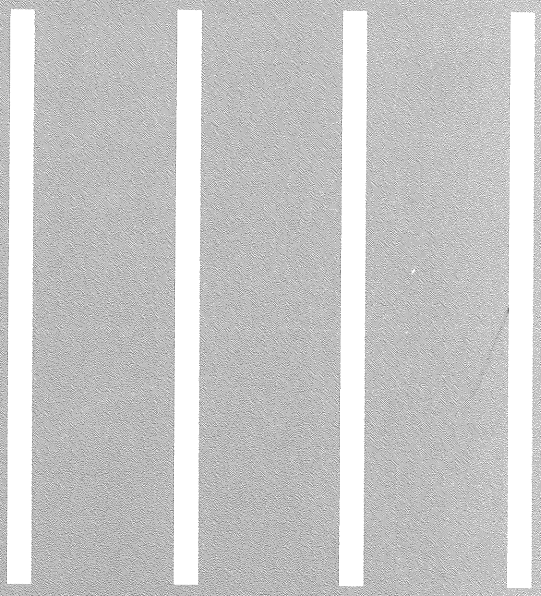
METROPOLITAN COUNCIL REPORT



# LAND USE TRENDS IN THE METROPOLITAN URBAN SERVICE AREA



# LAND USE TRENDS

# in the

# METROPOLITAN URBAN SERVICE AREA

# 1970 - 1978

July 1981



Metropolitan Council
300 Metro Square Building
7th and Robert Streets
St. Paul, Minnesota 55101

Publication No. 01-81-10

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## ABOUT THIS REPORT

This report analyzes land use trends in the urban and developing portion of the Twin Cities Metropolitan Area between 1970 and 1978. The trends examined in this report deal with residential, commercial, industrial, and public/recreational land uses, as well as vacant land being "consumed" for these urban uses.

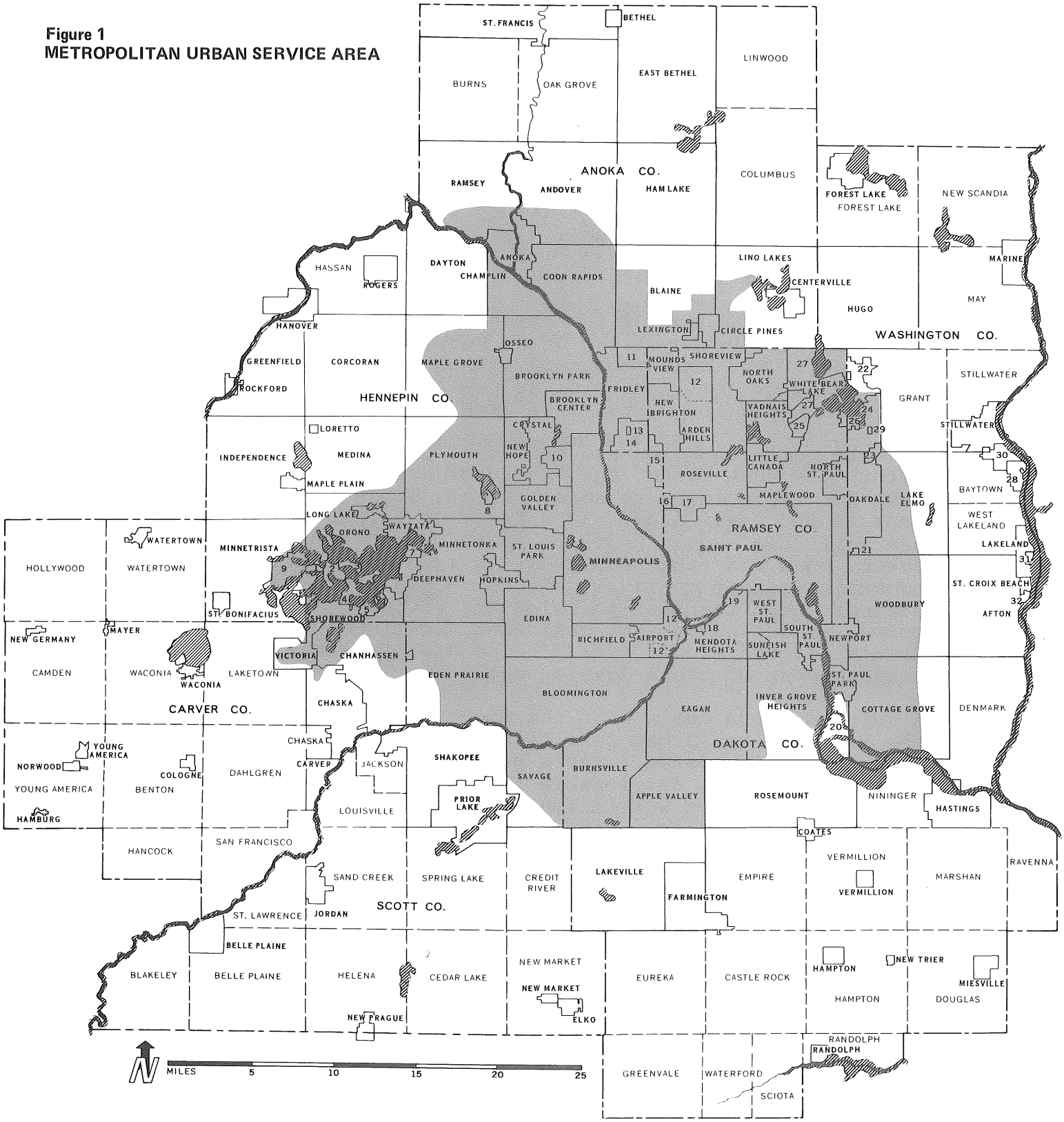
The geographic focus of the report is what the Metropolitan Council calls Metropolitan Urban Service Area, or "MUSA," for short. The MUSA comprises all or part of 82 communities lying generally within the central portion of the Seven-County Metropolitan Area (see Figure 1).

Council policies encourage new development to take place within the MUSA rather than in rural areas outside the MUSA for two primary reasons. First, urban-type development in the rural area, where fewer municipal services are available, would require expensive extensions of sewer, road and other improvements into sparsely developed communities that could ill afford to pay for them. Second, Council growth policies are intended to protect prime, producing agricultural land, still the Metropolitan Area's largest single type of land use, from the encroachment of urban development.

A related issue deals with how much vacant land remains in the Metropolitan Urban Service Area after existing land uses are accommodated. There needs to be a sufficient supply of vacant, developable land if future development is expected to locate within the MUSA rather than in the Region's rural areas. Historically, the supply of vacant land around the Region's urban core was an important factor in determining the size and shape of the MUSA, defined in the Metropolitan Council's Development Framework, its regional growth plan. The MUSA was envisioned to contain an adequate supply of vacant, developable land served by a fairly complete range of urban services to support new, urban development. Consequently, the extent to which new development consumes remaining available vacant land can affect the need to expand the MUSA to ensure an adequate land supply.

Monitoring land use trends, particularly the supply of vacant land, is also helpful in determining where and when future development will occur. The timing and location of such development is important in planning the extension of major regional systems, such as sewers, highways and parks.

**Figure 1**
**METROPOLITAN URBAN SERVICE AREA**




1 SPRING PARK
2 ORONO
3 MINNETONKA BEACH
4 TONKA BAY
5 EXCELSIOR
6 GREENWOOD
7 WOODLAND
8 MEDICINE LAKE
9 MOUND
10 ROBBINSDALE
11 SPRING LAKE PARK
12 U. S. GOVT.
13 HILLTOP
14 COLUMBIA HEIGHTS
15 ST. ANTHONY
16 LAUDERDALE
17 FALCON HEIGHTS
18 MENDOTA
19 LILYDALE
20 GREY CLOUD
21 LANDFALL
22 DELLWOOD
23 PINE SPRINGS
24 MAHTOMEDI
25 GEM LAKE
26 BIRCHWOOD
27 WHITE BEAR
28 BAYPORT
29 WILLERNIE
30 OAK PARK HEIGHTS
31 LAKELAND SHORES
32 ST. MARY'S POINT

ANOKA — County Boundary
ORONO — Municipal Boundary
CAMDEN — Township Boundary

In some communities, mostly those in the Region's fully developed area, there are concerns about the supply of vacant land. Monitoring can detect land use changes in these communities and provide a basis for a community's land use decisions. Although the amount of vacant land in such cases is usually small, it is important because it usually develops at fairly high densities.

This report consists of eight major sections. The first is a summary of the report. The section "Major Findings" summarizes the most significant land use trends between 1970 and 1978. "The Metropolitan Urban Service Area: A General Perspective" analyzes growth and land use trends within the Region's MUSA; "The Fully Developed Area," within the Region's 22 older cities; and "Municipal Land Use Trends," within the MUSA's 82 communities. The report also examines land use trends in subregional sectors and rings, and discusses trends in residential land consumption and land use impacts of housing construction.

## A NOTE ABOUT THE DATA

The Metropolitan Urban Service Area (MUSA), the subject of this report, contains all or part of some 81 cities and one township in the seven-county Region. As Figure 1 shows, 15 of these communities, lying on the fringe of the MUSA, are split by the MUSA boundary so that some parts lie outside the MUSA. However, land use data is generally available for whole communities only, so, for these "divided" communities, it is not possible to distinguish between land use trends inside and outside the MUSA. This means that most of the data in this report, with a few exceptions, deals with the area comprising the MUSA, plus that portion of the MUSA cities and townships lying outside the MUSA boundary. This more inclusive area is refered to as the "study area" (see Figure 2).

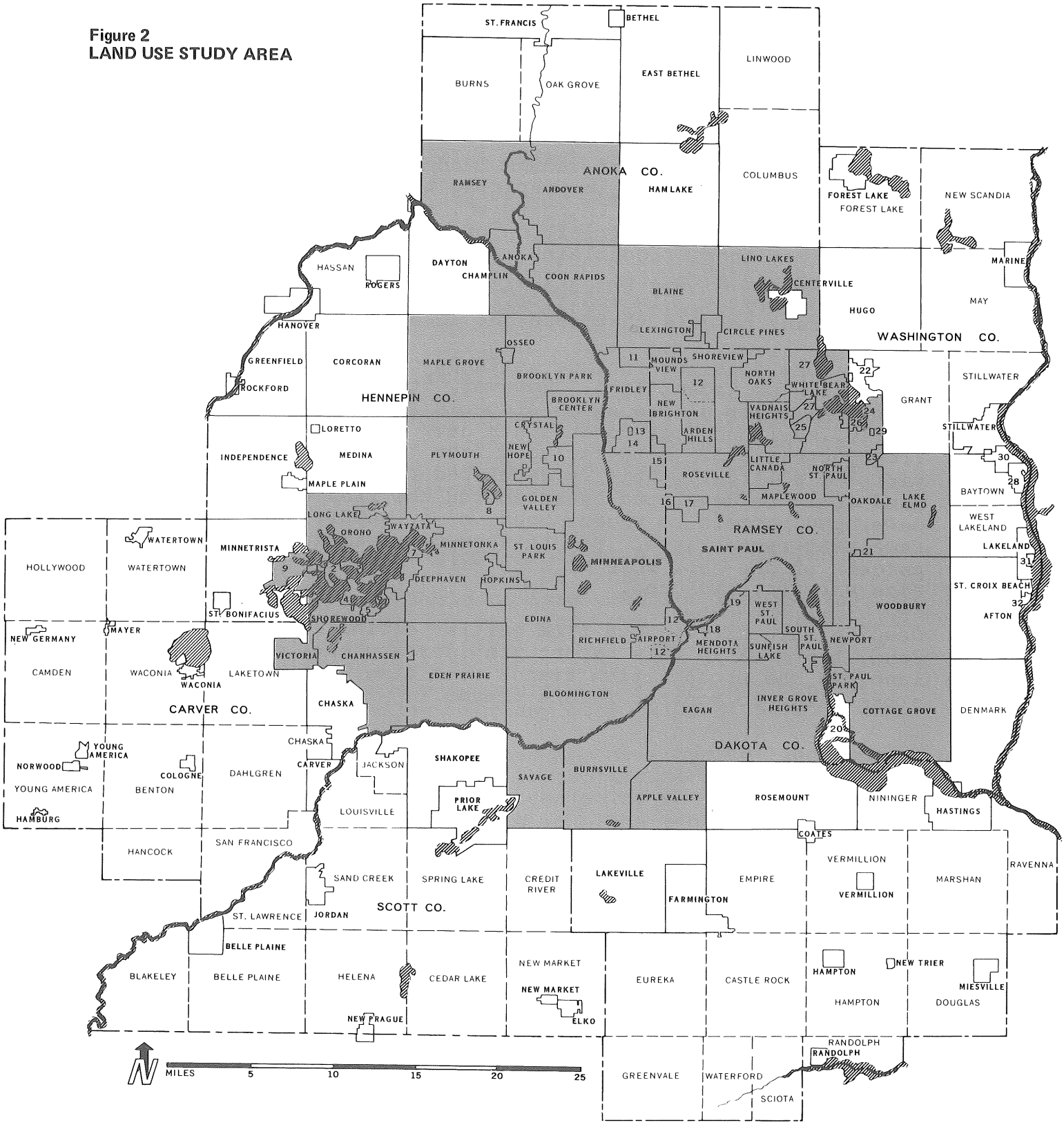
The study area consists of 667,885 acres, of which 575,000 acres is included in the MUSA. The portion of the study area lying outside the MUSA accounted for only 11 percent of that area's new residential development, one percent of new commercial and three percent of new industrial growth between 1970 and 1978. Consequently, the study area, though not precisely identical to the MUSA, serves as valid and useful basis for analyzing trends within the MUSA.

The study used as a basis for this report relied on background land use data collected in the early 1960s and analysis of Metropolitan Council aerial photographs taken in 1970, 1974, 1975 and 1978. The type of use in a land parcel was usually evident by inspecting the type of structures shown in the aerial photo. When it was not, other data (building permits reports, reverse directories, etc.) were consulted to identify the structure and their attendant land use.

The kind of vacant land referred to in this report is called "measured" vacant land. This means that aerial photos were measured for the amount of vacant or agricultural land they showed. This procedure produces a reliable, though conservative, estimate of usable vacant land.

Another method of estimating vacant land is to study municipal land use records to determine the amount of land devoted to all urban land uses, then subtract that total from the entire land area of a community. The result is called "residual" vacant land. Residual vacant land was not used to calculate the total amount of remaining vacant land in the MUSA because it includes much land that is not suitable or available for development. However, it was

**Figure 2**
**LAND USE STUDY AREA**

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ANOKA ___ County Boundary
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estimated for the study to provide a general comparison with estimates calculated for measured vacant land, the type of vacant land used in this report.

Determining the amount of vacant land in the Metropolitan Area was a major factor in preparing the Council's Development Framework. In doing so, the Council used a relatively restricted definition of vacant land. It excluded wetlands, floodplains, bedrock areas and steep slopes because such areas are not typically suitable for urban development. In addition, the Council counted only those vacant parcels that were one acre or larger.

This report does not include wetlands or floodplains in the definition of vacant land. However, it includes bedrock areas and steep slopes as developable land because, historically, environmental constraints have not kept development from these areas. Also excluded from the definition are parts of a larger, patially developed plat, although this land could be developed by extending the land use on developed parcels to vacant ones, or by subdividing the remaining vacant area. For this report, vacant land parcels of one-half acre or more were inventoried, smaller size parcels, excluded.

Despite such differences from earlier definitions of vacant land, the data in this report provides a useful picture of land use and urbanization trends over time, and can provide a base line to monitor future trends.

## SUMMARY

### VACANT LAND REMAINING IN THE METROPOLITAN URBAN SERVICE AREA

Twin Cities Area land use trends between 1970 and 1978 show there will be an ample supply of developable land in the Region's Metropolitan Urban Service Area for many decades to come. The Metropolitan Urban Service Area, or "MUSA," comprises the central portion of the Seven-County Metropolitan Area, consisting of 67 cities and parts of another 15.

The data shows that, at the current rate of development, the MUSA has a developable land supply that will meet the Region's needs for about 40 years. This calculation is based on the amount of land only. Other important factors--such as building densities and the need to assemble land into sizeable parcels--can also affect the pace of development.

The measure of new development in this report is land "consumption"--the conversion of vacant land to urban uses. "Urban" land includes land used for residential, commercial or industrial purposes, public and recreational land, and streets and alleys. Only a small percentage of land in public and recreational uses requires urban services, like roads and sewers, but these uses generally preclude using the land for any other kind of development.

Two factors determine how long the developable land supply in the MUSA will last. One is the amount of vacant, developable land remaining at a given point in time, and the other is the rate at which it is being consumed. The rate of land consumption, in turn, depends on the rate of new construction and its density. The higher the density, the less land is consumed.

### RATE OF LAND CONSUMPTION

The data show that 32,100 acres in MUSA communities was urbanized between 1970 and 1975, and another 12,395 from 1975 to 1978. That rate of urbanization averages out to be 6,420 acres per year during the earlier period, and 4,132 in the later one. The decline in the annual average was due mainly to a sharp drop in conversion of land for public and recreational use. This shift probably means no further large-scale conversions of MUSA land to public uses will take place in future years, primarily because of the increasingly developed character of any MUSA communities.

The rate of land consumption has important implications for the Council's Development Framework. If it is accelerating, the Council may have to consider expanding the MUSA outward sooner than anticipated. On the other hand, a slowdown raises other questions: Is it because of a general regional slowdown in growth? Is growth taking place at higher densities? Or, is a greater share of the growth going in the rural area?

Other data shows that rural area growth has been declining fairly steadily since 1973 as a percentage of all growth in the Region. About a third of all single-family housing units built in the Region in 1973 were located in the rural area, but the percentage in the first eight months of 1980 was under 12 percent. One theory is that, as urban development is discouraged in the Region's rural area, it will jump to counties outside the Region, but available data does not show this happening. Development trends in counties adjacent to the Metropolitan Area have generally followed those in this Region's rural areas. Thus, the land use data for most of the 1970s shows that, although the MUSA continues to capture most new development, there remains a sufficient supply of vacant, developable land for new growth.

AMOUNT OF VACANT LAND

The entire MUSA--developed and undeveloped land--contains a total of about 575,000 acres. In 1978, about 34 percent--197,400 acres--was classed as vacant. Of that total, 149,400 acres was considered suitable for development. The remaining vacant land was considered unsuitable for development because it was a part of a partially developed platted area or because it consisted of wetlands or floodplains.

That amount of vacant land represents an abundant supply generally throughout the MUSA. By geographic sector (wedge-shaped areas radiating from the Region's urban core), it ranges from 25 years' worth in the sector northwest of Minneapolis to 139 years in the sector southeast of St. Paul. These figures assume that the MUSA will experience the same land consumption rate in the future as it did between 1975 and 1978.

The data shows that, in 1978, the 10 MUSA communities with the most vacant land suitable for development were Eagan (12,304 acres), Woodbury (10,154), Inver Grove Heights (9,186), Cottage Grove (8,273), Eden Prairie (7,747), Brooklyn Park (6,897), Plymouth, (6,674), Maple Grove (6,673), Burnsville (6,279) and Apple Valley (5,842).

MIX OF LAND USES

The data shows that the mix of land uses in the MUSA is changing in one significant way. Between 1970 and 1975, public/recreational and residential uses accounted for the overwhelming percentage of newly urbanized land--36 percent and 40 percent, respectively. From 1975 to 1978, on the other hand, public/recreational land uses represented only about six percent of land converted to urban use, while residential development jumped to 60 percent.

The data shows that land consumption for new housing remained strong throughout the eight-year period, despite the deep 1974-75 recession. Moreover, land used for single-family housing increased its share of all housing.

That means more land was consumed for each new housing unit built in the MUSA during the study period, representing a relative decline in overall housing density. These lower densities are factored into the Council's calculation of how many years supply of vacant land there is left in the MUSA.

The high cost of housing has had a mixed impact on development patterns. It could very well have pushed some people out to lower-cost new housing it the rural area. At the same time, it has resulted in a stronger housing market for existing housing in the older, central parts of the Region.

Despite these cost pressures, though, the vast majority of new residential development--predominantly single-family--has taken place in the suburbs.

MUNICIPAL TRENDS

On a community-by-community basis, the data shows some shifts. Between 1975 and 1978, the five MUSA communities with the most vacant land developed for all urban uses were, in order, Apple Valley, Plymouth, Brooklyn Park, Eden Prairie and Bloomington. By comparison, the top five in the 1970-75 period were, in order, Eagan, Lino Lakes, Ramsey, Apple Valley and Inver Grove Heights.

TRENDS IN THE FULLY DEVELOPED AREA

The two time periods also showed marked differences in development trends within the Region's fully developed area. This area developed at an average of 810 acres per year between 1970 and 1975. In sharp contrast, the annual figure was approximately 340 acres in the 1975-1978 period.

This trend is consistent with the nearly fully developed character of the area, and a continued decline is expected in land consumption in this part of the Region.

# MAJOR FINDINGS

## GENERAL

1. A total of 11,335 acres of vacant or agricultural land in the Region's Metropolitan Urban Service Area (MUSA) was converted to urban uses--residential, commercial, industrial or public/recreational, street and alleys--between 1975 and 1978. Ths MUSA, which comprises a total of about 575,000 acres, consists of the central portion of the Seven-County Metropolitan Area where urban services are concentrated.

2. The boundary of the MUSA splits several outlying communities so that some parts lie inside and others outside the MUSA. If the portion of those communities lying outside the MUSA is included, the total amount of vacant land converted to urban uses was 12,395 acres between 1975 and 1978, and 32,100 acres between 1970 and 1975.

3. Within the MUSA proper, the 1975-78 average rate of land consumption--the conversion of vacant land to urban uses--was 3,778 acres per year--an area larger than either South St. Paul or Crystal.

4. In the area comprising all portions of MUSA communities, the average annual rate of land consumption was 6,420 acres between 1970 and 1975, or an area the size of Fridley. Between 1975 and 1978, the annual average was 4,132 acres, an area the size of the city of Anoka.

5. If the MUSA continues to develop at the 1975-1978 rate, there would be enough developable land with the MUSA to last approximately 40 years.

6. About 75 percent of all vacant land in the MUSA in 1978 was considered developable. The figure excludes wetlands, floodplains and areas that are part of a larger, partially developed plat. A total of 150,000 acres was suitable for development, about 40,000 not suitable, and approximately 8,000 acres were part of an already existing platted area.

7. During the 1970-75 period, public and recreational land accounted for the largest share (42 percent) of land consumption; residential development, the second highest (37 percent).

8. Between 1975 and 1978, residential uses accounted for the largest share (62 percent) of land consumption; industrial development and streets/alleys tied for second place (13 percent).

SUBREGIONAL SECTOR TRENDS

9. More vacant land was converted to urban use in every sector of the MUSA from 1970 to 1975 than in the subsequent three years. Sectors are wedge-shaped areas within the MUSA that fan out from the central cities of Minneapolis and St. Paul.

10. The land consumption rate was highest between 1975 and 1978 in the sector made up of Robbinsdale, Crystal, New Hope, Plymouth, Maple Grove, Brooklyn Center, Brooklyn Park, Osseo and Champlin. It was lowest in the sector comprising White Bear Lake area communities, plus Oakdale, Lake Elmo, North St. Paul and Landfall.

11. The sector that includes Eden Prairie, Edina, Bloomington and Richfield led in the amount of land converted to residential development between 1975 and 1978. This sector also led in commercial land consumption in both time periods.

12. The sector that includes 10 Anoka County cities, two Ramsey County communities and St. Anthony in Hennepin was first in residential land consumption between 1970 and 1975. The primary reason was the extensive housing development in the Anoka County communities of Ramsey and Andover, most of it outside the MUSA.

13. The sector comprising Eagan, Inver Grove Heights and five other northern Dakota County communities led in industrial land consumption in the 1975-78 period, accounting for one-third of all industrial land developed in that time period. This sector also placed among the top three sectors in the preceding five years.

14. The annual average rate of land consumption was also lower for all sectors during the 1975-78 time period than for the 1970-75 period, except in the case of the sector consisting of Robbinsdale, Crystal, New Hope, Brooklyn Center, Brooklyn Park, Plymouth, Maple Grove and Osseo.

15. In 1978, the sector comprising Eagan, Inver Grove Heights and five other northern Dakota County communities had the most vacant, developable land in the MUSA of any MUSA sector. The sector with the least amount was that consisting of White Bear Lake area communities, plus Oakdale, Lake Elmo, North St. Paul and Landfall.

DEVELOPMENT RING TRENDS

16. The developing ring of communities that surround the central cities and their older, developed suburbs increased slightly its share of land converted to urban uses from 1970-75 to 1975-78, despite the fact that less land was urbanized in the second period than in the first. This was true for all five urban land uses, except public/recreational land.

17. In the approximately 26 suburbs immediately adjacent to Minneapolis and St. Paul, called the "inner ring" of communities, commercial land made up only 4.5 percent of all urban land in 1978. However, it accounted for 12 percent of all land consumed between 1970 and 1978. This differential is the highest for any type of land use in the inner ring.

18. In the developing ring of suburbs, public and recreational land accounted for 23.6 percent of existing land uses in 1977. But between 1970 and 1975, it accounted for 51.3 percent of all new urbanized land, the widest divergance of any land use in the developing ring.

FULLY DEVELOPED AREA TRENDS

19. In the MUSA's fully developed area, the annual average rate of land consumption dropped off sharply from the 1970-75 period to the 1975-78 period. In the former, it was 840 acres per year; in the latter, 340.

20. Residential land uses and public/recreational uses accounted for nearly 60 percent of land consumed in the fully developed area between 1970 and 1975. In the 1975-78 period, residential and industrial development were the leaders (46 and 28 percent, respectively).

MUNICIPAL TRENDS

21. Between 1975 and 1978, the five MUSA communities with the most vacant land developed for all urban uses were, in order, Apple Valley, Plymouth, Brooklyn Park, Eden Prairie and Bloomington. By comparison, the top five in the 1970-75 period were, in order, Eagan, Lino Lakes, Ramsey, Apple Valley and Inver Grove Heights.

22. In 1978, Eagan, Woodbury, Inver Grove Heights and Cottage Grove had the most vacant, developable land of any MUSA communities, largely because much of the Region's new growth has taken place in western Twin Cities suburbs. The leading 10 communities contained about half of the MUSA's vacant, developable land in 1978.

23. The MUSA communities with the least amount of vacant, developable land tend to be those cities that are very small, very developed or both. They include Willernie (3 acres), Lauderdale (10), Lilydale and Mendota combined (12), Richfield (17), Osseo (18) and St. Anthony (19).

24. The four communities with the most land converted to residential development between 1975 and 1978 were Hennepin County suburbs--Bloomington, Brooklyn Park, Plymouth and Eden Prairie.

25. Between 1975 and 1978, Burnsville had the most newly urbanized land devoted to commercial purposes, Apple Valley, the most for industrial and public/recreational uses.

ZONING

26. Between 1975 and 1978, the mix of land use reflected in a MUSA community's newly urbanized land comes close to the mix of the community's zoned land use. It does not appear, therefore, that communities are "overzoning" for industrial and commercial land, except possibly in some developing suburbs.

HOUSING

27. Land consumption for new housing remained strong throughout the 1970-78 period, despite the deep 1974-75 recession. During the eight-year period, single-family housing increased its share of all housing, resulting in a decline in overall housing densities.

## THE METROPOLITAN URBAN SERVICE AREA: A GENERAL PERSPECTIVE

### LAND USE CHANGES, 1970-1978

The average annual rate of vacant land consumption during the period 1975-1978 in the study area* was 4,132 acres (6.5 square miles). This is equivalent to adding a city the size of Anoka to the urbanized area every year. The average annual rate of land consumption for the same area for the period 1970-1975 was 6,420 acres (10.0 square miles), or an area the size of Fridley.

The total amount of land consumed during the 1975-1978 period was 12,395 acres (19.4 square miles), while 32,100 acres (50 square miles) were consumed during the five-year period from 1970-1975. At the current rate of consumption, the supply of mapped suitable vacant land within the MUSA will last for about 40 years. Considering all vacant land, the supply would be adequate for nearly 80 years.

The period 1970-1975 was marked by the massive acquisition of park lands, primarily by developing suburban communities (see Table 1). Average annual land consumption for residential, commercial and industrial purposes ("built-on" land) between 1975 and 1978 was 3,359 acres; for the 1970-1975 period, 3,106 acres. Table 1 lists land use changes, by type for both time periods, while Figures 3 and 4 show graphically the changes in composition of the land used during each of the time periods.

Slightly more than three percent of the vacant/agricultural land in the study area was developed for urban purpose between 1975 and 1978. During the 1970-1975 period, more than 8.5 percent was consumed.

Table 2 shows the total acres of vacant land used for the various types of urban usage for the periods 1970-1975 and 1975-1978.

The largest user of vacant land between 1975 and 1978 was residential construction, with 62.3 percent (7,722 acres) of the total, followed by industrial uses and streets and alleys with 12.7 percent each. Public and recreational land use led during the 1970-1975 period, with 41.9 percent (13,406 acres), followed by residential, with 36.6 percent (11,694).

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* See definition of "study area" in Figure 2.

Table 1

LAND USE CHANGE IN STUDY AREA*, 1970-1975 and 1975-1978

| | Residential | Commercial | Industrial | Public and Recreation | Streets and Alleys | Water | Vacant | Total |
|---|---|---|---|---|---|---|---|---|
| 1970 | 97,484 | 7,757 | 30,384 | 44,945 | 66,894 | 42,743 | 375,091 | 665,298 |
| 1975 | 109,162 | 2,495 | 32,507 | 58,373 | 70,027 | 42,743 | 342,991 | 665,298 |
| 1978 | 116,943 | 10,277 | 34,084 | 59,592 | 71,643 | 43,183 | 332,133 | 667,855** |
| Change 1970-1975 | 11,678 | 1,738 | 2,123 | 13,428 | 3,133 | -- | 32,100 | -- |
| Change 1975-1978* | 7,722 | 782 | 1,573 | 749 | 1,569 | -- | 12,395 | -- |

* Includes Central Cities.

** The study area increased between 1975 and 1978 due to annexation of land by Victoria during this period.

**Figure 3**
**PERCENT OF LAND CONVERTED TO URBAN USES, BY TYPE, 1970-1975**

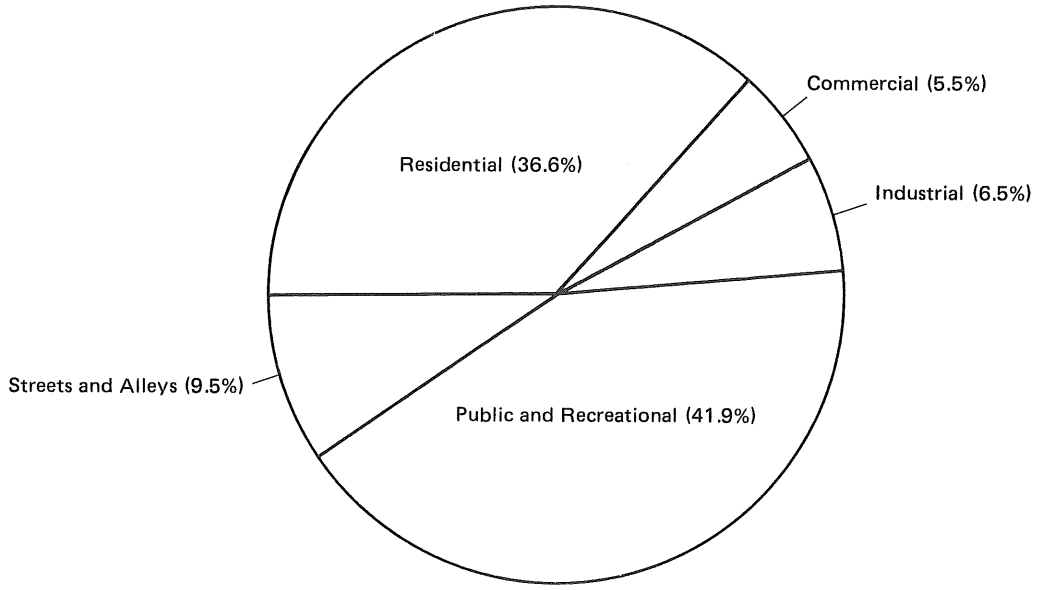


**Figure 4**
**PERCENT OF LAND CONVERTED TO URBAN USES, BY TYPE, 1975-1978**

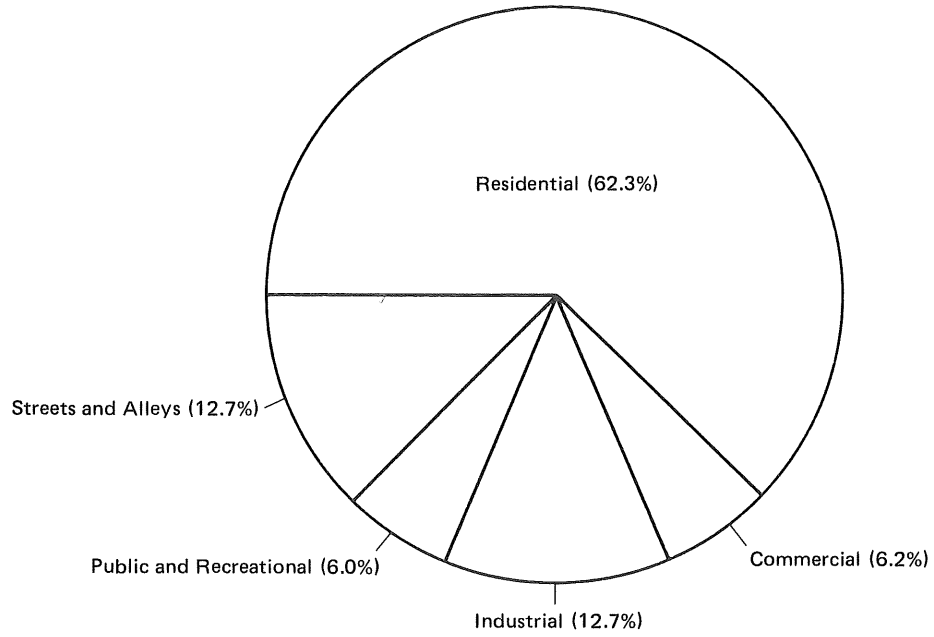

Table 2
ACRES OF LAND USED FOR URBAN PURPOSES, BY TYPE, IN STUDY AREA,*
1970-1975 and 1975-1978

| | Residential | Commercial | Industrial | Public and Recreation | Streets and Alleys | Total |
|---|---|---|---|---|---|---|
| 1970-1975 | | | | | | |
| Total | 11,694 | 1,768 | 2,068 | 13,406 | 3,035 | 31,971 |
| Percent | 36.6% | 5.5% | 6.5% | 41.9% | 9.5% | 100% |
| Annual Rate | 2,339 | 354 | 414 | 2,682 | 607 | 6,394 |
| 1975-1978 | | | | | | |
| Total | 7,722 | 782 | 1,573 | 749 | 1,569 | 12,395 |
| Percent | 62.3% | 6.3% | 12.7% | 6.0% | 12.7% | 100% |
| Annual Rate | 2,574 | 261 | 524 | 250 | 523 | 4,132 |

*Does not include central cities.

## AMOUNT OF VACANT LAND, 1978

In 1978, there were 197,443 acres (209 square miles) of measured vacant land within the MUSA itself (see Table 3). Of these, 149,580 acres (23 square miles) were considered suitable for urban development. Table 3 shows the breakdown between land suitable for development, land not suitable for development, and land which is vacant but part of a plat of land that is partially developed. Seventy-five percent of the vacant land in the study is deemed suitable for development, according to the general criteria applied in this study.* This ratio is the same inside the MUSA as well as in those few rural communities located within the study area. Platted land, which is not considered in the supply of vacant land, constitutes only a small share of the remaining vacant land, 14 percent.

Table 3
AMOUNT OF VACANT LAND IN STUDY AREA, 1978

| | Inside MUSA | Outside MUSA | Total |
|---|---|---|---|
| Measured Vacant Land | | | |
| Suitable | 149,482 | 72,918 | 222,500 |
| Not Suitable | 40,166 | 23,018 | 63,184 |
| Part of Plat | 7,695 | 1,335 | 9,030 |
| Total | 197,443 | 97,271 | 294,714 |
| Residual Vacant Land | | | 332,133 |

A total of 11,335 acres of vacant land was consumed during the 1975-1978 period, for an annual consumption rate of 3,778 acres. At this rate of consumption, the vacant land within the MUSA would be adequate for just about 40 years. Measured vacant land by community is shown in Table 12. Exact location of vacant land is shown for communities in the Fully Developed Area** with proportional squares representing the area of vacant land shown for the remainder of the communities in the study area. A map of measured vacant land can be seen in Figure 6.

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* In this study, only wetlands and floodplains were classified as not suitable for development and in areas of intensive urban activity such as in the Fully Developed Area communities, even somewhat swampy parcels were classified as developable because of land values and urban pressure.

** See definition on page 19.

## THE FULLY DEVELOPED AREA

### LAND USE CHANGES, 1970-1978, AND AMOUNT OF VACANT LAND

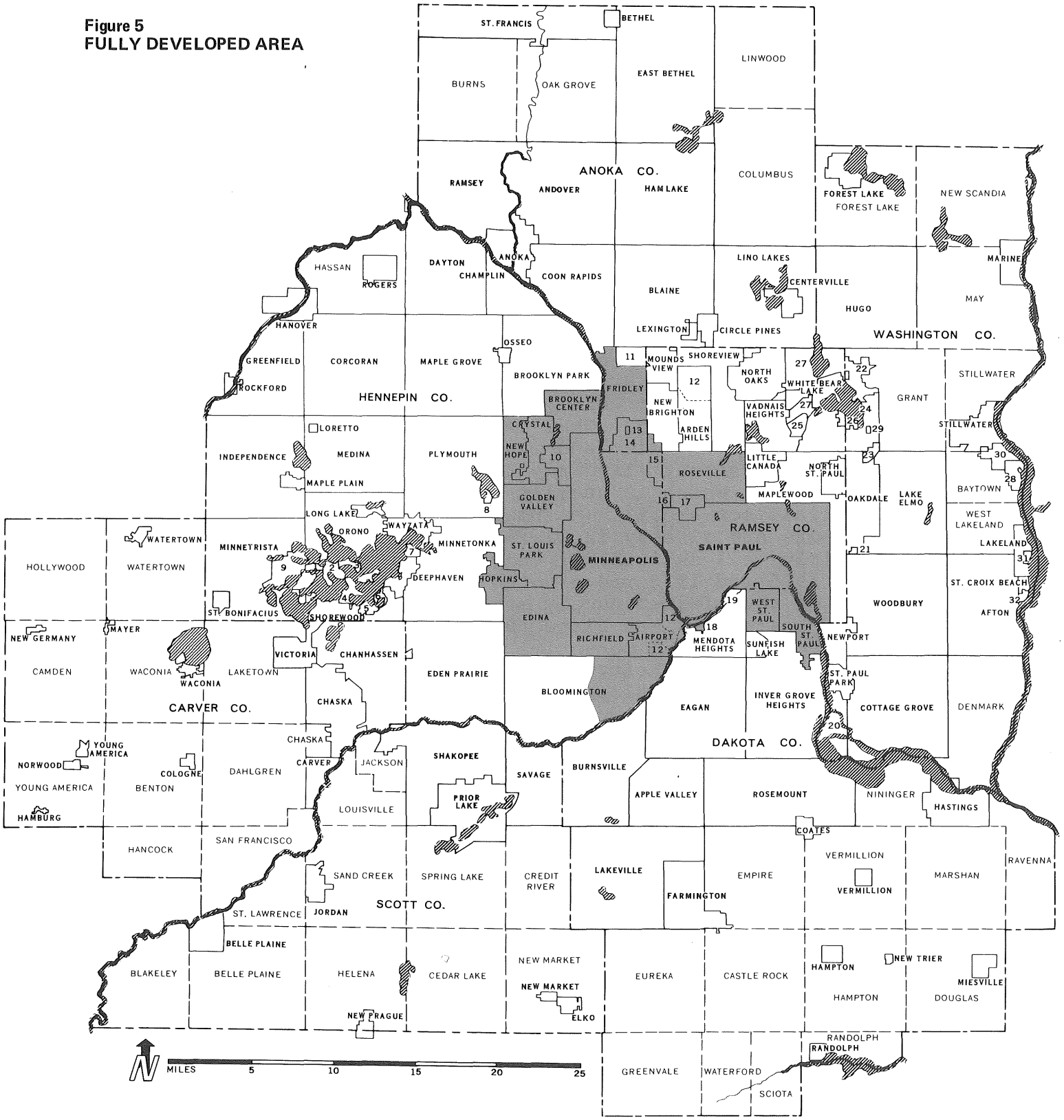
The Fully Developed Area (FDA) is one of five policy areas defined in the Council's Development Framework plan. It consists of the central cities and contiguous suburbs where little vacant land (less than 10 percent of the total area) remains for new development. The FDA is shown in Figure 5. Land use data for the FDA is shown in Table 4.

Given the limited amount of vacant land remaining in this area, it is not surprising that the amount of land developed dropped sharply between the 1970-1975 period and the 1975-1978 period. This shift represents a change in the annual average land consumption from 814 acres per year in the former to 340 in the latter period. This rate of land consumption could continue for 50 years, given the current supply of land. This is undoubtedly an overstatement since much of this land may not be on the market. However, new "vacant" land may be created through redevelopment, which is usually used more intensively for residential, commercial and industrial uses because most of the streets are already in place and public land needs are also fairly well satisfied. Only 12 percent of the land between 1975 and 1978 was devoted to these two uses. Because of the limited supply of land, new development in the FDA generally takes place at higher densities. These factors, coupled with potential for redevelopment of obsolete or low-intensity uses, give the FDA significant opportunities for development and redevelopment.

### ZONING OF VACANT LAND

Within the Fully Developed Area suburbs, vacant land has been classified by zoning category. This is shown in Tables 5 and 6. The comparison between vacant land available by zoning type and amount of land consumed by various land uses indicates a fairly close correspondence, particularly during the 1975 to 1978 period. The only deviation occurs in the public/open land zoning category. However, this deviation probably does not represent any real incompatibility between zoning and development. Considerable public/open land is classified as unsuitable for development. It may, however, be quite suitable for "development" as park or recreation land. It is quite likely that much of the extensive development of public and recreation land occurring between 1970 and 1975 actually occurred on land classified as not suitable.

**Figure 5**
**FULLY DEVELOPED AREA**




1 SPRING PARK
2 ORONO
3 MINNETONKA BEACH
4 TONKA BAY
5 EXCELSIOR
6 GREENWOOD
7 WOODLAND
8 MEDICINE LAKE
9 MOUND
10 ROBBINSDALE
11 SPRING LAKE PARK
12 U. S. GOVT.
13 HILLTOP
14 COLUMBIA HEIGHTS
15 ST. ANTHONY
16 LAUDERDALE
17 FALCON HEIGHTS
18 MENDOTA
19 LILYDALE
20 GREY CLOUD
21 LANDFALL
22 DELLWOOD
23 PINE SPRINGS
24 MAHTOMEDI
25 GEM LAKE
26 BIRCHWOOD
27 WHITE BEAR
28 BAYPORT
29 WILLERNIE
30 OAK PARK HEIGHTS
31 LAKELAND SHORES
32 ST. MARY'S POINT

ANOKA — County Boundary
ORONO — Municipal Boundary
CAMDEN — Township Boundary

Table 4
ACRES OF LAND IN MAJOR LAND-USE GROUPS
FOR THE FULLY DEVELOPED AREA,*
1970-1975 and 1975-1978

| | Residential | Commercial | Industrial | Public and Recreation | Streets and Alleys | Water | Vacant | Total |
|---|---|---|---|---|---|---|---|---|
| 1970 | 52,960 | 5,488 | 17,865 | 22,464 | 33,251 | 5,232 | 22,288 | 159,548 |
| 1975 | 54,341 | 5,910 | 18,501 | 23,440 | 33,906 | 5,232 | 18,218 | 159,548 |
| 1978 | 54,809 | 6,051 | 18,785 | 23,512 | 33,960 | 5,232 | 17,199 | 159,548 |
| Change 1970-1975 | 1,381 | 422 | 636 | 976 | 655 | --- | -4,070 | --- |
| Change 1975-1978 | 468 | 141 | 284 | 72 | 54 | --- | -1,019 | --- |
| | | | PERCENT OF TOTAL LAND | | | | | |
| 1978 | 34.4% | 3.8 | 11.8 | 14.7 | 21.3 | 3.3 | 10.8 | 100.0% |
| Change 1970-1975 | 34.9% | 10.4 | 15.6 | 24.0 | 16.0 | 0.0 | -100.0 | 0.0% |
| Change 1975-1978 | 45.9% | 13.8 | 27.9 | 7.0 | 5.2 | 0.0 | -100.0 | 0.0% |

* Includes Central Cities.

These findings run somewhat contrary to the assumption that the Region is overzoned for industrial and commercial land. This may still be the case in the developing suburbs, but it appears that as communities fill up, their remaining vacant land is zoned quite consistently with development trends or needs. Given the availability of land in all zoning categories in most FDA suburbs, it is not reasonable to argue that the zoning is determining the mix of development occurring in these communities.

Table 5
VACANT LAND AND LAND CONSUMED IN THE
FULLY DEVELOPED AREA SUBURBS, BY ZONING CLASSIFICATION,
1970-1975 and 1975-1978
(in acres)

| | Residential | | Commercial | | Industrial | | Public/Open | | Other | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Suitable | Not Suitable | Suitable | Not Suitable | Suitable | Not Suitable | Suitable | Not Suitable | Suitable | Not Suitable | Suitable | Not Suitable |
| Total in FDA Suburbs* | 2,331 | 974 | 581 | 129 | 1,590 | 1,128 | 265 | 1,031 | 31 | 466 | 4,798 | 3,728 |
| Percent of Suitable Land | 48.6% | | 12.1% | | 33.1% | | 5.5% | | .6% | | 100% | |
| Percent of Unsuitable Land | | 26.1% | | 3.5% | | 30.3% | | 27.7% | | 12.5% | | 100% |
| Land Consumed, 1975 - 1978 | 468 | | 141 | | 284 | | 72 | | | | 965** | |
| Percent of Total Consumed | 48.5% | | 14.6% | | 29.4% | | 7.5% | | | | 100% | |
| Land Consumed, 1970 - 1978 | 1,381 | | 422 | | 636 | | 976 | | | | 3,415** | |
| Percent of Total Consumed | 40.4% | | 12.4% | | 18.6% | | 28.6% | | | | 100% | |

* Minneapolis and St. Paul not included.
**Excludes streets and alleys.

Table 6
ZONING OF VACANT LAND IS FULLY
DEVELOPED AREA SUBURBS, 1970
(in acres)

Zoning Classification

| City | Residential | | Commercial | | Industrial | | Public/Open | | Other | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Suitable | Not Suitable | Suitable | Not Suitable | Suitable | Not Suitable | Suitable | Not Suitable | Suitable | Not Suitable | Suitable | Not Suitable |
| Bloomington (East) | 132 | 0 | 148 | 0 | 64 | 0 | 152 | 1,005 | 0 | 0 | 496 | 1,005 |
| Brooklyn Center | 173 | 37 | 76 | 13 | 176 | 29 | 17 | 12 | 0 | 0 | 442 | 91 |
| Columbia Heights and Hilltop | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 0 |
| Crystal | 63 | 32 | 3 | 0 | 60 | 6 | 0 | 0 | 7 | 0 | 133 | 38 |
| Edina | 411 | 358 | 37 | 0 | 52 | 87 | 0 | 0 | 0 | 0 | 500 | 445 |
| Falcon Heights | 34 | 0 | 4 | 8 | 0 | 0 | 0 | 0 | 0 | 293 | 38 | 301 |
| Fridley | 99 | 11 | 18 | 0 | 357 | 283 | 10 | 0 | 0 | 0 | 484 | 294 |
| Golden Valley | 132 | 30 | 28 | 15 | 206 | 128 | 76 | 0 | 22 | 12 | 464 | 185 |
| Hopkins | 52 | 74 | 0 | 42 | 77 | 23 | 0 | 0 | 0 | 58 | 129 | 197 |
| Lauderdale | 0 | 4 | 0 | 0 | 0 | 0 | 10 | 8 | 0 | 0 | 10 | 12 |
| Mendota | 12 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 73 |
| New Hope | 33 | 18 | 31 | 25 | 172 | 176 | 0 | 0 | 0 | 0 | 236 | 219 |
| Richfield | 5 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 |
| Robbinsdale | 57 | 51 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 57 | 57 |
| Roseville | 394 | 35 | 87 | 0 | 128 | 56 | 0 | 0 | 2 | 0 | 611 | 91 |
| St. Anthony | 19 | 1 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 31 | 19 | 37 |
| St. Louis Park | 262 | 84 | 89 | 26 | 197 | 59 | 0 | 0 | 0 | 72 | 548 | 241 |
| South St. Paul | 44 | 110 | 10 | 0 | 65 | 253 | 0 | 0 | 0 | 0 | 119 | 363 |
| West St. Paul | 384 | 56 | 38 | 0 | 36 | 23 | 0 | 0 | 0 | 0 | 458 | 79 |
| TOTAL* | 2,331 | 974 | 581 | 129 | 1,590 | 1,128 | 265 | 1,031 | 31 | 466 | 4,798 | 3,728 |

*Minneapolis and St. Paul not included.

## MUNICIPAL LAND USE TRENDS

### LAND USE CHANGES, 1970-1978

Ranked in Tables 7 through 11 below are the 10 communities with the highest rates of land consumption in each of the land use categories. Table 12, which follows the rankings, contains a complete listing of data for all communities in the study area.

Apple Valley leads in two of the four land use categories--industrial and public/recreational--as well as in total amount consumed. Only Plymouth appears on all five rankings. In all, 25 different cities appear on the five tables. Comparing the rankings for 1975-1978 to the previous period shows considerable changes in the rankings. The greatest consistency over time occurs in the industrial category, where eight of the 1975 to 1978 leaders were also on the 1970 to 1975 list. The greatest shift occurred in the public and recreational category, where only three cities appeared in the top 10 for both time periods.

Table 7
COMMUNITIES WITH MOST VACANT LAND
CONVERTED TO RESIDENTIAL USES, 1975-1978

| 1975-1978 Rank | Community | Acres | 1970-1975 Rank |
|---|---|---|---|
| 1 | Bloomington | 693 | 6 |
| 2 | Brooklyn Park | 636 | 8 |
| 3 | Plymouth | 502 | 10 |
| 4 | Eden Prairie | 494 | - |
| 5 | Apple Valley | 483 | 5 |
| 6/7 | Burnsville | 373 | 2 |
| 6/7 | Ramsey | 373 | 1 |
| 8 | Maple Grove | 368 | - |
| 9 | Coon Rapids | 256 | - |
| 10 | Shoreview | 227 | - |
| | Total | 4,410 | |
| | Study Area Total | 7,722 | |
| | Top 10 as percent of Study Area | | 57.1% |

Table 8
COMMUNITIES WITH MOST VACANT LAND
CONVERTED TO COMMERCIAL USES, 1975-1978

| 1975-1978 Rank | Community | Acres | 1970-1975 Rank |
|---|---|---|---|
| 1 | Burnsville | 118 | 6 |
| 2 | Woodbury | 61 | - |
| 3 | Eden Prairie | 50 | 5 |
| 4 | Coon Rapids | 30 | - |
| 5 | St. Louis Park | 28 | - |
| 6/7/8 | Andover | 27* | - |
| 6/7/8 | Minnetonka | 27 | 3 |
| 6/7/8 | Plymouth | 27 | - |
| 9 | Maplewood | 25 | 2 |
| 10 | Bloomington | 24 | 1 |
| | Total | 417 | |
| | Study Area Total | 782 | |
| | Top 10 as percent of Study Area | | 53.3% |

* Primarily addition to storage yard for auto salvage operation.

Table 9
COMMUNITIES WITH MOST VACANT LAND
CONVERTED TO INDUSTRIAL USES, 1975-1978

| 1975-1978 Rank | Community | Acres | 1970-1975 Rank |
|---|---|---|---|
| 1 | Apple Valley | 357* | 3 |
| 2 | Plymouth | 217 | 4 |
| 3 | Eden Prairie | 118 | 6 |
| 4 | Minnetonka | 104 | 9 |
| 5 | Inver Grove Heights | 72 | 5 |
| 6 | Brooklyn Park | 71 | 8 |
| 7 | Shoreview | 62 | - |
| 8 | New Hope | 56 | 10 |
| 9 | Golden Valley | 54 | - |
| 10/11 | Blaine | 52 | - |
| 10/11 | Burnsville | 52 | 7 |
| | Total | 1,163 | |
| | Study Area Total | 1,573 | |
| | Top 10 as percent of Study Area | | 73.9% |

*Gravel extraction operations.

Table 10
COMMUNITIES WITH MOST VACANT LAND CONVERTED
TO PUBLIC AND RECREATIONAL USES, 1975-1978

| 1975-1978 Rank | Community | Acres | 1970-1975 Rank |
|---|---|---|---|
| 1 | Apple Valley | 331 | 6 |
| 2 | Lilydale/Mendota | 218 | - |
| 3 | Lake Elmo | 30 | - |
| 4 | Fridley | 27 | - |
| 5 | North St. Paul | 26 | - |
| 6 | New Hope | 24 | - |
| 7 | Coon Rapids | 18 | 3 |
| 8 | Plymouth | 14 | - |
| 9 | St. Paul Park | 11 | - |
| 10 | Maple Grove | 10 | 10 |
| | Total | 709 | |
| | Study Area Total | 749 | |
| | Top 10 as percent of Study Area | | 94.7% |

*Gravel extraction operations.

Table 11
COMMUNITIES WITH MOST VACANT LAND
CONVERTED TO ALL URBAN PURPOSES, 1975-1978

| 1975-1978 Rank | Community | Acres | 1970-1975 Rank |
|---|---|---|---|
| 1 | Apple Valley | 1,324 | 4 |
| 2 | Plymouth | 970 | - |
| 3 | Brooklyn Park | 922 | - |
| 4 | Eden Prairie | 822 | - |
| 5 | Bloomington | 724 | - |
| 6 | Burnsville | 550 | 6 |
| 7 | Ramsey | 517 | 1 |
| 8 | Maple Grove | 499 | 10 |
| 9 | Minnetonka | 431 | - |
| 10 | Eagan | 334 | 2 |
| | Total | 7,093 | |
| | Study Area Total | 12,395 | |
| | MUSA Total | 11,368 | |
| | Top 10 as percent of Study Area | | 57.2% |
| | Top 10 as percent of MUSA* | | 60.3% |

*Ramsey, which is largely outside the MUSA, is replaced by Coon Rapids in this calculation, and minor adjustments for non-MUSA development in Eden Prairie, Maple Grove and Plymouth are made.

## Table 12
## ACRES OF LAND IN MAJOR LAND USE GROUPS, BY CITY, 1970-1975 AND 1975-1978

| City | | Residential | Commercial | Industrial | Public & Recreational | Streets & Alleys | Water | Vacant and/or Agricultural | Total |
|---|---|---|---|---|---|---|---|---|---|
| Andover | 1970 | 650 | 20 | 26 | 645 | 1,476 | 575 | 19,755 | 23,147 |
| | 1975 | 1,400 | 33 | 37 | 647 | 1,593 | 575 | 18,862 | 23,147 |
| | 1978 | 1,598 | 60 | 44 | 647 | 1,628 | 575 | 18,595 | 23,147 |
| | Change 1970-1975 | 750 | 13 | 11 | 2 | 117 | -- | -893 | -- |
| | Change 1975-1978 | 198 | 27 | 7 | -- | 35 | -- | -267 | -- |
| Anoka | 1970 | 850 | 48 | 212 | 310 | 498 | 289 | 1,123 | 3,330 |
| | 1975 | 938 | 53 | 263 | 700 | 519 | 289 | 1,706 | 4,468 |
| | 1978 | 1,038 | 53 | 263 | 700 | 525 | 289 | 1,600 | 4,468 |
| | Change 1970-1975 | 88 | 5 | 51 | 390 | 21 | -- | -583 | 1,138 |
| | Change 1975-1978 | 100 | -- | -- | -- | 6 | -- | -106 | |
| Apple Valley | 1970 | 803 | 35 | 359 | 142 | 484 | 130 | 9,119 | 11,072 |
| | 1975 | 1,326 | 64 | 466 | 812 | 609 | 130 | 7,665 | 11,072 |
| | 1978 | 1,814 | 85 | 823 | 1,143 | 736 | 130 | 6,341 | 11,072 |
| | Change 1970-1975 | 523 | 29 | 107 | 670 | 125 | -- | -1,459 | -- |
| | Change 1975-1978 | 488 | 21 | 357* | 331 | 127 | -- | 1,324 | -- |
| Arden Hills | 1970 | 409 | 17 | 892 | 1,465 | 507 | 498 | 2,495 | 6,283 |
| | 1975 | 554 | 25 | 897 | 1,484 | 537 | 498 | 2,288 | 6,283 |
| | 1978 | 612 | 35 | 909 | 1,484 | 538 | 498 | 2,198 | 6,283 |
| | Change 1970-1975 | 145 | 8 | 5 | 19 | 30 | -- | -207 | -- |
| | Change 1975-1978 | 67 | 10 | 12 | -- | 1 | -- | -90 | -- |
| Birchwood | 1970 | 73 | 1 | -- | 5 | 36 | -- | 98 | 213 |
| | 1975 | 89 | 1 | -- | 5 | 38 | -- | 80 | 213 |
| | 1978 | 103 | 1 | -- | 5 | 38 | -- | 66 | 213 |
| | Change 1970-1975 | 16 | -- | -- | -- | 2 | -- | -18 | -- |
| | Change 1975-1978 | 14 | -- | -- | -- | -- | -- | -14 | -- |
| Blaine | 1970 | 1,537 | 78 | 2,141 | 658 | 1,738 | 40 | 15,623 | 21,815 |
| | 1975 | 1,907 | 201 | 2,162 | 787 | 1,842 | 40 | 14,876 | 21,815 |
| | 1978 | 2,115 | 213 | 2,214 | 793 | 1,877 | 40 | 14,563 | 21,815 |
| | Change 1970-1975 | 370 | 123 | 21 | 129 | 104 | -- | -747 | -- |
| | Change 1975-1978 | 175 | 12 | 52 | 6 | 35 | -- | -280 | -- |
| Bloomington | 1970 | 5,826 | 662 | 962 | 4,263 | 2,820 | 869 | 8,890 | 24,292 |
| | 1975 | 6,308 | 846 | 1,030 | 4,321 | 2,905 | 869 | 8,013 | 24,292 |
| | 1978 | 7,001 | 870 | 1,037 | 4,301 | 2,925 | 869 | 7,289 | 24,292 |
| | Change 1970-1975 | 482 | 184 | 68 | 58 | 85 | -- | -877 | -- |
| | Change 1975-1978 | 693 | 24 | 7 | -20 | 20 | -- | -724 | -- |

* Gravel pits

Table 12 (cont.)
ACRES OF LAND IN MAJOR LAND USE GROUPS, BY CITY,
1970-1975 AND 1975-1978

| City | | Residential | Commercial | Industrial | Public & Recreational | Streets & Alleys | Water | Vacant and/or Agricultural | Total |
|---|---|---|---|---|---|---|---|---|---|
| Brooklyn Center | 1970 | 2,036 | 365 | 112 | 653 | 1,219 | -- | 1,049 | 5,434 |
| | 1975 | 2,127 | 419 | 170 | 702 | 1,237 | -- | 779 | 5,434 |
| | 1978 | 2,148 | 442 | 188 | 704 | 1,245 | -- | 707 | 5,434 |
| Change 1970-1975 | | 91 | 54 | 58 | 49 | 18 | -- | -270 | -- |
| Change 1975-1978 | | 21 | 23 | 18 | 2 | 8 | -- | - 72 | -- |
| Brooklyn Park | 1970 | 1,942 | 60 | 160 | 386 | 1,187 | -- | 13,250 | 16,985 |
| | 1975 | 2,361 | 117 | 255 | 459 | 1,287 | -- | 12,506 | 16,985 |
| | 1978 | 2,997 | 138 | 326 | 463 | 1,547 | -- | 11,514 | 16,985 |
| Change 1970-1975 | | 419 | 57 | 95 | 73 | 100 | -- | -744 | -- |
| Change 1975-1978 | | 636 | 21 | 71 | 4 | 260 | -- | -922 | -- |
| Burnsville | 1970 | 1,770 | 87 | 520 | 348 | 1,408 | 1,255 | 11,002 | 16,390 |
| | 1975 | 2,458 | 183 | 616 | 728 | 1,598 | 1,255 | 9,552 | 16,390 |
| | 1978 | 2,831 | 301 | 668 | 735 | 1,598 | 1,255 | 9,002 | 16,390 |
| Change 1970-1975 | | 688 | 96 | 96 | 380 | 190 | -- | -1,450 | -- |
| Change 1975-1978 | | 373 | 118 | 52 | 7 | -- | -- | -550 | -- |
| Champlin | 1970 | 471 | 12 | 13 | 685 | 250 | 38 | 4,074 | 5,543 |
| | 1975 | 734 | 12 | 13 | 793 | 332 | 38 | 3,621 | 5,543 |
| | 1978 | 807 | 35 | 13 | 797 | 363 | 38 | 3,490 | 5,543 |
| Change 1970-1975 | | 263 | -- | -- | 108 | 82 | -- | -453 | -- |
| Change 1975-1978 | | 73 | 23 | -- | 4 | 31 | -- | -131 | -- |
| Chanhassen | 1970 | 583 | 27 | 70 | 664 | 501 | 1,548 | 11,409 | 14,802 |
| | 1975 | 634 | 31 | 70 | 908 | 514 | 1,548 | 11,097 | 14,802 |
| | 1978 | 689 | 31 | 73 | 908 | 529 | 1,548 | 11,024 | 14,802 |
| Change 1970-1975 | | -51 | 4 | -- | 244 | 13 | -- | -312 | -- |
| Change 1975-1978 | | -55 | -- | 3 | -- | 15 | -- | -73 | -- |
| Circle Pines | 1970 | 294 | 10 | 13 | 51 | 140 | 76 | 678 | 1,262 |
| | 1975 | 304 | 10 | 13 | 57 | 140 | 76 | 662 | 1,262 |
| | 1978 | 314 | 10 | 13 | 57 | 140 | 76 | 652 | 1,262 |
| Change 1970-1975 | | 10 | -- | -- | 6 | -- | -- | -16 | -- |
| Change 1975-1978 | | 10 | -- | -- | -- | -- | -- | -10 | -- |
| Columbia Heights and Hilltop | 1970 | 954 | 75 | 168 | 211 | 556 | 189 | 177 | 2,330 |
| | 1975 | 961 | 76 | 210 | 211 | 556 | 189 | 127 | 2,330 |
| | 1978 | 962 | 77 | 210 | 212 | 556 | 189 | 124 | 2,330 |
| Change 1970-1975 | | 7 | 1 | 42 | -- | -- | -- | -50 | -- |
| Change 1975-1978 | | 1 | 1 | -- | 1 | -- | -- | -3 | -- |

Table 12 (cont.)
ACRES OF LAND IN MAJOR LAND USE GROUPS, BY CITY,
1970-1975 AND 1975-1978

| City | | Residential | Commercial | Industrial | Public & Recreational | Streets & Alleys | Water | Vacant and/or Agricultural | Total |
|---|---|---|---|---|---|---|---|---|---|
| Coon Rapids | 1970 | 2,066 | 123 | 357 | 620 | 1,401 | 117 | 9,971 | 14,655 |
| | 1975 | 2,347 | 142 | 363 | 1,675 | 1,485 | 117 | 8,526 | 14,655 |
| | 1978 | 2,603 | 172 | 377 | 1,693 | 1,495 | 117 | 8,198 | 14,655 |
| | Change 1970-1975 | 281 | 19 | 6 | 1,055 | 84 | -- | -1,445 | -- |
| | Change 1975-1978 | 256 | 30 | 14 | 18 | 10 | -- | -328 | -- |
| Cottage Grove | 1970 | 874 | 69 | 335 | 110 | 834 | 512 | 19,751 | 22,305 |
| | 1975 | 1,311 | 120 | 391 | 772 | 964 | 512 | 18,235 | 22,305 |
| | 1978 | 1,508 | 123 | 417 | 774 | 1,009 | 512 | 17,962 | 22,305 |
| | Change 1970-1975 | 437 | 51 | 56 | 662 | 130 | -- | -1,336 | -- |
| | Change 1975-1978 | 197 | 3 | 26 | 2 | 45 | -- | -273 | -- |
| Crystal | 1970 | 1,711 | 134 | 430 | 211 | 708 | 60 | 458 | 3,712 |
| | 1975 | 1,734 | 147 | 435 | 214 | 708 | 60 | 414 | 3,712 |
| | 1978 | 1,741 | 150 | 439 | 214 | 708 | 60 | 400 | 3,712 |
| | Change 1970-1975 | 23 | 13 | 5 | 3 | -- | -- | -44 | -- |
| | Change 1975-1978 | 7 | 3 | 4 | -- | -- | -- | -14 | -- |
| Deephaven | 1970 | 574 | 11 | 21 | 73 | 157 | 1,144 | 690 | 2,670 |
| | 1975 | 574 | 11 | 21 | 73 | 157 | 1,144 | 690 | 2,670 |
| | 1978 | 582 | 11 | 21 | 73 | 159 | 1,144 | 680 | 2,670 |
| | Change 1970-1975 | -- | -- | -- | -- | -- | -- | -- | -- |
| | Change 1975-1978 | 8 | -- | -- | -- | 2 | -- | -10 | -- |
| Eagan | 1970 | 947 | 49 | 469 | 842 | 934 | 888 | 17,692 | 21,821 |
| | 1975 | 1,544 | 99 | 613 | 2,589 | 1,039 | 888 | 15,049 | 21,821 |
| | 1978 | 1,767 | 109 | 658 | 2,589 | 1,095 | 888 | 14,715 | 21,821 |
| | Change 1970-1975 | 597 | 50 | 144 | 1,747 | 105 | -- | -2,643 | -- |
| | Change 1975-1978 | 223 | 10 | 45 | -- | 56 | -- | -334 | -- |
| Eden Prairie | 1970 | 811 | 27 | 530 | 395 | 1,054 | 1,840 | 17,803 | 22,460 |
| | 1975 | 1,034 | 132 | 627 | 859 | 1,235 | 1,840 | 16,733 | 22,460 |
| | 1978 | 1,528 | 182 | 745 | 860 | 1,394 | 1,840 | 15,911 | 22,460 |
| | Change 1970-1975 | 223 | 105 | 97 | 464 | 181 | -- | -1,070 | -- |
| | Change 1975-1978 | 494 | 50 | 118 | 1 | 159 | -- | -822 | -- |
| Edina | 1970 | 3,692 | 326 | 653 | 1,824 | 1,710 | 121 | 1,742 | 10,068 |
| | 1975 | 4,100 | 398 | 697 | 1,885 | 1,870 | 121 | 997 | 10,068 |
| | 1978 | 4,226 | 420 | 711 | 1,889 | 1,870 | 121 | 831 | 10,068 |
| | Change 1970-1975 | 408 | 72 | 44 | 61 | 160 | -- | -745 | -- |
| | Change 1975-1978 | 126 | 22 | 14 | 4 | -- | -- | -166 | -- |

Table 12 (cont.)
ACRES OF LAND IN MAJOR LAND USE GROUPS, BY CITY,
1970-1975 AND 1975-1978

| City | | Residential | Commercial | Industrial | Public & Recreational | Streets & Alleys | Water | Vacant and/or Agricultural | Total |
|---|---|---|---|---|---|---|---|---|---|
| Excelsior | 1970 | 153 | 17 | 23 | 57 | 105 | 294 | 93 | 742 |
| | 1975 | 153 | 17 | 23 | 57 | 105 | 294 | 93 | 742 |
| | 1978 | 153 | 22 | 23 | 57 | 105 | 294 | 93 | 742 |
| | Change 1970-1975 | -- | -- | -- | -- | -- | -- | -- | -- |
| | Change 1975-1978 | -- | 5 | -- | -- | -- | -- | -- | -- |
| Falcon Heights | 1970 | 320 | 44 | 53 | 980 | 223 | -- | 78 | 1,698 |
| | 1975 | 324 | 44 | 53 | 980 | 223 | -- | 74 | 1,698 |
| | 1978 | 325 | 44 | 53 | 981 | 223 | -- | 72 | 1,698 |
| | Change 1970-1975 | 4 | -- | -- | -- | -- | -- | -4 | -- |
| | Change 1975-1978 | 1 | -- | -- | 1 | -- | -- | -2 | -- |
| Fridley | 1970 | 1,554 | 141 | 794 | 367 | 1,071 | 232 | 2,621 | 6,780 |
| | 1975 | 1,733 | 157 | 948 | 376 | 1,105 | 232 | 2,229 | 6,780 |
| | 1978 | 1,760 | 170 | 981 | 403 | -- | 232 | 2,129 | 6,780 |
| | Change 1970-1975 | 179 | 16 | 154 | 9 | 34 | -- | -392 | -- |
| | Change 1975-1978 | 27 | 13 | 33 | 27 | 1,105 | -- | -100 | -- |
| Gem Lake, White Bear Lake, White Bear Twp. | 1970 | 2,101 | 98 | 186 | 478 | 1,402 | 4,037 | 5,164 | 13,466 |
| | 1975 | 2,217 | 125 | 213 | 770 | 1,427 | 4,037 | 4,677 | 13,466 |
| | 1978 | 2,345 | 138 | 213 | 769 | 1,434 | 4,037 | 4,530 | 13,466 |
| | Change 1970-1975 | 116 | 27 | 27 | 292 | 25 | -- | -487 | -- |
| | Change 1975-1978 | 128 | 13 | -- | -1 | 7 | -- | -147 | -- |
| Golden Valley | 1970 | 1,901 | 201 | 660 | 1,469 | 1,216 | 96 | 1,189 | 6,732 |
| | 1975 | 1,947 | 269 | 693 | 1,493 | 1,225 | 96 | 1,009 | 6,732 |
| | 1978 | 2,013 | 285 | 747 | 1,493 | 1,236 | 96 | 862 | 6,732 |
| | Change 1970-1975 | 46 | 68 | 33 | 24 | 9 | -- | -180 | -- |
| | Change 1975-1978 | 66 | 16 | 54 | -- | 11 | -- | -147 | -- |
| Greenwood, Minnetonka Beach, Shorewood, Tonka Bay | 1970 | 677 | 38 | 9 | 189 | 355 | 3,112 | 3,704 | 8,084 |
| | 1975 | 751 | 39 | 9 | 189 | 365 | 3,112 | 3,619 | 8,084 |
| | 1978 | 829 | 39 | 9 | 189 | 370 | 3,112 | 3,536 | 8,084 |
| | Change 1970-1975 | 74 | 1 | -- | -- | 10 | -- | -85 | -- |
| | Change 1975-1978 | 78 | -- | -- | -- | 5 | -- | -83 | -- |
| Hopkins | 1970 | 673 | 96 | 347 | 457 | 397 | -- | 599 | 2,569 |
| | 1975 | 766 | 96 | 361 | 463 | 402 | -- | 481 | 2,569 |
| | 1978 | 780 | 97 | 363 | 470 | 406 | -- | 453 | 2,569 |
| | Change 1970-1975 | 93 | -- | 14 | 6 | 5 | -- | -118 | -- |
| | Change 1975-1978 | 14 | 1 | 2 | 7 | 4 | -- | -28 | -- |

Table 12 (cont.)
ACRES OF LAND IN MAJOR LAND USE GROUPS, BY CITY,
1970-1975 AND 1975-1978

| City | | Residential | Commercial | Industrial | Public & Recreational | Streets & Alleys | Water | Vacant and/or Agricultural | Total |
|---|---|---|---|---|---|---|---|---|---|
| Inver Grove Heights | 1970 | 1,081 | 88 | 498 | 216 | 1,075 | 990 | 15,510 | 19,458 |
| | 1975 | 1,357 | 132 | 603 | 1,174 | 1,151 | 990 | 14,051 | 19,458 |
| | 1978 | 1,550 | 135 | 675 | 1,175 | 1,203 | 990 | 13,730 | 19,458 |
| Change 1970-1975 | | 276 | 44 | 105 | 958 | 76 | -- | -1,459 | -- |
| Change 1975-1978 | | 193 | 3 | 72 | 1 | 52 | -- | -255 | -- |
| Lake Elmo | 1970 | 562 | 46 | 94 | 2,293 | 684 | 1,135 | 11,326 | 16,140 |
| | 1975 | 576 | 49 | 100 | 2,293 | 687 | 1,135 | 11,300 | 16,140 |
| | 1978 | 638 | 51 | 100 | 2,323 | 687 | 1,135 | 11,206 | 16,140 |
| Change 1970-1975 | | 14 | 3 | 6 | -- | 3 | -- | -26 | -- |
| Change 1975-1978 | | 62 | 2 | -- | 30 | -- | -- | -94 | -- |
| Lauderdale | 1970 | 137 | 16 | 39 | 25 | 33 | -- | 26 | 276 |
| | 1975 | 137 | 16 | 39 | 25 | 33 | -- | 26 | 276 |
| | 1978 | 137 | 16 | 39 | 25 | 33 | -- | 26 | 276 |
| Change 1970-1975 | | -- | -- | -- | -- | -- | -- | -- | -- |
| Change 1975-1978 | | -- | -- | -- | -- | -- | -- | -- | -- |
| Lexington | 1970 | 146 | 9 | 13 | 21 | 132 | -- | 99 | 420 |
| | 1975 | 151 | 10 | 13 | 21 | 132 | -- | 93 | 420 |
| | 1978 | 156 | 10 | 13 | 21 | 132 | -- | 88 | 420 |
| Change 1970-1975 | | 5 | 1 | -- | -- | -- | -- | -6 | -- |
| Change 1975-1978 | | 5 | -- | -- | -- | -- | -- | -5 | -- |
| Lilydale and Mendota | 1970 | 95 | 15 | 35 | 5 | 29 | 96 | 333 | 608 |
| | 1975 | 107 | 15 | 41 | 5 | 31 | 96 | 313 | 608 |
| | 1978 | 50 | 8 | 21 | 223 | 16 | 103 | 187 | 608 |
| Change 1970-1975 | | 12 | -- | 6 | -- | 2 | -- | -20 | -- |
| Change 1975-1978 | | -57 | -7 | -20 | 218 | -15 | 7 | -126 | -- |
| Lino Lakes | 1970 | 420 | 9 | 50 | 172 | 691 | 3,797 | 16,131 | 21,270 |
| | 1975 | 501 | 10 | 64 | 2,472 | 714 | 3,797 | 13,712 | 21,270 |
| | 1978 | 772 | 12 | 64 | 2,478 | 719 | 3,797 | 13,428 | 21,270 |
| Change 1970-1975 | | 81 | 1 | 14 | 2,300 | 23 | -- | -2,419 | -- |
| Change 1975-1978 | | 271 | 2 | -- | 6 | 5 | -- | -284 | -- |
| Little Canada | 1970 | 378 | 30 | 115 | 146 | 458 | 248 | 1,468 | 2,834 |
| | 1975 | 489 | 85 | 116 | 153 | 473 | 248 | 1,279 | 2,834 |
| | 1978 | 507 | 55 | 122 | 153 | 473 | 248 | 1,253 | 2,834 |
| Change 1970-1975 | | 111 | 87 | 1 | 7 | 15 | -- | -189 | -- |
| Change 1975-1978 | | 18 | 2 | 6 | -- | -- | -- | -26 | -- |

Table 12 (cont.)
ACRES OF LAND IN MAJOR LAND USE GROUPS, BY CITY,
1970-1975 AND 1975-1978

| City | | Residential | Commercial | Industrial | Public & Recreational | Streets & Alleys | Water | Vacant and/or Agricultural | Total |
|---|---|---|---|---|---|---|---|---|---|
| Long Lake and Orono | 1970 | 1,342 | 62 | 145 | 936 | 741 | 3,544 | 8,464 | 15,234 |
| | 1975 | 1,459 | 72 | 155 | 1,003 | 781 | 3,544 | 8,220 | 15,234 |
| | 1978 | 1,526 | 72 | 155 | 1,003 | 783 | 3,544 | 8,151 | 15,234 |
| Change 1970-1975 | | 117 | 10 | 10 | 67 | 40 | -- | -244 | -- |
| Change 1975-1978 | | 67 | -- | -- | -- | 2 | -- | -69 | -- |
| Mahtomedi | 1970 | 246 | 12 | -- | 80 | 185 | 85 | 1,478 | 2,086 |
| | 1975 | 251 | 12 | -- | 157 | 185 | 85 | 1,396 | 2,086 |
| | 1978 | 261 | 28 | -- | 157 | 185 | 85 | 1,370 | 2,086 |
| Change 1970-1975 | | 5 | -- | -- | 77 | -- | -- | -82 | -- |
| Change 1975-1978 | | 10 | 16 | -- | -- | -- | -- | -26 | -- |
| Maple Grove | 1970 | 660 | 36 | 1,793 | 887 | 1,090 | 988 | 16,842 | 22,296 |
| | 1975 | 997 | 62 | 1,833 | 1,443 | 1,216 | 988 | 15,757 | 22,296 |
| | 1978 | 1,365 | 81 | 1,835 | 1,453 | 226 | 988 | 15,258 | 22,296 |
| Change 1970-1975 | | 337 | 26 | 40 | 556 | 126 | -- | -1,085 | -- |
| Change 1975-1978 | | 368 | 19 | 2 | 10 | 100 | -- | -499 | -- |
| Maplewood | 1970 | 1,883 | 186 | 304 | 884 | 1,332 | 440 | 6,411 | 11,440 |
| | 1975 | 2,133 | 334 | 382 | 1,112 | 1,372 | 440 | 5,667 | 11,440 |
| | 1978 | 2,175 | 359 | 410 | 1,112 | 1,372 | 440 | 5,572 | 11,440 |
| Change 1970-1975 | | 250 | 148 | 78 | 228 | 40 | -- | -744 | -- |
| Change 1975-1978 | | 42 | 25 | 28 | -- | -- | -- | -95 | -- |
| Medicine Lake | 1970 | 75 | -- | -- | 5 | 28 | -- | 4 | 112 |
| | 1975 | 76 | -- | -- | 5 | 28 | -- | 3 | 112 |
| | 1978 | 76 | -- | -- | 5 | 28 | -- | 3 | 112 |
| Change 1970-1975 | | 1 | -- | -- | -- | -- | -- | -1 | -- |
| Change 1975-1978 | | -- | -- | -- | -- | -- | -- | -- | -- |
| Mendota Heights | 1970 | 711 | 17 | 169 | 935 | 640 | 546 | 3,366 | 6,384 |
| | 1975 | 806 | 48 | 174 | 976 | 656 | 546 | 3,178 | 6,384 |
| | 1978 | 852 | 48 | 175 | 963 | 656 | 546 | 3,144 | 6,384 |
| Change 1970-1975 | | 95 | 31 | 5 | 41 | 16 | -- | -188 | -- |
| Change 1975-1978 | | 46 | -- | 1 | -13 | -- | -- | -34 | -- |
| Minnetonka | 1970 | 4,950 | 160 | 320 | 565 | 2,090 | 782 | 9,116 | 17,983 |
| | 1975 | 5,181 | 296 | 411 | 609 | 2,196 | 782 | 8,508 | 17,983 |
| | 1978 | 5,375 | 323 | 515 | 617 | 2,294 | 782 | 8,077 | 17,983 |
| Change 1970-1975 | | 231 | 136 | 91 | 44 | 106 | -- | -608 | -- |
| Change 1975-1978 | | 194 | 27 | 104 | 8 | 98 | -- | -431 | -- |

Table 12 (cont.)
ACRES OF LAND IN MAJOR LAND USE GROUPS, BY CITY,
1970-1975 AND 1975-1978

| City | | Residential | Commercial | Industrial | Public & Recreational | Streets & Alleys | Water | Vacant and/or Agricultural | Total |
|---|---|---|---|---|---|---|---|---|---|
| Mound | 1970 | 616 | 34 | 71 | 152 | 199 | 528 | 858 | 2,458 |
| | 1975 | 664 | 35 | 71 | 182 | 213 | 528 | 765 | 2,458 |
| | 1978 | 672 | 35 | 71 | 182 | 213 | 528 | 757 | 2,458 |
| | Change 1970-1975 | 48 | 1 | -- | 30 | 14 | -- | -93 | -- |
| | Change 1975-1978 | 8 | -- | -- | -- | -- | -- | -8 | -- |
| Moundsview | 1970 | 937 | 18 | 23 | 138 | 396 | 20 | 1,398 | 2,930 |
| | 1975 | 1,087 | 24 | 44 | 138 | 464 | 20 | 1,153 | 2,930 |
| | 1978 | 1,138 | 37 | 44 | 138 | 470 | 20 | 1,083 | 2,930 |
| | Change 1970-1975 | 150 | 6 | 21 | -- | 68 | -- | -245 | -- |
| | Change 1975-1978 | 51 | 13 | -- | -- | 6 | -- | -70 | -- |
| New Brighton | 1970 | 1,332 | 42 | 338 | 242 | 683 | 372 | 1,741 | 4,750 |
| | 1975 | 1,483 | 68 | 378 | 245 | 741 | 372 | 1,463 | 4,750 |
| | 1978 | 1,535 | 87 | 392 | 245 | 754 | 372 | 1,365 | 4,750 |
| | Change 1970-1975 | 151 | 26 | 40 | 3 | 58 | -- | -278 | -- |
| | Change 1975-1978 | 52 | 19 | 14 | -- | 13 | -- | -98 | -- |
| New Hope | 1970 | 1,172 | 62 | 233 | 310 | 602 | 11 | 910 | 3,300 |
| | 1975 | 1,264 | 88 | 318 | 343 | 653 | 11 | 623 | 3,300 |
| | 1978 | 1,314 | 92 | 374 | 367 | 658 | 11 | 484 | 3,300 |
| | Change 1970-1975 | 92 | 26 | 85 | 33 | 51 | -- | -287 | -- |
| | Change 1975-1978 | 50 | 4 | 56 | 24 | 5 | -- | -139 | -- |
| Newport | 1970 | 178 | 21 | 127 | 21 | 241 | 126 | 1,782 | 2,496 |
| | 1975 | 187 | 21 | 151 | 21 | 244 | 126 | 1,746 | 2,496 |
| | 1978 | 205 | 21 | 155 | 21 | 246 | 126 | 1,722 | 2,496 |
| | Change 1970-1975 | 9 | -- | 24 | -- | 3 | -- | -36 | -- |
| | Change 1975-1978 | 18 | -- | 4 | -- | 2 | -- | -24 | -- |
| North Oaks | 1970 | 555 | 2 | 47 | 233 | 273 | 767 | 3,608 | 5,485 |
| | 1975 | 807 | 2 | 47 | 266 | 282 | 767 | 3,314 | 5,485 |
| | 1978 | 868 | -- | 47 | 266 | 292 | 767 | 3,243 | 5,485 |
| | Change 1970-1975 | 252 | -- | -- | 33 | 9 | -- | -294 | -- |
| | Change 1975-1978 | 61 | 2 | -- | -- | 10 | -- | -71 | -- |
| North St. Paul | 1970 | 566 | 34 | 100 | 136 | 496 | 134 | 557 | 2,023 |
| | 1975 | 596 | 69 | 104 | 136 | 501 | 134 | 483 | 2,023 |
| | 1978 | 656 | 72 | 104 | 162 | 506 | 134 | 389 | 2,023 |
| | Change 1970-1975 | 30 | 35 | 4 | -- | 5 | -- | -74 | -- |
| | Change 1975-1978 | 60 | 3 | -- | 26 | 5 | -- | -94 | -- |
| Oakdale/Landfall | 1970 | 512 | 26 | 30 | 141 | 390 | 160 | 5,485 | 6,744 |
| | 1975 | 716 | 33 | 30 | 161 | 427 | 160 | 5,217 | 6,744 |
| | 1978 | 786 | 35 | 30 | 166 | 432 | 160 | 5,135 | 6,744 |
| | Change 1970-1975 | 204 | 7 | -- | 20 | 37 | -- | -268 | -- |
| | Change 1975-1978 | 70 | 2 | -- | 5 | 5 | -- | -82 | -- |

## Table 12 (cont.)
## ACRES OF LAND IN MAJOR LAND USE GROUPS, BY CITY, 1970-1975 AND 1975-1978

| City | | Residential | Commercial | Industrial | Public & Recreational | Streets & Alleys | Water | Vacant and/or Agricultural | Total |
|---|---|---|---|---|---|---|---|---|---|
| Osseo | 1970 | 184 | 43 | 39 | 77 | 95 | -- | 37 | 475 |
| | 1975 | 190 | 44 | 41 | 77 | 95 | -- | 28 | 475 |
| | 1978 | 199 | 44 | 41 | 78 | 95 | -- | 18 | 475 |
| | Change 1970-1975 | 6 | 1 | 2 | -- | -- | -- | -9 | -- |
| | Change 1975-1978 | 9 | -- | -- | 1 | -- | -- | -10 | -- |
| Pine Springs | 1970 | 15 | -- | 1 | -- | 78 | 78 | 378 | 550 |
| | 1975 | 15 | -- | 1 | -- | 78 | 78 | 378 | 550 |
| | 1978 | 31 | -- | 1 | -- | 78 | 78 | 362 | 550 |
| | Change 1970-1975 | -- | -- | -- | -- | -- | -- | -16 | -- |
| | Change 1975-1978 | 16 | -- | -- | -- | -- | -- | -16 | -- |
| Plymouth | 1970 | 2,196 | 86 | 499 | 388 | 1,454 | 1,535 | 16,773 | 22,841 |
| | 1975 | 2,501 | 106 | 606 | 508 | 1,566 | 1,535 | 16,019 | 22,841 |
| | 1978 | 3,003 | 133 | 823 | 522 | 1,776 | 1,535 | 15,049 | 22,841 |
| | Change 1970-1975 | 395 | 20 | 107 | 120 | 112 | -- | -754 | -- |
| | Change 1975-1978 | 502 | 27 | 217 | 14 | 210 | -- | -970 | -- |
| Ramsey | 1970 | 461 | 16 | 114 | 551 | 819 | 200 | 17,655 | 19,826 |
| | 1975 | 1,951 | 26 | 137 | 567 | 1,052 | 200 | 14,755 | 18,688 |
| | 1978 | 2,324 | 36 | 150 | 573 | 1,167 | -- | 14,238 | 18,688 |
| | Change 1970-1975 | 1,490 | 10 | 23 | 16 | 233 | -- | -2,910 | -1,138 |
| | Change 1975-1978 | 373 | 10 | 13 | 6 | 115 | -- | -517 | -- |
| Robbinsdale | 1970 | 867 | 69 | 32 | 211 | 438 | 80 | 211 | 1,908 |
| | 1975 | 869 | 70 | 32 | 216 | 438 | 80 | 203 | 1,908 |
| | 1978 | 869 | 70 | 33 | 216 | 438 | 80 | 202 | 1,908 |
| | Change 1970-1975 | 2 | 1 | -- | 5 | -- | -- | -8 | -- |
| | Change 1975-1978 | -- | -- | 1 | -- | -- | -- | -1 | -- |
| Roseville | 1970 | 2,389 | 248 | 833 | 582 | 1,623 | 321 | 2,788 | 8,784 |
| | 1975 | 2,545 | 290 | 878 | 1,187 | 1,650 | 321 | 1,913 | 8,784 |
| | 1978 | 2,647 | 306 | 922 | 1,187 | 1,665 | 321 | 1,736 | 8,784 |
| | Change 1970-1975 | 156 | 42 | 45 | 605 | 27 | -- | -875 | -- |
| | Change 1975-1978 | 102 | 16 | 44 | -- | 15 | -- | -177 | -- |
| Richfield | 1970 | 2,454 | 164 | 97 | 600 | 1,199 | -- | 116 | 4,627 |
| | 1975 | 2,459 | 165 | 99 | 630 | 1,199 | -- | 78 | 4,627 |
| | 1978 | 2,463 | 165 | 99 | 630 | 1,199 | -- | 74 | 4,627 |
| | Change 1970-1975 | 5 | 1 | 2 | 30 | -- | -- | -38 | -- |
| | Change 1975-1978 | 4 | -- | -- | -- | -- | -- | -4 | -- |

## Table 12 (cont.)
## ACRES OF LAND IN MAJOR LAND USE GROUPS, BY CITY, 1970-1975 AND 1975-1978

| City | | Residential | Commercial | Industrial | Public & Recreational | Streets & Alleys | Water | Vacant and/or Agricultural | Total |
|---|---|---|---|---|---|---|---|---|---|
| St. Anthony (part) | 1970 | 113 | 79 | 31 | 10 | 22 | 117 | 61 | 433 |
| Ramsey County | 1975 | 141 | 80 | 32 | 11 | 22 | 117 | 30 | 433 |
| | 1978 | 142 | 80 | 32 | 11 | 22 | 117 | 29 | 433 |
| Change 1970-1975 | | 28 | 1 | 1 | 1 | -- | -- | -31 | -- |
| Change 1975-1978 | | 1 | -- | -- | -- | -- | -- | -1 | -- |
| St. Anthony (part) | 1970 | 449 | 29 | 20 | 381 | 209 | -- | 31 | 1,119 |
| Hennepin County | 1975 | 450 | 29 | 20 | 381 | 223 | -- | 16 | 1,119 |
| | 1978 | 450 | 29 | 29 | 381 | 223 | -- | 7 | 1,119 |
| Change 1970-1975 | | 1 | -- | -- | -- | 14 | -- | -15 | -- |
| Change 1975-1978 | | -- | -- | 9 | -- | -- | -- | -9 | -- |
| St. Louis Park | 1970 | 2,556 | 274 | 720 | 885 | 1,332 | 22 | 1,006 | 6,795 |
| | 1975 | 2,618 | 307 | 758 | 901 | 1,340 | 22 | 849 | 6,795 |
| | 1978 | 2,634 | 335 | 766 | 901 | 1,340 | 22 | 797 | 6,795 |
| Change 1970-1975 | | 62 | 33 | 38 | 16 | 8 | -- | -157 | -- |
| Change 1975-1978 | | 16 | 28 | 8 | -- | -- | -- | -52 | -- |
| St. Paul Park | 1970 | 305 | 13 | 175 | 74 | 231 | 88 | 702 | 1,588 |
| | 1975 | 309 | 13 | 181 | 89 | 231 | 88 | 675 | 1,588 |
| | 1978 | 314 | 15 | 187 | 100 | 231 | 88 | 653 | 1,588 |
| Change 1970-1975 | | 4 | 2 | 6 | 15 | -- | -- | -27 | -- |
| Change 1975-1978 | | 5 | -- | 6 | 11 | -- | -- | -22 | -- |
| Savage | 1970 | 172 | 25 | 255 | 27 | 263 | 226 | 9,450 | 10,418 |
| | 1975 | 225 | 26 | 302 | 612 | 277 | 226 | 8,750 | 10,418 |
| | 1978 | 295 | 31 | 314 | 612 | 277 | 226 | 8,710 | 10,418 |
| Change 1970-1975 | | 53 | 1 | 47 | 585 | 14 | -- | -700 | -- |
| Change 1975-1978 | | 70 | 5 | 12 | -- | -- | -- | -40 | -- |
| Shoreview | 1970 | 819 | 28 | 134 | 135 | 603 | 1,006 | 5,335 | 8,060 |
| | 1975 | 1,038 | 39 | 152 | 1,010 | 651 | 1,006 | 4,164 | 8,060 |
| | 1978 | 1,265 | 39 | 214 | 1,010 | 682 | 1,006 | 3,844 | 8,060 |
| Change 1970-1975 | | 219 | 11 | 18 | 875 | 48 | -- | -1,171 | -- |
| Change 1975-1978 | | 227 | -- | 62 | -- | 31 | -- | -320 | -- |
| Spring Lake Park | 1970 | 361 | 12 | 19 | 57 | 258 | 84 | 547 | 1,338 |
| | 1975 | 386 | 15 | 43 | 59 | 263 | 84 | 488 | 1,338 |
| | 1978 | 399 | 24 | 43 | 59 | 263 | 84 | 466 | 1,338 |
| Change 1970-1975 | | 25 | 3 | 24 | 2 | 5 | -- | -59 | -- |
| Change 1975-1978 | | 13 | 9 | -- | -- | -- | -- | -22 | -- |

## Table 12 (cont.)
## ACRES OF LAND IN MAJOR LAND USE GROUPS, BY CITY, 1970-1975 AND 1975-1978

| City | | Residential | Commercial | Industrial | Public & Recreational | Streets & Alleys | Water | Vacant and/or Agricultural | Total |
|---|---|---|---|---|---|---|---|---|---|
| Spring Park | 1970 | 115 | 15 | 16 | 17 | 76 | 203 | 36 | 478 |
| | 1975 | 121 | 18 | 16 | 17 | 76 | 203 | 27 | 478 |
| | 1978 | 121 | 21 | 16 | 17 | 76 | 203 | 24 | 478 |
| Change 1970-1975 | | 6 | 3 | -- | -- | -- | -- | -9 | -- |
| Change 1975-1978 | | -- | 3 | -- | -- | -- | -- | -3 | -- |
| South St. Paul | 1970 | 1,449 | 66 | 476 | 204 | 683 | 214 | 588 | 3,680 |
| | 1975 | 1,460 | 66 | 481 | 205 | 747 | 214 | 507 | 3,680 |
| | 1978 | 1,466 | 66 | 513 | 205 | 748 | 214 | 468 | 3,680 |
| Change 1970-1975 | | 11 | -- | 5 | 1 | 64 | -- | -81 | -- |
| Change 1975-1978 | | 6 | -- | 32 | -- | 1 | -- | -39 | -- |
| Sunfish Lake | 1970 | 118 | 2 | -- | 1 | 63 | 87 | 797 | 1,068 |
| | 1975 | 119 | 2 | -- | 1 | 63 | 87 | 796 | 1,068 |
| | 1978 | 123 | 2 | -- | 1 | 64 | 87 | 791 | 1,068 |
| Change 1970-1975 | | 1 | -- | -- | -- | -- | -- | -1 | -- |
| Change 1975-1978 | | 4 | -- | -- | -- | 1 | -- | -5 | -- |
| Vadnais Heights | 1970 | 769 | 38 | 4 | 854 | 556 | 536 | 2,435 | 5,192 |
| | 1975 | 795 | 51 | 16 | 855 | 557 | 536 | 2,382 | 5,192 |
| | 1978 | 883 | 74 | 16 | 855 | 584 | 536 | 2,244 | 5,192 |
| Change 1970-1975 | | 26 | 13 | 12 | 1 | 1 | -- | -53 | -- |
| Change 1975-1978 | | 88 | 23 | -- | -- | 27 | -- | -138 | -- |
| Victoria | 1970 | 88 | 6 | 21 | 210 | 49 | 167 | 1,244 | 1,785 |
| | 1975 | 122 | 12 | 21 | 210 | 55 | 167 | 1,198 | 1,785 |
| | 1978 | 231 | 12 | 25 | 680 | 110 | 607 | 2,677 | 4,342 |
| Change 1970-1975 | | 34 | 6 | -- | -- | 6 | -- | -46 | -- |
| Change 1975-1978 | | 50 | -- | -- | -- | 8 | -- | -58 | -- |
| Wayzata | 1970 | 345 | 67 | 58 | 130 | 150 | 103 | 1,260 | 2,113 |
| | 1975 | 375 | 76 | 59 | 130 | 221 | 103 | 1,149 | 2,113 |
| | 1978 | 388 | 76 | 59 | 130 | 221 | 103 | 1,136 | 2,113 |
| Change 1970-1975 | | 30 | 9 | 1 | -- | 71 | -- | -111 | -- |
| Change 1975-1978 | | 13 | -- | -- | -- | -- | -- | -13 | -- |
| West St. Paul | 1970 | 1,043 | 117 | 58 | 450 | 476 | 32 | 1,034 | 3,210 |
| | 1975 | 1,119 | 158 | 70 | 456 | 530 | 32 | 845 | 3,210 |
| | 1978 | 1,145 | 172 | 79 | 462 | 534 | 32 | 786 | 3,210 |
| Change 1970-1975 | | 76 | 41 | 12 | 6 | 54 | -- | -189 | -- |
| Change 1975-1978 | | 26 | 14 | 9 | 6 | 4 | -- | -59 | -- |

Table 12 (cont.)
ACRES OF LAND IN MAJOR LAND USE GROUPS, BY CITY,
1970-1975 AND 1975-1978

| City | | Residential | Commercial | Industrial | Public & Recreational | Streets & Alleys | Water | Vacant and/or Agricultural | Total |
|---|---|---|---|---|---|---|---|---|---|
| Willernie | 1970 | 47 | 5 | 1 | 1 | 15 | 3 | 8 | 80 |
| | 1975 | 47 | 5 | 1 | 1 | 15 | 3 | 8 | 80 |
| | 1978 | 47 | 5 | 1 | 1 | 15 | 3 | 8 | 80 |
| | Change 1970-1975 | -- | -- | -- | -- | -- | -- | -- | -- |
| | Change 1975-1978 | -- | -- | -- | -- | -- | -- | -- | -- |
| Woodbury | 1970 | 616 | 22 | 107 | 101 | 734 | 594 | 20,699 | 22,873 |
| | 1975 | 825 | 40 | 168 | 383 | 788 | 594 | 20,075 | 22,873 |
| | 1978 | 877 | 101 | 172 | 385 | 820 | 594 | 19,924 | 22,873 |
| | Change 1970-1975 | 209 | 18 | 61 | 282 | 54 | -- | -624 | -- |
| | Change 1975-1978 | 52 | 61 | 4 | 2 | 32 | -- | -151 | -- |
| Woodland | 1970 | 55 | 1 | 1 | 25 | 30 | 713 | 274 | 1,099 |
| | 1975 | 55 | 1 | 1 | 25 | 30 | 713 | 274 | 1,099 |
| | 1978 | 55 | 1 | 1 | 25 | 30 | 713 | 274 | 1,099 |
| | Change 1970-1975 | -- | -- | -- | -- | -- | -- | -- | -- |
| | Change 1975-1978 | -- | -- | -- | -- | -- | -- | -- | -- |
| Airport-Ft. Snelling | 1970 | 11 | 13 | 2,093 | 1,730 | 309 | 184 | -- | 4,340 |
| | 1975 | 11 | 13 | 2,093 | 1,730 | 309 | 184 | -- | 4,340 |
| | 1978 | 11 | 13 | 2,093 | 1,730 | 309 | 184 | -- | 4,340 |
| | Change 1970-1975 | -- | -- | -- | -- | -- | -- | -- | -- |
| | Change 1975-1978 | -- | -- | -- | -- | -- | -- | -- | -- |
| TOTAL | 1970 | 72,651 | 5,218 | 20,824 | 34,782 | 48,650 | 39,322 | 370,741 | 592,188 |
| | 1975 | 84,345 | 6,986 | 22,892 | 48,188 | 51,685 | 39,322 | 338,770 | 592,188 |
| | 1978 | 92,126 | 7,768 | 24,465 | 49,407 | 53,301 | 39,763 | 327,912 | 594,745 |
| | Change 1970-1975 | 11,694 | 1,768 | 2,068 | 13,406 | 3,035 | -- | -31,971 | -- |
| | Change 1975-1978 | 7,722 | 782 | 1,573 | 749 | 1,569 | -- | -12,395 | -- |

## AMOUNT OF VACANT LAND, 1978

The leading municipalities in terms of vacant land within the MUSA are shown in Table 13. Eagan, Woodbury, Inver Grove Heights and Cottage Grove are the leaders in the amount of vacant land. Given the predominance of growth on the west side of the Region, it is understandable that vacant land would abound on the east, where these communities are located.

Unsuitable vacant land is most prevalent in Blaine, Eden Prairie, Brooklyn Park and Lino Lakes. The prominence of northern suburbs is evident, due to their extensive areas of low, marshy areas. South and southwest Minneapolis suburbs also show up prominently because of their many wetlands, caused by glaciation. Although these lands are not developable in their present condition, this has not historically prevented development. Increasing local, state and federal environmental protection regulations make it less likely that substantial development will occur in these areas, although where wetlands are abundant or the location is exceptional, some development may still occur. This would likely be affected, at least at the regional level, by lack of development in areas of steep slopes, woodlands, or bedrock, which cannot be readily detected from aerial photography and do preclude development, although they have greatly reduced its density.

Platted land, although a minor source of vacant land regionally, can be significant in a given city. Such land may never be developed, but often allows for major expansion of the firm owning the land. When such land is primarily residential (large lots), as in Mendota Heights, further development is unlikely. In Arden Hills (where the arsenal is located) and Falcon Heights (where the University's agricultural campus is located), no development is foreseen at the present time. However, in Maplewood (3M), Plymouth (Union Gospel Mission and Minneapolis Work Farm), or Eagan (Univac and Blue Cross), development on this land at some point is likely.

The leading ten communities contain about half (49.8 percent) of the MUSA's vacant land. Greater concentration is exhibited for each of three suitability categories, ranging from 53.5 percent of suitable land to 78.3 percent of platted land. These figures are close to but slightly under the degree of concentration among the leaders in terms of development. As previously noted, 60 percent of the MUSA's development occurred in the ten leading cities between 1975 and 1978.

A detailed breakdown of measured municipal vacant land data is provided in Table 14 and mapped in Figure 6 (foldout map in back pocket).

Table 13
CITIES WITHIN MUSA WITH GREATEST AMOUNT OF VACANT LAND, 1978

| Rank | Suitable Community | Suitable Acres | Not Suitable Community | Not Suitable Acres | Platted Community | Platted Acres | Total Community | Total Acres |
|---|---|---|---|---|---|---|---|---|
| 1 | Eagan | 12,304 | Blaine | 4,177 | Eagan | 1,372 | Eagan | 13,795 |
| 2 | Woodbury | 10,154 | Eden Prairie | 3,469 | Arden Hills | 1,150 | Eden Prairie | 11,216 |
| 3 | Inver Grove Heights | 9,186 | Brooklyn Park | 3,460 | Plymouth | 1,119 | Woodbury | 11,039 |
| 4 | Cottage Grove | 8,273 | Lino Lakes | 3,023 | Maplewood | 505 | Brooklyn Park | 10,492 |
| 5 | Eden Prairie | 7,747 | Burnsville | 2,529 | Apple Valley | 428 | Inver Grove Hghts.. | 9,348 |
| 6 | Brooklyn Park | 6,897 | Minnetonka | 2,078 | Cottage Grove | 418 | Plymouth | 9,328 |
| 7 | Plymouth | 6,674 | Bloomington | 1,974 | Falcon Heights | 301 | Cottage Grove | 9,130 |
| 8 | Maple Grove | 6,673 | Coon Rapids | 1,674 | Mendota Heights | 269 | Burnsville | 9,037 |
| 9 | Burnsville | 6,279 | Plymouth | 1,535 | Fridley | 233 | Maple Grove | 7,492 |
| 10 | Apple Valley | 5,842 | Shoreview | 1,467 | Burnsville | 229 | Coon Rapids | 7,390 |
| Total | | 80,029 | | 25,359 | | 6,024 | | 98,267 |
| Percent of MUSA Area | | 53.5% | | 63.1% | | 78.3% | | 49.8% |

Table 14
ACRES OF VACANT LAND IN STUDY AREA, BY CITY, 1978

| City | Residual Vacant | Measured Vacant | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Inside MUSA | | | | Outside MUSA | | | | |
| | | Suitable | Not Suitable | Platted | Total | Suitable | Not Suitable | Platted | Total | TOTAL |
| Andover | 18,595 | 1,984 | 488 | 0 | 2,472 | 1,998 | 3,789 | 0 | 15,778 | 18,250 |
| Anoka | 1,600 | 918 | 26 | 0 | 944 | 0 | 0 | 0 | 0 | 944 |
| Apple Valley | 6,341 | 5,842 | 0 | 428 | 6,270 | 0 | 0 | 0 | 0 | 6,270 |
| Arden Hills | 2,198 | 730 | 290 | 1,150 | 2,170 | 0 | 0 | 0 | 0 | 2,170 |
| Birchwood | 66 | 46 | 0 | 0 | 46 | 0 | 0 | 0 | 0 | 46 |
| Blaine | 14,563 | 2,385 | 4,177 | 0 | 6,562 | 1,624 | 4,811 | 0 | 6,435 | 12,997 |
| Bloomington | 7,289 | 3,252 | 1,974 | 44 | 5,270 | 0 | 0 | 0 | 0 | 5,270 |
| Brooklyn Center | 707 | 442 | 49 | 42 | 533 | 0 | 0 | 0 | 0 | 533 |
| Brooklyn Park | 11,514 | 6,897 | 3,460 | 135 | 10,492 | 0 | 0 | 0 | 0 | 10,492 |
| Burnsville | 9,002 | 6,279 | 2,529 | 229 | 9,037 | 0 | 0 | 0 | 0 | 9,037 |
| Champlin | 3,490 | 2,456 | 237 | 44 | 2,737 | 0 | 0 | 0 | 0 | 2,737 |
| Chanhassen | 11,024 | 4,151 | 777 | 5 | 4,933 | 3,587 | 1,050 | 0 | 4,637 | 9,570 |
| Circle Pines | 652 | 222 | 321 | 0 | 543 | 0 | 0 | 0 | 0 | 543 |
| Columbia Heights and Hilltop | 124 | 25 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 25 |
| Coon Rapids | 8,198 | 5,695 | 1,647 | 48 | 7,390 | 0 | 0 | 0 | 0 | 7,390 |
| Cottage Grove | 17,962 | 8,273 | 439 | 418 | 9,130 | 8,581 | 134 | 0 | 8,715 | 17,845 |
| Crystal | 400 | 133 | 7 | 31 | 171 | 0 | 0 | 0 | 0 | 171 |
| Deephaven | 680 | 650 | 38 | 0 | 688 | 0 | 0 | 0 | 0 | 688 |
| Eagan | 14,715 | 12,304 | 119 | 1,372 | 13,795 | 0 | 0 | 0 | 0 | 13,795 |
| Eden Prairie | 15,911 | 7,747 | 3,469 | 0 | 11,216 | 2,408 | 975 | 0 | 3,383 | 14,599 |
| Edina | 831 | 500 | 358 | 87 | 945 | 0 | 0 | 0 | 0 | 945 |
| Excelsior | 93 | 82 | 6 | 0 | 88 | 0 | 0 | 0 | 0 | 88 |
| Falcon Heights | 972 | 38 | 0 | 301 | 339 | 0 | 0 | 0 | 0 | 339 |
| Fridley | 2,129 | 484 | 61 | 233 | 778 | 0 | 0 | 0 | 0 | 778 |
| Gem Lake, White Bear Lake, and White Bear Twp. | 4,530 | 2,882 | 1,053 | 0 | 3,935 | 0 | 0 | 0 | 0 | 3,935 |
| Golden Valley | 862 | 464 | 78 | 107 | 649 | 0 | 0 | 0 | 0 | 649 |
| Greenwood, Minnetonka Beach, Shorewood, and Tonka Bay | 3,536 | 3,200 | 463 | 27 | 3,690 | 0 | 0 | 0 | 0 | 3,690 |
| Hopkins | 453 | 129 | 197 | 0 | 326 | 0 | 0 | 0 | 0 | 326 |
| Inver Grove Heights | 13,730 | 9,186 | 162 | 0 | 9,348 | 3,506 | 0 | 701 | 4,207 | 13,555 |

Table 14 (Cont.)
ACRES OF VACANT LAND IN STUDY AREA, BY CITY, 1978

| City | Residual Vacant | Measured Vacant | | | | | | | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Inside MUSA | | | | Outside MUSA | | | | |
| | | Suitable | Not Suitable | Platted | Total | Suitable | Not Suitable | Platted | Total | |
| Lake Elmo | 11,206 | 2,582 | 75 | 0 | 2,657 | 5,643 | 100 | 0 | 5,743 | 8,400 |
| Lauderdale | 26 | 10 | 0 | 12 | 22 | 0 | 0 | 0 | 0 | 22 |
| Lexington | 88 | 93 | 0 | 0 | 93 | 0 | 0 | 0 | 0 | 93 |
| Lilydale and Mendota | 187 | 12 | 160 | 7 | 179 | 0 | 0 | 0 | 0 | 179 |
| Lino Lakes | 13,428 | 2,521 | 3,023 | 0 | 5,544 | 2,500 | 5,482 | 0 | 7,982 | 13,526 |
| Little Canada | 1,253 | 1,094 | 0 | 60 | 1,154 | 0 | 0 | 0 | 0 | 1,154 |
| Long Lake and Orono | 8,151 | 3,517 | 1,354 | 0 | 4,871 | 886 | 500 | 0 | 0 | 6,257 |
| Mahtomedi | 1,370 | 976 | 21 | 0 | 997 | 0 | 0 | 0 | 0 | 997 |
| Maple Grove | 15,258 | 6,673 | 819 | 0 | 7,492 | 6,080 | 1,515 | 0 | 7,595 | 15,087 |
| Maplewood | 5,572 | 3,689 | 67 | 505 | 4,261 | 0 | 0 | 0 | 0 | 4,261 |
| Medicine Lake | 3 | - | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| Mendota Heights | 3,144 | 1,550 | 664 | 269 | 2,483 | 0 | 0 | 0 | 0 | 2,483 |
| Minnetonka | 8,077 | 2,613 | 2,078 | 191 | 4,882 | 0 | 0 | 0 | 0 | 4,882 |
| Mound | 757 | 112 | 140 | 0 | 252 | 0 | 0 | 0 | 0 | 252 |
| Mounds View | 1,083 | 1,142 | 0 | 0 | 1,142 | 0 | 0 | 0 | 0 | 1,142 |
| New Brighton | 1,365 | 494 | 149 | 57 | 700 | 0 | 0 | 0 | 0 | 700 |
| New Hope | 484 | 236 | 33 | 186 | 455 | 0 | 0 | 0 | 0 | 455 |
| Newport | 1,722 | 1,129 | 128 | 0 | 1,257 | 0 | 0 | 0 | 0 | 1,257 |
| North Oaks | 3,243 | 1,967 | 1,276 | 0 | 3,243 | 0 | 0 | 0 | 0 | 3,243 |
| North St. Paul | 389 | 338 | 0 | 0 | 338 | 0 | 0 | 0 | 0 | 338 |
| Oakdale and Landfall | 5,135 | 2,559 | 1,018 | 139 | 3,716 | 0 | 0 | 0 | 0 | 3,716 |
| Osseo | 18 | 18 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 18 |
| Pine Springs | 362 | 328 | 0 | 0 | 328 | 0 | 0 | 0 | 0 | 328 |
| Plymouth | 15,049 | 6,674 | 1,535 | 1,119 | 9,328 | 2,495 | 747 | 0 | 3,242 | 12,570 |
| Ramsey | 14,238 | 846 | 103 | 0 | 949 | 10,537 | 2,313 | 0 | 12,850 | 13,799 |
| Richfield | 74 | 17 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 17 |
| Robbinsdale | 202 | 57 | 38 | 19 | 114 | 0 | 0 | 0 | 0 | 114 |
| Roseville | 1,736 | 611 | 51 | 40 | 702 | 0 | 0 | 0 | 0 | 702 |
| St. Anthony | 36 | 19 | 0 | 37 | 56 | 0 | 0 | 0 | 0 | 56 |
| St. Louis Park | 797 | 548 | 89 | 80 | 789 | 0 | 0 | 0 | 0 | 789 |
| St. Paul Park | 653 | 522 | 106 | 0 | 628 | 0 | 0 | 0 | 0 | 628 |
| Savage | 8,710 | 1,915 | 671 | 0 | 2,586 | 3,246 | 1,353 | 634 | 5,233 | 7,819 |
| Shoreview | 3,844 | 2,055 | 1,467 | 61 | 3,583 | 0 | 0 | 0 | 0 | 3,583 |
| Spring Lake Park | 466 | 239 | 23 | 0 | 262 | 0 | 0 | 0 | 0 | 262 |
| Spring Park | 24 | 24 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 24 |

Table 14 (Cont.)
ACRES OF VACANT LAND IN STUDY AREA, BY CITY, 1978

| City | Residual Vacant | Measured Vacant | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Inside MUSA | | | | Outside MUSA | | | | |
| | | Suitable | Not Suitable | Platted | Total | Suitable | Not Suitable | Platted | Total | TOTAL |
| South St. Paul | 468 | 119 | 264 | 99 | 482 | 0 | 0 | 0 | 0 | 482 |
| Sunfish Lake | 791 | 715 | 0 | 0 | 715 | 0 | 0 | 0 | 0 | 715 |
| Vadnais Heights | 2,244 | 1,249 | 995 | 0 | 2,244 | 0 | 0 | 0 | 0 | 2,244 |
| Victoria | 2,677 | 1,050 | 19 | 0 | 1,069 | 1,162 | 0 | 0 | 1,162 | 2,231 |
| Wayzata | 1,136 | 1,015 | 152 | 0 | 1,167 | 0 | 0 | 0 | 0 | 1,167 |
| West St. Paul | 786 | 458 | 43 | 36 | 537 | 0 | 0 | 0 | 0 | 537 |
| Willernie | 8 | 3 | 5 | 0 | 8 | 0 | 0 | 0 | 0 | 8 |
| Woodbury | 19,924 | 10,154 | 880 | 5 | 11,039 | 8,665 | 258 | 0 | 8,923 | 19,962 |
| Woodland | 274 | 243 | 31 | 0 | 274 | 0 | 0 | 0 | 0 | 274 |
| Airport and Fort Snelling | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL* | 327,912 | 149,582 | 40,166 | 7,695 | 197,443 | 72,918 | 23,018 | 1,335 | 97,271 | 294,714 |

*Minneapolis and St. Paul not included.

## LAND USE TRENDS IN SUBREGIONAL SECTORS

### LAND USE CHANGES, 1970-1978

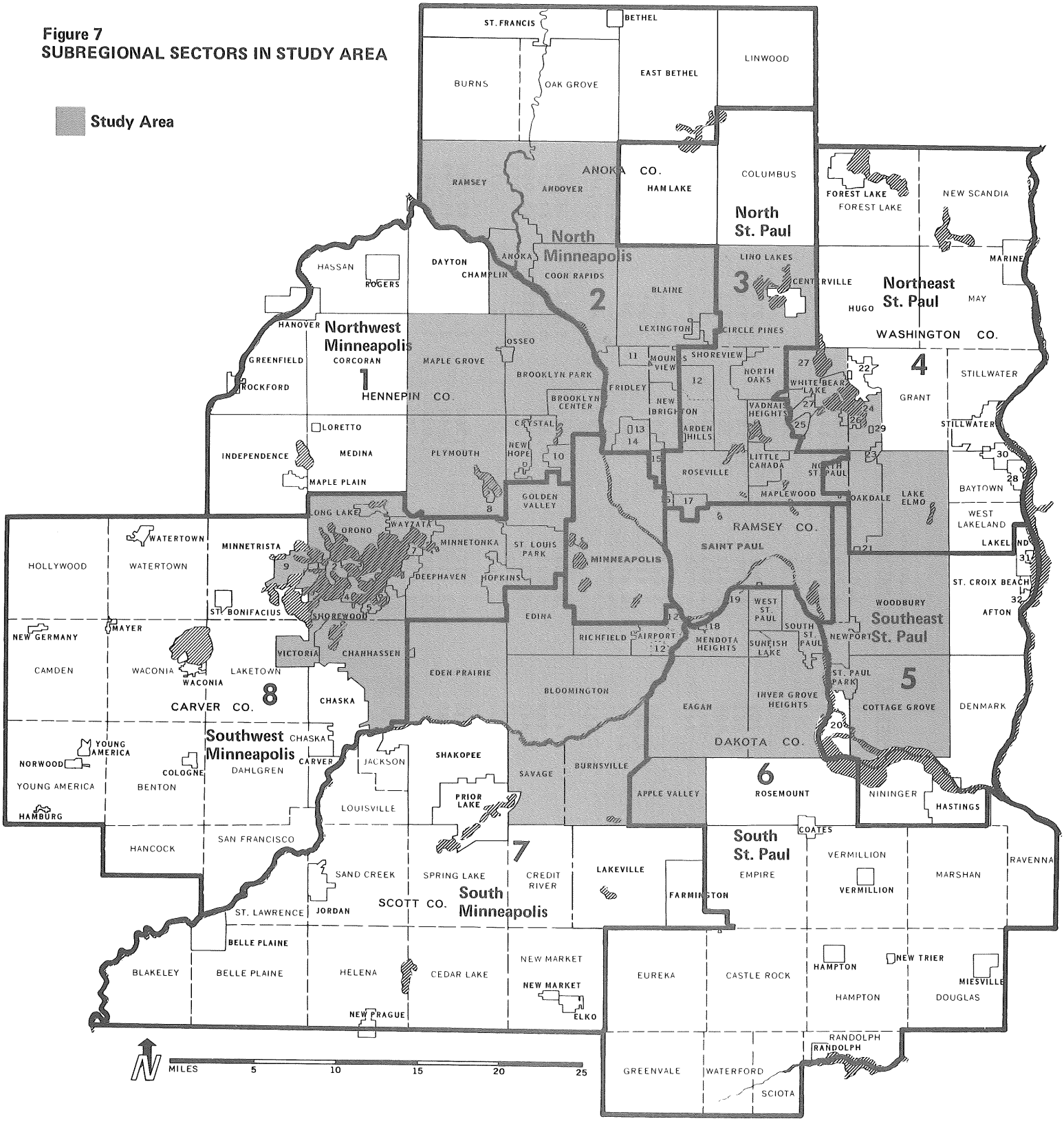
Sectors were first used in the Council's Development Framework planning to ensure that the Framework plan allowed a sufficient supply of serviced land in all directions from the central cities for new development. Minneapolis and St. Paul are not included in this analysis because their changes in land use acreage were slight and difficult to identify. Considerable redevelopment has occurred, but often without a change in land use. Figure 7 shows the geographical location of the sectors.

Table 15 lists the amount of land in each type of land use by sector for 1970, 1975 and 1978, with the change between the periods 1970-1975 and 1975-78. Figure 8 shows the total land use for each sector for each of the two time periods.

Table 16 shows the average annual amount of vacant land consumed by sector within the study area by land use type for the periods 1970-75 and 1975-78. The same information is shown graphically in Figure 9. During the period 1975-78, Sector 1 (Northwest Minneapolis) led in land consumption, with 2,828 acres (22.8 percent of the total), followed by Sector 7 (South Minneapolis), with 2,353 acres (19.0 percent) and Sector 6 (South St. Paul), with 2,235 acres (18.0 percent). In the earlier period, Sector 2 (North Minneapolis) had the greatest amount of vacant land converted to urban use with 6,504 acres (20.3 percent), followed by Sector 6 (South St. Paul), with 6,035 acres (18.9 percent) and Sector 3 (North St. Paul), with 4,898 acres (15.3 percent). Sector 7 (South Minneapolis) was close behind, with 4,880 acres (15.3 percent). Comparing the two periods, Sector 1 was the only sector that increased its annual average land consumption after 1975.

In terms of type of land consumed, Sector 7 (South Minneapolis) was the leader in residential land from 1975 to 1978. In the previous period, Sector 2 (North Minneapolis) was the leader, primarily due to a large amount of residential development in Ramsey and Andover, most of which was outside the MUSA. Sector 1 (Northwest Minneapolis) ranked second in both time periods, and was the only sector to increase its residential land consumption from that of the first time period. Sector 7 (South Minneapolis) was also the leader in commercial construction in both time periods, followed by Sector 3 (North St. Paul) in the 1970 to 1975 period, and Sector 2 (North Minneapolis) in the following period. Sectors 1, 2 and 6 consumed the most industrial land from 1970 to 1975.

**Figure 7**
**SUBREGIONAL SECTORS IN STUDY AREA**




| | | | |
|---|---|---|---|
| 1 SPRING PARK | 9 MOUND | 17 FALCON HEIGHTS | 25 GEM LAKE |
| 2 ORONO | 10 ROBBINSDALE | 18 MENDOTA | 26 BIRCHWOOD |
| 3 MINNETONKA BEACH | 11 SPRING LAKE PARK | 19 LILYDALE | 27 WHITE BEAR |
| 4 TONKA BAY | 12 U. S. GOVT. | 20 GREY CLOUD | 28 BAYPORT |
| 5 EXCELSIOR | 13 HILLTOP | 21 LANDFALL | 29 WILLERNIE |
| 6 GREENWOOD | 14 COLUMBIA HEIGHTS | 22 DELLWOOD | 30 OAK PARK HEIGHTS |
| 7 WOODLAND | 15 ST. ANTHONY | 23 PINE SPRINGS | 31 LAKELAND SHORES |
| 8 MEDICINE LAKE | 16 LAUDERDALE | 24 MAHTOMEDI | 32 ST. MARY'S POINT |

ANOKA — County Boundary
ORONO — Municipal Boundary
CAMDEN — Township Boundary

Table 15
ACRES OF LAND IN MAJOR LAND USE GROUPS, BY SECTOR,
1970-1975 and 1975-1978

| Sector | | Residential | Commerical | Industrial | Public and Recreational | Streets and Alleys | Water | Vacant and/or Agricultural | Total |
|---|---|---|---|---|---|---|---|---|---|
| Sector 1 | 1970 | 11,224 | 867 | 3,311 | 3,813 | 7,071 | 2,712 | 53,608 | 82,606 |
| | 1975 | 12,853 | 1,065 | 3,703 | 4,760 | 7,560 | 2,712 | 49,953 | 82,606 |
| | 1978 | 14,519 | 1,185 | 4,072 | 4,819 | 8,174 | 2,712 | 47,125 | 82,606 |
| Change | 1970-1975 | 1,629 | 198 | 392 | 947 | 489 | -- | -3,655 | -- |
| Change | 1975-1978 | 1,666 | 120 | 369 | 59 | 614 | -- | -2,828 | -- |
| Sector 2 | 1970 | 11,704 | 700 | 4,269 | 4,262 | 9,399 | 2,311 | 71,490 | 104,135 |
| | 1975 | 15,239 | 924 | 4,663 | 5,875 | 10,137 | 2,311 | 64,986 | 104,135 |
| | 1978 | 16,533 | 1,068 | 4,805 | 5,933 | 10,357 | 2,311 | 63,128 | 104,135 |
| Change | 1970-1975 | 3,535 | 224 | 394 | 1,613 | 738 | -- | -6,504 | -- |
| Change | 1975-1978 | 1,294 | 144 | 142 | 58 | 220 | -- | -1,858 | -- |
| Sector 3 | 1970 | 6,988 | 516 | 2,146 | 5,045 | 5,559 | 7,395 | 35,584 | 63,233 |
| | 1975 | 7,986 | 794 | 2,207 | 8,411 | 5,754 | 7,395 | 30,686 | 63,233 |
| | 1978 | 8,840 | 872 | 2,359 | 8,418 | 5,843 | 7,395 | 29,506 | 63,233 |
| Change | 1970-1975 | 998 | 278 | 61 | 3,366 | 195 | -- | -4,898 | -- |
| Change | 1975-1978 | 854 | 78 | 152 | 7 | 89 | -- | -1,180 | -- |
| Sector 4 | 1970 | 4,122 | 222 | 412 | 3,134 | 3,286 | 5,632 | 24,494 | 41,302 |
| | 1975 | 4,507 | 294 | 449 | 3,523 | 3,358 | 5,632 | 23,539 | 41,302 |
| | 1978 | 4,867 | 330 | 449 | 3,583 | 3,375 | 5,632 | 23,066 | 41,302 |
| Change | 1970-1975 | 385 | 72 | 37 | 389 | 72 | -- | -955 | -- |
| Change | 1975-1978 | 360 | 36 | -- | 60 | 17 | -- | -473 | -- |
| Sector 5 | 1970 | 2,927 | 211 | 1,030 | 712 | 2,762 | 1,538 | 48,180 | 57,360 |
| | 1975 | 3,832 | 282 | 1,289 | 2,371 | 2,949 | 1,538 | 45,099 | 57,360 |
| | 1978 | 4,128 | 346 | 1,329 | 2,386 | 3,028 | 1,538 | 44,605 | 57,360 |
| Change | 1970-1975 | 905 | 71 | 259 | 1,659 | 187 | -- | -3,081 | -- |
| Change | 1975-1978 | 296 | 64 | 40 | 15 | 79 | -- | -494 | -- |
| Sector 6 | 1970 | 6,247 | 389 | 2,064 | 2,795 | 4,384 | 2,983 | 48,439 | 67,301 |
| | 1975 | 7,838 | 584 | 2,448 | 6,218 | 4,826 | 2,983 | 42,404 | 67,301 |
| | 1978 | 8,767 | 625 | 2,944 | 6,761 | 5,052 | 2,983 | 40,169 | 67,301 |
| Change | 1970-1975 | 1,591 | 195 | 384 | 3,423 | 442 | -- | -6,035 | -- |
| Change | 1975-1978 | 929 | 41 | 496 | 543 | 226 | -- | -2,235 | -- |
| Sector 7 | 1970 | 14,736 | 1,304 | 5,110 | 9,187 | 8,763 | 4,495 | 49,000 | 92,595 |
| | 1975 | 16,595 | 1,763 | 5,464 | 10,765 | 9,393 | 4,495 | 44,120 | 92,595 |
| | 1978 | 18,355 | 1,982 | 5,667 | 10,757 | 9,572 | 4,495 | 41,767 | 92,595 |
| Change | 1970-1975 | 1,859 | 459 | 354 | 1,578 | 630 | -- | -4,880 | -- |
| Change | 1975-1978 | 1,760 | 219 | 203 | -8 | 179 | -- | -2,353 | -- |

Table 15 (Cont.)
ACRES OF LAND IN MAJOR LAND USE GROUPS, BY SECTOR,
1970-1975 and 1975-1978

| Sector | | Residential | Commercial | Industrial | Public and Recreational | Streets and Alleys | Water | Vacant and/or Agricultural | Total |
|---|---|---|---|---|---|---|---|---|---|
| Sector 8 | 1970 | 14,703 | 1,009 | 2,482 | 5,834 | 7,426 | 12,256 | 39,946 | 83,656 |
| | 1975 | 15,495 | 1,280 | 2,669 | 6,265 | 7,708 | 12,256 | 37,983 | 83,656 |
| | 1978 | 16,117 | 1,361 | 2,844 | 6,750 | 7,900 | 12,696 | 38,545 | 86,213 |
| Change 1970-1975 | | 792 | 271 | 187 | 431 | 282 | -- | -1,963 | -- |
| Change 1975-1978 | | 563 | 80 | 171 | 15 | 145 | -- | -974 | -- |
| All Sectors* | 1970 | 72,651 | 5,218 | 20,824 | 34,782 | 48,650 | 39,322 | 370,741 | 592,188 |
| | 1975 | 84,345 | 6,986 | 22,892 | 48,188 | 51,685 | 39,322 | 338,770 | 592,188 |
| | 1978 | 92,126 | 7,768 | 24,465 | 49,407 | 53,301 | 39,763 | 327,912 | 594,745 |
| Change 1970-1975 | | 11,694 | 1,768 | 2,068 | 13,406 | 3,035 | -- | 31,971 | -- |
| Change 1975-1978 | | 7,722 | 782 | 1,573 | 749 | 1,569 | -- | 12,395 | -- |

* Does not include central citites.

**Figure 8**
**LAND CONVERTED TO URBAN USES, BY SECTOR, 1970-1975 and 1975-1978**

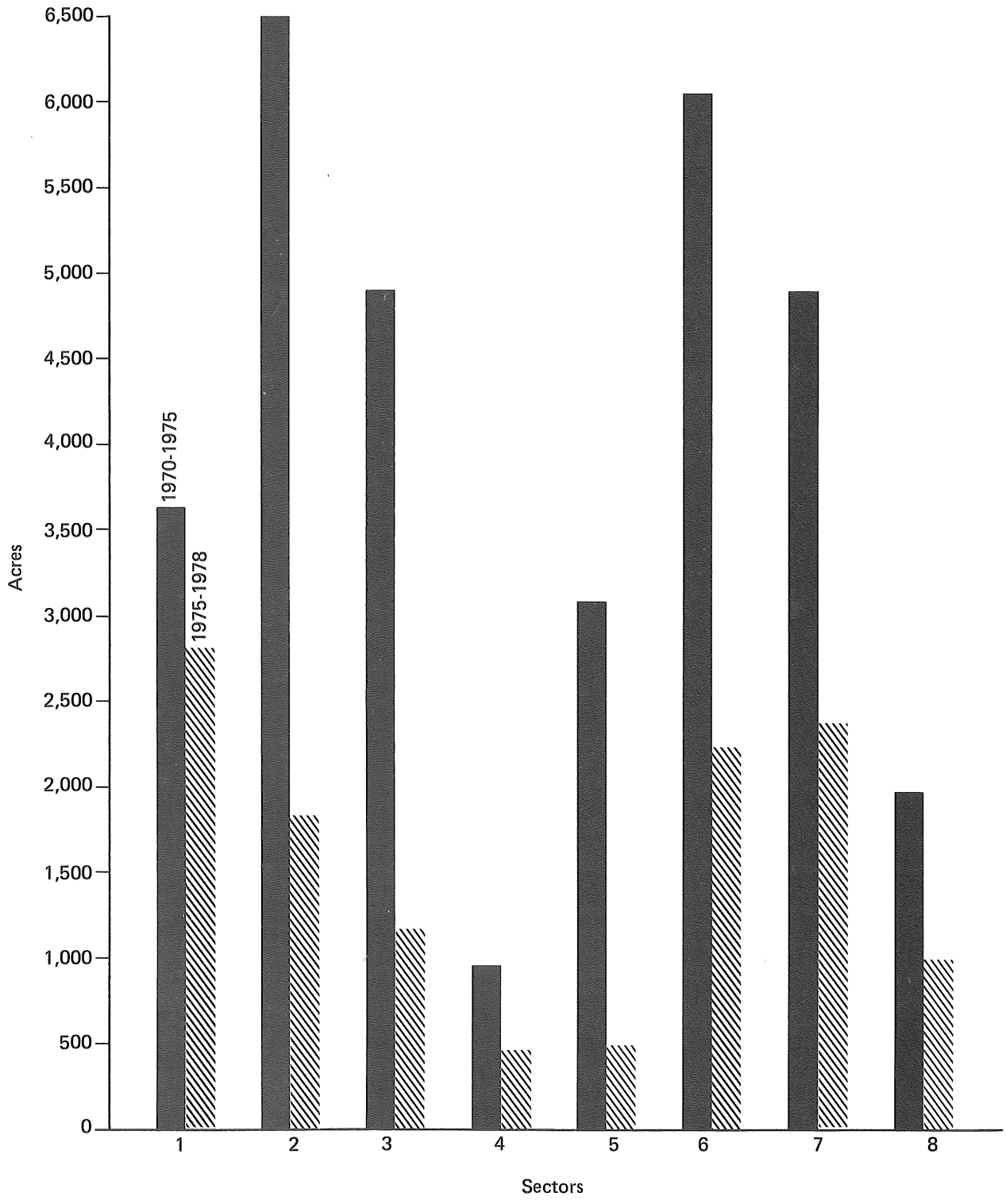
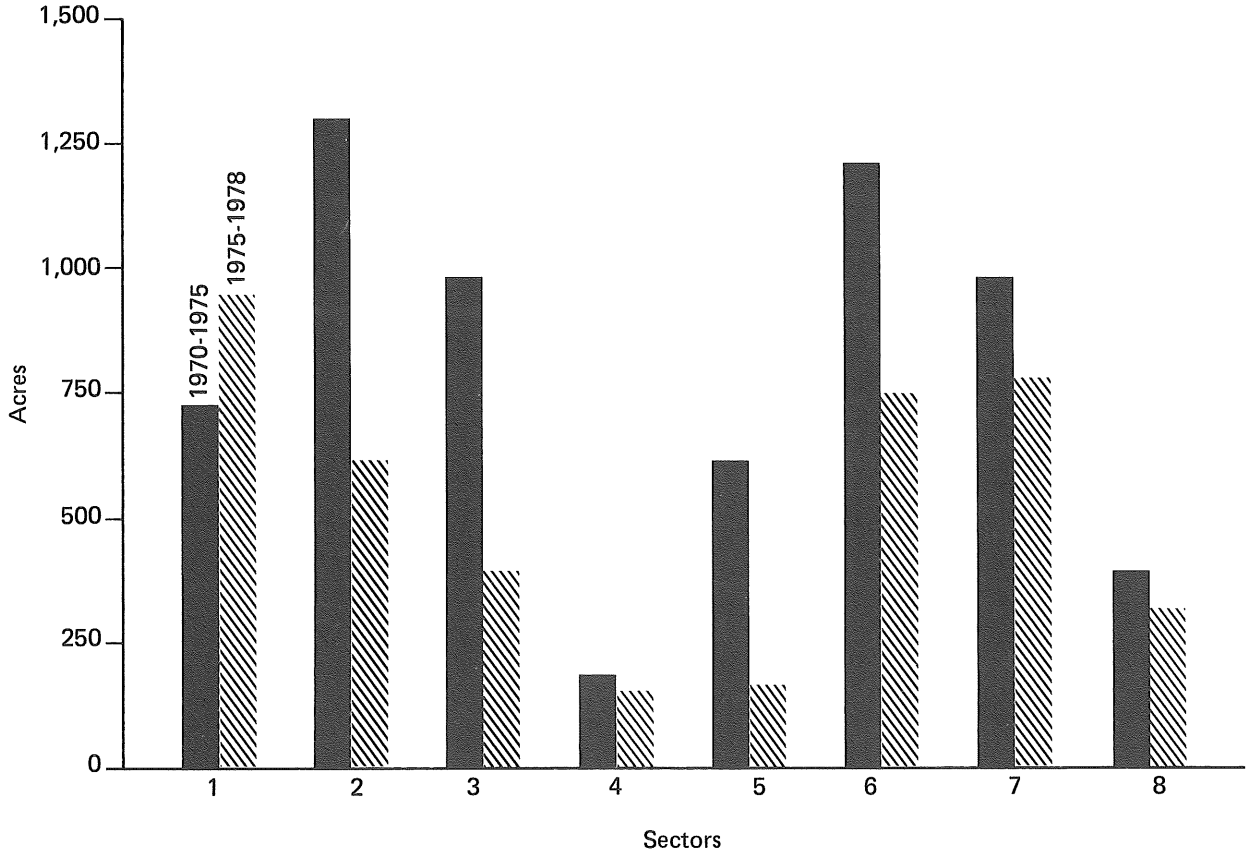


Table 16
ANNUAL AVERAGE AMOUNT OF VACANT LAND CONVERTED
TO URBAN USE, BY SECTOR IN STUDY AREA,*
1970-1975 and 1975-1978
(in acres)

| Sector | | Residential | Commerical | Industrial | Public and Recreation | Streets and Alleys | Total** Average Annual |
|---|---|---|---|---|---|---|---|
| Sector 1 | 1970-1975 | 326 | 40 | 78 | 189 | 98 | 731 |
| | 1975-1978 | 555 | 40 | 123 | 20 | 205 | 943 |
| Sector 2 | 1970-1975 | 707 | 45 | 79 | 323 | 148 | 1,302 |
| | 1975-1978 | 431 | 48 | 47 | 19 | 73 | 618 |
| Sector 3 | 1970-1975 | 200 | 56 | 12 | 673 | 39 | 980 |
| | 1975-1978 | 285 | 26 | 51 | 2 | 30 | 394 |
| Sector 4 | 1970-1975 | 77 | 14 | 7 | 78 | 14 | 190 |
| | 1975-1978 | 120 | 12 | 0 | 20 | 6 | 158 |
| Sector 5 | 1970-1975 | 181 | 14 | 52 | 332 | 37 | 616 |
| | 1975-1978 | 99 | 21 | 13 | 5 | 26 | 164 |
| Sector 6 | 1970-1975 | 318 | 39 | 77 | 685 | 88 | 1,207 |
| | 1975-1978 | 310 | 14 | 165 | 181 | 75 | 745 |
| Sector 7 | 1970-1975 | 372 | 92 | 71 | 316 | 126 | 977 |
| | 1975-1978 | 587 | 73 | 68 | -3 | 60 | 785 |
| Sector 8 | 1970-1975 | 158 | 54 | 37 | 86 | 56 | 391 |
| | 1975-1978 | 188 | 27 | 57 | 5 | 48 | 325 |
| Total | 1970-1975 | 2,339 | 354 | 413 | 2,682 | 606 | 6,394 |
| | 1975-1978 | 2,575 | 261 | 524 | 249 | 523 | 4,132 |

* Does not include Central Cities.
** Do not always match figures in other tables because of rounding.

**Figure 9**
**ANNUAL CONSUMPTION OF VACANT LAND, BY SECTOR, 1970-1975 and 1975-1978**



After 1975, Sector 6 increased its industrial land consumption to lead all others, accounting for nearly one-third of the study area's industrial land developed in the period. Sector 6 also led in public land consumed in both time periods. Sector 4 (Northeast St. Paul) was last among the eight sectors in land consumed for all categories in both time periods, except for public and recreation land in the 1975 to 1978 period.

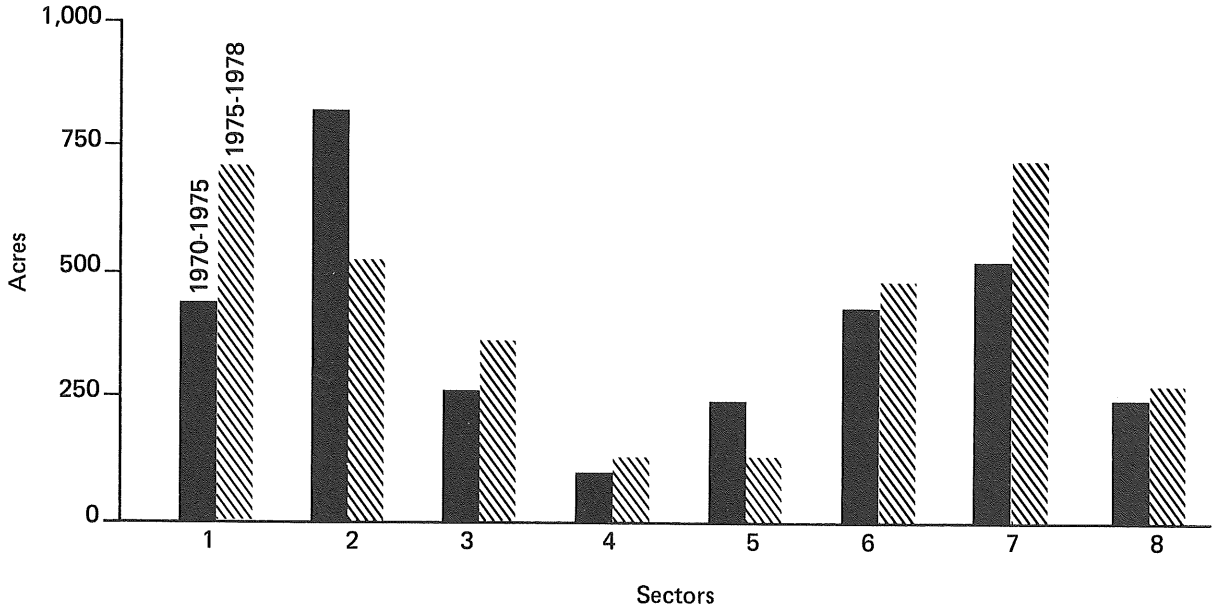
Table 17 shows the distribution of vacant land used for residential, commercial and industrial purposes during 1970-1975 and 1975-1978, by sector. For the 1975-1978 period, Sectors 1 and 7 exchanged places in ranking from those in Table 4, with Sector 7 leading in the latter period in consumption with 2,182 acres (21.6 percent). Sector 1 was a close second, with 2,155 acres (21.4 percent). Sectors 2 and 5 were the only sectors that decreased, in annual terms, in additional "built on" land from 1970-1975 to 1975-1978. Figure 10 shows annual consumption of "built on" land graphically.

AMOUNT OF VACANT LAND, 1978

The amount of measured vacant land remaining in each sector and its suitability status is shown in Table 18 (in the study area) and Table 19 (inside the MUSA). From a monitoring perspective, Table 19 is of most interest. Sector 6 (South St. Paul), shows the greatest amount of both vacant land and suitable vacant land. It is followed closely by Sector 1 (Northwest Minneapolis). Table 20 converts the remaining supply of land to years of supply, assuming average annual consumption rates of the 1975 to 1978 period would continue. This indicates that Sector 4 (Northeast St. Paul), with the least amount of suitable land, has the second longest supply period, 65 years. Sector 5 (Southeast St. Paul), with its slow development rate in the mid 1970s and vast amount of suitable open space, leads all sectors with a 139-year supply of land. This might also reflect an atypically low growth rate for the 1975 to 1978 period in this sector or could reflect constraints on developing the vacant land in this sector. This will have to be monitored over time.

Sector 8 (Southwest Minneapolis) has a 56 year supply, while Sector 1 (Northwest Minneapolis) with 25 years, and Sector 7 (South Minneapolis), with 26 years, have the shortest supply of land within the MUSA. Sector 7's supply is understated because of the presence of several Freestanding Growth Centers adjacent to the serviced area, namely Lakeville, Shakopee and Prior Lake. This is not the case in Sector 1, where the supply of land is least in terms of

**Figure 10**
**ANNUAL CONSUMPTION OF "BUILT-ON" LAND,* BY SECTOR, 1970-1975 and 1975-1978**




*"Built-on" land is land with residential, commercial and industrial uses.

Table 17
AMOUNT OF VACANT LAND CONVERTED TO "BUILT ON"* URBAN USE, BY SECTOR, IN THE STUDY AREA
1970-1975 AND 1975-1978

| Sector | Time Period | Residential, Commercial, Industrial Acres | Annual Average |
|---|---|---|---|
| 1 | 1970-75 | 2,219 | 444 |
| | 1975-78 | 2,155 | 718 |
| 2 | 1970-75 | 4,153 | 831 |
| | 1975-78 | 1,580 | 527 |
| 3 | 1970-75 | 1,337 | 267 |
| | 1975-78 | 1,084 | 361 |
| 4 | 1970-75 | 494 | 99 |
| | 1975-78 | 396 | 132 |
| 5 | 1970-75 | 1,235 | 247 |
| | 1975-78 | 400 | 133 |
| 6 | 1970-75 | 2,170 | 434 |
| | 1975-78 | 1,466 | 489 |
| 7 | 1970-75 | 2,672 | 534 |
| | 1975-78 | 2,182 | 727 |
| 8 | 1970-75 | 1,250 | 250 |
| | 1975-78 | 814 | 271 |
| Total | 1970-75 | 15,530 | 3,106 |
| | 1975-78 | 10,077 | 3,359 |

* Residential, commercial and industrial.

remaining years. This sector also has considerable rural growth beyond the study area that the Metropolitan Council would like to see occur within the MUSA. Any major change in the rate or density of development would, of course, have a significant effect on the number of years supply of land remaining.

A comparison of "measured" versus "residual" vacant land is provided for each sector in Table 21. In all sectors, measured vacant land is less than the residual vacant calculations. Major differences are in Sector 4 (Northeast St. Paul), 23 percent, and Sector 8 (Southwest Minneapolis), 19.9 percent.

Table 18
ACRES OF VACANT LAND, BY SECTOR, IN STUDY AREA, 1978

| Sector | Suitable | Unsuitable | Platted | Total |
|---|---|---|---|---|
| 1 | 32,161 | 8,443 | 1,576 | 42,180 |
| 2 | 38,686 | 17,899 | 345 | 56,930 |
| 3 | 14,739 | 12,597 | 1,792 | 29,128 |
| 4 | 15,357 | 2,272 | 139 | 17,768 |
| 5 | 39,068 | 2,257 | 790 | 42,115 |
| 6 | 33,692 | 1,412 | 2,912 | 38,016 |
| 7 | 25,364 | 11,329 | 994 | 37,687 |
| 8 | 23,433 | 6,975 | 482 | 30,890 |
| Total in Study Area | 222,500 | 63,184 | 9,030 | 294,714 |

Table 19
ACRES OF VACANT LAND, BY SECTOR,
IN METROPOLITAN URBAN SERVICE AREA, 1978

| Sector | Suitable | Unsuitable | Platted | Total |
|---|---|---|---|---|
| 1 | 23,586 | 6,181 | 1,576 | 31,343 |
| 2 | 14,527 | 6,995 | 345 | 21,867 |
| 3 | 12,239 | 7,115 | 1,792 | 21,146 |
| 4 | 9,714 | 2,172 | 139 | 12,025 |
| 5 | 21,822 | 1,865 | 790 | 24,477 |
| 6 | 30,186 | 1,412 | 2,211 | 33,809 |
| 7 | 19,710 | 9,001 | 360 | 29,071 |
| 8 | 17,798 | 5,425 | 482 | 23,705 |
| Total in MUSA | 149,582 | 40,166 | 7,675 | 197,443 |

Table 20
AVERAGE ANNUAL CONSUMPTION OF VACANT LAND, BY SECTOR, IN METROPOLITAN URBAN SERVICE AREA, 1975-1978

| Sector | Measured Suitable Land 1978 | Average Annual Consumption 1975-1978 | Years Supply Remaining |
|---|---|---|---|
| 1 | 23,586 | 933 | 25 |
| 2 | 14,527 | 408 | 36 |
| 3 | 12,239 | 320 | 38 |
| 4 | 9,724 | 149 | 65 |
| 5 | 21,822 | 157 | 139 |
| 6 | 30,186 | 723 | 42 |
| 7 | 19,710 | 770 | 26 |
| 8 | 17,798 | 319 | 56 |
| Total within MUSA | 149,582 | 3,779 | 40 |

Table 21
COMPARISON OF MEASURED AND RESIDUAL VACANT LAND, BY SECTOR, 1978

| Sector | Residual Vacant | Percent Difference | Measured Vacant |
|---|---|---|---|
| 1 Northwest Minneapolis | 47,125 | -10.5% | 42,180 |
| 2 North Minneapolis | 63,128 | - 9.2 | 56,930 |
| 3 North St. Paul | 29,506 | - 1.3 | 29,128 |
| 4 Northeast St. Paul | 23,066 | -23.0 | 17,768 |
| 5 Southeast St. Paul | 44,605 | - 5.6 | 42,115 |
| 6 South St. Paul | 40,169 | - 5.4 | 38,016 |
| 7 South Minneapolis | 41,767 | - 9.8 | 37,687 |
| 8 Southwest Minneapolis | 38,545 | -19.9 | 30,890 |
| Total* | 327,912 | -10.1% | 294,714 |

*Minneapolis and St. Paul not included.

## LAND USE TRENDS IN DEVELOPMENT RINGS

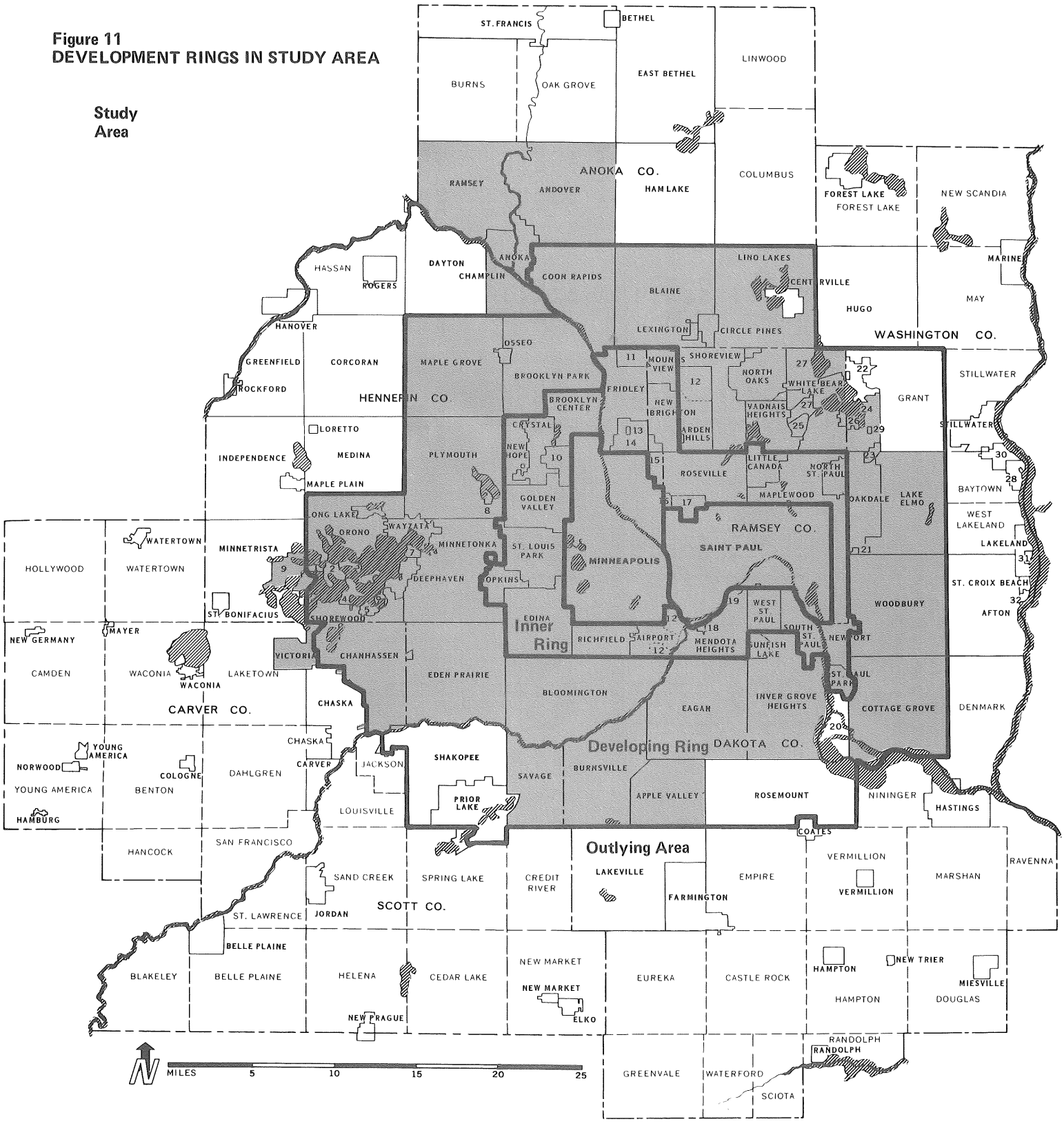
### Land Use Changes, 1970-1978

Concentric development rings were conceived for use initially in Development Framework planning and correspond generally to levels of development of suburban and rural communities. The rings correspond to municipal boundaries, making them useful for time-series analysis. The three rings, excluding the central cities, consist of the Inner Ring, Developing Ring and Outlying Area. Their boundaries, as they apply to the study area, are shown in Figure 11.

Table 22 lists the total acres in the various land use categories for 1970, 1975 and 1978, along with the 1970-1975 and 1975-1978 change in these categories for development rings. Table 23 lists the vacant land by ring. In 1978, the developing ring had 70.9 percent of the study area's land and 79.4 percent of its vacant land. As might be expected, most (78.2 percent) of the new development between 1975 and 1978 occurred in the Developing Ring. This is an increase from 71.4 percent of the study area's vacant land consumed in the 1970 to 1975 period. This amounted to 9,691 acres, or slightly over 15 square miles. The Inner Ring shows 1,617 acres developed during this period, and the Outlying Area, represented by only six communities in the study area, had 1,087 acres developed. Both of these areas declined in their share of land consumed between the two time periods. Their rates of annual consumption dropped, while that for the developing ring increased. Although much less land was consumed in the Inner Ring suburbs, its rate of vacant land consumed is much higher, 16.1 percent of the remaining land between 1970 and 1975, and 5.8 percent between 1975 and 1978. In the Developing Ring, the respective figures were 7.8 and 3.7 percent.

The increasing share of development shifting to the Developing Ring, as indicated in land consumption trends between the two time periods, is reflected in all land uses except public and recreation land (see Table 24). Changes in land use in the Inner Ring are not greatly different from the existing land use mix, with the exception of much less new land devoted to streets and alleys. Commercial development is the major benefactor, with over 12 percent of land consumed in both time periods, compared to only 4.5 percent of the 1978 existing land use base. In the Developing Ring, streets and alleys also show up less prominently in the change than in the current base.

**Figure 11**
**DEVELOPMENT RINGS IN STUDY AREA**




1 SPRING PARK
2 ORONO
3 MINNETONKA BEACH
4 TONKA BAY
5 EXCELSIOR
6 GREENWOOD
7 WOODLAND
8 MEDICINE LAKE
9 MOUND
10 ROBBINSDALE
11 SPRING LAKE PARK
12 U. S. GOVT.
13 HILLTOP
14 COLUMBIA HEIGHTS
15 ST. ANTHONY
16 LAUDERDALE
17 FALCON HEIGHTS
18 MENDOTA
19 LILYDALE
20 GREY CLOUD
21 LANDFALL
22 DELLWOOD
23 PINE SPRINGS
24 MAHTOMEDI
25 GEM LAKE
26 BIRCHWOOD
27 WHITE BEAR
28 BAYPORT
29 WILLERNIE
30 OAK PARK HEIGHTS
31 LAKELAND SHORES
32 ST. MARY'S POINT

ANOKA — County Boundary
ORONO — Municipal Boundary
CAMDEN — Township Boundary

Table 22
ACRES OF LAND IN MAJOR LAND USE GROUPS, BY DEVELOPMENT RING
1970-1975 and 1975-1978

| Development Ring | | Residential | Commerical | Industrial | Public and Recreational | Streets and Alleys | Water | Vacant and/or Agricultural | Total |
|---|---|---|---|---|---|---|---|---|---|
| Inner Ring | 1970 | 32,090 | 2,891 | 9,215 | 14,173 | 18,772 | 3,833 | 33,221 | 114,195 |
| | 1975 | 34,211 | 3,566 | 9,962 | 15,318 | 19,428 | 3,833 | 27,877 | 114,195 |
| | 1978 | 34,927 | 3,771 | 10,285 | 15,632 | 19,487 | 3,833 | 26,260 | 114,195 |
| Change 1970-1975 | | 2,121 | 675 | 747 | 1,145 | 656 | -- | -5,344 | -- |
| Change 1975-1978 | | 716 | 205 | 323 | 314 | 59 | -- | -1,617 | -- |
| Developing Ring | 1970 | 37,425 | 2,191 | 11,151 | 18,056 | 26,587 | 33,693 | 292,801 | 421,904 |
| | 1975 | 44,325 | 3,249 | 12,387 | 29,771 | 28,493 | 33,693 | 296,986 | 421,904 |
| | 1978 | 50,529 | 3,766 | 13,617 | 30,196 | 29,808 | 33,693 | 260,295 | 421,904 |
| Change 1970-1975 | | 6,900 | 1,058 | 1,236 | 11,715 | 1,906 | -- | -22,815 | -- |
| Change 1975-1978 | | 6,204 | 517 | 1,230 | 425 | 1,315 | -- | - 9,691 | -- |
| Outlying Area (portion in Study Area) | 1970 | 3,136 | 136 | 457 | 2,553 | 3,291 | 1,797 | 44,719 | 56,089 |
| | 1975 | 5,809 | 171 | 542 | 3,099 | 3,764 | 1,797 | 40,907 | 56,089 |
| | 1978 | 6,670 | 231 | 566 | 3,579 | 4,006 | 2,237 | 41,357 | 58,646 |
| Change 1970-1975 | | 2,673 | 35 | 85 | 546 | 473 | -- | -3,812 | -- |
| Change 1975-1978 | | 802 | 60 | 20 | 10 | 195 | -- | -1,807 | -- |
| Total Study Area (excluding Mpls. and St. Paul) | 1970 | 72,651 | 5,218 | 20,823 | 34,782 | 48,650 | 39,323 | 370,741 | 592,188 |
| | 1975 | 84,345 | 6,986 | 22,891 | 48,188 | 51,685 | 39,323 | 338,770 | 592,188 |
| | 1978 | 92,126 | 7,768 | 24,468 | 49,407 | 53,301 | 39,763 | 327,912 | 594,745 |
| Change 1970-1975 | | 11,694 | 1,768 | 2,068 | 13,406 | 3,035 | -- | -31,971 | -- |
| Change 1975-1978 | | 7,722 | 782 | 1,573 | 749 | 1,569 | -- | -12,395 | -- |

Table 23
CONVERTED LAND IN DEVELOPMENT RINGS AS PERCENTAGE
OF EACH LAND USE TYPE, 1970-1975 and 1975-1978

| Development Ring | Residential | Commercial | Industrial | Public and Recreational | Streets and Alleys | Water | Vacant and/or Agricultural | Total |
|---|---|---|---|---|---|---|---|---|
| Inner Ring 1978 | 37.9% | 48.5% | 42.0% | 31.6% | 36.6% | 9.6% | 8.0% | 19.2% |
| Change 1970-1975 | 18.1 | 38.2 | 36.1 | 8.5 | 21.6 | | 16.7 | |
| Change 1975-1978 | 9.3 | 26.2 | 20.5 | 41.9 | 3.8 | | 13.0 | |
| Developing Ring 1978 | 54.8 | 48.5 | 55.7 | 61.1 | 55.9 | 84.7 | 79.4 | 70.9 |
| Change 1970-1975 | 59.0 | 59.8 | 59.8 | 87.4 | 62.8 | | 71.4 | |
| Change 1975-1978 | 80.3 | 66.1 | 78.2 | 56.7 | 83.8 | | 78.7 | |
| Outlying Area 1978 | 7.2 | 3.0 | 2.3 | 7.2 | 7.5 | 5.6 | 12.7 | 9.9 |
| Change 1970-1975 | 22.9 | 2.0 | 4.1 | 4.1 | 15.6 | | 11.9 | |
| Change 1975-1978 | 10.4 | 7.7 | 1.3 | 1.3 | 12.4 | | 8.8 | |



Table 24
LAND USES AS A PERCENTAGE OF DEVELOPMENT RING TOTALS, 1978

| Development Ring | Residential | Commercial | Industrial | Public and Recreational | Streets and Alleys | Water | Vacant and/or Agricultural |
|---|---|---|---|---|---|---|---|
| Inner Ring | | | | | | | |
| 1978 (percent of developed) | 41.5% | 4.5% | 12.2% | 18.6% | 23.2% | - | 100.0% |
| Change 1970-1975 | 39.7 | 12.6 | 14.0 | 21.4 | 12.3 | - | -100.0 |
| Change 1975-1978 | 44.3 | 12.7 | 20.0 | 19.4 | 3.7 | - | -100.0 |
| Developing Ring | | | | | | | |
| 1978 (percent of developed) | 39.5 | 2.9 | 10.6 | 23.6 | 23.3 | - | 100.0 |
| Change 1970-1975 | 30.2 | 4.6 | 5.4 | 51.3 | 8.4 | - | -100.0 |
| Change 1975-1978 | 64.0 | 5.3 | 12.7 | 4.4 | 13.6 | - | -100.0 |
| Outlying Area | | | | | | | |
| 1978 (percent of developed) | 44.3 | 1.5 | 3.8 | 23.8 | 26.7 | - | 100.0 |
| Change 1970-1975 | 70.1 | .9 | 2.2 | 14.3 | 12.4 | - | -100.0 |
| Change 1975-1978 | 73.8 | 5.5 | 1.8 | .9 | 17.9 | - | -100.0 |

In the 1970 to 1975 periods, public and recreation land, with 51.3 percent of the change, had the greatest divergence from the existing land use base. In the 1975 to 1978 period, residential was the major Developing Ring land consumer, with 64 percent. This compares to a 1978 base percentage of only 39.5 percent.

In those few communities in the outlying portion of the study area, residential is the largest land user, as it is in the rest of the study area. In terms of change, residential use is even more dominant, accounting for over 70 percent of the land consumed since 1970.

## AMOUNT OF VACANT LAND, 1978

Data on acres of measured vacant land by development ring is shown in Table 25. "Measured" vacant land is shown by suitability categories, whether inside or outside the MUSA, and is compared to "residual" vacant land. Over half of the measured vacant land is within the MUSA, most of which is in the Developing Ring. The residual vacant land is higher in each of the three rings, with the greatest deviation in the Inner Ring, where the measured vacant land was 26 percent below the residual figure.

The supply of vacant land, by ring, is provided in Table 26. The ring figures are also broken down by sector. Sectors within each development ring are shown in Figure 12. At 1975 to 1978 rates of consumption, the supply of suitable land would last for 45 years in the six Outlying Area communities in the study area, 27 years in the Inner Ring and 42 years in the Developing Ring. The only areas where the supply of suitable land for development is less than 17 years are in the Inner Ring, in Sectors 1, 4, 7 and 8, ranging from nine years in Sector 7 (South Minneapolis), to 15 years in Sector 8 (Southwest Minneapolis).

Table 25
ACRES OF VACANT LAND, BY DEVELOPMENT RING, 1978

| | RESIDUAL VACANT | MEASURED VACANT | | | | | | | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Inside MUSA | | | | Outside MUSA | | | | |
| | | Suitable | Not Suitable | Platted | Total | Suitable | Not Suitable | Platted | Total | |
| Inner Ring | 26,260 | 14,499 | 2,565 | 2,280 | 19,344 | - | - | - | - | 19,344 |
| Developing Ring | 260,295 | 127,295 | 36,588 | 5,371 | 169,676 | 49,221 | 16,925 | 1,335 | 67,481 | 237,157 |
| Outlying Area | 41,357 | 7,366 | 1,013 | 44 | 8,423 | 23,697 | 6,093 | 0 | 29,790 | 38,213 |
| Total* | 327,912 | 149,582 | 40,166 | 7,695 | 197,443 | 72,918 | 23,018 | 1,335 | 97,271 | 294,714 |

* Minneapolis and St. Paul not included.

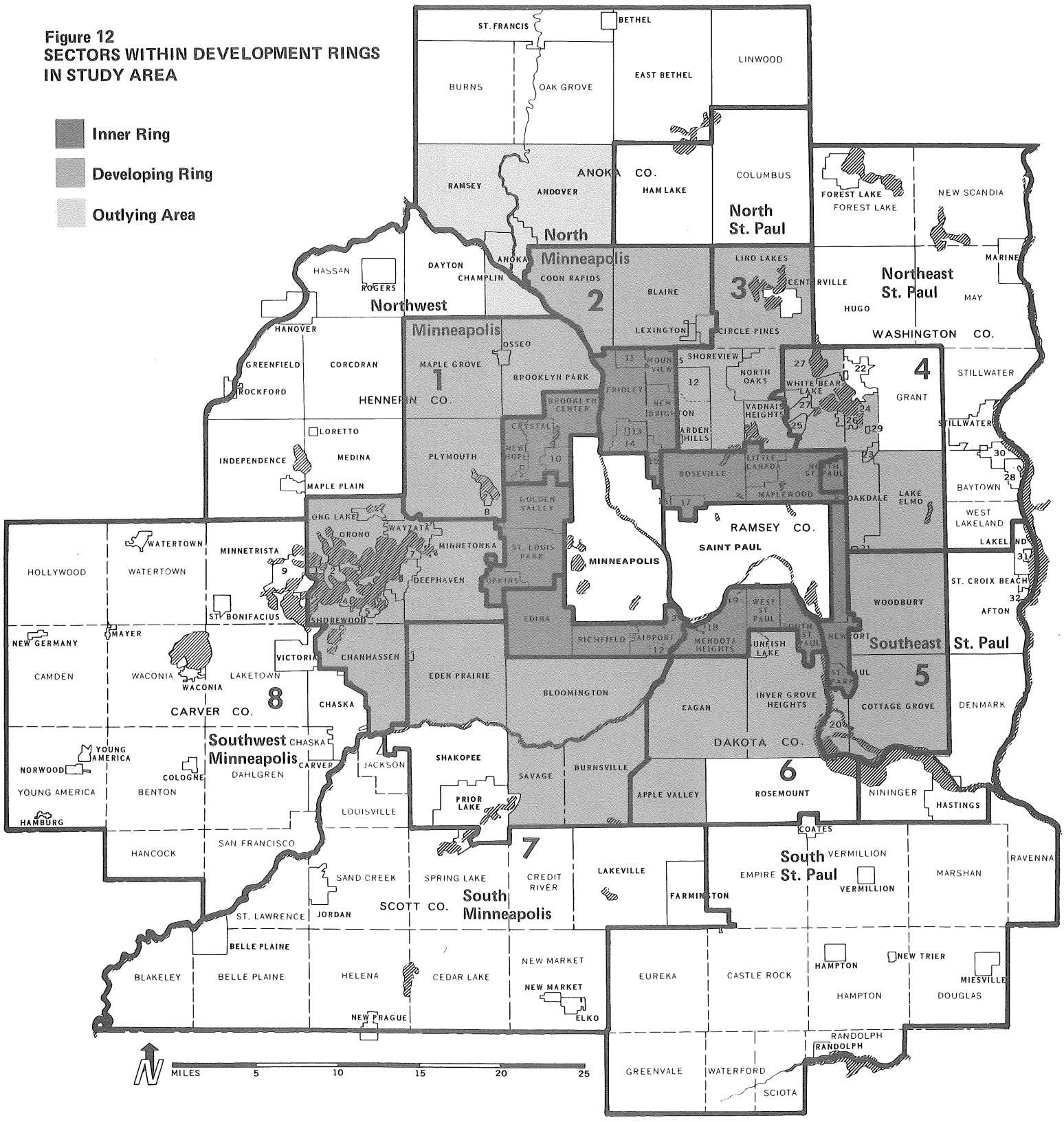
Table 26
ACRES OF VACANT LAND BY SECTOR AND RING IN MUSA, 1978

| Sector and Ring | Measured Suitable Land | Average Annual Consumption 1975-1978 | Years Supply Remaining |
|---|---|---|---|
| Sector 1 | | | |
| Inner Ring | 868 | 75 | 12 |
| Developing Ring | 20,262 | 814 | 25 |
| Outlying Area | 2,456 | 44 | 56 |
| | 23,586 | 933 | 25 |
| Sector 2 | | | |
| Inner Ring | 2,384 | 101 | 24 |
| Developing Ring | 8,395 | 209 | 40 |
| Outlying Area | 3,748 | 99 | 38 |
| | 14,527 | 408 | 36 |
| Sector 3 | | | |
| Inner Ring | 3,717 | 92 | 40 |
| Developing Ring | 8,522 | 228 | 37 |
| Outlying Area | 0 | 0 | 0 |
| | 12,239 | 320 | 38 |
| Sector 4 | | | |
| Inner Ring | 338 | 31 | 11 |
| Developing Ring | 9,376 | 118 | 79 |
| Outlying Area | 0 | 0 | 0 |
| | 9,714 | 149 | 65 |
| Sector 5 | | | |
| Inner Ring | 3,395 | 23 | 148 |
| Developing Ring | 18,427 | 134 | 138 |
| Outlying Area | 0 | 0 | 0 |
| | 21,822 | 157 | 139 |
| Sector 6 | | | |
| Inner Ring | 2,139 | 84 | 25 |
| Developing Ring | 28,047 | 639 | 44 |
| Outlying Area | 0 | 0 | 0 |
| | 30,186 | 723 | 26 |

Table 26 (Cont.)
ACRES OF VACANT LAND BY SECTOR AND RING IN MUSA, 1978

| Sector and Ring | Measured Suitable Land | Average Annual Consumption 1975-1978 | Years Supply Remaining |
|---|---|---|---|
| Sector 7 | | | |
| Inner Ring | 517 | 57 | 9 |
| Developing Ring | 19,193 | 713 | 27 |
| Outlying Area | 0 | 0 | 0 |
| | 19,710 | 770 | 26 |
| Sector 8 | | | |
| Inner Ring | 1,141 | 76 | 15 |
| Developing Ring | 15,495 | 227 | 68 |
| Outlying Area | 1,162 | 22 | 53 |
| | 17,798 | 319 | 56 |
| TOTAL | | | |
| Inner Ring | 14,499 | 539 | 27 |
| Developing Ring | 127,717 | 3,075 | 42 |
| Outlying Area | 7,366 | 165 | 45 |
| | 149,582 | 3,779 | 40 |

**Figure 12**
**SECTORS WITHIN DEVELOPMENT RINGS IN STUDY AREA**




1 SPRING PARK
2 ORONO
3 MINNETONKA BEACH
4 TONKA BAY
5 EXCELSIOR
6 GREENWOOD
7 WOODLAND
8 MEDICINE LAKE
9 MOUND
10 ROBBINSDALE
11 SPRING LAKE PARK
12 U. S. GOVT.
13 HILLTOP
14 COLUMBIA HEIGHTS
15 ST. ANTHONY
16 LAUDERDALE
17 FALCON HEIGHTS
18 MENDOTA
19 LILYDALE
20 GREY CLOUD
21 LANDFALL
22 DELLWOOD
23 PINE SPRINGS
24 MAHTOMEDI
25 GEM LAKE
26 BIRCHWOOD
27 WHITE BEAR
28 BAYPORT
29 WILLERNIE
30 OAK PARK HEIGHTS
31 LAKELAND SHORES
32 ST. MARY'S POINT

ANOKA — County Boundary
ORONO — Municipal Boundary
CAMDEN — Township Boundary

## RESIDENTIAL LAND CONSUMPTION AND HOUSING CONSTRUCTION

This section of the report relates residential land consumption--the major use of urban land--to residential construction. These relationships are shown by ring and sector in Table 27.

Within the study area, the rate of residential land consumption has remained fairly constant since 1970, despite the housing slumps of the mid 1970s. This is due to an increase in the proportion of single-family housing and a consequent decline in overall density. Within the study area, density dropped from 5.7 houses per acre in the 1970-1974 period to four per acre for 1975-1977. For the same periods, single-family housing went from 78.4 percent of the houses built to 67.8 percent.

This same pattern occurred most clearly in the Developing Ring. In the Inner Ring, despite a large increase in the percent of single-family housing, the density did not drop appreciably. In the six outlying cities in the study area, the density increased, despite a slight increase in the percent of single-family housing. The same trend also occurred in the fully developed suburbs.

The general pattern of decreasing density and an increasing single-family percentage was also true in most of the subregional sectors. The single-family percentage went up in all eight sectors, and substantially so in all cases. Density declined in all but two sectors: Sector 2 (North Minneapolis) and Sector 5 (Southeast St. Paul). These two had the lowest densities in the 1970-1975 period.

Since there are no apparent land supply problems in any of the sectors at this time, there is no particular concern with the short-term decrease in density. However, single-family construction has continued strong since 1978, and if it persists, land supplies could be consumed faster than expected. This is why regular monitoring of land supply and residential construction is essential.

Data for individual cities is shown in Table 28. Because of abundant land supply within the MUSA in all sectors, there is no special need to be concerned with land supply constraints in particular cities. Monitoring will be done of vacant land by city, however, to determine whether there are constraints on their vacant land supplies. Questions regarding suitability, price, ownership, access, and other factors would be investigated in these cases.

Table 27
RESIDENTIAL CONSTRUCTION AND RESIDENTIAL LAND CONSUMPTION,
BY SECTOR AND RING, 1970-1975 and 1975-1978*

| Area | Residential Permits 1970-1974 | Residential Land Consumed in Acres 1970-1975 | Density Houses /Acre | Percent Single Family | Residential Permits 1975-1977 | Residential Land Consumed in Acres 1975-1978 | Density Homes /Acre | Percent Single Family |
|---|---|---|---|---|---|---|---|---|
| Study Area excl. Central Cities | 66,282 | 11,606** | 5.7 | 38.4 | 30,794 | 7,722** | 4.0 | 67.8 |
| Central Cities | 16,189 | 72 | - | 9.2 | 4,018 | n.a. | - | 25.3 |
| Remainder of Region | 14,930 | n.a. | - | 70.1 | 8,454 | n.a. | - | 79.8 |
| Regional Total | 97,401 | | | 38.4 | 43,266 | | | 66.2 |
| Sector | | | | | | | | |
| 1. NW Mpls. | 10,628 | 1,629 | 6.5 | 46.1 | 7,132 | 1,666 | 4.3 | 76.5 |
| 2. North Mpls. | 12,615 | 3,535 | 3.6 | 50.8 | 4,683 | 1,294 | 3.6 | 74.4 |
| 3. No. St. Paul | 7,629 | 998 | 7.6 | 27.8 | 3,438 | 854 | 4.0 | 58.2 |
| 4. NE St. Paul | 3,018 | 385 | 7.8 | 45.7 | 1,430 | 360 | 4.0 | 75.4 |
| 5. SE St. Paul | 2,505 | 905 | 2.8 | 58.1 | 1,119 | 296 | 3.8 | 97.1 |
| 6. So. St. Paul | 8,963 | 1,591 | 5.6 | 32.5 | 2,937 | 929 | 3.2 | 79.1 |
| 7. So. Mpls. | 13,505 | 1,859 | 7.3 | 28.5 | 6,826 | 1,760 | 3.9 | 50.3 |
| 8. SW Mpls. | 7,419 | 792 | 9.4 | 32.5 | 3,229 | 563 | 5.7 | 62.4 |
| Development Rings | | | | | | | | |
| Inner Ring Suburbs | 22,468 | 2,121 | 10.6 | 26.7 | 7,395 | 716 | 10.3 | 47.8 |
| Developing | 39,244 | 6,900 | 5.7 | 40.9 | 21,583 | 6,204 | 3.5 | 73.1 |
| Outlying (Part) | 4,570 | 2,673 | 1.7 | 84.2 | 1,816 | 802 | 2.3 | 86.3 |
| Fully Developed Area Suburbs excluding Bloomington | 15,800 | 1,356** | 11.7 | 22.0 | 5,476 | 454** | 12.1 | 36.4 |

* The land base inventory covers the period from April 1970 to April 1975, and April 1975 to April 1978. The permit data is aggregated in whole years to best match these periods.

** Minneapolis and St. Paul have been excluded because most of their residential development has not resulted in a change of land use, but has been due to increased density, as figures above indicate.

*** Excludes all of Bloomington. All of Bloomington is excluded because almost all of its residential development has occurred in West Bloomington outside the FDA. Only 25 acres of residential land was consumed between 1970 and 1975 and 14 acres between 1975 and 1978,

Table 28
RESIDENTIAL CONSTRUCTION AND RESIDENTIAL LAND CONSUMPTION,
BY MUNICIPALITY, IN THE STUDY AREA, 1970-1975 AND 1975-1978

| City | Residential Permits 1970-1974 | Acres Used 1970-1975 | Density | Percent Single-Family | Residential Permits 1975-1977 | Acres Used 1970-1975 | Density | Percent Single-Family |
|---|---|---|---|---|---|---|---|---|
| Andover | 1,020 | 750 | 1.36 | 98% | 309 | 198 | 1.56 | 100% |
| Anoka | 792 | 88 | 9.00 | 36 | 383 | 100 | 3.83 | 37 |
| Apple Valley | 2,363 | 523 | 4.52 | 48 | 1,228 | 488 | 2.52 | 85 |
| Arden Hills | 302 | 145 | 2.08 | 37 | 327 | 67 | 4.88 | 41 |
| Birchwood | 46 | 16 | 2.88 | 100 | 35 | 14 | 2.50 | 100 |
| Blaine | 1,886 | 370 | 5.10 | 50 | 931 | 175 | 16.10 | 61 |
| Bloomington | 3,478 | 482 | 7.22 | 29 | 2,191 | 693 | 3.16 | 51 |
| Brooklyn Center | 1,283 | 91 | 14.10 | 18 | 188 | 21 | 8.95 | 59 |
| Brooklyn Park | 2,946 | 419 | 7.03 | 32 | 2,126 | 636 | 3.34 | 87 |
| Burnsville | 4,821 | 688 | 7.01 | 30 | 1,376 | 373 | 3.69 | 62 |
| Champlin | 952 | 263 | 3.62 | 82 | 299 | 73 | 4.10 | 100 |
| Chanhassen | 381 | 51 | 7.47 | 59 | 211 | 55 | 3.84 | 98 |
| Circle Pines | 90 | 10 | 9.00 | 100 | 36 | 10 | 3.60 | 100 |
| Columbia Heights and Hilltop | 319 | 7 | 45.57 | 30 | 224 | 1 | 224.00 | 43 |
| Coon Rapids | 2,141 | 281 | 7.62 | 38 | 856 | 256 | 3.34 | 67 |
| Cottage Grove | 1,199 | 437 | 2.74 | 83 | 648 | 197 | 3.29 | 100 |
| Crystal | 326 | 23 | 14.17 | 56 | 192 | 7 | 27.43 | 53 |
| Deephaven | 82 | 0 | 0 | 99 | 64 | 8 | 8.00 | 100 |
| Eagan | 3,053 | 597 | 5.11 | 30 | 759 | 223 | 3.40 | 69 |
| Eden Prairie | 1,336 | 223 | 5.99 | 38 | 1,417 | 494 | 2.87 | 71 |
| Edina | 3,523 | 408 | 8.63 | 16 | 1,503 | 126 | 11.93 | 18 |
| Excelsior | 260 | 0 | 0 | 2 | 7 | 0 | 0 | 100 |
| Falcon Heights | 100 | 4 | 25.00 | 11 | 12 | 1 | 12.00 | 83 |
| Fridley | 2,160 | 179 | 12.07 | 23 | 708 | 27 | 26.22 | 53 |
| Gem Lake, White Bear Lake, and White Bear Twp. | 866 | 116 | 7.47 | 52 | 397 | 128 | 3.10 | 96 |
| Golden Valley | 690 | 46 | 15.00 | 46 | 273 | 46 | 5.93 | 52 |
| Greenwood, Minnetonka Beach, Shorewood, and Tonka Bay | 151 | 74 | 2.04 | 79 | 227 | 78 | 2.91 | 89 |
| Hopkins | 1,750 | 93 | 18.82 | 1 | 166 | 14 | 11.86 | 8 |
| Inver Grove Heights | 1,811 | 276 | 6.56 | 14 | 440 | 193 | 2.28 | 66 |

Table 28 (Cont.)
RESIDENTIAL CONSTRUCTION AND RESIDENTIAL LAND CONSUMPTION,
BY MUNICIPALITY, IN THE STUDY AREA, 1970-1975 AND 1975-1978

| City | Residential Permits 1970-1974 | Acres Used 1970-1975 | Density | Percent Single-Family | Residential Permits 1975-1977 | Acres Used 1970-1975 | Density | Percent Single-Family |
|---|---|---|---|---|---|---|---|---|
| Lake Elmo | 551 | 14 | 39.36 | 30% | 199 | 62 | 3.21 | 48% |
| Lauderdale | 17 | 0 | 0 | 100 | 5 | 0 | 0 | 100 |
| Lexington | 40 | 5 | 8.00 | 73 | 35 | 5 | 7.00 | 49 |
| Lilydale and Mendota | 94 | 12 | 7.83 | 3 | -20 | -57 | 0 | 0 |
| Lino Lakes | 169 | 81 | 2.09 | 98 | 172 | 271 | .63 | 100 |
| Little Canada | 1,570 | 111 | 14.14 | 5 | 332 | 18 | 18.44 | 31 |
| Long Lake and Orono | 272 | 117 | 2.32 | 63 | 182 | 67 | 2.72 | 98 |
| Mahtomedi | 92 | 5 | 18.40 | 84 | 50 | 10 | 5.00 | 98 |
| Maple Grove | 1,347 | 337 | 4.00 | 70 | 1,979 | 368 | 5.38 | 74 |
| Maplewood | 1,649 | 250 | 6.60 | 28 | 278 | 42 | 6.62 | 2 |
| Medicine Lake | 13 | 1 | 13.00 | 85 | 3 | 0 | 0 | 100 |
| Mendota Heights | 361 | 95 | 3.80 | 63 | 203 | 46 | 4.41 | 96 |
| Minnetonka | 1,649 | 231 | 7.14 | 46 | 1,208 | 194 | 6.23 | 68 |
| Mound | 491 | 48 | 10.23 | 94 | 276 | 8 | 34.50 | 96 |
| Mounds View | 1,174 | 150 | 7.83 | 42 | 246 | 51 | 4.82 | 92 |
| New Brighton | 999 | 151 | 6.62 | 66 | 365 | 52 | 7.02 | 94 |
| New Hope | 650 | 92 | 7.07 | 68 | 356 | 50 | 7.12 | 30 |
| Newport | 192 | 9 | 21.33 | 58 | 65 | 18 | 3.61 | 100 |
| North Oaks | 204 | 252 | .81 | 100 | 136 | 61 | 2.23 | 100 |
| North St. Paul | 318 | 30 | 10.60 | 90 | 365 | 60 | 6.08 | 64 |
| Oakdale and Landfall | 1,129 | 204 | 5.53 | 31 | 356 | 70 | 5.09 | 72 |
| Osseo | 82 | 6 | 13.67 | 17 | 36 | 9 | 4.00 | 100 |
| Pine Springs | 0 | 0 | 0 | 0 | 22 | 16 | 1.38 | 100 |
| Plymouth | 2,823 | 395 | 7.15 | 45 | 1,789 | 502 | 3.56 | 81 |
| Ramsey | 1,273 | 1,490 | .85 | 100 | 507 | 373 | 1.36 | 100 |
| Richfield | 110 | 5 | 22.00 | 55 | 165 | 4 | 41.25 | 25 |
| Robbinsdale | 206 | 2 | 103.00 | 39 | 164 | 0 | 0 | 29 |
| Roseville | 1,702 | 156 | 10.91 | 27 | 810 | 102 | 7.94 | 43 |
| St. Anthony (part) (Hennepin) | 38 | 1 | 38.00 | 97 | 13 | 0 | 0 | 85 |
| St. Anthony (part) (Ramsey) | 424 | 28 | 15.14 | 2 | 9 | 1 | 9.00 | 100 |
| St. Louis Park | 1,231 | 62 | 19.85 | 7 | 371 | 16 | 23.19 | 14 |
| St. Paul Park | 54 | 4 | 13.50 | 52 | 24 | 5 | 4.80 | 100 |
| Savage | 237 | 53 | 4.47 | 100 | 174 | 70 | 2.49 | 90 |
| Shoreview | 1,538 | 219 | 7.02 | 34 | 1,000 | 227 | 4.41 | 65 |
| Spring Lake Park | 259 | 25 | 10.36 | 65 | 61 | 13 | 4.69 | 100 |

Table 28 (Cont.)
RESIDENTIAL CONSTRUCTION AND RESIDENTIAL LAND CONSUMPTION,
BY MUNICIPALITY, IN THE STUDY AREA, 1970-1975 AND 1975-1978

| City | Residential Permits 1970-1974 | Acres Used 1970-1975 | Density | Percent Single-Family | Residential Permits 1975-1977 | Acres Used 1970-1975 | Density | Percent Single-Family |
|---|---|---|---|---|---|---|---|---|
| Spring Park | 169 | 6 | 28.17 | 4% | 28 | 0 | 0 | 4% |
| South St. Paul | 464 | 11 | 42.18 | 32 | 123 | 6 | 20.50 | 82 |
| Sunfish Lake | 12 | 1 | 12.00 | 100 | 10 | 4 | 2.50 | 100 |
| Vadnais Heights | 347 | 26 | 13.35 | 20 | 352 | 88 | 4.00 | 41 |
| Victoria | 42 | 34 | 1.24 | 90 | 42 | 50 | .84 | 71 |
| Wayzata | 241 | 30 | 8.03 | 6 | 168 | 13 | 12.92 | 11 |
| West St. Paul | 805 | 76 | 10.59 | 27 | 194 | 26 | 7.46 | 81 |
| Willnerie | 16 | 0 | 0 | 25 | 6 | 0 | 0 | 100 |
| Woodbury | 1,060 | 209 | 5.07 | 30 | 382 | 52 | 7.35 | 92 |
| Woodland | 10 | 0 | 0 | 100 | 6 | 0 | 0 | 100 |
| Airport-Fort Snelling | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 66,251 | 11,845 | 5.59 | | 30,780 | 7,774 | 3.96 | |

## DEFINITIONS

### LAND-USE CATEGORIES

For the sake of consistency, land-use categories remained unchanged through the various studies carried out by the Metropolitan Council.

Residential — Includes all permanent single-family and multiple housing units along with mobile home courts.

Commercial — Includes all retail sales, services (including professional), and all of those recreational services that are predominantly privately owned and operated for profit (for example, theaters, bowling alleys). This does not include golf courses, which are classified as recreation/open space. Also included in "commercial" is SIC 80* with the exception of SIC 806 (hospitals). SIC 80 includes private institutions such as convalescence homes and rest homes in which medical or surgical services are not a main function of the institution.

Industrial — Includes the SIC categories 019 and 14 through 50, which include the following: horticultural specialities (with the exception of sod farms), mining and quarrying of nonmetallic minerals (except fuels), general contractors (building construction and all nonbuilding construction), manufacturing of all kinds, transportation of all kinds, communications and utilities and wholesale trade.

Public and Semi-Public Buildings and Recreation Open Space

Includes the buildings and land adjacent to schools, both public and private, hospitals, churches and all facilities of local, state and federal governments, including convalescent homes, mental institutions and penal facilities maintained by any level of government. Also included are parks, playgrounds, athletic facilities, golf courses and similar areas.

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*SIC = Standard Industrial Classification

Streets and Alleys

Includes all land used for highways, streets and alleys and related easements.

Residual Vacant and/or Agricultural

Includes all land not being used for any of the urban uses listed above. This is the residual after all urban land uses and water area are subtracted from the total area.

Measured Vacant and/or Agricultural

Includes only that portion of the vacant and/or agricultural land in a community that can be identified from aerial photographs as being vacant or unused for anything other than agriculture.

GEOGRAPHIC AREAS

Metropolitan Urban Service Area (MUSA)

That portion of the Twin Cities Metropolitan Area that has metropolitan sewer service available. Shown in Figure 1.

Land Use Study Area

All of those cities either wholly or partially within the Metropolitan Urban Service Area. Shown in Figure 2.

Fully Developed Area

Those inner ring suburbs having little vacant land left for development and the central cities. A map of the area is shown in Figure 5.

Central Cities

Minneapolis and St. Paul.

OTHER TERMS

Platted

An area of measured vacant land adjacent to a developed area of urban land use, both of which are located on a single parcel of land. This measured vacant land is considered vacant but unavailable for development. It could be used for expansion by the present owner or replatted and sold.