as class 4c for taxes payable in 1993 in which an application is made for the 4c classification for taxes payable in 1994 and thereafter, the tenant income limitation is 100% of the county or area median income, adjusted for family size as determined by the Department of Housing and Urban Development. However, for those in which a formal application for financing, refinancing, or insurance is received by the local, state or federal agency before July 1, 1992, the income limitation is 100% or less of the county or area median income not adjusted for family size as determined by the Department of Housing and Urban Development.

For projects built after January 1984, a governmental agency providing financing or mortgage insurance for a building qualifying for the 4c or 4d classification or other entity must annually review income records maintained by the owner of the property to determine the number of units that qualify for the 4c or 4d classification and report such to the assessor responsible assessing the property. The income records must reflect household income at the commencement of the tenancy, and thereafter, when household composition changes.

- (4) The agency administering the programs for these housing projects usually establishes rent restrictions in the management agreement between the agency and the owner of the property.

4d(2)

- (11) For taxes payable in 1992, 1993, and 1994, only, property leased by the occupant under the community lending model lease-purchase program administered by the Federal National Mortgage Association (Fannie Mae) is classified as class 4d(2) property.
- (12) The occupants income, for the 4d(2) classification, must be no greater than 60% of the county or area median income, adjusted for family size, and, for the 4d(3) classification, no greater than 80% of the county or area median income, adjusted for family size. The lease agreement must provide that a portion of the lease payment be escrowed as a nonrefundable down payment on the housing.

4d(3)

- (12) The occupants income, for the 4d(2) classification, must be no greater than 60% of the county or area median income, adjusted for family size, and, for the 4d(3) classification, no greater than 80% of the county or area median income, adjusted for family size. The lease agreement must provide that a portion of the lease payment be escrowed as a nonrefundable down payment on the housing.
- (13) Property qualifying for the 4d(3) classification is limited to one and two unit residential buildings which are unoccupied and have been abandoned and boarded for at least six months.

### LEASHOLD COOPERATIVES

- (14) Each unit occupied by a member of a qualified leasehold cooperative are assessed as homestead property. The first \$72,000 of market value has a class rate of 1% and the value exceeding \$72,000 has a class rate of 2%.
- (15) When a residential apartment building is owned by a non-profit corporation or a limited partnership which operates the property in conjunction with a cooperative association, and has received public financing, homestead treatment may be claimed by the cooperative association on behalf of the members for each dwelling unit occupied by a member of the cooperative. If the property is owned by a limited partnership, it must include as the managing general partner a non-profit organization and the limited partnership agreement must provide that the managing general partner have sufficient powers so that it materially participates in the management and control of the limited partnership.

The cooperative association must be organized under chapter 308A and all voting members of the board of directors must be resident tenants of the cooperative and must be elected by the resident tenants of the cooperative. The cooperative association must have a lease for occupancy of the property for a term of at least 20 years, which permits the cooperative, while not in default on the lease, to participate materially in the management of the property. The cooperative association must have a right under a written agreement to purchase the property if the owner proposes to sell it. If the cooperative association does not purchase the property, the owner cannot subsequently sell the property to another purchaser for a price that is less than it was offered for sale to the cooperative association unless the cooperative approves the sale.

- (16) The public financing must be from at least one of the following sources:
- a) Tax increment financing proceeds;
  - b) tax exempt government bonds;
  - c) programs under section 221(d)(3), 202, or 236, of Title II of the National Housing Act;
  - d) rental housing program funds under Section 8, or the market rate family graduated payment mortgage program funds administered by the MnHFA;
  - e) low-income housing credit under section 42 of the IRS Code;
  - f) public financing provided by a local government for the acquisition or rehabilitation of the building, including grants or loans from the federal community block grants, HOME block grant, or residential rental bonds issued under chapter 474A;
  - g) other rental housing program funds provided by the MnHFA for the acquisition or rehabilitation of the building.
- (17) A minimum of 40% of the cooperative association's members must have incomes, at the time the member acquires membership in the cooperative, at or less than 60% of the area median gross income as determined by the U.S. Secretary of Housing and Urban Development.
- (18) The governing body of the municipality must hold a public hearing and make the following findings:
- a) that the granting of the homestead treatment of the leasehold cooperative's apartment units will facilitate safe, clean, affordable housing for cooperative members that would otherwise not be available absent the homestead designation;
  - b) that the owner has presented information satisfactory to the governing body showing that the savings garnered from the homestead classification on the units will be used to reduce tenant's rents or provide a level of furnishing or maintenance not possible absent the designation;
  - c) and that it meets the requirements of section 273.124, subdivision 6, paragraphs (b), (d), and (i).

Although there are no rent restrictions expressly stated in the statute for leasehold cooperative, rent restrictions might be imposed in some of the agreements with the public financing.

