

Dane County Comprehensive Plan

Part of Background Chapter

Fall 2002

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Chapter 1: Background

B. Housing

B.1. Housing Growth. According to the U.S. Bureau of the Census, there were 180,398 housing units in Dane County in April 2000. Between 1990 and 2000, the county's year-round housing stock increased by 32,547 units, or 22%. While the City of Madison made up 51% of the county's housing stock, small cities and villages led county housing growth, accounting for about half of the 1990s housing increase (Table I-1).

Table I-1: Housing Stock by Type: 1970 - 2000

Housing Units – Dane County								
Type	April 1970		April 1980		April 1990		April 2000	
	Number	% Total	Number	% Total	Number	% Total	Number	% Total
1-Family	54,855	59.7%	72,107	57.4%	85,541	57.9%	105,903	58.7%
2-Family	8,623	9.4%	10,101	8.0%	9,743	6.6%	10,243	5.7%
3+-Family	27,050	29.4%	41,579	33.1%	50,318	34.0%	61,886	34.3%
Mobile Home	1,398	1.5%	1,824	1.5%	2,247	1.5%	2,366	1.3%
Total	91,926	100.0%	125,611	100.0%	147,849	100.0%	180,398	100.0%

Housing Units – City of Madison								
Type	April 1970		April 1980		April 1990		April 2000	
	Number	% Total	Number	% Total	Number	% Total	Number	% Total
1-Family	28,798	50.7%	34,174	49.6%	38,769	48.4%	44,565	48.2%
2-Family	5,485	9.6%	5,611	8.1%	5,605	7.0%	5,739	6.2%
3+-Family	21,959	38.7%	28,632	41.5%	34,882	43.6%	41,084	44.5%
Mobile Home	542	1.0%	532	0.8%	791	1.0%	965	1.1%
Total	56,784	100.0%	68,949	100.0%	80,047	100.0%	92,353	100.0%

Housing Units – Small Cities								
Type	April 1970		April 1980		April 1990		April 2000	
	Number	% Total	Number	% Total	Number	% Total	Number	% Total
1-Family	8,611	64.4%	12,327	53.9%	15,366	55.9%	20,519	57.6%
2-Family	1,414	10.6%	1,976	8.6%	1,733	6.3%	1,901	5.3%
3+-Family	3,225	24.1%	8,381	36.6%	10,202	37.1%	13,054	36.7%
Mobile Home	116	0.9%	186	0.8%	173	0.6%	141	0.4%
Total	13,366	100.0%	22,870	100.0%	27,474	100.0%	35,615	100.0%

Housing Units – Towns								
Type	April 1970		April 1980		April 1990		April 2000	
	Number	% Total	Number	% Total	Number	% Total	Number	% Total
1-Family	11,381	85.1%	16,521	72.2%	19,912	72.5%	24,042	67.5%
2-Family	714	5.3%	1,168	5.1%	884	3.2%	884	2.5%
3+-Family	1,316	9.8%	3,100	13.6%	3,204	11.7%	3,750	10.5%
Mobile Home	706	5.3%	776	3.4%	890	3.2%	824	2.3%
Total	14,117	105.6%	21,565	94.3%	24,890	90.6%	29,500	82.8%

Housing Units – Villages								
Type	April 1970		April 1980		April 1990		April 2000	
	Number	% Total	Number	% Total	Number	% Total	Number	% Total
1-Family	6,065	45.4%	9,085	39.7%	11,139	40.5%	16,777	47.1%
2-Family	1,010	7.6%	1,346	5.9%	1,490	5.4%	1,719	4.8%
3+-Family	550	4.1%	1,466	6.4%	2,428	8.8%	4,005	11.2%
Mobile Home	34	0.3%	330	1.4%	383	1.4%	429	1.2%
Total	7,659	57.3%	12,227	53.5%	15,440	56.2%	22,930	64.4%

Source: U.S. Bureau of the Census and Dane County Regional Planning Commission.

Since 1990 building activity in the county has been erratic. Of the past twelve years, 1991 proved to be the worst year for housing construction. Since that time, the number of permits issued continued to increase and peaked in 1993, followed by a decline until 1996 and then peaked again in 2001. In 2001, permits were issued for 2,290 single-family units and 2,320 multifamily units (the highest level for both types since 1969) and 166 two-family units. Madison made up 39% of the county's housing units but 52% of the county's multifamily units during the last 12 years (Table I-2).

The composition of the county's housing stock has been changing in recent years. Although single-family housing makes up nearly 59% of housing within the county, the popularity of multifamily housing has been increasing. "Single-family attached", which are generally associated with condominiums, are becoming an increasing portion of single-family housing. Although classified as single-family, most people consider this housing type as multi-family. Nearly half of all housing units produced since 1990 were multifamily units. Over one-half of all multifamily housing construction occurred in the City of Madison. Single-family housing is predominant outside the City of Madison.

Table I-2: Housing Construction by Type: 1990–2001

Housing Units Authorized by Building Permit									
Year	Dane County			City of Madison			Balance of Dane County		
	1-Family	2-Family	Total	1-Family	2-Family	Total	1-Family	2-Family	Total
1990	1,944	2,100	4,044	547	896	1,443	1,397	1,204	2,601
1991	1,629	1,201	2,830	448	499	947	1,181	702	1,883
1992	2,125	1,191	3,316	540	664	1,204	1,585	527	2,112
1993	2,120	1,902	4,022	503	1,176	1,679	1,617	726	2,343
1994	1,744	1,941	3,685	364	1,105	1,469	1,380	836	2,216
1995	1,422	1,995	3,417	356	1,034	1,390	1,066	961	2,027
1996	1,700	1,345	3,045	459	542	1,001	1,241	803	2,044
1997	1,522	1,577	3,099	359	692	1,051	1,163	885	2,048
1998	1,826	1,915	3,741	401	972	1,373	1,425	943	2,368
1999	1,944	2,100	4,044	547	896	1,443	1,397	1,204	2,601
2000	2,030	2,083	4,113	633	1,145	1,778	1,397	938	2,335
2001	2,290	2,486	4,776	824	1,666	2,490	1,466	820	2,286
Total	22,296	21,836	44,132	5,981	11,287	17,268	16,315	10,549	26,864
Avg.	1,858	1,820	3,678	498	941	1,439	1,360	879	2,239
% Total	50.5%	49.5%	100.0%	34.6%	65.4%	100.0%	60.7%	39.3%	100.0%

Source: U.S. Bureau of the Census and Dane County Regional Planning Commission.

B.2. Housing Tenure. According to the 2000 Census, of the total housing units in Dane County, 55% were owner-occupied, 41% were renter-occupied and 4% were vacant. In the City of Madison, 46% were owner-occupied and 50% were renter-occupied (see Table I-3). Outside the City of Madison nearly two-thirds of the households are owner-occupied.

Table I-3: Housing Units by Tenure: 1970 - 2000

Dane County Housing Units						
Year	Owner-Occupied		Renter-Occupied		Vacant	
	Number	%Total	Number	%Total	Number	%Total
1970	49,941	54.3%	38,633	42.0%	3,352	3.6%
1980	67,152	53.5%	53,449	42.6%	5,010	4.0%
1990	78,848	53.3%	63,938	43.2%	5,065	3.4%
2000	99,895	55.4%	73,589	40.8%	6,914	3.8%

City of Madison Housing Units						
Year	Owner-Occupied		Renter-Occupied		Vacant	
	Number	%Total	Number	%Total	Number	%Total
1970	27,059	47.7%	27,960	49.2%	1,765	3.1%
1980	32,343	46.9%	34,108	49.5%	2,498	3.6%
1990	36,332	45.4%	41,029	51.3%	2,686	3.4%
2000	42,496	46.0%	46,523	50.4%	3,375	3.7%

Balance of Dane County Housing Units						
Year	Owner-Occupied		Renter-Occupied		Vacant	
	Number	%Total	Number	%Total	Number	%Total
1970	22,882	65.1%	10,673	30.4%	1,587	4.5%
1980	34,809	61.4%	19,341	34.1%	2,512	4.4%
1990	42,516	62.7%	22,909	33.8%	2,379	3.5%
2000	57,399	65.2%	27,066	30.8%	3,539	4.0%

Source: U.S. Bureau of the Census and Dane County Regional Planning Commission.

B.3. Housing Costs as a Percentage of Household Income. The U.S. Bureau of the Census identifies housing problems experienced by households. These problems include the cost of housing exceeding 30% of a household's income. Nearly 40% of the County's renters paid more than 30% of their household income to housing costs, but only 20% of owners paid 30% or more. The age of housing and increased maintenance is also a housing problem (see Table I-4).

Table I-4: Housing Costs as a Percentage of Household Income by Tenure: 1999

	Dane County Households				City of Madison Households				Madison's % of County
	Owner-Occupied		Renter-Occupied		Owner-Occupied		Renter-Occupied		
	Number	% Total	Number	% Total	Number	% Total	Number	% Total	Rental Units
Less than 15%	26,234	30.7%	10,984	15.1%	11,723	31.6%	6,066	13.1%	55.2%
15 to 19.9	16,033	18.8%	11,466	15.8%	6,933	18.7%	6,387	13.8%	55.7%
20 to 24.9	15,227	17.8%	11,371	15.6%	6,317	17.0%	6,917	14.9%	60.8%
25 to 29.9	10,603	12.4%	8,579	11.8%	4,366	11.8%	5,275	11.4%	61.5%
30 to 34.9	6,004	7.0%	5,641	7.8%	2,846	7.7%	3,679	7.9%	65.2%
35% or more	11,045	12.9%	22,305	30.7%	4,848	13.1%	16,523	35.6%	74.1%

Source: U.S. Bureau of the Census, U.S. Department of Housing and Urban Development, and Dane County Regional Planning Commission.

B.4. Age of the Housing Stock. The overall age of a housing stock must be considered when determining housing quality. Generally, older housing will require more repairs and upgrading than newer housing.

Census Bureau figures indicate the number of units, still in existence in 2000, built during specific periods. In 2000, about one-third of all housing units in the county were more than 40 years old, and about one-fifth of the housing was built between 1990 and 2000 (Table I-5).

In Madison, nearly 40% of all housing units are more than 40 years old and only 16% of its housing stock was built in the 1990s. Although Madison has only half of the County's housing, it accounts for more than 60% of housing built before 1960.

Table I-5: Age of Year-Round Occupied Housing Stock: 1990

Year Built	Dane County		City of Madison		% County Housing Units in City
	Number	Percent of Total	Number	Percent of Total	
1990 – March 2000	38,083	21.1%	14,824	16.1%	38.9%
1980 – 1989	23,560	13.1%	10,985	11.9%	46.6%
1970 - 1979	36,115	20.0%	16,351	17.6%	45.0%
1960 - 1969	26,265	14.6%	15,177	16.4%	57.8%
1959 or earlier	56,375	31.2%	35,116	38.0%	62.3%
Total	180,398	100.0%	92,353	100.0%	51.2%

Source: U.S. Bureau of the Census and Dane County Regional Planning Commission.

B.5. Housing Vacancy. For a housing market to operate efficiently, it must have an adequate supply of available housing units for sale or rent. The market's supply of available housing units must be sufficient to allow for the formation of new households, to allow for in-migration and to provide opportunities for changing household size and status. The available vacancy rate of a housing market is a good indication of the adequacy of the housing supply.

According to HUD, an overall available vacancy rate of 3% (1.5% for the owned portion of a housing stock and 5% for the rented portion) allows for an adequate housing choice among customers. The overall available vacancy rate for the county was 3.8% in 2000. The owner-vacancy rate for the county was 1.0%, while the renter-available vacancy rate was 4.2%. In Madison, the overall vacancy rate was lower (3.6%). The owner-available vacancy rate for the city was 0.8%, while the renter-available vacancy rate was 3.9%. Since Dane County and Madison both had lower vacancy rates or a tighter housing market, it may have contributed to higher housing costs.

B.6. Housing Value and Rental Rates. According to the Census Bureau, the median market value of owner-occupied homes in Dane County in 1980 was \$59,500. In 1990, the median market value of owner-occupied homes stood at \$78,400, representing a 32% increase. By 2000, the median market value of owner-occupied units was \$146,900, an 85% increase from 1990. (See Table I-6). The median value of owner-occupied housing is more expensive outside Madison.

Monthly rent includes the monthly cost of utilities and fuel. As shown in Table I-7, the median monthly rent for renter-occupied housing units in Dane County increased from \$225 in 1980 to \$423 in 1990, an increase of 88%. By 2000 the median rent increased to \$641, a 52% increase from 1990 (See Table I-7). Median monthly rents are higher in the City of Madison than outside Madison.

Table I-6: Median Value of Owner-Occupied Housing Units: 1980 - 2000

	Median Value of Owner-Occupied Units			Change 1980–1990		Change 1990–2000	
	1980	1990	2000	Dollars	Percent	Dollars	Percent
Dane County	\$59,500	\$78,400	\$146,900	\$18,900	31.8%	\$68,500	87.4%
City of Madison	\$57,900	\$75,200	\$139,300	\$17,300	29.9%	\$64,100	85.2%

Source: U.S. Bureau of the Census, and Dane County Regional Planning Commission.

Table I-7: Median Monthly Rental Rates of Renter-Occupied Housing Units: 1980 - 2000

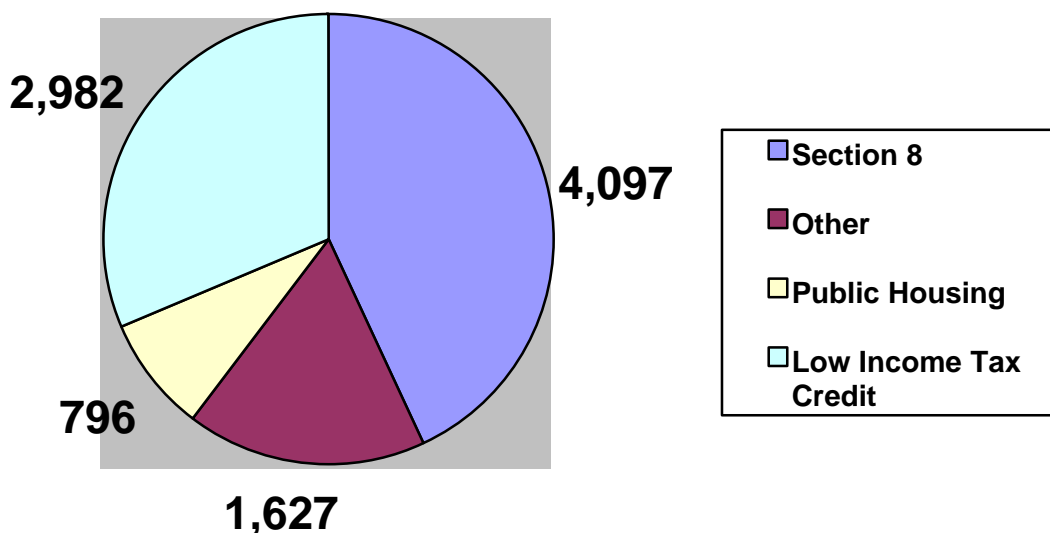
	Median Monthly Rates of Renter-Occupied Units			Change 1980–1990		Change 1990-2000	
	1980	1990	2000	Dollars	Percent	Dollars	Percent
Dane County	\$225	\$423	\$641	\$198	88%	\$218	51.5%
City of Madison	\$223	\$430	\$644	\$207	93%	\$214	49.8%

Source: U.S. Bureau of the Census, and Dane County Regional Planning Commission.

B.7. Assisted Rental Housing Units. The U.S. Department of Housing and Urban Development (HUD) is primarily responsible for providing rental housing assistance to lower-income households. The primary state provider is the Wisconsin Housing and Economic Development Administration (WHEDA). Together these agencies offer a variety of assistance to stimulate the production, rehabilitation, and securing of multifamily housing for lower-income households.

The number of units designated for affordable housing has increased dramatically over the last three years. However, three-fourths of the increase was for the Low Income Tax Credit (Section 42) program, which serves moderate income families, not low income.

Figure I-1: 2001 Dane County Affordable/Low Income Housing Stock



Total Units in 2002: 9,502
 Total Units in 1997: 8,623
 Percentage Change: 10.2%

As of April 2002, there were 9,502 assisted rental housing units in Dane County – 13% of all rental housing units in the county. A majority of the units (57%) are for family households. Two-thirds of the assisted units provided were Section 8, which are rent payments that does not create new housing (Table I-8).

Table I-8: Assisted Rental Housing in Dane County 2002

	Family	Elderly	Disabled	2002 Total	1998 Total
Federally Assisted Rental	3,693	2,606	221	6,520	6,311
Section 8 ¹				4,097	3,881
Public Housing ²				796	903
Affordable Housing Tax Credits³	1,730	835	417	2,982	2,312
Total	5,423	3,441	638	9,502	8,623
Percent of Total	57%	36%	7%	100%	-

Program Abbreviation, Name and Explanation

¹Section 8: New Construction and Substantial Rehabilitation provides rent subsidy to owner for the difference between tenant's income and rent.

¹Section 8: Existing, Voucher and Moderate Rehabilitation; existing units are selected by tenant and HUD.

²PHA: Public Housing Authority (CDA & DCHA) owned and operated HUD assisted for debt service and operations.

³LITC: Low Income Tax Credit program allows investors to receive IRS credits for providing affordable housing.

Source: Wisconsin Housing and Economic Development Authority, and Dane County Regional Planning Commission

F. Economy

F.1. Commuting to Work. As shown in Table I-9A, about three-fourths of Dane County's workers drive alone to work. Although transit use increased by seven percent, carpooling declined by nine percent from 1990 to 2000. Average travel time to work increased by ten percent to about 20 minutes during the past ten years. Commuting times are slightly shorter in Madison and slightly longer outside Madison.

Table I-9A: Commuting to Work: 1990-2000*

Workers by Mode of Transportation	Dane County				Change	
	1990		2000		1990-2000	
	Number	%Total	Number	%Total	Number	Percent
Car, truck, or van—drove alone	140,013	68.5%	179,816	74.1%	39,803	28.4%
Car, truck, or van—carpooled	25,550	12.5	23,162	9.5	-2,388	-9.3
Public transportation (inc. taxi)	9,402	4.6	10,066	4.2	664	7.1
Other means	5,314	2.6	5,292	2.2	-22	-0.4
Walked or worked at home	24,120	11.8	24,206	10.0	86	0.4
Total	204,399	100.0%	242,542	100.0%	38,143	18.7%
Mean travel time to work (min.)	18.1		19.9		1.8	9.9%

Workers by Mode of Transportation	City of Madison				Change	
	1990		2000		1990-2000	
	Number	%Total	Number	%Total	Number	Percent
Car, truck, or van—drove alone	64,787	61.2%	78,700	65.7%	13,913	21.5%
Car, truck, or van—carpooled	12,275	11.6%	11,477	9.6%	-798	-6.5%
Public transportation (inc. taxi)	8,131	7.7%	8,579	7.2%	448	5.5%
Other means	4,403	4.2%	4,521	3.8%	118	2.7%
Walked or worked at home	16,291	15.4%	16,430	13.7%	139	0.9%
Total	105,887	100.0%	119,707	100.0%	13,820	13.1%
Mean travel time to work (min.)	16.9		18.3		1.4	8.3

Workers by Mode of Transportation	Balance of Dane County				Change	
	1990		2000		1990-2000	
	Number	%Total	Number	%Total	Number	Percent
Car, truck, or van—drove alone	75,226	76.4%	101,116	82.3%	25,890	34.4%
Car, truck, or van—carpooled	13,275	13.5%	11,685	9.5%	-1,590	-12.0%
Public transportation (inc. taxi)	1,271	1.3%	1,487	1.2%	216	17.0%
Other means	911	0.9%	771	0.6%	-140	-15.4%
Walked or worked at home	7,829	7.9%	7,776	6.3%	-53	-0.7%
Total	98,512	100.0%	122,835	100.0%	24,323	24.7%
Mean travel time to work (min.)						

Table I-9B: Place of Work: 2000*

Workers by Place of Work	Dane County		City of Madison		Balance of Dane County	
	Number	%Total	Number	%Total	Number	Percent
Total Workers	242,542	100.0%	119,707	100.0%	122,835	100.0%
Worked in Wisconsin	241,180	99.4%	119,010	99.4%	122,170	99.5%
Worked in Dane County	229,385	94.6%	115,068	96.1%	114,317	93.1%
Living in a Place	200,596	82.7%	119,707	100.0%	80,889	65.9%
Worked in a Place of Residence	111,634	46.0%	93,887	78.4%	17,747	14.4%

*All employed civilian persons age 16 and older

Source: U.S. Bureau of the Census and Dane County Regional Planning Commission

F.2. Place of Work. As shown in Table I-9B, over 99% of Dane County workers work in Wisconsin, and nearly 95% work in Dane County. Most (83%) of Dane County workers live in a place (a city, village, or census-designated place, i.e. Windsor). Over three-fourths of the workers living in the City of Madison work in Madison. Outside of Madison, only 14% of workers that reside in a place work in their place of residence.

F.3. School Enrollment and Educational Attainment. As shown in Table I-10, school enrollment greatly increased during the 1990s, reflecting the “baby boomlet” population under age 19. Conversely, the relatively small “X-generation” population (age 19-36) contributed to a decline in college enrollment. K - 12 enrollment increased twice as fast outside the City of Madison than in the City.

The percent of persons 25 years and older that have graduated from high school or college is used to measure the educational attainment of the area. The percent of Dane County population that graduated from high school increased to 92.2% in 2000, compared to 85.1% for Wisconsin. The percent of Dane County population that has a bachelor’s degree or higher increased to 40.6% in 2000, compared to 22.4% for Wisconsin.

Table I-10: School Enrollment & Educational Attainment: 1990-2000*

Dane County	1990		2000		Change 1990-2000	
	Number	%Total	Number	%Total	Number	Percent
Preschool & Kindergarten	7,531	6.5%	12,551	9.5%	5,020	66.7%
Elementary or high school (grades 1-12)	51,989	45.0%	66,300	50.0%	14,311	27.5%
College or graduate school	56,075	48.5%	53,774	40.5%	-2,301	-4.1%
TOTAL	115,595	100.0	132,625	100.0	17,030	14.7%
Persons 25 years & over						
Percent High School graduates		88.9%		92.2%		
Percent Bachelor’s degree or higher		34.2%		40.6%		
City of Madison	1990		2000		Change 1990-2000	
	Number	%Total	Number	%Total	Number	Percent
Preschool & Kindergarten	3,744	5.4%	5,080	7.0%	1,336	35.7%
Elementary or high school (grades 1-12)	21,066	30.3%	24,706	33.8%	3,640	17.3%
College or graduate school	44,601	64.3%	43,299	59.2%	-1,302	-2.9%
Total	69,411	100.0%	73,085	100.0%	3,674	5.3%
Persons 25 years & over						
Percent High School graduates		90.6%		92.4%		
Percent Bachelor’s degree or higher		42.0%		48.2%		
Balance of Dane County	1990		2000		Change 1990-2000	
	Number	%Total	Number	%Total	Number	Percent
Preschool & Kindergarten	3,787	8.2%	7,471	12.5%	3,684	97.3%
Elementary or high school (grades 1-12)	30,923	67.0%	41,594	69.9%	10,671	34.5%
College or graduate school	11,474	24.8%	10,475	17.6%	-999	-8.7%
Total	46,184	100.0%	59,540	100.0%	13,356	28.9%

*population 3 years and over

Source: U.S. Bureau of the Census and Dane County Regional Planning Commission

F.4. Employment. As of 2000, Dane County had a civilian labor force of about 256,000. Of that total, 246,069 were employed; 3.8% were unemployed. The employed labor force is largely employed in what are typically referred to as “white collar” occupations. In 2000, 83% of employees (204,000) worked in professional, technical or service-related positions. This compares to 70% statewide employed in the same positions. Dane County's higher percentage can be partially attributed to the presence of Wisconsin's state capital and major university (see Table I-11). From 1980 to 2000, management, professional and technical jobs increased by 86%, while farming jobs declined by 80%.

Table I-11: Occupation of the Employed: 1980 – 2000

Dane County	Employed Persons Age 16 and Older							
	1980		1990		2000		Change 1980–2000	
	Number	% Total	Number	% Total	Change	% Total	Change	Percent
Management, professional & technical	57,602	34.0%	79,158	38.0%	107,347	43.6%	49,745	86.4%
Service Occupations	24,661	14.5%	27,110	13.0%	31,362	12.7%	6,701	27.2%
Sales and office occupations	51,063	30.1%	60,792	29.2%	65,285	26.5%	14,222	27.9%
Farming, fishery & forestry	4,516	2.7%	4,541	2.2%	891	0.4%	-3,625	-80.3%
“Blue Collar” occupations	31,816	18.8%	36,468	17.5%	41,179	16.7%	9,363	29.4%
Total	169,658	100.0%	208,069	100.0%	246,064	100.0%	76,406	45.0%
Unemployment Rate	4.8%		3.2%		3.8%			
City of Madison	1980		1990		2000		change 1980-2000	
	Number	% Total	Number	% Total	Change	% Total	Change	Percent
	Management, professional & technical	34,857	38.2%	45,781	42.3%	57,139	46.9%	22,282
Service Occupations	14,659	16.1%	15,827	14.6%	17,217	14.1%	2,558	17.5%
Sales and office occupations	27,995	30.7%	31,204	28.8%	31,276	25.7%	3,281	11.7%
Farming, fishery & forestry	517	0.6%	966	0.9%	243	0.2%	-274	-53.0%
“Blue Collar” occupations	13,147	14.4%	14,506	13.4%	15,953	13.1%	2,806	21.3%
Total	91,175	100.0%	108,284	100.0%	121,828	100.0%	30,653	33.6%
Balance of Dane County	1980		1990		2000		change 1980-2000	
	Number	% Total	Number	% Total	Change	% Total	Change	Percent
	Management, professional & technical	22,745	29.0%	33,377	33.4%	50,208	40.4%	27,463
Service Occupations	10,002	12.7%	11,283	11.3%	14,145	11.4%	4,143	41.4%
Sales and office occupations	23,068	29.4%	29,588	29.7%	34,009	27.4%	10,941	47.4%
Farming, fishery & forestry	3,999	5.1%	3,575	3.6%	648	0.5%	-3,351	-83.8%
“Blue Collar” occupations	18,669	23.8%	21,962	22.0%	25,226	20.3%	6,557	35.1%
Total	78,483	100.0%	99,785	100.0%	124,236	100.0%	45,753	58.3%

Source: U.S. Bureau of the Census and Dane County Regional Planning Commission

As shown in Table I-12, two-thirds of Dane County's employed residents work in the trade or service sectors of the economy. Manufacturing employment accounts for eleven percent of all the jobs held by Dane County workers. Since 1980, the employed labor force has increased 45%, while jobs created in Dane County increased by 70% (not shown below). There is a major difference between the industry type of the employed persons inside and outside the City of Madison. Madison workers account for 2/3rd of Dane County's service workers, while non-Madison workers account for more than 2/3rd of its retail and wholesale trade workers.

Table I-12: Industry of Employed: 1980 – 2000*

Dane County	Annual Average							
	1980		1990		2000		Change 1980-2000	
	Number	%Total	Number	%Total	Number	%Total	Number	Percent
Construction & Mining	12,435	7.3%	14,603	7.0%	15,572	6.3%	3,137	25.2%
Manufacturing	19,406	11.4%	25,024	12.0%	26,418	10.7%	7,012	36.1%
Transportation & Public Utilities	8,839	5.2%	11,100	5.3%	15,988	6.5%	7,149	80.9%
Wholesale & Retail Trade	33,717	19.9%	42,232	20.3	51,092	20.8%	17,375	51.5%
Finance, Insurance & Real Estate	13,451	7.9%	18,798	9.0%	22,755	9.2%	9,304	69.2%
Services including Public Administration	81,810	48.2%	96,411	46.3%	114,239	46.4%	32,429	39.6%
Total	169,658	100.0%	208,168	100.0%	246,064	100.0%	76,406	45.0%
City of Madison	1980		1990		2000		Change 1980-2000	
	Number	%Total	Number	%Total	Number	%Total	Number	Percent
	Construction & Mining	3,129	3.4%	3,712	3.4%	4,295	3.5%	1,166
Manufacturing	8,179	9.0%	10,365	9.6%	10,221	8.4%	2,042	25.0%
Transportation & Public Utilities	4,187	4.6%	5,297	4.9%	7,775	6.4%	3,588	85.7%
Wholesale & Retail Trade	18,311	20.1%	22,254	20.6%	15,741	12.9%	-2,570	-14.0%
Finance, Insurance & Real Estate	6,967	7.6%	8,795	8.1%	9,785	8.0%	2,818	40.4%
Services including Public Administration	50,402	55.3%	57,861	53.4%	74,011	60.8%	23,609	46.8%
Total	91,175	100.0%	108,284	100.0%	121,828	100.0%	30,653	33.6
Balance of County	1980		1990		2000		Change 1980-2000	
	Number	%Total	Number	%Total	Number	%Total	Number	Percent
	Construction & Mining	9,306	11.9%	10,891	10.9%	11,277	9.1%	1,971
Manufacturing	11,227	14.3%	14,659	14.7%	16,197	13.0%	4,970	44.3%
Transportation & Public Utilities	4,652	5.9%	5,803	5.8%	8,213	6.6%	3,561	76.5%
Wholesale & Retail Trade	15,406	19.6%	19,978	20.0%	35,351	28.5%	19,945	129.5%
Finance, Insurance & Real Estate	6,484	8.3%	10,003	10.0%	12,970	10.4%	6,486	100.0%
Services including Public Administration	31,408	40.0%	38,550	38.6%	40,228	32.4%	8,820	28.1%
Total	78,483	100.0%	99,884	100.0%	124,236	100.0%	45,753	58.3%

*Employed Persons Age 16 and Older

Source: U.S. Bureau of the Census and Dane County Regional Planning Commission

Since 1980, the number of jobs in Dane County has surpassed the size of its employed labor force, spurring an increase in inter-county commuting into Dane County. In 1990, nearly 4,400 more jobs (2% of the County's workforce) were located in the County than there were workers living in the County. By 2000, that number had grown to 24,800 (10%) creating an employee deficit worsened by the fact that an additional 16,700 workers (5.4%) worked outside Dane County. All together, about 41,500 workers commute into Dane County (see Tables I-12 and I-12A).

Most workers commuting into Dane County work in services, government, retail trade or manufacturing. Most of Dane County workers that commute out of Dane County work in transportation and public utilities or construction.

The largest employment sector and the greatest number of businesses are in services. Government is the second largest employment sector, followed by trade. From 1980 to 2000, services were also the fastest growing employment sector, followed by construction and trade as shown in Table I-12B.

Among Dane County's 12,126 business employers, service businesses are the most numerous followed by trade and construction, as shown in Table I-12B. In 2000, the average number of employees per establishment in Dane County was 22.3. The employer type with the highest average of employees per establishment was in manufacturing, followed by transportation and utilities and finance, insurance and real estate (see Table I-12C).

Table I-12D compares average annual wages by industry type from 1980 to 2000. The average wage increased by 142% to \$32,233 in 2000, although when factoring inflation increases (in constant 2000 dollars) wages increased by only 16%. The highest average annual wages in 2000 was in finance, insurance and real estate, followed by construction and manufacturing. The greatest increase in wages were realized in the finance, insurance and real estate sector, while the construction and manufacturing sectors experienced the slowest wage growth.

Table I-12A: Employed Working in Dane County by Industry: 1980 – 2000

Industry Type	Employment Covered by Unemployment Compensation							
	March 1980		March 1990		March 2000		Change 1980-2000	
	Number	%Total	Number	%Total	Number	%Total	Number	Percent
Construction & Mining	5,983	3.5%	7,362	3.5%	13,023	4.8%	7,040	117.7%
Manufacturing	20,052	11.9%	25,056	11.8%	31,438	11.6%	11,386	56.8%
Transportation & Public Utilities	5,961	3.5%	7,840	3.7%	9,812	3.6%	3,851	64.6%
Wholesale & Retail Trade	33,223	19.6%	47,732	22.5%	59,523	22.0%	26,300	79.2%
Finance, Insurance & Real Estate	12,277	7.3%	18,449	8.7%	21,863	8.1%	9,586	78.1%
Services	29,316	17.3%	45,542	21.4%	69,731	25.7%	40,415	137.9%
Government	62,331	36.9%	60,515	28.5%	65,489	24.2%	3,158	5.1%
State Government	46,808	27.7%	41,463	19.5%	40,337	14.9%	-6,471	-13.8%
Local Government	12,652	7.5%	15,987	7.5%	20,832	7.7%	8,180	64.7%
County Total	169,143	100.0	212,496	100.0%	270,879	100.0%	101,736	60.1%

Table I-12B: Employers in Dane County by Industry: 1980 – 2000

Industry Type	Number of Establishments							
	March 1980		March 1990		March 2000		Change 1980-2000	
	Number	%Total	Number	%Total	Number	%Total	Number	Percent
Construction & Mining	941	13.6%	931	10.7%	1,286	10.6%	345	36.7%
Manufacturing	415	6.0%	551	6.4%	693	5.7%	278	67.0%
Transportation & Public Utilities	243	3.5%	307	3.5%	413	3.4%	170	70.0%
Wholesale & Retail Trade	2,259	32.7%	2,813	32.5%	3,292	27.1%	1,033	45.7%
Finance, Insurance & Real Estate	743	10.7%	866	10.0%	1,091	9.0%	348	46.8%
Services	2,314	33.5%	3,198	36.9%	5,351	44.1%	3,037	131.2%
County Total	6,915	100.0%	8,666	100.0%	12,126	100.0%	5,211	75.4%

Table I-12C: Employers per Establishment in Dane County: 1980 – 2000

Industry Type	Employees per Establishment		
	March 1980	March 1990	March 2000
	Number	Number	Number
Construction & Mining	6.4	7.9	10.1
Manufacturing	48.3	45.5	45.4
Transportation & Public Utilities	24.5	25.5	23.8
Wholesale & Retail Trade	14.7	17.0	18.1
Finance, Insurance & Real Estate	16.5	21.3	20.0
Services	12.7	14.2	13.0
County Total	24.5	24.5	22.3

Table I-12D: Average Annual Wages: 1980 – 2000

Industry Type	Average Annual Wages							
	March 1980		March 1990		March 2000		Wage Change 1980-2000	
	1980	In 2000 \$	1990	In 2000 \$	2000	In 2000 \$	In 2000 dollars	
Construction & Mining	\$17,760	\$37,155	\$25,715	\$33,880	\$39,724	\$39,724	\$2,569	6.9%
Manufacturing	\$17,520	\$36,653	\$27,101	\$35,706	\$39,392	\$39,392	\$2,739	7.5%
Transportation & Public Utilities	\$16,749	\$35,040	\$26,600	\$35,046	\$41,486	\$41,486	\$6,446	18.4%
Wholesale & Retail Trade	\$8,909	\$18,638	\$13,486	\$17,768	\$22,029	\$22,029	\$3,391	18.2%
Finance, Insurance & Real Estate	\$12,911	\$27,010	\$23,422	\$30,859	\$42,546	\$42,546	\$15,536	57.5%
Services	\$10,413	\$21,785	\$18,587	\$24,489	\$28,618	\$28,618	\$6,833	31.4%
Government	\$15,014	\$31,410	\$25,065	\$33,024	\$35,847	\$35,847	\$4,437	14.1%
County Total	\$13,324	\$27,874	\$21,241	\$27,986	\$32,233	\$32,233	\$4,359	15.6%

Source: Wisconsin Department of Workforce Development and Dane County Regional Planning Commission

F.5. Household Income. Household income is a prime determinant in the type of housing a household selects. In 1989, Dane County had a median household income of \$32,703. The Bureau of the Census showed a 1999 median household income of \$49,223 for Dane County, or a 50% increase from 1989 to 1999 (see Tables I-13 through I-16). Household income grew at a slower rate in the 1990s than the 1980s.

Table I-13: Median Household Income 1979-1999

	Median Household Income			1979-1989		1989-1999	
	1979	1989	1999	Number	Percent	Number	Percent
Dane County	\$18,309	\$32,703	\$49,223	\$14,394	78.6%	\$16,520	50.5%
City of Madison	\$16,510	\$29,420	\$41,941	\$12,910	78.2%	\$12,521	42.6%

Source: U.S. Bureau of the Census and Dane County Regional Planning Commission

Table I-14A provides a comparison of household income distribution between 1989 and 1999. The 36% of households with the lowest incomes were under \$25,000 compared to only 22% in 1999. Nine percent of households with the highest incomes were over \$75,000 compared to 26% in 1999. Table I-14B compares households by income range in Dane County to households in Madison.

Table I-14A: Distribution of Households by Income: 1989 - 1999

Dane County: 1989			Dane County: 1999		
Income Range	Number of Households	Percent of Total	Percent of Total	Number of Households	Income Range
Less than \$15,000	27,304	19.2%	11.2%	19,460	Less than \$15,000
\$15,000-\$24,999	24,516	17.2%	10.7%	18,556	\$15,000-\$24,999
\$25,000-\$34,999	23,941	16.8%	11.8%	20,548	\$25,000-\$34,999
\$35,000-\$49,999	29,577	20.8%	17.1%	29,664	\$35,000-\$49,999
\$50,000-\$74,999	24,150	17.0%	23.4%	40,590	\$50,000-\$74,999
\$75,000-\$149,999	10,770	7.6%	21.5%	37,459	\$75,000-\$149,999
\$150,000 or More	1,973	1.4%	4.3%	7,433	\$150,000 or More
Total	142,231	100.0%	100.0%	173,710	Total

Table I-14B: Distribution of Households by Income: 1999

Dane County			City of Madison		
Income Range	Number of Households	Percent of Total	Percent of Total	Number of Households	Percent of County Total
Less than \$15,000	19,460	11.2%	15.8%	13,930	71.6%
\$15,001-\$24,999	18,556	10.7%	12.1%	10,696	57.6%
\$25,000-\$34,999	20,548	11.8%	13.1%	11,561	56.3%
\$35,000-\$49,999	29,664	17.1%	18.1%	15,934	53.7%
\$50,000-\$74,999	40,590	23.4%	20.8%	18,338	45.2%
\$75,000-\$99,999	22,232	12.8%	9.4%	8,271	37.2%
\$100,000-\$149,999	15,227	8.8%	7.4%	6,542	43.0%
\$150,000 or More	7,433	4.3%	3.4%	2,995	40.3%
Total	173,710	100.0%	100.0%	88,267	50.8%
Median HH Income (MHI)		\$49,223	\$41,941		
60%[^] MHI	47,332	\$29,534	\$25,165	24,791	
80% MHI	67,222	\$39,378	\$33,553	33,179	

Source: U.S. Bureau of the Census, and Dane County Regional Planning Commission.

Table I-15 details income by type. About 88% of households have income from earnings; 18% have social security income and 13% have retirement income.

Table I-15: Income by Type 1989-1999

Dane County	1989		1999			Income Type
	Mean Income	Number of Households	Mean Income	Number of Households	Percent of Total	
Earnings	\$36,086	121,137	\$56,650	152,570	87.8%	Earnings
	N/A	N/A	\$6,493	4,471	2.6%	Supplemental Security
Social Security	\$8,488	26,788	\$12,474	31,281	18.0%	Social Security
Public Assistance	\$4,327	6,496	\$2,362	2,195	1.3%	Public Assistance
Retirement	\$9,654	17,008	\$21,495	21,892	12.6%	Retirement

City of Madison	1989		1999			Income Type
	Mean Income	Number of Households	Mean Income	Number of Households	Percent of Total	
Earnings	\$35,209	65,815	\$49,502	77,431	86.7%	Earnings
	N/A	N/A	\$6,262	2,607	2.9%	Supplemental Security
Social Security	\$8,610	14,110	\$12,426	15,788	17.7%	Social Security
Public Assistance	\$4,241	3,957	\$2,171	1,384	1.6%	Public Assistance
Retirement	\$10,666	9,582	\$22,280	11,299	12.7%	Retirement

Source: U.S. Bureau of the Census, and Dane County Regional Planning Commission.

Table I-16 shows a comparison of persons below the poverty level in 1989 and 1999. The percent of population living below the poverty level decreased during the 1990s. Although the number of families below the poverty level decreased, individuals below the poverty level actually increased. About 60% of Dane County's families in poverty live in the City of Madison, and 75% of Dane County's individuals in poverty live in Madison.

Table I-16: Poverty Status 1989-1999

Dane County	1989		1999		1989-1999	
	Below Poverty Level		Below Poverty Level		Change	
	Number	Percent of Total	Number	Percent of Total	Number	Percent
Families	4,230	4.8%	4,028	4.0%	-202	-4.8%
With children under 18 years	3,392	7.6%	3,202	6.1%	-190	-5.6%
With children under 5 years	2,202	11.1%	1,719	8.4%	-483	-21.9%
Families w/female householder	2,363	21.2%	2,062	16.2%	-301	-12.7%
With children under 18 years	2,218	30.2%	1,889	20.7%	-329	-14.8%
With children under 5 years	1,369	53.8%	986	34.8%	-383	-28.0%
Individuals	36,889	10.5%	38,815	9.4%	1,926	5.2%
18 years and over	29,696	11.0%	31,755	10.0%	2,059	6.9%
65 years and over	1,579	5.0%	1,828	4.8%	249	15.8%
Children under 18 years	6,839	8.4%	6,735	7.2%	-104	-1.5%
Children 5 to 17 years	4,137	7.4%	4,554	6.6%	417	10.1%
Unrelated individuals 15 years +	23,592	27.4%	25,731	23.5%	2,139	9.1%
City of Madison	1989		1999		1989-1999	
	Below Poverty Level		Below Poverty Level		Change	
	Number	Percent of Total	Number	Percent of Total	Number	Percent
Families	2,673	6.6%	2,477	5.8%	-196	-7.3%
With children under 18 years	2,184	11.2%	1,918	9.3%	-266	-12.2%
With children under 5 years	1,496	16.3%	993	11.8%	-503	-33.6%
Families w/female householder	1,508	24.6%	1,230	18.6%	-278	-18.4%
With children under 18 years	1,431	35.7%	1,099	24.7%	-332	-23.2%
With children under 5 years	915	56.2%	573	39.3%	-342	-37.4%
Individuals	28,640	16.1%	29,287	15.0%	647	2.3%
18 years and over	24,039	16.7%	25,136	15.7%	1,097	4.6%
65 years and over	799	4.8%	812	4.5%	13	1.6%
Children under 18 years	4,411	12.7%	4,045	11.4%	-366	-8.3%
Children 5 to 17 years	2,575	11.2%	2,704	10.8%	129	5.0%
Unrelated individuals 15 years +	20,211	33.8%	21,291	29.1%	1,080	5.3%

Source: U.S. Bureau of the Census and Dane County Regional Planning Commission

G. Population

G.1. Population Growth. As shown in Table I-17, Dane County's growth rate has increased each decade since 1970. Dane County's population grew by 12% during the 1970's, 14% through the 1980's, and more than 16% during the 1990's.

Since 1970, villages have grown the fastest (140%) followed by small cities (109%). Since 1980, towns grew by 20%, while the City of Madison grew by 22%.

Table I-17: Population 1970 - 2000

	Total Population				Percent Change per Decade		
	1970	1980	1990	2000	1970-1980	1980-1990	1990-2000
Dane County	290,272	323,545	367,085	426,526	1.1%	1.3%	1.6%
City of Madison	173,258	170,616	190,766	208,054	-0.2%	1.2%	0.9%
% of County	59.7%	52.7%	52.0%	48.8%	—	—	—
Small Cities	40,286	56,486	67,582	84,071	40.2%	19.6%	24.4%
% of County	13.9%	17.5%	18.4%	19.7%	—	—	—
Towns	51,938	62,503	66,989	74,775	20.3%	7.2%	11.6%
% of County	17.9%	19.3%	18.2%	17.5%	—	—	—
Villages	24,790	33,940	41,748	59,626	36.9%	23.0%	42.8%
% of County	8.5%	10.5%	11.4%	14.0%	—	—	—

Source: U.S. Bureau of the Census, Wisconsin Department of Administration, and Dane County Regional Planning Commission.

G.2. Age Composition. The age composition of the county's population has changed significantly since 1990. The changes are: 1) a slight decrease in the number of preschoolers; 2) a decrease in the number of "X-generation" adults between the ages of 25 and 34; 3) an increase (13,874) in the proportion of school-age persons between the ages of 5 and 19; 4) an increase (9,278) in the younger baby boomers between ages 35 and 44; 5) a large increase (26,642) in the older baby boomers between ages 45 and 54; 6) a modest increase (6,442) of older adults between ages 55 and 64; and 7) an increase (6,191) in the proportion of older adults age 65 and over. The decreasing number of adults between the ages of 25 and 34 is especially significant (see Table I-18). In 1990, the county's median age was 30.7; by 2000 this figure reached 33.2. In 2000, the City of Madison median age was 30.6, up from 29.3 in 1990.

There were significant changes in Dane County's population by age group between the City of Madison and the balance of the County outside of Madison. The City of Madison lost population in four age groups (which are shaded in Table I-18): Under 5; 5 to 9; 25 to 34; and 65 to 74. The area of Dane County outside the City of Madison only lost population in the "X-generation" category (25 to 34). The balance of Dane County also had much greater increases than Madison in all age groups except 20 to 24 (college age) and 25 to 34.

Table I-18: Population by Age: 1990 - 2000

Dane County				
Age Group	Census		2000 % of Total	1990-2000 Change
	1990	2000		
Under 5	26,027	25,818	6.1%	-0.8%
5 to 9	24,312	26,693	6.3%	9.8%
10 to 14	21,392	27,733	6.5%	29.6%
15 to 19	27,760	32,912	7.7%	18.6%
20 to 24	42,123	43,986	10.3%	4.4%
25 to 34	72,726	68,386	16.0%	-6.0%
35 to 44	60,830	70,108	16.4%	15.3%
45 to 54	33,578	60,220	14.1%	79.3%
55 to 64	24,359	30,801	7.2%	26.4%
65 to 74	18,999	20,211	4.7%	6.4%
75 or over	14,979	19,658	4.6%	31.2%
Total	367,085	426,526	100.0%	16.2%
Median Age	30.7	33.2		

City of Madison				
Age Group	Census		2000 % of Total	1990-2000 Change
	1990	2000		
Under 5	11,863	10,815	5.2%	-8.8%
5 to 9	10,387	10,016	4.8%	-3.6%
10 to 14	8,527	10,332	5.0%	21.2%
15 to 19	16,297	18,192	8.7%	11.6%
20 to 24	30,670	32,394	15.6%	5.6%
25 to 34	38,997	37,054	17.8%	-5.0%
35 to 44	29,381	29,925	14.4%	1.9%
45 to 54	15,469	26,553	12.8%	71.7%
55 to 64	11,840	13,589	6.5%	14.8%
65 to 74	9,813	9,508	4.6%	-3.1%
75 or over	8,018	9,676	4.7%	20.7%
Total	191,262	208,054	100.0%	8.8%
Median Age	29.3	30.6		

Balance of Dane County				
Age Group	Census		2000 % of Total	1990-2000 Change
	1990	2000		
Under 5	14,164	15,003	6.9%	5.9%
5 to 9	13,925	16,677	7.6%	19.8%
10 to 14	12,865	17,401	8.0%	35.3%
15 to 19	11,463	14,720	6.7%	28.4%
20 to 24	11,453	11,592	5.3%	1.2%
25 to 34	33,729	31,332	14.3%	-7.1%
35 to 44	31,449	40,183	18.4%	27.8%
45 to 54	18,109	33,667	15.4%	85.9%
55 to 64	12,519	17,212	7.9%	37.5%
65 to 74	9,186	10,703	4.9%	16.5%
75 to 84	6,961	9,982	4.6%	43.4%
Total	175,823	218,472	100.0%	24.3%

Source: U.S. Bureau of the Census and Dane County Regional Planning Commission

G.3. Racial and Ethnic Composition. The total racial minority population residing in the county in 2000 consisted of 53,929 persons. This figure represented 12.6% of the county's population. Of the racial and ethnic population residing in the county, 16,829 were African-American, 14,773 were Asian or Pacific Islander and 14,387 persons were of Hispanic origin. Most of Dane County's racial minority residents (70%) live in the City of Madison. From 1990 to 2000, the non-white or Hispanic population throughout the county grew by 107%, as shown in Table I-19. In the City of Madison, the increase in the minority population accounted for all the growth in the City from 1990 to 2000.

Table I-19: Population by Race and Hispanic Origin

Dane County				
Population	1990		2000	
	Number	% Total	Number	% Total
Hispanic	5,744	1.6%	14,387	3.4%
Not Hispanic	361,341	98.4%	412,139	96.6%
White	341,057	92.9%	372,597	87.4%
African American	10,303	2.8%	16,829	3.9%
American Indian	1,122	0.3%	1,198	0.3%
Asian & Pacific Is.	8,546	2.3%	14,773	3.5%
Other race	313	0.1%	510	0.1%
Two or more races	N/A		6,232	1.5%
Total	367,085	100.0%	426,526	100.0%
City of Madison				
Population	1990		2000	
	Number	% Total	Number	% Total
Hispanic	3,877	2.0%	8,512	4.1%
Not Hispanic	187,385	98.0%	199,542	95.9%
White	171,166	89.5%	170,509	82.0%
African American	7,948	4.2%	11,987	5.8%
American Indian	689	0.4%	648	0.3%
Asian & Pacific Is.	7,365	3.9%	12,073	5.8%
Other race	217	0.1%	300	0.1%
Two or more races	N/A		4,025	1.9%
Total	191,262	100.0%	208,054	100.0%
Balance of Dane County				
Population	1990		2000	
	Number	% Total	Number	% Total
Hispanic	1,867	1.1%	5,875	2.7%
Not Hispanic	173,956	98.9%	212,597	97.3%
White	169,891	96.6%	202,088	92.5%
African American	2,355	1.3%	4,842	2.2%
American Indian	433	0.2%	550	0.3%
Asian & Pacific Is.	1,181	0.7%	2,700	1.2%
Other race	96	0.1%	210	0.1%
Two or more races	N/A		2,207	1.0%
Total	175,823	100.0%	218,472	100.0%

Source: U. S. Bureau of the Census and Dane County Regional Planning Commission

G.4. Mobility of the Population. Between 1995 and 2000, almost half of Dane County's residents moved. About 60% of movers moved within Dane County. The percentage of the population moving was greater in the City of Madison, because most University of Wisconsin students reside there (see Table I-20).

Table I-20: Dane County Population Mobility

Residence in 1995	Dane County	% Total	City of Madison	% Total	Balance of County	% Total
Persons 5 years and over	401,058	100.0%	196,989	100.0%	204,069	100.0%
Same House	185,078	46.1	77,305	39.2	107,773	52.8
Different House	204,248	50.9	111,047	56.4	93,201	45.7
In Dane County	118,975	29.7	56,829	28.9	62,146	30.5
Outside of Dane County	85,273	21.3	54,218	27.6	31,055	15.2
In Wisconsin	43,347	10.8	27,088	13.8	16,259	8.0
Outside of Wisconsin	41,926	10.5	27,130	13.8	14,796	7.2
Abroad	11,732	3.0	8,637	4.4	3,095	1.5

Source: U.S. Bureau of the Census.

G.5. Household Growth. From 1990 to 2000, the number of households in Dane County increased from 142,786 to 173,484. This represents an increase of 21.5%, compared to the population growth of 16.2%. Between 1980 and 1990, the household growth rate was 18.4%, compared to a population increase of 13.2% (Table I-21). Similar to population growth, the household growth rate was greatest in small cities and villages.

Table I-21: Households: 1970 - 2000

	Number of Households				Percent Change		
	1970	1980	1990	2000	1970-1980	1980-1990	1990-2000
Dane County	88,574	120,601	142,786	173,484	36.2%	18.4%	21.5%
City of Madison	55,019	66,451	77,361	89,019	20.8%	16.4%	15.1%
% of County	62.1%	55.1%	54.2%	51.3%			
Small Cities	12,534	21,787	26,648	34,331	73.8%	22.3%	28.8%
% of County	14.2%	18.1%	18.7%	19.8%			
Towns	13,650	20,608	23,684	28,576	51.0%	14.9%	20.7%
% of County	15.4%	17.1%	16.6%	16.5%			
Villages	7,371	11,755	15,093	21,558	59.5%	28.4%	42.8%
% of County	8.3%	9.7%	10.6%	12.4%			

Source: U. S. Bureau of the Census and Dane County Regional Planning Commission

G.6. Household Size. Household size is one of the primary factors that must be considered when determining existing and future housing demand. As households change in size, so do their housing requirements.

Households are declining in size. In 1990, one- and two-person households accounted for nearly 61% of all households in the county, as shown in Table I-22. By 2000, one- and two-person households accounted for 65% of all households.

Table I-22: Distribution of Persons Per Household: 1990-2000

Household Size	Number of Households		Percent of Total		Owner-Occupied Households		Renter-Occupied Households	
	1990	2000	1990	2000	1990	2000	1990	2000
One	37,640	51,014	26.4%	29.4%	12,390	18,861	25,250	32,153
Two	49,247	61,168	34.5	35.3	28,104	38,429	21,143	22,739
Three	23,835	26,075	16.7	15.0	15,030	16,768	8,805	9,307
Four	20,933	22,963	14.7	13.2	15,541	17,466	5,392	5,497
Five	7,909	8,578	5.5	5.0	5,747	6,205	2,162	2,373
Six	2,237	2,476	1.6	1.4	1,483	1,559	754	917
Seven+	985	1,210	0.7	0.7	553	607	432	603
Total	142,786	173,484	100.0%	100.0%	78,848	99,895	63,938	73,589

Source: U.S. Bureau of the Census and Dane County Regional Planning Commission.

Since the number of smaller households has been increasing, the average household size has been decreasing. In 1990, Dane County had an average household size of 2.5 persons. By 2000, the average household size had declined to 2.4 persons.

Table I-23 shows that the average size of an owner household is larger than the average size of a renter household in Dane County. In 2000, the average size of an owner household was 2.6 persons, while the average size of a renter household was 2.0 persons. The decrease since 1980 occurred within both the owner-household and the renter-household categories. The largest household sizes are in the villages and towns where owner-occupied households are most prevalent.

Table I-23: Average Household Size

	Persons per household							
	Total-Occupied				Owner-occupied		Renter-occupied	
	1970	1980	1990	2000	1990	2000	1990	2000
Dane County	3.09	2.56	2.46	2.37	2.76	2.61	2.10	2.03
City of Madison	2.88	2.38	2.30	2.19	2.60	2.40	2.04	2.00
Small Cities	3.26	2.54	2.29	2.35				
Towns	3.73	3.01	2.80	2.59				
Villages	3.17	2.85	2.74	2.72				

Source: U.S. Bureau of the Census and Dane County Regional Planning Commission

G.7. Household Type. In 1990, 61.2% of all households within the county were composed of families. By 2000, the proportion of all households that were families dropped by 3%. The remaining households were composed of one or more unrelated individuals. Although the City of Madison accounts for 51% of all the households in Dane County, it accounts for only 47% of the families in the county (Table I-24). In 1990, single-parent families made up 10.5% of all families in Dane County. By 2000, single-parent households increased their share of all households in the county to 11.1%.

Table I-24: Households by Type: 1990 - 2000

Dane County	1990		2000	
	Number	% Total	Number	% Total
Families	87,363	61.2%	100,856	58.1%
Married couples	72,269	50.6%	81,649	47.1%
Female householder	11,478	8.0%	13,741	7.9%
Male householder	3,616	2.5%	5,466	3.2%
Nonfamilies	55,423	38.8%	72,628	41.9%
One Person	37,640	26.4%	51,014	29.4%
Two Persons or more	17,783	12.5%	21,614	12.5%
Total	142,786	100.0%	173,484	100.0%
<hr/>				
City of Madison	1990		2000	
	Number	% Total	Number	% Total
Families	40,511	52.4%	42,458	47.7%
Married couples	32,189	41.6%	32,953	37.0%
Female householder	6,419	8.3%	6,943	7.8%
Male householder	1,903	2.5%	2,562	2.9%
Nonfamilies	36,850	47.6%	46,561	52.3%
One Person	24,132	31.2%	31,441	35.3%
Two Persons or more	12,718	16.4%	15,120	17.0%
Total	77,361	100.0%	89,019	100.0%
<hr/>				
Balance of Dane County	1990		2000	
	Number	% Total	Number	% Total
Families	46,852	71.6%	58,398	69.1%
Married couples	40,080	61.3%	48,696	57.7%
Female householder	5,059	7.7%	6,798	8.0%
Male householder	1,713	2.6%	2,904	3.4%
Nonfamilies	18,573	28.4%	26,067	30.9%
One Person	13,508	20.6%	19,573	23.2%
Two Persons or more	5,065	7.7%	6,494	7.7%
Total	65,425	100.0%	84,465	100.0%

Source: U. S. Bureau of the Census and Dane County Regional Planning Commission

G.8. Population Forecast. In order to plan adequately for Dane County on a long-term basis, population forecasts must be prepared. As the County's population grows and its characteristics change, so will the demand or need for jobs, housing and governmental services: transportation, education, public safety, utilities, parks, etc. Thus, the purpose of this section is to estimate the population by age groups in order to determine the potential need for schools, labor force, retirement services, and other needs of the future population.

Population forecasts are not intended to predict the future demand for housing, jobs and governmental services, because future demand is affected by many factors such as household income, consumer preferences and public financing. All forecasts, including the ones presented in this section, must be used with great caution. Forecasts cannot take into account unpredictable events that could have a significant effect on the components of population growth.

Dane County's population is expected to continue to grow at a moderate rate, although the rate may seem rapid within the context of Wisconsin's population projections, which show growth rates that are half those of Dane County. Using a discounted linear regression of 1970 to 2000 population growth, Dane County's forecast population is expected to grow from 45,000 to 48,000 persons per decade from 2000 to 2030, or to about 560,000 to 570,000 by 2030.

It is also important to look at future population changes by age group. Although the overall County population may grow at a steady rate, various age groups grow at different rates. In the 1990's, the school age population grew faster than the general population growth, causing a school building boom, while the population for the entry-level labor force was actually declining, causing an even lower unemployment rate. The population forecasts by age for 2025 indicate the following:

- School age population will grow at a much slower rate, about a fourth the rate seen in the 1990's.
- College enrollment will continue at a similar rate.
- The labor force will experience drops in the number of workers over age 45, causing the labor force to remain very tight.
- The numbers of retirees will double.

(These data will be revised in February 2003)

Table I-25: Dane County Population Forecast: 1990 - 2005

Population by Age Group	1990 Census	Percent of Total	2000 Census	Percent of Total	Projected 2025	Percent of Total	2000-2025 Change	
							Number	Percent
Under 5	26,027	7.1%	25,818	6.1%	33,614	6.3%	7,796	30%
5-17	57,542	15.7%	70,437	16.5%	79,886	15.0%	9,449	13%
18-24	58,045	15.8%	60,887	14.3%	64,742	12.2%	3,855	6%
25-34	72,726	19.8%	68,386	16.0%	87,019	16.3%	18,633	27%
35-44	60,830	16.6%	70,108	16.4%	66,674	12.5%	-3,434	-5%
45-54	33,578	9.1%	60,220	14.1%	66,226	12.4%	6,006	10%
55-59	24,359	6.6%	30,801	7.2%	58,706	11.0%	27,905	91%
65 & Over	33,978	9.3%	39,869	9.3%	75,902	14.2%	36,033	90%
Total	367,085	100.0%	426,526	100.0%	532,770	100.0%	106,244	25%

Population by Sectors	1990 Census	Percent of Total	2000 Census	Percent of Total	Projected 2025	Percent of Total	2000-2025 Change	
							Number	Percent
Pre-school	26,027	7.1%	25,818	6.1%	33,614	6.3%	7,796	30%
School age	57,542	15.7%	70,437	16.5%	79,886	15.0%	9,449	13%
College age	58,045	15.8%	60,887	14.3%	64,742	12.2%	3,855	6%
Young labor force	133,556	36.4%	138,494	32.5%	153,694	28.8%	15,200	11%
Older labor force	57,937	15.8%	91,021	21.3%	124,932	23.4%	33,911	37%
Retirees	33,978	9.3%	39,869	9.3%	75,902	14.2%	36,033	90%
Total	367,085	100.0%	426,526	100.0%	532,770	100.0%	106,244	25%

Source: U. S. Bureau of the Census, Wisconsin Department of Administration, and Dane County Regional Planning Commission

G.9. Housing Forecasts. Since the late 1970s, over one-half of the county's households have been one- or two-person households. This trend has led to a decrease in the county's average household size. Households are decreasing in size primarily due to an increase in the divorce rate, a decrease in the birth rate, the postponement of marriage, and an increase in the proportion of the population age 65 and older. As households decline in size, the need for additional housing increases. Household size is a key production factor. Dane County had an average household size of 2.46 persons in 1990 and 2.37 persons in 2000. Utilizing this most recent rate of decline and other factors, Dane County will have an average household size of 2.3 persons by 2010. The number of households in an area is determined by dividing the "population in housing" by the average household size.

According to HUD, an overall available vacancy rate of 3% (1.5% for the owned portion of the housing stock and 5% for the rental portion) is considered adequate to allow for housing choice among consumers. As of 2000, Dane County's overall available vacancy rate was 3.8%. Utilizing the HUD-recommended available vacancy rate of 3% in conjunction with household growth, the county's housing stock needs an increase of 10,000 to 11,000 vacant available units per decade through 2025 (see Table I-26).

Based on projected households and housing losses as well as the 3% adequate vacancy rate, estimates of the overall housing production requirements for the county for 2025 were prepared. Between 2000 and 2025, an additional one percent of current housing stock will be needed to compensate for the loss of housing due to demolitions. As previously mentioned, these estimates of future housing production are based on growth components and are not intended to be forecasts of the true demand for housing, which is affected by many other factors.

The county will require over 233,000 housing units by 2025. This means that about 53,000 additional housing units would have to be constructed. Based on 1990 to 2000 housing trends, over half of the housing stock in 2025 will be single-family housing units.

Table I-26: Housing Forecast by Planning Sector (draft)

Sector		1990			1980-1990	
	Population	%Total	Housing Unit	Pop/HU	Hsing Unit	%Total
Outlying USA	69,073	18.8%	25,826	2.67	5,225	23.5%
Central USA	245,390	66.8%	103,681	2.37	13,853	62.2%
Rural	52,622	14.3%	18,344	2.87	3,180	14.3%
Dane County	367,085	100.0%	147,851	2.48	22,258	100.0%

Sector		2000			1990-2000	
	Population	%Total	Housing Unit	Pop/HU	Hsing Unit	%Total
Outlying USA	96,773	22.7%	37,269	2.60	11,443	35.2%
Central USA	270,877	63.5%	120,365	2.25	16,684	51.3%
Rural	58,876	13.8%	22,764	2.59	4,420	13.6%
Dane County	426,526	100.0%	180,398	2.36	32,547	100.0%

Sector		2010			2000-2010	
	Population	%Total	Housing Unit	Pop/HU	Hsing Unit	%Total
Outlying USA	112,021	24.1%	43,778	2.56	6,509	34.0%
Central USA	289,866	62.3%	130,702	2.22	10,337	54.0%
Rural	63,043	13.6%	25,061	2.52	2,297	12.0%
Dane County	464,930	100.0%	199,541	2.33	19,143	100.0%

Sector		2020			2010-2020	
	Population	%Total	Housing Unit	Pop/HU	Hsing Unit	%Total
Outlying USA	133,075	26.1%	52,684	2.53	8,906	40.0%
Central USA	309,531	50.7%	141,390	2.19	10,688	48.0%
Rural	67,549	13.2%	27,733	2.44	2,672	12.0%
Dane County	510,155	100.0%	221,807	2.30	22,266	100.0%

Sector		2025			2020-2025	
	Population	%Total	Housing Unit	Pop/HU	Hsing Unit	%Total
Outlying USA	144,458	27.1%	57,566	2.51	4,882	43.0%
Central USA	318,624	59.8%	146,499	2.17	5,109	45.0%
Rural	69,688	13.1%	29,095	2.40	1,362	12.0%
Dane County	532,770	100.0%	233,160	2.29	11,353	100.0%

Source: U. S. Bureau of the Census and Dane County Regional Planning Commission

G.10. Residential Land Demand. It is apparent that the expected national population shifts resulting from the baby boom generation will have drastic effects on the Dane County housing market during the next 30 years. The baby boomers, born between 1946 and 1965, are being followed by a population group that is substantially smaller. Their impact already has been demonstrated, with large numbers of smaller classroom sizes in the early 1980s, and a lack of young workers in the labor force in the 1990s. In addition, the numbers of elderly are growing and will continue to grow at a steady pace. This will place new demands on the type and location of housing and residential demand.

Although this plan deals with how demographic shifts affect the housing market, public policy, economic forces and people's response to those forces also influence the market. Therefore, even though the demographic shifts are bound to have a major impact, it is also likely that people's behavior will adapt to these shifts. Overall, the housing market has been quite responsive to changing times. The years just ahead will probably be no exception.

Following are the main impacts of these changing demographic forces on the Dane County housing market going into the next century, based on the long-range population forecasts by age group. Decade by decade, these trends in Dane County's housing market can be illustrated (see Table I-27).

Table I-27: Residential Land Demand

2000 Planning Area	Housing Units	Residential Land*	Housing Density	
Outlying USA	37,269	9,268	4.0	
Central USA	120,365	18,058	6.7	
Rural	22,764	21,868	1.0	
Dane County	180,398	49,194	3.7	

2010 Planning Area	Housing Units	Residential Land*	2000-2010	
			Res. Land	% Change
Outlying USA	43,778	10,887	1,619	17.5%
Central USA	130,702	19,609	1,551	8.6%
Rural	25,061	24,074	2,207	10.1%
Dane County	199,541	54,570	5,376	10.9%

2020 Planning Area	Housing Units	Residential Land*	2010-2020	
			Res. Land	% Change
Outlying USA	52,684	13,101	2,215	20.3%
Central USA	141,390	21,212	1,603	8.2%
Rural	27,733	26,641	2,567	10.7%
Dane County	221,807	60,955	6,385	11.7%

2025 Planning Area	Housing Units	Residential Land*	2020-2025	
			Res. Land	% Change
Outlying USA	57,566	14,316	1,214	9.3%
Central USA	146,499	21,979	766	3.6%
Rural	29,095	27,950	1,309	4.9%
Dane County	233,160	64,244	3,289	5.4%

*Residential land is exclusive of road right-of-way and parks

Source: U. S. Bureau of the Census and Dane County Regional Planning Commission

2010. The baby boomers will be between the ages of 45 and 64 and their children will be entering the housing market. Population is projected to increase by only 9 to 4% from the year 2000. Households, likewise, are projected to increase but at a slower rate than in prior decades. The developing suburbs are less likely to have rapid growth and may be facing issues similar to those of Madison during earlier decades. Rehabilitation of older housing is expected to be an increasing concern.

Housing

1. The projected minor increases in the number of youth ages 0 to 18, while not directly affecting any segment of the housing market, may indicate changes in the kind of housing people will be needing in the future, such as less family housing.
2. The large increases expected in the empty-nester age category and continued decline in the typical first-time home buyer age group may create a larger market for owner-occupied single family attached (condominiums) which would produce higher density development for a significant market segment.
3. Rehabilitation of older housing is expected to be a major concern.

Residential Land Demand

The largest increase in urban acreage is expected in outlying urban areas i.e. Sun Prairie, Stoughton and Waunakee. Slightly lesser amounts of residential land demand will occur in the Central Urban Service Area but at higher density. The largest residential land increase will be in the rural area, but it will represent only 12% of the total increase of housing since rural development occurs at very low densities at about one house per acre.

2020. The baby boomers will be between the ages of 55 and 74 in 2020. Population is projected to increase by 10% from 2010. Households are also projected to increase but at a slower rate than the 1990's. Rehabilitation of older housing is expected to be a continued concern, since over half of all housing will be more than 40 years old (compared to 45% in 2000).

Housing

1. Half of the baby boomers will be retired and one out of seven persons in the county will be over age 65. This will place increasing pressure on the construction of housing for the elderly; about a third is expected to be condominiums (higher density development).
2. Older seniors will number over 26,000 persons, or 5% of the county population, causing an increased need for housing with supportive services for the frail elderly. This type of housing is usually sited in an urban setting.
3. The typical first-time homebuyer age group will increase by 10,000 persons, refueling that housing market.
4. Conversely, a smaller middle-age group will cause a slowdown in the move-up market or less demand for larger lots.
5. Maintenance and rehabilitation will become an increasing concern.

Residential Land Demand

The outlying urban areas will increase their share (58%) of urban residential development. Rural development will still represent the largest share (40%) of total residential development in Dane County.

H. Countywide Land Use Inventory

H.1. Introduction. The land use inventory involves mapping and analyzing each use of land in Dane County: residential, commercial, industrial, agricultural, woodlands, water, etc. The inventory has been done each decade since the formation of the Regional Planning Commission (1970-1980-1990-2000). The timing of the inventory is done to coincide with the U.S. Census, to update our database with complete and accurate land use data, which matches the time of the 2000 Census of Population (April 2000).

There are a number of steps involved in conducting the inventory.

- 1) *Map preparation* is the basic step, using the Geographic Information System (GIS) to prepare a computer-generated parcel map of each unit of government noting correct boundaries and parcels for April 2000.
- 2) *Field survey* (driving each street in built-up areas) noting the land use by code on the work maps.
- 3) *Hand-colored maps* of built-up areas were prepared based on land use codes.
- 4) *Review for accuracy* of these maps was done by reviewing aerial photography and spot checks in the field.
- 5) *Aerial photo interpretation* using the (Fly Dane) orthophotos taken in April 2000 were used primarily in the rural areas. The aerial photos are all part of the GIS system which gives maximum computer mapping capability.

The photo interpretations were directly digitized into the GIS system by Land Use Code. These were also reviewed for accuracy.

- 6) *Digitizing* was done for all of the built-up areas (cities, villages, hamlets, and urbanized areas of towns) as the year 2000 maps and photos became available.
- 7) *GIS land use data* is then generated for each community by the GIS computer. This report reflects the output of the land use inventory data for the year 2000.

By using the GIS system, land use data is readily available on a countywide basis, community by community, or even sub-areas of communities. Maps or aerial photos reflecting year 2000 land uses can be prepared for any area of the county.

Table I-28A: Dane County Housing and Residential Land Use: 1970 - 2000

Housing Unit or Land Use	1970			1980			1990			2000		
	Acres	Units	Density	Acres	Units	Density	Acres	Units	Density	Acres	Units	Density
Residential	29,847	92,430	3.10	41,560	126,275	3.04	48,002	147,851	3.08	49,194	180,398	3.67
Single Family	27,601	55,359	2.01	37,737	72,771	1.93	42,710	84,909	1.99	43,198	105,903	2.45
Two Family	748	8,623	11.54	1,213	10,101	8.33	1,804	9,672	5.36	1,716	10,243	5.97
Multifamily	971	27,050	27.87	2,096	41,579	19.84	2,914	49,946	17.14	3,843	61,886	16.10
Mobile Home	528	1,398	2.65	514	1,824	3.55	573	3,324	5.80	436	2,366	5.43

Table I-28B: Dane County Housing and Residential Land Use: City, Village and Town Totals

Housing Unit or Land Use	County Total			Cities			Villages			Towns		
	Acres	Units	Density	Acres	Units	Density	Acres	Units	Density	Acres	Units	Density
Residential	49,194	180,398	3.67	19,812	127,968	6.46	5,899	22,930	3.89	23,482	29,502	1.26
Single Family	43,198	105,903	2.45	15,340	65,084	4.24	5,073	16,777	3.31	22,785	24,052	1.06
Two Family	1,716	10,243	5.97	1,132	7,640	6.75	424	1,719	4.06	161	876	5.45
Multifamily	3,843	61,886	16.10	3,210	54,131	16.86	333	4,005	12.04	300	3,750	12.49
Mobile Home	436	2,366	5.43	130	1,113	8.53	70	429	6.14	236	824	3.49

Table I-28: Dane County Housing and Residential Land Use: Larger Cities

Housing Unit or Land Use	Fitchburg			Madison			Middleton			Sun Prairie		
	Acres	Units	Density	Acres	Units	Density	Acres	Units	Density	Acres	Units	Density
Residential	2,304	8,662	3.76	12,169	92,353	7.59	1,286	7,327	5.70	1,714	8,115	4.74
Single Family	1,926	4,029	2.09	9,111	44,565	4.89	954	3,723	3.90	1,337	5,163	3.86
Two Family	82	293	3.57	671	5,739	8.56	90	233	2.60	153	463	3.04
Multifamily	292	4,277	14.65	2,264	41,084	18.15	243	3,371	13.88	224	2,489	11.13
Mobile Home	4	63	15.14	123	965	7.81						

Source: U. S. Bureau of the Census and Dane County Regional Planning Commission

Table I - 28 is a combination of Land Use Inventory Data and Census Data for the past four decades. The areas are all expressed in acres, the residential numbers are expressed as the units of each type, while the density is expressed in the number of units per acre.

The general trend for the past four decades is an increase in density, particularly in the 90s, a time when this topic was debated on a countywide basis.

The second part of this table compares the housing areas, units and density by types of local governments. In overall residential density, the cities have the highest density, while the village density is only slightly above the County's, while the towns have the lowest density.

The other means of comparison is among the four largest cities in the county as shown in the bottom portion of the table. Madison has the largest number of housing units and highest residential density in all housing types, while Middleton and Sun Prairie have lower densities. Fitchburg has the lowest densities; however, Fitchburg's housing inventory also includes significant amounts of rural subdivisions and rural scattered site housing. Most of these latter type units were developed before Fitchburg became a city in 1983.

Table I-29: Land Use in Dane County and the City of Madison in 2000

Land Use	Dane County	% of Total Area	% of Devel-- oped Area	City of Madison	% of Total Area	% of Devel- oped Area	City as % of County
Residential	49,193.7	6.2%	38.7%	12,169.2	21.3%	36.9%	24.7%
Single Family	43,195.4			9,110.9			
Two Family	1,716.4			670.7			
Multifamily	3,544.0			2,091.3			
Group Quarters	299.2			172.8			
Mobile Home	436.1			123.5			
Seasonal Res.	2.6						
Industrial	7,361.8	0.9%	5.8%	1,483.6	2.6%	4.5%	20.2%
Manufacturing	2,517.6			594.1			
Wholesale	1,674.0			786.4			
Extractive	3,170.2			103.1			
Transportation	43,842.1	5.5%	34.5%	9,009.4	15.7%	27.3%	20.5%
Street ROWs	39,773.6			7,293.8			
Railroads	1,439.8			296.2			
Other Transportation	2,628.7			1,419.4			
Communication / Utilities	1,777.5	0.2%	1.4%	701.5	1.2%	2.1%	39.5%
Generating & Processing	274.8			110.5			
Transmission	212.6			31.1			
Waste Processing	1,232.0			559.4			
Other	58.1			0.5			
Commercial-Retail	3,008.5	0.4%	2.4%	1,516.0	2.6%	4.6%	50.4%
Gen. Repair & Mainten.	242.1			120.5			
Transportation Related	670.7			218.2			
Other	2,095.7			1,177.2			
Commercial-Services	3,655.1	0.5%	2.9%	2,068.2	3.6%	6.3%	56.6%
Transient Lodging	172.5			104.0			
Other	3,482.6			1,964.2			
Institutional & Gov't	5,082.9	0.6%	4.0%	2,006.7	3.5%	6.1%	39.5%
Education	2,608.7			1,096.6			
Administration	311.6			202.0			
Cemeteries	550.7			199.7			
Other	1,611.8			508.4			
Outdoor Recreation	13,133.4	1.7%	10.3%	4,033.8	7.0%	12.2%	30.7%
Total Developed Area	127,054.9	16.0%	100.0%	32,988.3	57.7%	100.0%	26.0%
Agriculture & Undeveloped	666,280.3	84.0%		24,232.4	42.3%	73.5%	3.6%
Woodlands	91,034.2	11.5%		270.9	0.5%	0.8%	
Other Open Lands	84,183.7	10.6%		2,230.8	3.9%	6.8%	
Vacant, Unused Land	13,262.9	1.7%		6,515.5	11.4%	19.8%	
Water	26,747.8	3.4%		13,372.6	23.4%	40.5%	
Cropland/Pasture	451,051.7	56.9%		1,842.7	3.2%	5.6%	
Total Area	793,335.2	100.0%		57,220.7	100.0%	173.5%	7.2%

Source: Dane County Regional Planning Commission

The comparisons of Table I-29 illustrate the differences between the City of Madison with the entire area of Dane County, including the City expressed in acreage, percent of developed area, and percent of total area.

In reviewing the percent of total area, 16% of the Dane area is developed while 84% is in agricultural and undeveloped uses. In the City, 57.7% of the area is developed while 42.3% is undeveloped. While this seems like a large undeveloped area for a city, note that over half of the undeveloped area is water, primarily the lakes. The largest undeveloped use in the County is cropland and pasture with water as a much smaller percentage of the total area.

Over half of all land developed for commercial use is in the City, with major areas also committed to communications and utilities as well as the institutional and government uses.

Table I-30 reflects total land use by category for each decade. One comparison is that the 2000 total area of the County increased by 6,514 acres. The three previous decades had virtually the same total area since the measurements were done on the same base maps. The 2000 inventory was totally done using year 2000 orthophotography and digitized base maps generated from the photography. Another source of the difference is that a different map projection was used. This area compares to the U.S. Census Bureau's digitized area. All measurements were done using the ArcView systems and rechecked for accuracy.

Residential increases were most dramatic in the 70s and 80s with a more modest increase in the 90s. There were two residential categories which actually decreased in the 90s. Two-family or duplexes decreased by 88 acres which is probably due to an error in the 1990 inventory. Mobile Homes decreased by 137 acres which usually means a change in use such as the removal of a mobile home park in Monona which was replaced by other development. There was a decrease in the area for railroads which is a reflection of abandoned railroads rights-of-way changing to recreational trails.

There was a shift in commercial-retail categories in the 90s with general repair and maintenance showing a decrease while transportation-related uses showed a major increase in area (all auto- and truck-related uses as well as marine and aircraft).

There was a slight decrease (4 acres) in land used for cemeteries. This is probably due to measuring procedures as opposed to any decrease in use.

The total developed area continues to increase each decade while the agricultural and undeveloped area continues to decrease, reflecting the level of development which has been occurring.

Within the undeveloped category, the area of woodlands continues to increase each decade due to a combination of natural growth of wooded areas as well as many areas where trees have been planted for various purposes.

Other Open Lands describes open areas which are neither croplands nor woodlands. Much of this land area is less productive farmland which has been taken out of production for various reasons including the federal Conservation Reserve Program (CRP) where farmers make a commitment to keeping the land out of production. Vacant and Unused Land describes land primarily in urban areas which have not been developed or vacant lots which have not been developed at the time of the inventory.

The area covered by water increased due to the ability to measure all bodies of water accurately using the scale enlargement capability of GIS systems and data.

Cropland/pasture area has decreased partly due to urban development, but also due to increases in the other undeveloped uses: woodlands, other open lands and vacant areas.

Table I-30: Land Use in Dane County: 1970 - 2000

Land Use	1970	1980	1990	2000	1970-1980	1980-1990	1990-2000	1980-2000
Residential	29,846.6	41,560.1	48,001.7	49,193.7	11,713.5	6,441.6	1,192.0	7,633.6
Single Family	27,600.6	37,737.1	42,710.1	43,198.0				
Two Family	747.5	1,213.2	1,804.2	1,716.4				
Multifamily	913.7	1,932.2	2,760.3	3,544.0				
Group Quarters	56.8	163.5	153.7	299.2				
Mobile Home	528.0	514.1	573.4	436.1				
Industrial	1,507.0	4,084.2	5,190.4	7,361.8	2,577.2	1,106.2	2,171.4	3,277.6
Manufacturing	991.2	1,678.1	2,164.1	2,517.6				
Wholesale	515.8	611.9	704.5	1,674.0				
Extractive	NA	1,794.2	2,321.8	3,170.2				
Transportation	29,144.0	35,289.3	37,418.0	43,842.1	6,145.3	2,128.7	6,424.1	8,552.8
Street ROWs	NA	31,642.7	33,641.5	39,773.6				
Railroads	NA	1,791.2	1,513.2	1,439.8				
Other Transportation	NA	1,855.4	2,263.3	2,628.7				
Communication / Utilities	5,248.0	1,323.0	1,515.1	1,777.5	-3,925.0	192.1	262.4	454.5
Generating & Processing	NA	122.4	133.5	274.8				
Transmission	NA	177.7	215.3	212.6				
Waste Processing	NA	944.2	1,109.0	1,232.0				
Other	NA	78.7	57.3	58.1				
Commercial-Retail	1,426.0	2,254.0	2,522.2	3,008.5	828.0	268.2	486.3	754.5
Gen. Repair & Mainten.		403.9	518.9	242.1				
Transportation Related		249.8	265.0	670.7				
Other		1,600.3	1,738.3	2,095.7				
Commercial-Services	1,172.1	1,210.1	2,202.6	3,655.1	38.0	992.5	1,452.5	2,445.0
Transient Lodging	123.0	182.2	156.1	172.5				
Other	1,049.1	1,027.9	2,046.5	3,482.6				
Institutional & Gov't	5,332.9	4,479.7	4,707.4	5,082.9	-853.2	227.7	375.5	603.2
Education		2,300.3	2,301.2	2,608.7				
Administration		208.0	241.9	311.6				
Cemeteries		429.8	554.6	550.7				
Other		1,541.6	1,609.7	1,611.8				
Outdoor Recreation	11,632.2	9,543.6	11,102.8	13,133.4	-2,088.6	1,559.2	2,030.6	3,589.8
Total Developed Area	85,308.8	99,744.0	112,660.2	127,054.9	14,435.2	12,916.2	14,394.7	27,310.9
Agriculture & Undeveloped	701,367.5	687,077.0	674,160.9	666,280.3	-14,290.5	-12,916.1	-7,880.6	-20,796.7
Woodlands		76,999.2	81,447.0	91,034.2				
Other Open Lands		35,772.5	50,895.8	84,183.7				
Vacant, Unused Land		16,406.5	10,031.1	13,262.9				
Water	22,651.4	23,276.9	22,778.4	26,747.8				
Cropland/Pasture		534,621.9	509,008.6	451,051.7				
Total Area	786,676.3	786,821.0	786,821.1	793,335.2	144.7	0.1	6,514.1	6,514.2

Source: Dane County Regional Planning Commission