

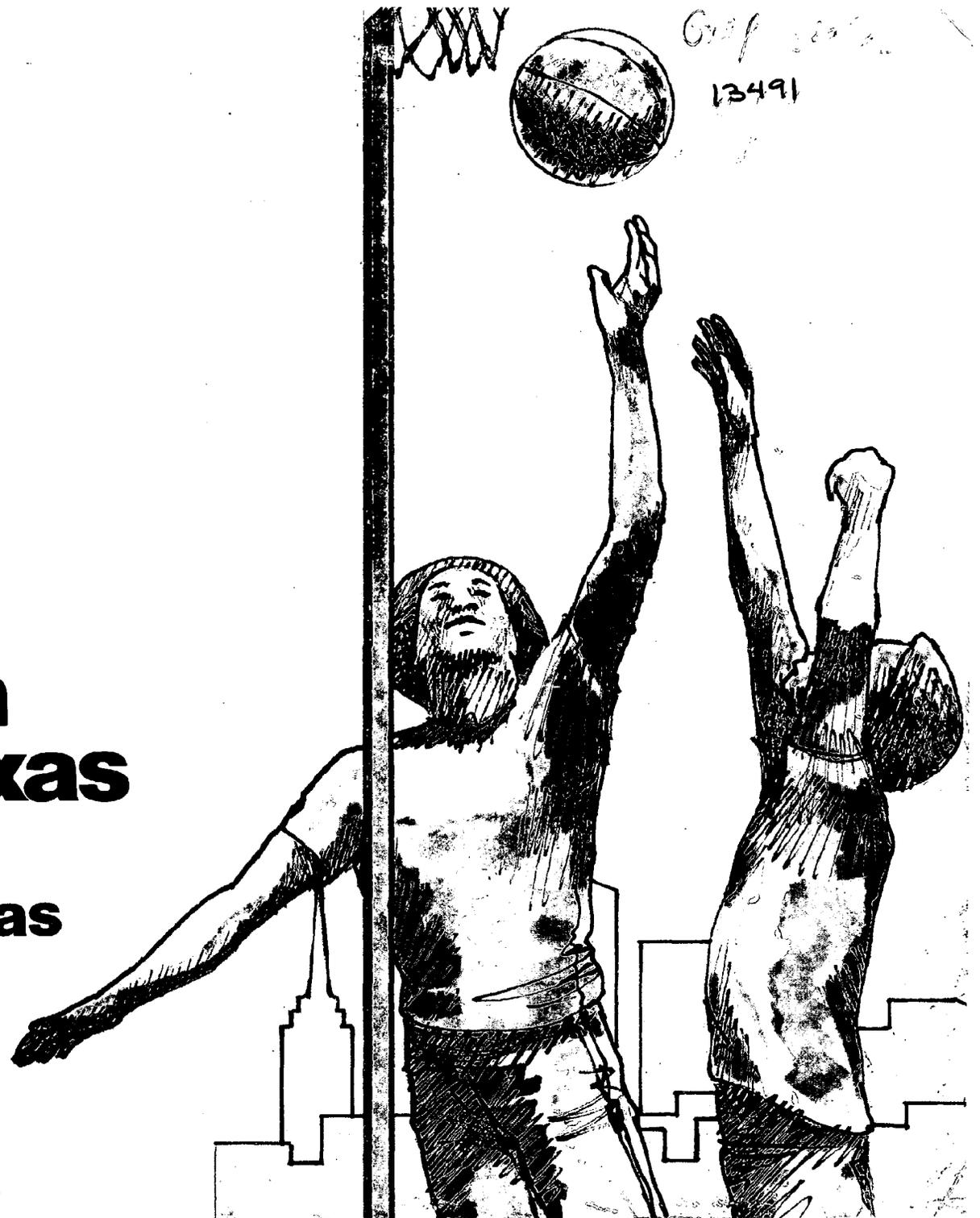
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Outdoor Recreation in the Urban Areas of Texas

Part 2: Metropolitan Areas

Texas Parks and Wildlife Department
Comprehensive Planning Branch



Outdoor Recreation in the Urban Areas of Texas

Part 2: Metropolitan Areas

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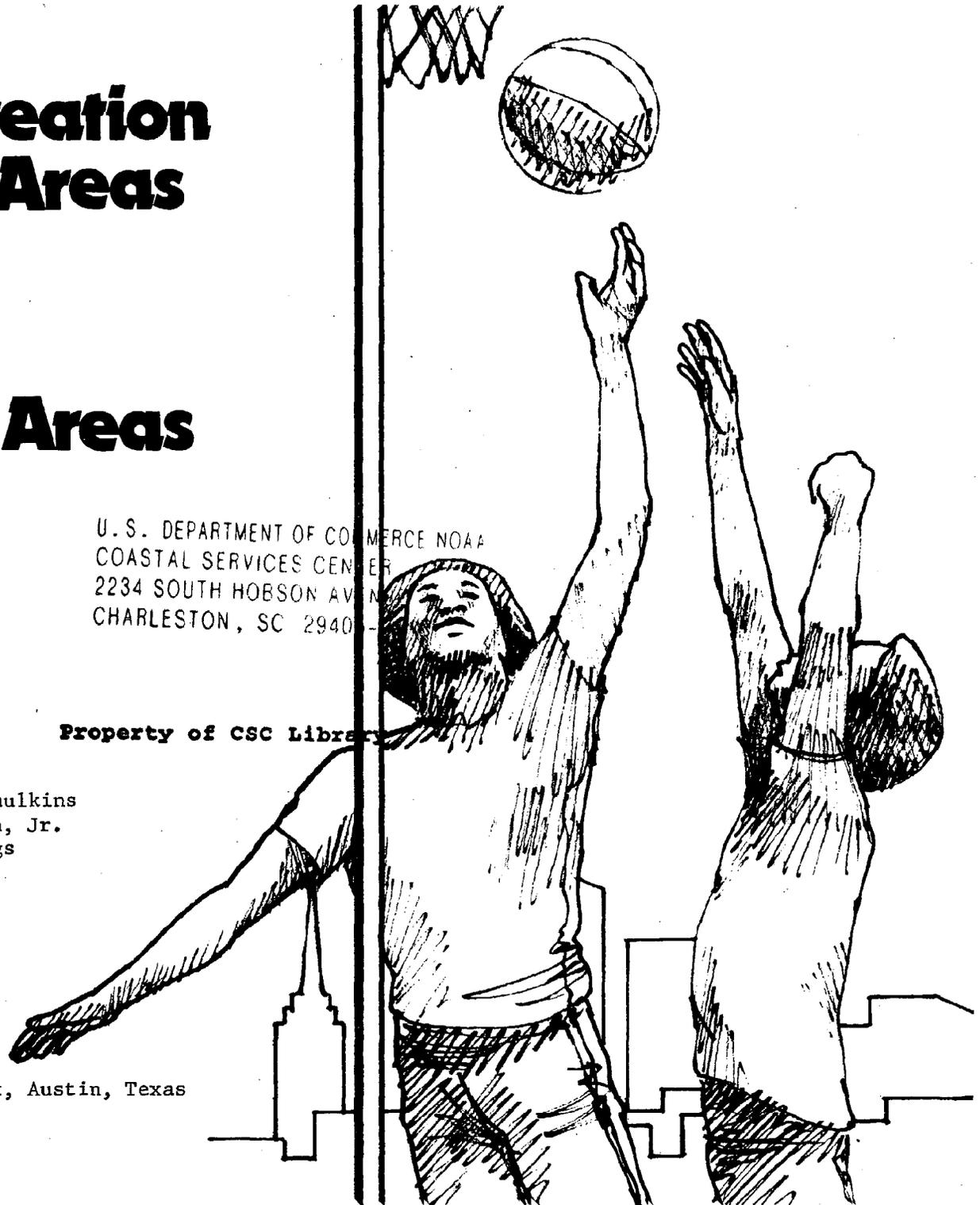
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December, 1975

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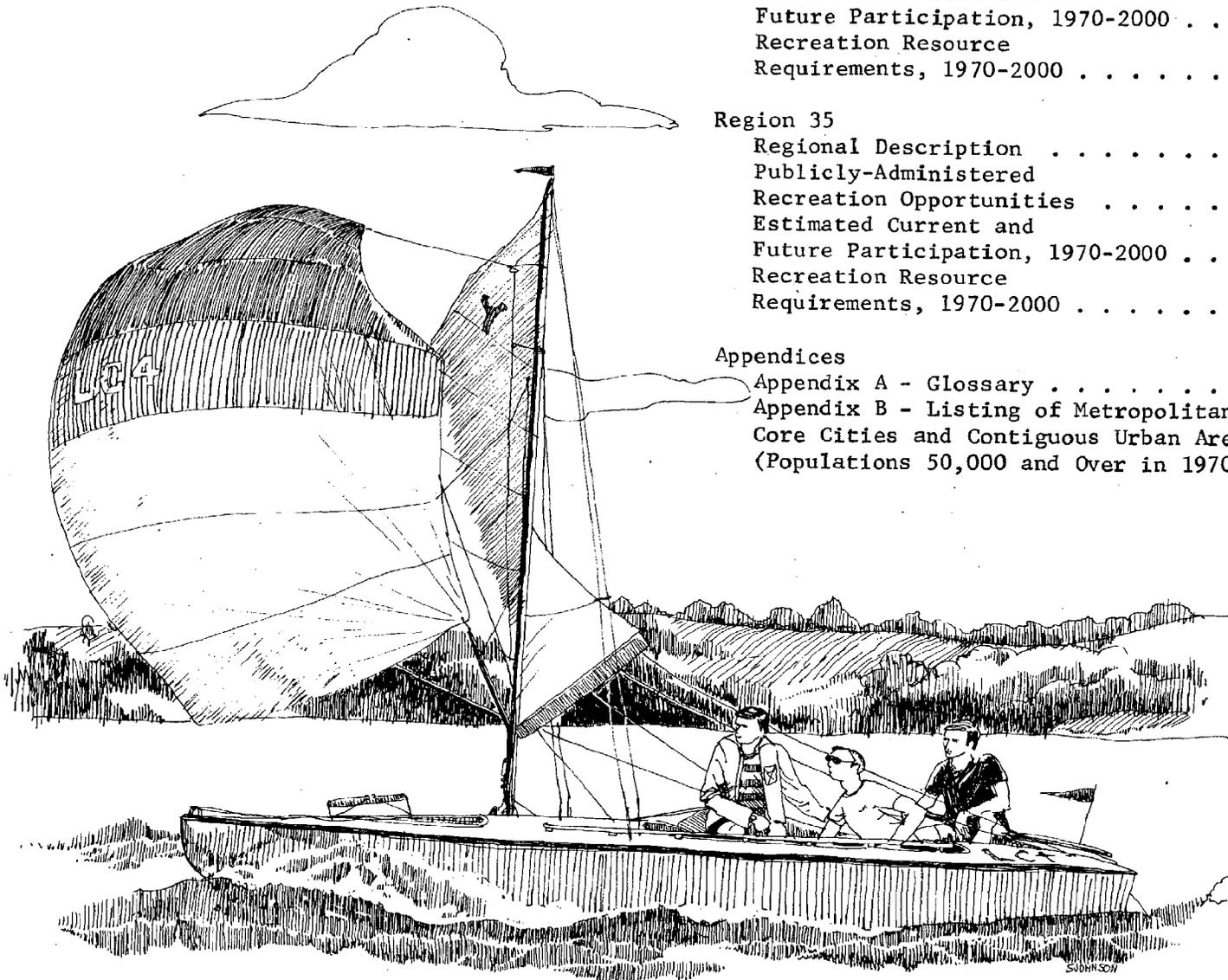
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Introduction



The Texas Outdoor Recreation Plan (TORP) is the official statewide outdoor recreation plan developed by the Texas Parks and Wildlife Department at the direction of the Legislature (Senate Bill 165, Acts of the 59th Legislature). The TORP serves to guide the provision of outdoor recreation opportunities for the people of Texas. The Texas Outdoor Recreation Plan in its entirety consists of ten volumes. Each volume deals with a specific aspect of outdoor recreation in the State of Texas. Two of these ten volumes, Outdoor Recreation in the Rural Areas of Texas (referred to as the Rural Volume) and Outdoor Recreation in the Urban Areas of Texas (referred to as the Urban Volume) consist of three and four parts each respectively. Each part is bound and published under separate cover. This document, Part II--Metropolitan Areas, is one of four parts which, combined, comprise the entire volume Outdoor Recreation in the Urban Areas of Texas.

To understand the objectives of Part II--Metropolitan Areas it is important that the reader:

- Relate the volume Outdoor Recreation in the Urban Areas of Texas to the other nine volumes of the TORP.
- Visualize the relationship of Part II--Metropolitan Areas to Part I, Part III, and Part IV of Outdoor Recreation in the Urban Areas of Texas.
- Review the Glossary to clarify the specific use of terms in the TORP. Data presented is most meaningful once the terms used to describe the data are defined as they apply to the TORP.

Outlined below are the ten volumes of the TORP, to include the various parts of the Urban and Rural Volumes, followed by a brief statement defining the purpose of each:

Texas Outdoor Recreation Plan

1. Outdoor Recreation in the Urban Areas of Texas
...analyzes outdoor recreation occurring in the urban areas of Texas with respect to existing recreation

opportunities, participation, and resource requirements now and in the future; also includes suggested minimum facility requirements for small communities (urbanized areas ranging in population from 200 to 2,499 in 1970 and which are not contiguous to a metropolitan area) and identifies areas of special concerns and associated problems in the urban areas of Texas.

a. Part I--An Overview

...summarizes the analyses of outdoor recreation occurring in all types of urban areas combined on a statewide and Analytical Planning Region basis.

b. Part II--Metropolitan Areas

...analyzes that portion of urban outdoor recreation occurring in each of 24 urbanized areas referred to as "metros" in the TORP. Metros are defined as the core city or cities having populations of 50,000 or more, according to 1970 population figures, plus all incorporated, and some unincorporated, urbanized areas contiguous to the core city/cities. Data is organized for each metro area by Analytical Planning Region. The 24 metro areas are located in 22 different planning regions, with Regions 18 and 34 having two metros each, Midland and Odessa in Region 18 and Brownsville-Harlingen-San Benito and McAllen-Edinburg-Pharr in Region 34.

c. Part III--Cities

...analyzes that portion of urban outdoor recreation occurring in urbanized areas with populations ranging from 10,000 to 49,999 in 1970 (referred to as "cities") and which are not part of or contiguous to a metropolitan area. Twenty-seven Analytical Planning Regions have one or more cities. Data is combined for all cities within a region and presented on a regional basis.

d. Part IV--Towns

...analyzes that portion of urban outdoor recreation occurring in urbanized areas with populations ranging from 2,500 to 9,999 in 1970 (referred to as "towns") and which are not part of or contiguous to a metropolitan area. All 37 Analytical Planning Regions have at least one or more towns. Data is combined for all towns within a region and presented on a regional basis.

2. Outdoor Recreation in the Rural Areas of Texas

...analyzes outdoor recreation occurring in the rural areas of Texas, areas having a country atmosphere or towns of less than 200 in population, with respect to existing recreation opportunities, participation and resource requirements now and in the future; also identifies areas of special concerns and associated problems in the rural areas of Texas.

a. Part I--An Overview

...summarizes the analyses of outdoor recreation occurring in the rural areas of Texas on a statewide and Analytical Planning Region basis.

- b. Part II--Regions 1 - 18
...analyzes rural outdoor recreation occurring in Analytical Planning Regions 1 - 18.
- c. Part III--Regions 19 - 37
...analyzes rural outdoor recreation occurring in Analytical Planning Regions 19 - 37.
3. Outdoor Recreation on the Texas Gulf Coast
...analyzes outdoor recreation for selected urban and rural activities occurring on saltwater or adjacent land areas in the seventeen counties which are contiguous to the Gulf of Mexico or saltwater bays. Analyses are with respect to existing recreation opportunities, participation, and resource requirements now and in the future for each of the seventeen counties and the entire seventeen counties grouped together as one coastal region.
4. Outdoor Recreation Activities
...analyzes participation patterns in certain activities as they are explained by various recreationists' characteristics such as times of day for participation, seasons of the year, distances travelled, expenditures of time and money, ability to participate, and facility preferences for residents of Texas and out-of-state visitors.
5. The Role of the Public and Private Sectors
...compares the general influences on outdoor recreation in Texas by public agencies and the private sector engaged in providing recreational resources for public use, either for free or for profit.
6. A Regional Environmental Analysis
...addresses basic resource conservation problems by focusing on the rapidly developing eight county Houston-Galveston region. The problems of conserving recreational resources, which include wildlife habitats, recreational areas, and a variety of other recreational resources, are illustrated by a map inventory of these resources. Also included are a series of maps showing various types of projected urban, industrial and other types of development in the region and how these types of development conflict with recreation and damage or destroy recreational resources. Lastly, a series of maps and discussions addresses selected examples of planning factors that should be considered in the comprehensive planning process.
7. Techniques of Analysis
...describes the methodology used in the TORP to determine recreational demand, recreation facility standards, opportunities, resource requirements, and recreation priorities in Texas.
8. A Statewide Recreation Information System
...describes the basic framework, uses, and operations of the recreational planning process in Texas.

Also discussed are the data previously collected to support recreation planning, previous and potential methods of collection, and the data types to consider acquiring in the future. In addition, the importance of communication, coordination, and cooperation among recreation planners and those involved in providing outdoor recreation opportunities is emphasized.

9. Regional Summary

...synoptically analyzes outdoor recreation in Texas occurring in the urban areas, rural areas, and urban and rural areas combined with respect to the planning region's description; recreation opportunities, participation, and resource requirements now and in the future; potential recreation resources; and recommendations and priorities for the region. Data is organized by region for Regions 1 - 37.

10. State Summary

...contains broad information, recommendations, and policy statements to guide the current and future development of outdoor recreation resources in Texas.

With the above relationships of the various TORP volumes identified, the objectives of Part II--Metropolitan Areas (referred to as "Metros") are more easily viewed in their proper perspective. "Metros" deals only with outdoor recreation occurring in those urban areas defined as metros. Again, metros are defined as the core city or cities with a population of 50,000 or more, according to the 1970 census, plus all urbanized areas contiguous to the core city or cities. The contiguous urbanized areas may be of any population size, and may be either incorporated or unincorporated. Where several cities comprise a core, only the combined total population must equal or exceed 50,000 in order for the cities to qualify as a metro. Since 22 Analytical Planning Regions have urbanized areas defined as metros, these 22 regions are analyzed in "Metros." Emphasized in the "Metros" is the inventory of outdoor recreation resources and the comparison of these resources with participation demands to determine resource requirements for various recreational facilities.

The primary objectives of "Metros" are threefold: (1) to provide an in-depth data base that will assist recreation planners within the metros in solving their current and future outdoor recreation problems, (2) to provide detailed information concerning the outdoor recreation problems facing the metros in order that Federal, State, and local governmental entities and private enterprises can more effectively, as well as efficiently, plan their outdoor recreation programs to help meet the needs of the metros across the State, and (3) to serve as one of the primary documents which can be used to allocate monies from the Land and Water Conservation Fund to all urban areas in an efficient and equitable manner.

OUTLINE OF THE "METROS"

This volume is organized by Analytical Planning Regions. Major categories presented in each regional analysis are a description of the metro of each region, the outdoor recreation opportunities available in 1971, estimated participation for the years 1970, 1975, 1980, 1990, and 2000 for selected urban outdoor recreation activities, and estimates of resource requirements for the years 1970, 1975, 1980, 1990, and 2000 for selected types of urban outdoor recreation facilities. This outline briefly describes the contents of each of these major categories and explains how this material may be interpreted by the reader.

REGIONAL DESCRIPTION

The Regional Description section contains three maps. One map is an outline of the State of Texas with the 37 analytical planning regions depicted. The Analytical Planning Region presented is emphasized by black shading. This map serves to locate the region within the State and in relation to the other planning regions across the State. The second map outlines the county/counties comprising the region and also depicts the general location of the metro in the region. The third map is of the metropolitan area itself, and shows boundaries, major thoroughfares, and points of interest. This section also presents certain demographic characteristics of the population, including 1970 population, percentage change in population growth between 1960 and 1970, and age and racial composition of the population^{1/}; describes important facets of the economy^{2/}; and lists important attractions and annual events^{3/}.

PUBLICLY-ADMINISTERED RECREATION OPPORTUNITIES

This section presents descriptive information on the supply of publicly-administered (Federal, State, and local) recreational lands, parks, facilities, and resources available within the urbanized areas of the metros of each region^{4/} and the number of opportunity days provided by these facilities and resources. The primary sources of this information were the 1969 Outdoor Recreation Facilities Inventory and the 1971 Municipal Inventory Update Survey. Supply and opportunity days data describe conditions as they existed through December 31, 1971. Facility standards used to compute opportunity days (see Appendix C, Part I--An Overview of the Urban Volume) were derived primarily from the 1970 On-Site Demand Survey. This section is divided into the headings as shown in the following explanatory discussions.

Land and Water Acreage

This page shows the total public park and recreation land acreage and the water acreage within or adjacent to those parks for the metro area of the region. The total park and recreation land is divided into developed and undeveloped recreational land. Average land and water acreages per metro statewide are also shown. Developed and undeveloped recreation land acreage is presented in table form and then depicted graphically using circle graphs, as percentages of the total recreation land for the metro in each region and for the statewide metro average.

Facts pertinent to the interpretation of data presented in the "Land and Water Acreage Section" section are:

- Land acreage figures include only public land set aside as park and recreation areas, and do not include private recreation areas.

^{1/} SOURCE: U. S. Department of Commerce, Bureau of the Census. 1970.

^{2/} SOURCE: Texas Almanac and State Industrial Guide: 1972-1973: A. H. Belo Corporation, Dallas, Texas.

^{3/} The 1971 Texas Outdoor Recreation Chambers of Commerce Survey.

^{4/} Parks located in rural areas were excluded, which means that parks owned and operated by the metros but located in rural areas, even if the rural areas were within the city limits, were excluded. School-administered parks, playgrounds, and facilities were also excluded, even though most schools in Texas are public.

- Water acreage figures are in terms of surface acres, and include only the freshwater lakes within or adjacent to the parks within the metro of that region. In other words, the total surface acres of water within the metro area (shown in the "Recreation Resource Requirements, 1970-2000" section) could conceivably be much greater than the amount presented in this table because there may be water bodies in the metros not within, or adjacent to, a park. Rivers and streams are not included in the water acreage figures.

Parks and Acreage by Type of Park

Purposes of this table are to statistically compare selected data for four types of urban parks ("DISTRICT," "COMMUNITY," "SPECIALTY," and "OPEN LAND") existing in the metro area of the region, to combine the data for the four types of parks into one "TOTAL" figure, and to show the "STATEWIDE AVERAGE METROS," which is the average per metro for all metros in the State. For these categories, data selected includes the number of parks, the number of parks per thousand population, the number of people per park, the total number of land acres of public parks, the number of acres per thousand population, and the number of people per land acre. Following each table is a brief narrative summarily describing conclusions drawn from the tabled data. In comparing the regional figures with the "STATEWIDE AVERAGE METROS," caution should be exercised in drawing conclusions with respect to the need for additional parks or lands in a particular region. The fact that a region falls below or above the statewide averages may or may not indicate that additional parks or lands are needed. For additional parks and lands needed the reader is referred to Outdoor Recreation in the Urban Areas of Texas: Part I--An Overview. For definitions of the various types of parks, the reader is referred to Appendix A, the Glossary.

Immediately following the table and narrative is a map of the metropolitan area entitled "Dispersion of Parks by Type," which shows the location of the various types of parks. Its purpose is to show park dispersion throughout the metro, and it enables one to determine what types of parks are needed in the different areas of the metro. (See "Recreation Resource Requirements, 1970-2000.")

Park and Recreation Facilities by Type of Park

This table presents detailed information on the number and types of facilities available in three types of urban parks (district, community, and specialty-- open land parks are not listed since they, by definition, contain no facilities) and for the three types of parks combined. Additional data included for each type of facility listed is presented under the following columnar headings:

- PEOPLE PER UNIT-- Computed by dividing the combined population of the region metro by the total number of facilities found in the three types of urban parks in the metro.
- UNITS PER THOUSAND REGION 1-37 METROS-- Computed by dividing the total number of facilities in the three types of urban parks in the region metro by the total population of the metro expressed in thousands.
- UNITS PER THOUSAND STATEWIDE AVERAGE METROS-- Computed by dividing the total number of facilities in the three types of urban parks in the metros of the State by the total population, expressed in thousands, in the metros of the State.

For those regions bordering the Gulf Coast which have metro areas accessible to saltwater, data for selected facilities is included. The reader is referred to Appendix A for precise definitions of the various types of facilities.

Conversion of Facilities to Recreation Opportunities

The opportunity days table shows the total annual days of recreation opportunity provided by selected types of facilities in the region's metro. Opportunity days are a quantitative measure of the recreation participation that can be satisfied by existing recreation facilities, given the current participation patterns and preferences of urban outdoor recreationists. Opportunity days were computed by multiplying the number of facilities available in 1971 for each activity times the standard for the facility. The terms "current," "present," etc., when used to refer to opportunity days, are referring to the year 1971. (See Appendix C of Part I--An Overview for more information on urban facility standards.) The number of opportunity days per thousand population on a regional metro basis and statewide metro basis are shown in the last two columns. These figures were calculated by dividing opportunity days for the metros by the population of the metros expressed in thousands.

It is recognized that, in reality, opportunity days are provided by facilities of activities which are not itemized in the opportunity tables. However, under TORP concepts, opportunity days calculations were limited by three criteria: (1) The activity for which opportunity days were calculated must have statewide significance in terms of the number of participants. (2) The major facility or resource, which provides the opportunity to participate in the activity must be quantifiable. Some activities rank high in terms of total participation, such as driving for pleasure, but the facilities, or resources, necessary for participation are difficult to measure in terms of supply. (3) Opportunity days computed were limited to those activities for which a standard could be developed, i.e., under TORP concepts, those facilities for which sufficient information could be compiled on which to base the standards.

The following points should be noted about the opportunity days table:

- Opportunity days were based on the total supply of publicly-administered recreational facilities available. No adjustments were made for the quality of the facilities. Some facilities were in need of repair and others may even need replacing. Also, the quality of facilities varies over time, depending on maintenance, intensity of use, etc. Consequently, the number of opportunity days provided may fluctuate with variations in facility quality.
- Opportunity days for surface acres of freshwater lakes were calculated on the basis of the total number of urban surface acres in the metros (as shown in the "Conversion of Facilities to Recreation Opportunity Days" table) not simply the surface acres within or adjacent to parks (as tabled under "Land and Water Acreage").

ESTIMATED CURRENT AND FUTURE PARTICIPATION, 1970-2000

Participation for 16 urban activities and the combined activity totals is shown for residents and non-residents for the years 1970, 1975, 1980, 1990, and 2000 in terms of annual activity-days occurring in the metro of the respective inland regions. For those regions bordering the Gulf Coast, participation in saltwater fishing, boating, skiing, and surfing

is also shown. Several different methodologies were employed to project participation; these are explained in Appendix C to Part I--An Overview.

The resident participation tables show participation by a resident of a metro participating in an activity in the metro in which he resides. Total annual resident participation is presented in terms of total days, the relative ranking of each activity for each year by total days, average days per household for the metro in the region, and statewide average days per household for metros.

Non-resident participation, or that participation by Texas residents not residing in the metro where the participation occurs, is presented in the next set of tables in terms of total annual activity days only.

The following points should be noted with regard to current and future participation.

- Urban participation includes only participation which occurred while the participant was on a trip. Participation occurring at the participant's home was not included. Participation was counted at both public and private places as long as it occurred "away from home".
- Urban participation by out-of-state residents was not presented because results of the Texas Outdoor Recreation On-Site Survey showed that only about two percent of recreationists at 38 parks located in six urban areas across the State were out-of-state residents. The narrow range of the percentage of out-of-state residents, .6 to 3.1 percent supports the conclusion that out-of-state participation comprises a small proportion of total urban outdoor recreation participation with the possible exception of regional amusement centers such as Six Flags Over Texas, Astroworld, Aquarena, etc.
- The terms "current," "present," and similar terms used in the participation tables and narratives refer to the year 1970, even though the verb tense implies a later projection year.
- Estimated participation for some activities may not be actual participation pursued because projection techniques may have assumed higher levels of supply, or, in other words, estimates of participation measure expected demand, if supply levels are varied, more so than participation likely to occur based on existing supply levels. Only by using varying supply levels can participation figures be calculated most suited to compute resource requirements. This provides an estimate of "what people would do if adequate facilities were available" rather than "what people will do using existing facilities, which may be inadequate."
- Survey data for some regions indicated no participation occurring for boating, skiing, and boat fishing. This was thought to be due to the lack of adequate recreational water resources available, or participation was not large enough to be picked up in sampling techniques. In these cases average urban participation rates, such as the statewide average urban rate or a multi-regional urban participation rate, were used for projections. This also provides an estimate of "what people would do if adequate facilities were available."
- Participation was not projected for archery, sport shooting, horseback riding, and visiting zoos, rodeos, and cultural centers. This was due primarily to the fact that participation in these activities tends to vary considerably across the State, apparently caused by differences in the tastes and preferences of recreationists within the various urban locales. However, for planning purposes, the statewide average rates of participation in the urban areas for each of these activities is presented in Outdoor Recreation in the Urban Areas of Texas: Part I--An Overview.

- Percentages quoted in narratives referring to changes in participation levels were computed utilizing data shown in the tables.

RECREATION RESOURCE REQUIREMENTS, 1970-2000

Of all the data presented in the "Metros" document, information presented in the "Recreation Resource Requirements, 1970-2000" section should be the most valuable to recreation planners having responsibilities for planning recreational development within the metros. Of most interest to the planners are the types and quantity of recreation facilities required to satisfy the needs of the people. Even though existing facility supply levels and projected participation are essential information to the planner, comparisons of the two must be made to produce resource requirement estimates. Only after supply levels and participation have been translated into resource requirements (what facilities are needed in what quantities) can the planner make the decisions, or recommendations, for which he is responsible. Recreation resource requirements were computed for the metros of each region for the years 1970, 1975, 1980, 1990, and 2000.

For use as a planning document supplying information to recreation planners, projections for the year 1980 are considered most relevant for planning purposes. The year 1980 is the most realistic time period for most planning entities considering that the final publication date for the "Metros" is the year 1975. The five years between 1975 and 1980 allow planners a reasonable time to act on the data presented. Also, the longer the projection horizons, the less reliable the projections become simply because unpredictable changes in conditions are more likely over longer periods of time. Consequently, the more distant projection periods, particularly the year 2000, would be interpreted as reflecting the general trends in participation that are expected. Facilities for which resource requirements were computed include square yards of swimming pools, acres of playgrounds, baseball/softball fields, picnic tables, football/soccer fields, holes of golf, tennis courts, basketball courts, surface acres of freshwater lakes, boat ramps (freshwater and salt-water), and miles of trails for walking, bicycling, and nature study. Included in the resource requirements section is a map of the metro entitled "Predominant Ethnic Background and Income Delineations," which shows the different socio-economic subsections of the area. When compared with the "Dispersion of Parks by Type" map in the recreation opportunities section, this map enables one to examine park dispersion in regard to metro subsections characterized by residents of different income and ethnic backgrounds.

In determining resource requirements for the metro within a region, a two-stage analysis was conducted. First, resource requirements were calculated by comparing projected participation with opportunity days available in the metro. If a deficit resulted (participation greater than opportunity days), the deficit was divided by the standard to determine resource requirements. Second, an analysis of the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities was conducted with consideration given to the economic and ethnic subsections of the metro and the contiguous cities. Also given special attention were the areas expected to undergo rapid population growth and physical expansion in the future. Then, conclusions from the analysis were used to qualify, where necessary, the resource requirements calculated in the first step to compensate for inadequate dispersion of facilities. For example, those subsections and contiguous cities of a metro area which seemed to have relatively few, or no, facilities were singled out, and the suggestion made that they be considered in any future development of facilities. In cases where a surplus existed (opportunity days greater than participation), the resource requirement was simply stated as zero. Appendix C, Part I--An Overview, Outdoor Recreation in the Urban Areas of Texas, provides more detail on the methodology used to calculate resource requirements.

The first column of numbers in the resource requirements tables shows the "Total Participation" (resident and non-resident combined), in thousands of days, taking place in the metro of the region. Next follows "1971 Opportunity Days Available," which was explained earlier in the section dealing with recreation opportunities. "Net Opportunity Days" is the difference between total participation and opportunity days, which is either a deficit or a surplus. The last two columns show "Units of Recreation Resources Required." The "Cumulative" column is an additive total of all incremental requirements from 1970 up to, and including, the time period being considered. "Incremental" requirements are the number of units needed within a specified time period, assuming that the units of facilities needed for the previous time periods have been provided.

In the development of resource requirements, it was assumed that the facility units listed in the resource requirements table satisfied the total demand for the activity, (excluding swimming pools and boat ramps, both of which had adjustments made so that the resource requirements reflect the facilities needed to satisfy participation occurring utilizing these type facilities. Miles of trails were also adjusted as shown below.) For instance, it was assumed that everyone who picnics away from home does so at a table, that all child's play away from home takes place at a playground, etc. Resource requirements represent facility development needed in addition to existing facilities, both public and private, within a given area, although the supply, or quantities of recreation opportunities, omitted privately-administered facilities due to the lack of inventory data. The private sector's contributions are insignificant for many of the selected activities; however, in some urban areas and for certain facilities, such as swimming pools, golf courses, tennis courts, etc., contributions by the private sector are significant. Therefore, where the private sector is providing significant quantities of recreation opportunities, the resource requirements may need to be adjusted appropriately to reflect these contributions. Lastly, all relevant support facilities should be provided in addition to the major facilities stated in the tables. For example, relevant support facilities for picnic tables might include such items as grills and garbage cans.

In considering these resource requirements, the reader should be mindful of the following:

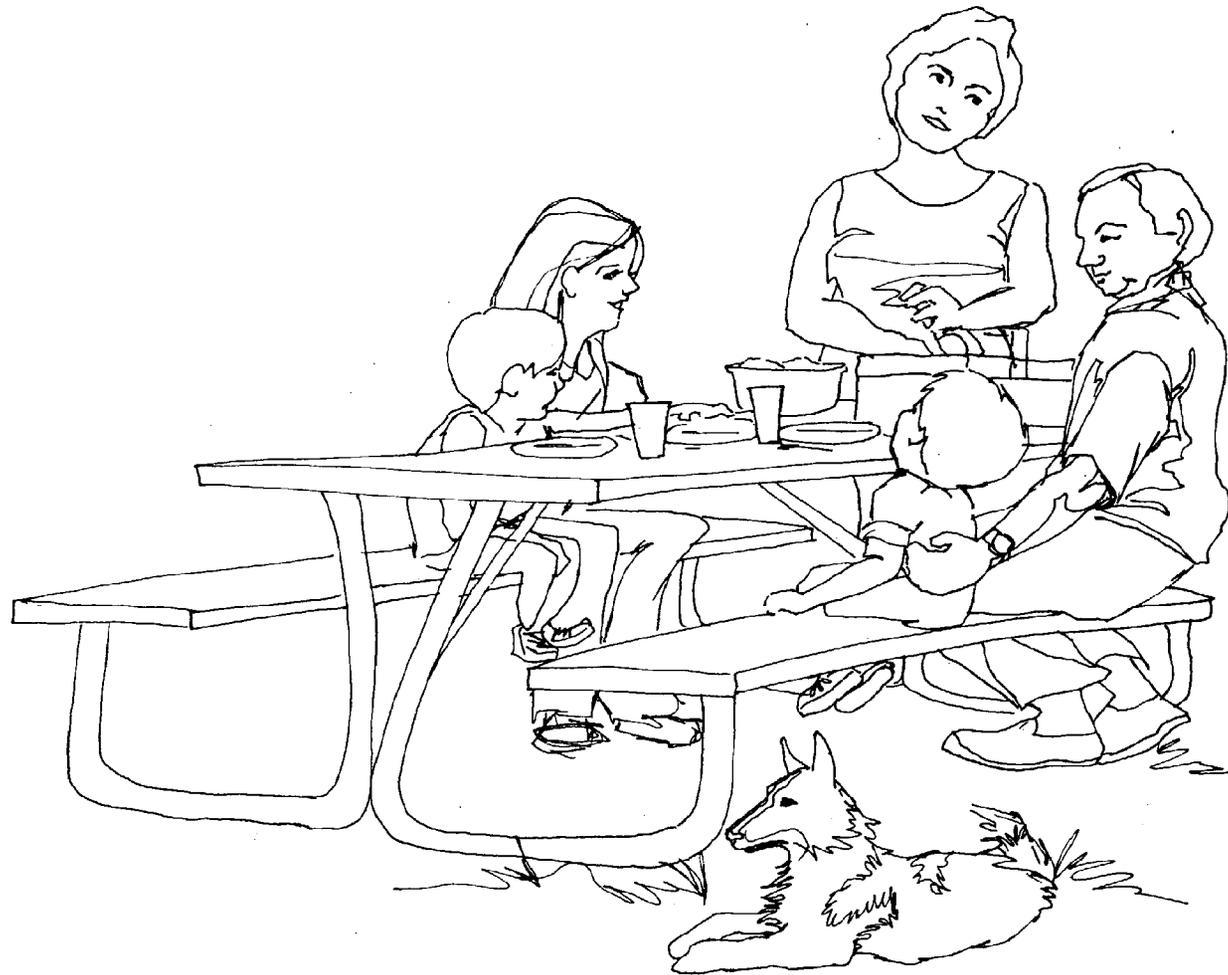
- Facility needs established by resource requirements should not imply that all of these facilities must be provided by local parks and recreation departments. Recreation resources are also supplied by other entities, such as Federal agencies, private concerns and school systems. Federal agencies provide a minimal amount of outdoor recreation opportunities in the urban areas of Texas. Federal involvement is currently limited to two U. S. Army Corps of Engineers parks; however, expected expansion of the Dallas-Fort Worth Metroplex could envelop other Corps reservoirs. A wide range of facilities, from tot lots, baseball/softball fields, tennis and basketball courts, to huge stadiums housing football and track fields, have been constructed by school systems ranging in levels from pre-elementary through university. While some schools permit public use of these facilities during non-school hours and on weekends and holidays, many remain closed to the general public. The quantities of these facilities are substantial in number and could satisfy some of the resource requirements if made available to the public. Facilities provided by private or quasi-public concerns are also varied and, in some cases, extensive. Included are facilities such as golf courses, baseball/softball fields, tennis courts, and swimming pools. For more information on the roles of the public and private sector in outdoor recreation in Texas the reader is referred to the State Summary and the Roles of the Public and Private Sectors of the TORP.

- The use of the terms "current," "present," "existing," etc., in the "Recreation Resource Requirements, 1970-2000" narratives when referencing levels of supply or opportunity days available refer to the year 1971; when referencing participation or resource requirements these terms refer to the year 1970.
- Resource requirements were not computed for the activities of surfing, sightseeing, and driving for pleasure because of the difficulties involved in quantifying the facilities which satisfy the demand for these activities.
- In a few instances, participation occurring in the metro area of a region for some activities may decline from one year to the next. Where this occurred, the resource requirements for that activity were left at the previous highest level, rather than advocate what would amount to removing facilities to meet a lessened demand.
- Designated freshwater and saltwater swimming areas may be substituted for swimming pool resource requirements. However, in so doing, total swimming participation (figure in the participation table) should be considered, not the participation figure given in the resource requirement table, which was adjusted to reflect only participation occurring in pools. Further, these substitutions should be made only if it is certain that swimmers would be satisfied with the substitution.
- It should be emphasized that surface acre resource requirements take into consideration the combined total participation in boating, water skiing, and fishing from a boat taking place in the metro of a region.
- In computing surface acre resource requirements two aspects of freshwater lakes considered were: (1) the availability of the freshwater lakes to support boating, boat fishing, and skiing, and (2) the suitability of the freshwater lakes to support the activities. Concerning availability, it was assumed that all freshwater lake surface acreage reported within the metros was available for the activities of boating, boat fishing, and skiing. This assumption was made due to the limited data available concerning the availability of lakes for participation in the water-related activities. Exceptions to this assumption are caused by restrictions limiting participation, such as the lake serving as a municipal water supply or the lake is not accessible for use due to a lack of boat launching facilities or roads. Concerning suitability, adjustments were made which took into account those portions of freshwater lakes that would not permit boating, boat fishing, and skiing. Water may be unsuitable to support these activities for reasons such as the size of the lake was too small to accommodate participation in an activity such as water skiing, portions of the lake near the bank were too shallow to support the activities, too much debris to allow water skiing or boating, or lake too open to provide a high use intensity of quality fishing. Surface acre resource requirements were first computed assuming all acreage was suitable to support the three water-related activities. These figures were then expanded using a statewide suitability adjustment factor for all types of urban areas, so that the resource requirements printed in the tables are figures which have been adjusted to compensate for portions of the lakes that would be unsuitable to support the activities.
- In computing freshwater surface acre requirements, it was assumed that all boating, skiing, and boat fishing took place on a lake or reservoir, either public or private. Rivers and streams were not considered because of the problems involved in trying to quantify the opportunity days provided by them. However, it is recognized that river or stream participation could be substituted for lake participation, depending upon the preferences of local residents, adequacy and quality of streams for recreation, etc.

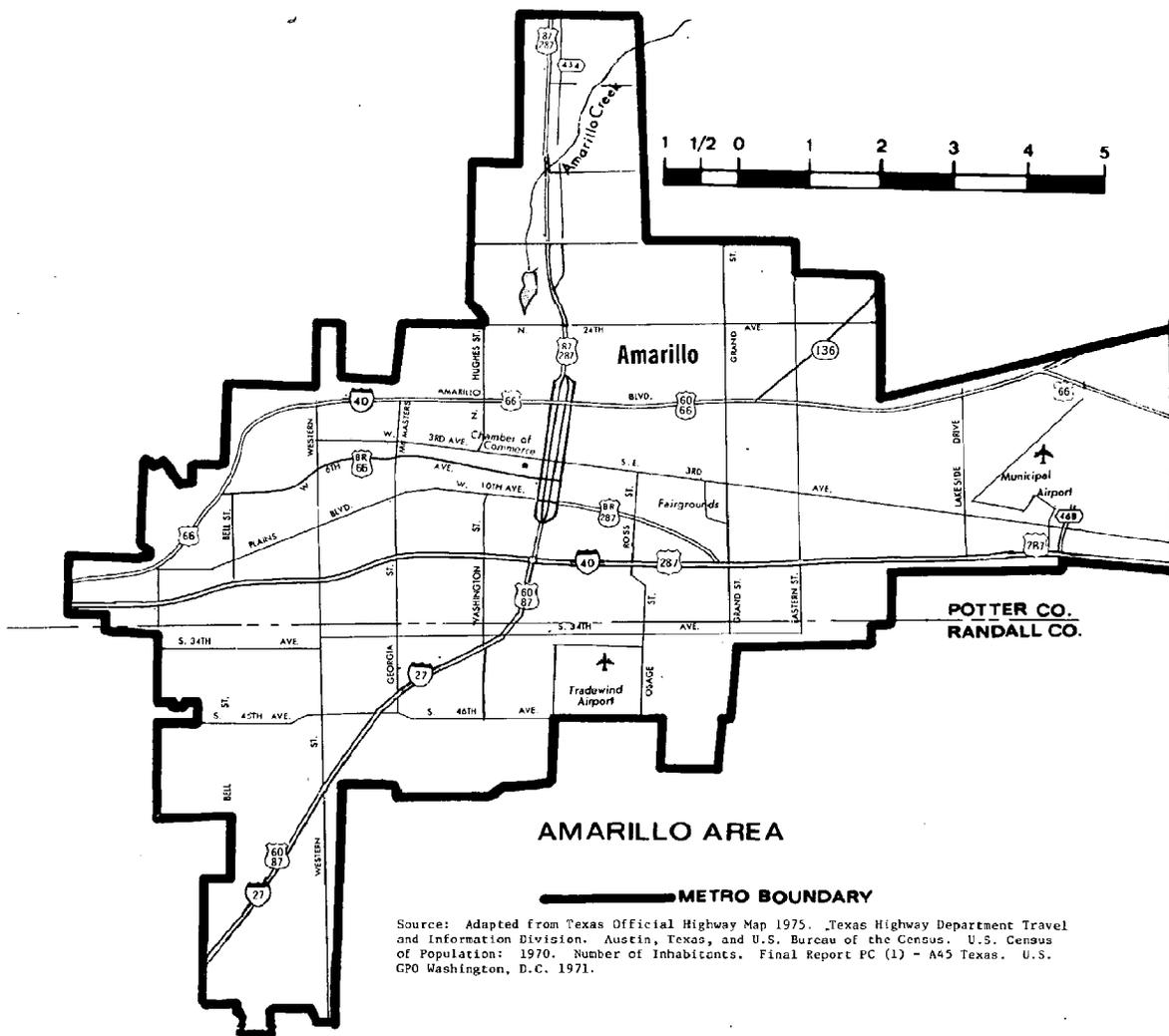
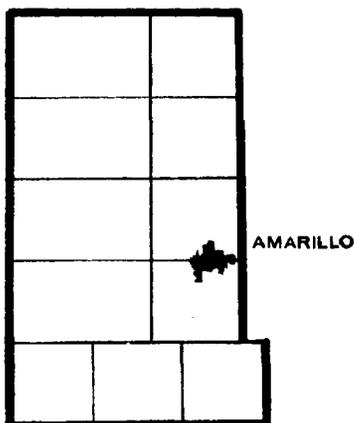
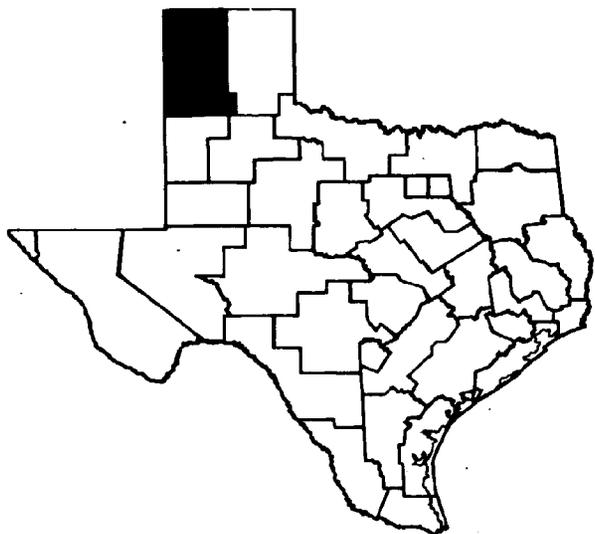
- In developing surface acres of fresh water in urban areas, consideration should be given to the proximity of recreational water located in rural areas. In some planning regions the supply of freshwater lakes in the rural areas provides a surplus of opportunity days. If these are located in close proximity to urban areas, rural lakes might be used to meet some of the demands for urban recreational water. It should be recognized that the development of freshwater lakes within many metros is not feasible. This is due to many factors, some of which the most limiting are the high cost of urban lands needed for lake construction, climatic conditions (extremely high evaporation rates and low annual rainfall rates) and poor soil conditions (soil too permeable to retain water).
- A criterion of two boat lanes per boat ramp was adopted for the purposes of this volume, since it was found that, statewide, the average amounted to approximately two lanes per ramp. The term "ramp," as opposed to "lane," is the more commonly used term when referring to the means to launch boats.
- If the proper dispersion of boat ramp facilities is to be maintained in those metros having more than one lake within themselves, the resource requirements estimates for boat ramps may have to be exceeded. For example, the boat ramp resource requirements may show that only one ramp is needed through the year 2000. If the metro area has several lakes widely dispersed, obviously, this one ramp would not provide reasonable access to all the surface acres. Planning should insure that each separate lake has access provided by boat ramps.
- In the computation of resource requirements for boat ramps, participation totals for boating, water skiing, and boat fishing were adjusted downward to consider only the estimated proportion of participation wherein a boat ramp was used. Many recreationists using boats leave their boats in the water until the next time they are used, or may not use a ramp at all. The factor used to adjust participation downward was based on data on the use of boating facilities and came from the 1968 Household Survey.
- In calculating resource requirements for the different types of trails, participation data was adjusted downward in order to consider only trails participation taking place at public recreation areas. While this is a different treatment than that of other types of facilities, it was necessary because it was found that a substantial amount of participation in these activities takes place at other than designated recreation places, such as streets and sidewalks. For walking, bicycling, and nature study, it was determined from 1968 Household Demand Survey data that 10.5, 4.0, and 20.1 percent, respectively, occurs at park and recreation areas.
- The sum of the individual resource requirements for the different types of trails may not agree exactly with the combined total due to rounding. Here, the combined resource requirement was broken into resource requirements for the individual types of trails on the basis of participation because the trails standard combines the activities of walking (hiking), bicycling, and nature study.
- In computing resource requirements for trails, horseback riding trails were included in the supply figures to compute opportunity days only if the horseback trail was designed for multiple use. Trails designated for horseback riding only were not included.

The purposes of this introduction have been: (1) to show how this document relates to, and forms an integral component of, the entire ten volume Texas Outdoor Recreation Plan, and (2) to provide a synopsis of Part II of the Urban Volume relative to structure, format, and contents. Also, this introduction has included facts pertinent to the regional

analyses; frequent reference back to this introduction is, therefore, strongly recommended. Although some statements regarding methodologies and data sources have been included, the reader is referred to Appendix C, Part I--An Overview of the Urban Volume for more detailed discussions.



Region 1



REGION 1

REGIONAL DESCRIPTION: AMARILLO METROPOLITAN AREA

Although Coronado's expedition came through the area, Amarillo began much later as a small construction depot for the Fort Worth and Denver City Railway in 1887. The dwellings at that time consisted mostly of buffalo-skin huts, which gave rise to its original name of Ragtown. The Spanish term for yellow, amarillo, was attached to the town when the first permanent buildings were painted "amarillo." Following the railroad men, buffalo hunters, and bone collectors, ranchers brought a new stimulus to the area and a new industry to Amarillo.

Major events in the Amarillo Metropolitan Area are the Amarillo Stock Show and Rodeo (January), Greater Southwest Music Festival (April), the Boy Scout N.J.R.A. Rodeo (spring), Will Rogers Range Riders Rodeo (July), Palo Duro Canyon Trail Ride (August), Tri-State Fair (September), Southwest Championship Auto Races (Labor Day weekend), and the National Hot Rod Association World Finals (October).

Amarillo College is a municipal-owned junior college. Cultural and economic attractions often exist side-by-side in the metropolitan area. The Bibins Memorial Library features rare books on Panhandle history; the Nielsen Memorial Museum contains Western, Spanish and Indian artifacts, including an outstanding gun collection; and, Colony Catherine is a world-acclaimed artist colony that includes both working and living areas for several artists. Amarillo's air terminal has the second longest municipal runway in the United States. The world's largest cattle auction is held here weekly. A helium monument commemorates the rare gas which is found more abundantly here than anywhere else in the world. The world's largest natural gas development is located here. Pipelines from the Amarillo Metropolitan Area connect many large cities and thousands of towns all the way to the Atlantic seaboard.

The fine arts are represented in Amarillo by the Little Theater, Symphony Orchestra, Civic Ballet, and Guild of Organists.

Amarillo is the county seat of Potter County and is a major trade and financial outlet for valuable agricultural products of the region.

POPULATION

1970 Metro Area Population: 127,010

Change 1960-70: -8%

Race Composition

White 94% ^{1/}

Negro 5%

Other 1%

Age Composition (years):

13 or less 27%

14 - 20 13%

21 - 44 31%

45 - 64 20%

65 and over 9%

ECONOMY

Agribusiness

Clothing

Oil Products

Sand, Gravel and Cement

^{1/} Includes persons of Mexican and/or Spanish descent.

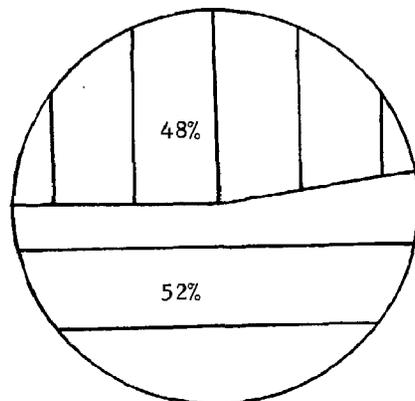
REGION 1

CITY SIZE: METRO

PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

REGION
1
METRO

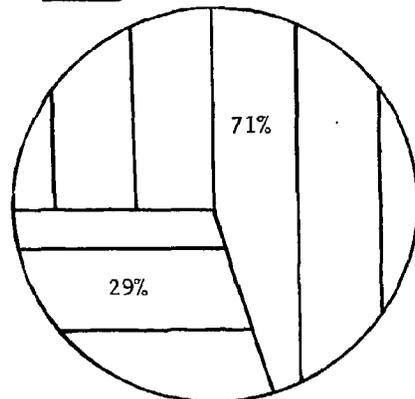


DEVELOPED LAND



UNDEVELOPED LAND

STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 1 METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	1,050	1,307
Undeveloped Land	1,148	536
Total Land	2,198	1,843
Water Within or Adjacent	55	1,006
Total Land and Water	2,253	2,849

Amarillo has a total of 2,198 acres of land set aside as park and recreation areas. In addition, 55 surface acres of water either within or adjacent to these parks were reported.

Of the total land acreage, 1,050 acres are developed with facilities leaving 1,148 acres available for future development. With only 48 percent of the land acreage currently developed, Amarillo is well below the Statewide Metro average of 71 percent.

REGION 1

CITY SIZE: METRO

PARKS AND ACREAGE BY TYPE OF PARK

	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	9.000	25.000	5.000	9.000	48.000	72.000
Parks Per Thousand	.071	.197	.039	.071	.378	.267
People Per Park	14,112.000	5,080.000	25,402.000	14,112.000	2,646.000	3,754.000
.....						
Land Acres	563.000	230.000	261.000	1,144.000	2,198.000	1,843.000
Acres Per Thousand	4.433	1.811	2.055	9.007	17.306	6.864
People Per Acre	226.000	552.000	487.000	111.000	58.000	146.000

More than one-half of the 48 parks in Amarillo are Community Parks. Eighteen others are divided between District and Open Land Parks with the remaining five being Specialty Parks. The land acreage in Open Land Parks consists of approximately one-half of the total park acreage for Amarillo. Another quarter is in District Parks with the remaining quarter divided almost evenly between Community and Specialty Parks. The dispersion of the four types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the population of Amarillo, .378 parks per 1,000 and 17.306 acres per 1,000 population exist.

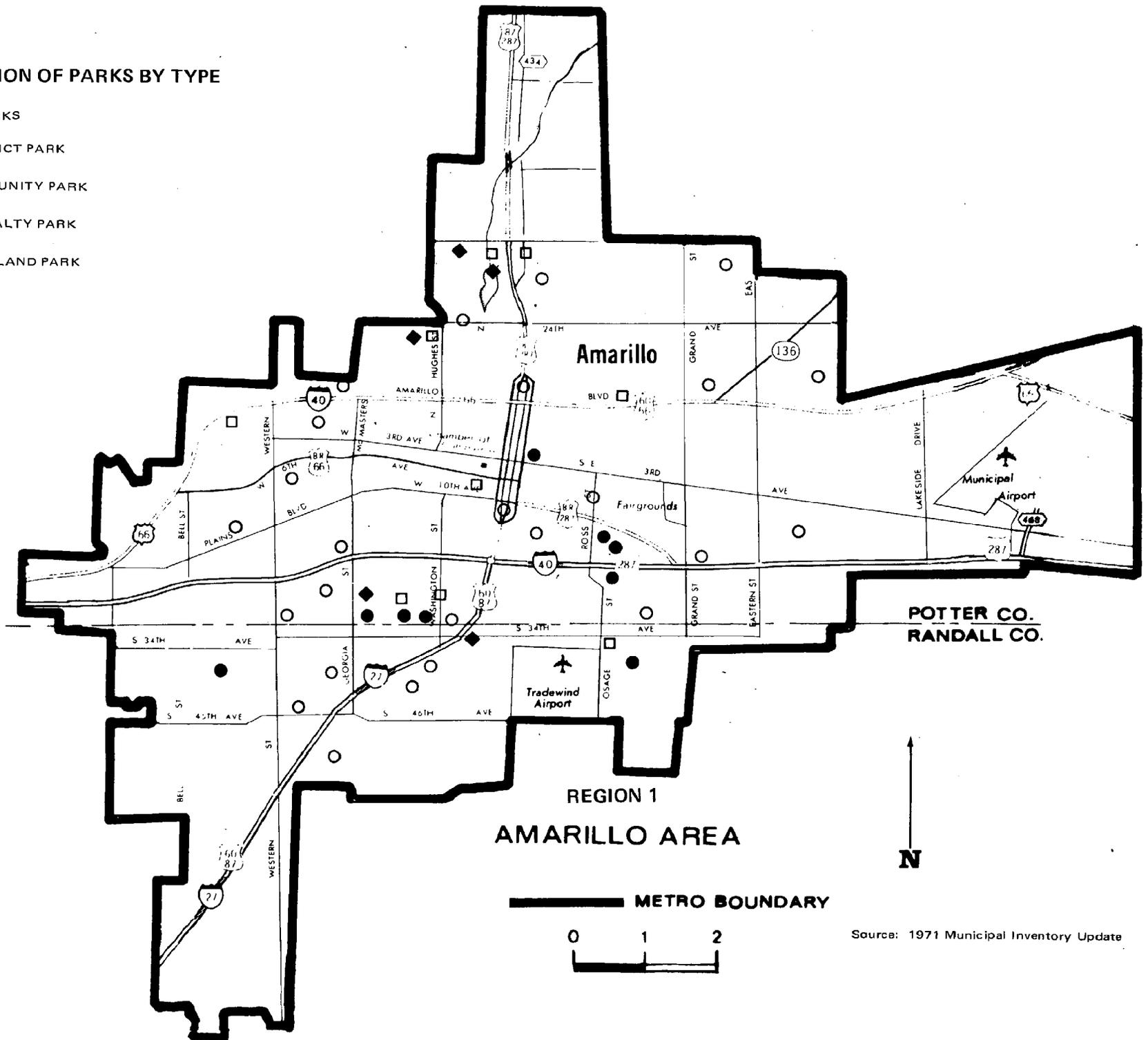
Another way to present this data is that 2,646 people share each park while 58 people share each acre of park land.

With .378 parks per 1,000, Amarillo ranks well above the Statewide Metro average. However, the 17.306 acres per 1,000 gives Amarillo a figure almost three times that of the Statewide Metro average for acres per 1,000.

DISPERSION OF PARKS BY TYPE

URBAN PARKS

- DISTRICT PARK
- COMMUNITY PARK
- ◆ SPECIALTY PARK
- OPEN-LAND PARK



Source: 1971 Municipal Inventory Update

PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 1 METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	8	25	1	34	3,736	.268	.150
Tennis Courts.....	27	15	0	42	3,024	.331	.142
Basketball Courts.....	10	40	0	50	2,540	.394	.071
Baseball/Softball Fields.....	24	80	2	106	1,198	.835	.186
Football/Soccer Fields.....	11	50	0	61	2,082	.480	.032
Picnicking:							
Parks.....	8	25	0	33	3,849	.260	.124
Tables.....	117	50	0	167	761	1.315	1.230
Playground:							
Parks.....	6	25	2	33	3,849	.260	.170
Acres Developed.....	6	11	5	22	5,773	.173	.258
Swimming:							
Parks.....	2	1	0	3	42,337	.024	.050
Pools (Sq. Yd.).....	4,000	400	0	4,400	29	34.645	25.950
Designated Fresh Water (Sq. Yd.)...	0	0	0	0	---	---	52.242
Boating:							
Parks.....	0	0	0	0	---	---	.006
Ramp Lanes - Fresh Water.....	0	0	0	0	---	---	.008
Camping:							
Parks.....	0	0	0	0	---	---	.002
Campsites.....	0	0	0	0	---	---	.121
Fishing:							
Parks.....	2	0	0	2	63,505	.016	.013
Pier/Barge/Marina-Fresh Water (Yd.)	0	0	0	0	---	---	.049
Golfing:							
Courses.....	0	0	1	1	127,010	.008	.005
Holes.....	0	0	27	27	4,704	.213	.100
Trails:							
Parks.....	2	0	0	2	63,505	.016	.006
Nature (Mi.).....	0	0	0	0	---	---	.009
Horseback (Mi.).....	0	0	0	0	---	---	.003
Bicycle (Mi.).....	0	0	0	0	---	---	.007
Hiking (Mi.).....	5	0	0	5	25,402	.039	.006
Total Trails (Mi.).....	5	0	0	5	25,402	.039	.021

REGION 1

PARK AND RECREATION FACILITIES BY TYPE OF PARK

CITY SIZE: METRO

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 1 METRO	STATEWIDE AVERAGE METRO AREAS
Sport Shooting:							
Parks.....	0	0	0	0	---	---	.002
Traps.....	0	0	0	0	---	---	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	0	0	0	0	---	---	.011
Miscellaneous:							
Parks.....	2	2	1	5	25,402	.008	.038
Amphitheatre Seats.....	200	50	0	250	508	1.969	1.077
Botanical Gardens (Acres).....	1	0	0	1	127,010	.008	.077
Zoos (Acres).....	0	0	2	2	63,505	.016	.051
Community/Recreation Centers.....	0	1	0	1	127,010	.008	.038

The developed park and recreation facilities in Amarillo are about equally divided between the District and Community Park categories, with very few facilities in Specialty Parks. The only parks with fishing water available or with trails facilities are District Parks, while the only golf course is located in a Specialty Park.

Of the 48 parks, 34 have facilities for games and sports, 33 have playgrounds and 33 have picnic facilities. The most common types of games and sports facilities are baseball/softball with 106 fields, followed by football/soccer with 61 fields, basketball with 50 courts and tennis with 42 courts.

Looking at selected facilities in relation to the number of potential users we find the following:

127,010 persons for each community/recreation center	2,540 persons for each basketball court
25,402 persons for each mile of trails	2,082 persons for each football/soccer field
5,773 persons for each acre of playground	1,198 persons for each baseball/softball field
4,704 persons for each golf hole	761 persons for each picnic table
3,024 persons for each tennis court	29 persons for each square yard of swimming pool

Amarillo is above the Statewide Metro average for facility units per 1,000 for tennis courts, basketball courts, baseball/softball fields, football/soccer fields, picnic tables, square yards of swimming pools, golf holes, trail miles, and amphitheatre seats. Amarillo is below the average for playground acres, acres of botanical gardens, zoo acreage and community/recreation centers. No designated fresh water swimming area, boat ramp lanes, campsites, yards of fishing pier/barge/marina or sport shooting facilities were reported.

REGION 1

CONVERSION OF FACILITIES TO RECREATION OPPORTUNITY DAYS

CITY SIZE: METRO

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

<u>ACTIVITY-FACILITY</u>	<u>ANNUAL DAYS AVAILABLE</u>	<u>DAYS PER THOUSAND POPULATION</u>	
		<u>REGION 1 METRO</u>	<u>STATEWIDE AVERAGE METRO</u>
Swimming (Pools) - square yards	660,000	5,197	3,891
Child's Play - playground acres	607,706	4,785	7,137
Baseball/Softball - fields	1,463,224	11,521	2,577
Picnicking - tables	284,234	2,228	2,093
Football/Soccer - fields	440,664	3,470	235
Golf - holes	109,269	860	414
Tennis - courts, double	113,148	891	384
Basketball - courts, full	439,750	3,463	625
Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	22,943	181	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	0	0	103
Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	42,320	333	164

The Amarillo Metro Area offers the most opportunity days for baseball/softball, followed by swimming (in pools), child's play and football/soccer. A comparison between the opportunity days per thousand population for the Amarillo Metro Area and the Statewide Metro average shows that the Amarillo Metro Area surpasses the statewide average for seven of the activity types -- swimming (in pools), baseball/softball, picnicking, football/soccer, golf, tennis, basketball, and trails activities. The Amrillo Metro Area is below the Statewide Metro average for child's play, and surface acres for freshwater boating, boat fishing and skiing, with no opportunity days available for freshwater boat ramps.

The eleventh ranking metro area, based on population, Amarillo also ranked eleventh in total participation for the year 1970. Estimates for 1970 indicate that residents and non-residents in the area spent over 4.6 million recreation days in pursuit of urban outdoor recreation opportunities available within the metro area.

Resident

Total days of participation in urban outdoor recreation activities by the residents of the Amarillo Metropolitan Area were estimated to be 4.4 million days in 1970. Total participation is expected to increase to 6.1 million days in 1975 and to 7.8 million days in 1980. These projections represent increases of 37.7 percent in 1975 and 77.3 percent in 1980. Participation on a household basis is expected to increase 31.5 percent and 63.5 percent over the 1970 level for the years of 1975 and 1980, respectively. These percentages represent increases of 33 days in 1975 and 34 days in 1980. In comparison to other metropolitan areas in Texas, the residents of the Amarillo Metropolitan Area are expected to participate at a rate of 18, 23, and 30 days per household below the average for 1970, 1975, and 1980, respectively. Both the total days of participation and the days per household are expected to increase through the year 2000, but days per household will remain below the statewide average for all metropolitan areas.

In 1970, the six most popular activities, based on total participation, were estimated to be bicycling, walking, swimming, child's play, driving for pleasure, and golf. The relative ranking of these six activities is expected to remain constant through 1980. All 16 activities will increase in total participation days and in days per household through the year 2000.

Non-Resident

Participation in urban outdoor recreation activities within the Amarillo Metropolitan Area by non-residents was estimated to total 189,000 days for the activities specified for 1970. Compared to the 1970 level, total participation is projected to increase 10 percent (to 208,000 days) by 1975, and 19.6 percent (to 226,000 days) by 1980. Similar increases are anticipated through the years 1990 and 2000.

Of the specific activities for which estimates were developed, the most popular activities by non-residents for 1970 were: sightseeing, with 64,000 days; driving for pleasure, with 43,000 days; picnicking, with 24,000 days, child's play, with 22,000 days; fishing, with 12,000 days; and swimming, with 10,000 days. Assuming adequate facilities are made available, all activities, as specified, are expected to increase at a moderate rate through the year 2000, with sightseeing, driving for pleasure, picnicking, child's play, fishing, and swimming retaining their ranking one through six, respectively.

REGION 1

CURRENT AND PROJECTED RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

CITY SIZE: METROS

ACTIVITY	1970				1975				1980				1990				2000			
	REG. 1		STATE-WIDE		REG. 1		STATE-WIDE		REG. 1		STATE-WIDE		REG. 1		STATE-WIDE		REG. 1		STATE-WIDE	
	PART. DAYS	RANK	AVERAGE DAYS/HH	METROS	PART. DAYS	RANK	AVERAGE DAYS/HH	METROS	PART. DAYS	RANK	AVERAGE DAYS/HH	METROS	PART. DAYS	RANK	AVERAGE DAYS/HH	METROS	PART. DAYS	RANK	AVERAGE DAYS/HH	METROS
Swimming	634	3	14.88	27.41	741	3	16.60	36.52	864	3	18.70	47.17	1,149	4	23.43	75.28	1,302	4	28.23	110.14
Child's Play	597	4	14.01	14.08	719	4	16.11	17.72	850	4	18.39	22.00	1,158	3	23.61	32.20	1,367	3	29.64	43.99
Baseball/Softball	94	8	2.21	2.78	115	10	2.58	3.19	136	10	2.94	3.59	179	11	3.65	4.41	207	11	4.49	5.22
Picnicking	191	7	4.48	5.72	222	7	4.97	5.66	253	7	5.47	5.66	319	9	6.50	5.61	357	9	7.74	5.64
Football/Soccer	21	14	.49	1.43	22	15	.49	1.42	23	15	.50	1.41	25	15	.51	1.39	24	15	.52	1.38
Golf	194	6	4.55	3.92	230	6	5.15	4.98	267	6	5.78	6.16	350	8	7.14	8.96	398	8	8.63	12.07
Tennis	51	11	1.20	6.06	54	13	1.21	9.21	56	13	1.21	11.49	61	13	1.24	16.07	57	14	1.24	21.46
Basketball	47	12	1.10	1.60	141	8	3.16	2.59	242	8	5.24	3.57	459	6	9.36	5.52	622	5	13.49	7.53
Walking	937	2	21.98	18.21	1,381	2	30.95	23.09	1,844	2	39.90	29.20	2,837	2	57.84	39.89	3,495	2	75.78	50.31
Bicycling	945	1	22.17	20.30	1,600	1	35.85	32.77	2,290	1	49.56	45.25	3,774	1	76.95	68.44	4,812	1	104.33	95.49
Nature Study	11	16	.26	.72	12	16	.27	1.67	12	16	.26	2.64	13	16	.27	4.63	12	16	.26	6.70
Fishing	77	10	1.81	1.80	84	11	1.88	1.88	91	12	1.97	1.97	105	12	2.14	2.13	106	12	2.30	2.30
Boating	38	13	.89	.88	71	12	1.59	1.60	107	11	2.32	2.31	183	10	3.73	3.74	238	10	5.16	5.17
Skiing	18	15	.42	.42	28	14	.63	.62	38	14	.82	.82	60	14	1.22	1.22	75	13	1.63	1.81
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	78	9	1.83	2.25	132	9	2.96	2.34	193	9	4.18	2.50	365	7	7.44	2.70	606	6	13.14	3.01
Dr. for Pleas.	471	5	11.05	13.38	513	5	11.50	13.52	542	5	11.73	13.67	605	5	12.34	13.86	597	7	12.94	14.10
TOTAL	4,404		103.33	120.96	6,065		135.90	158.78	7,808		168.97	199.41	11,642		237.37	286.05	14,275		309.52	386.32

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000	ACTIVITY	1970	1975	1980	1990	2000
Swimming	10	11	12	14	16	Swimming	644	752	876	1,163	1,318
Child's Play	22	25	27	32	36	Child's Play	619	744	877	1,190	1,403
Baseball/Softball	4	4	4	5	6	Baseball/Softball	98	119	140	184	213
Picnicking	24	27	29	35	40	Picnicking	215	249	282	354	397
Football/Soccer	8	9	10	12	14	Football/Soccer	29	31	33	37	38
Golf	2	2	2	2	2	Golf	196	232	269	352	400
Tennis	*	*	*	*	*	Tennis	51	54	56	61	57
Basketball	*	*	*	*	*	Basketball	47	141	242	459	622
Walking	*	*	*	*	*	Walking	937	1,381	1,844	2,837	3,495
Bicycling	*	*	*	*	*	Bicycling	945	1,600	2,290	3,774	4,812
Nature Study	*	*	*	*	*	Nature Study	11	12	12	13	12
Fishing	12	13	14	17	19	Fishing	89	97	105	122	125
Boating	*	*	*	*	*	Boating	38	71	107	183	238
Skiing	*	*	*	*	*	Skiing	18	28	38	60	75
Surfing	---	---	---	---	---	Surfing	---	---	---	---	---
Sightseeing	64	70	76	91	104	Sightseeing	142	202	269	456	710
Dr. for Pleas.	43	47	52	62	70	Dr. for Pleas.	514	560	594	667	667
TOTAL	189	208	226	270	307	TOTAL	4,593	6,273	8,034	11,912	14,582

Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the Amarillo Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with the current recreation opportunities^{2/} available in the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to subsections of the Amarillo Metro characterized by residents having similar incomes and ethnic backgrounds. Particular attention was given to those subsections expected to undergo relatively rapid population growth and physical expansion in the future.

Conclusions reached from analyzing the distribution of recreation opportunities within the metropolitan area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist.

In the discussions that follow, results of the distribution analysis of parks within subsections of the Amarillo Metro Area are presented. Then, estimates of current and future requirements for selected recreation facilities are presented for the metropolitan area and are qualified by conclusions reached from the distribution analysis of recreation facilities within subsections of the Amarillo Metro.

PARK DISTRIBUTION ANALYSIS

In analyzing the availability and distribution of parks in the Amarillo Metro Area, several characteristics were considered: changes in population (or trends, in general, 1960 to 1970), areas of the metro which were expected to exhibit relatively major expansion, and the dispersion of existing parks among the income/ethnic subsections of the metro. From these interrelated characteristics general conclusions were reached with respect to future park developments for the metro area.

Population trends affected estimations of future recreation participation. Projections of population growth for Amarillo's Metro Area indicated that the 1970 population of 127,010 would almost double to about 210,000 persons by the year 2000. In addition, information provided by urban recreation planners of the area shows that major directions of future urban expansion are expected to occur (illustrated by arrows of decreasing size on the following map, titled "Predominant Ethnic Background and Income Subsections") in the southwest-- between Interstate Highways 27 and 40; in the most northern portions-- in general vicinity of State Highways 87 and 287; and in the southeast-- around Interstate Highway 40.

^{1/} "Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

^{2/} "Current" recreation opportunities refers to computed figures derived from the numbers of publicly-administered facilities by type available within the metro area in 1971.

The "Predominant Ethnic Background and Income Subsections" map shows ten subsections, as delineated by local recreational planners from Amarillo, which characterize homogenous residential or demographic patterns by two major socio-economic factors. As illustrated by that map, the eastern one-third of the metro comprised two subsections of predominantly low-income Anglo residents separated by Third Avenue. The southwestern third of the metro was populated predominantly by middle-income Anglo residents, although there were two high-income Anglo subsections within this third of the metro. There was one subsection in northern Amarillo which was also predominantly middle-income Anglo. The remaining four subsections of the metro were made up of one subsection each populated predominantly by low-income Blacks (northwest central), middle-income Blacks (north central), low-income Mexican Americans (southeast central), and middle-income Mexican Americans (south of I-40, east of U.S. 60 and 87).

The "Dispersion of Parks by Type" map shows the geographic distribution of parks in the Amarillo Metro Area. Among the ten subsections, community and district parks appeared to be adequately distributed throughout Amarillo. Although two subsections-- the middle-income Anglo subsection in the far north and the high-income Anglo subsection in the far west had no parks of any type, specialty parks were located in the north central and south central subsections indicating that future developments of specialty parks (i.e., those parks with one facility or a concentration of one type facility) should be considered in the eastern and southwestern subsections. Open land parks were concentrated in the southern half of the metro. If resources permit, the entire northeastern one-third of the metro should be considered for additions of this type park when practical. Overall, it appeared that attention should be given to the development of additional parks in the northern, northeastern, eastern, southeastern, and southwestern portions of the metro area.

In addition to maintaining an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities in parks is also an important consideration. An analysis of the current and future requirements for selected recreational facilities and the current dispersion of facilities in the Amarillo Metro Area is presented in the following discussions.

FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. Then, an analysis of the dispersion of existing facilities among the predominant income/ethnic background subsections and the major growth areas of the metro was conducted. Conclusions reached from the facility dispersion analysis were then used to qualify the facility requirement estimates, particularly in those cases where no additional facilities were estimated as being needed within the metropolitan area. Usually, special note is made where growth areas appeared to have limited facilities. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the Urban Volume. In the discussion that follows, resource requirements for recreational facilities are generally referred to by units of the most important feature necessary to allow participation. For example, when a requirement is shown for swimming pools, features such as a bathhouse, cleaning and filtering system, and other support features are implied when a requirement for the major facility is shown.

LOW INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS LESS THAN \$5,000)

-  PREDOMINANTLY MEXICAN-AMERICAN
-  PREDOMINANTLY BLACK
-  PREDOMINANTLY ANGLO

MID INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME VARIED FROM \$5,000 TO \$15,000)

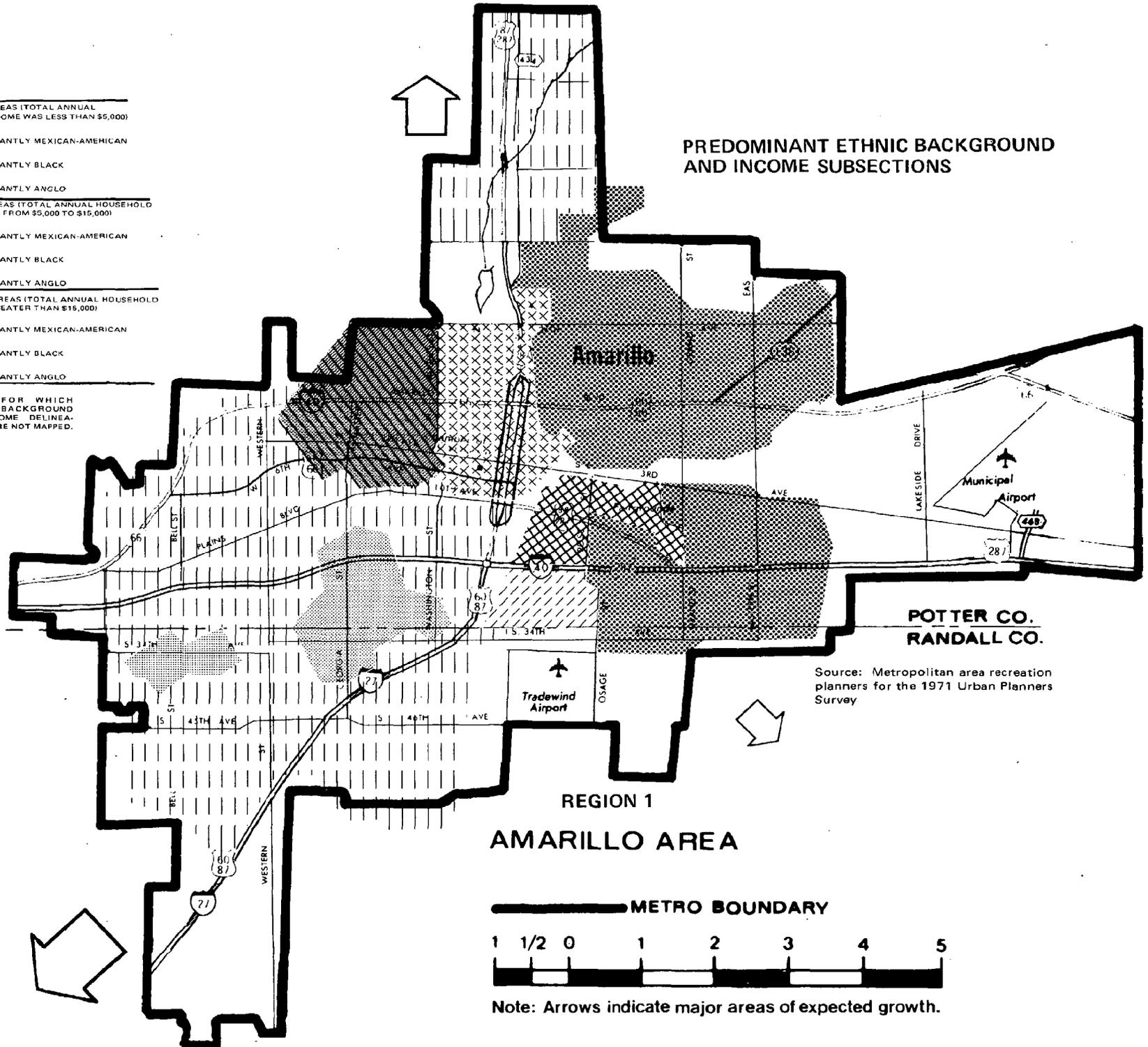
-  PREDOMINANTLY MEXICAN-AMERICAN
-  PREDOMINANTLY BLACK
-  PREDOMINANTLY ANGLO

HIGH INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS GREATER THAN \$15,000)

-  PREDOMINANTLY MEXICAN-AMERICAN
-  PREDOMINANTLY BLACK
-  PREDOMINANTLY ANGLO

AREAS FOR WHICH ETHNIC BACKGROUND AND INCOME DELINEATIONS WERE NOT MAPPED.

PREDOMINANT ETHNIC BACKGROUND AND INCOME SUBSECTIONS



POTTER CO.
RANDALL CO.

Source: Metropolitan area recreation planners for the 1971 Urban Planners Survey

REGION 1

AMARILLO AREA

METRO BOUNDARY



Note: Arrows indicate major areas of expected growth.

N

Swimming

Amarillo had 4,400 square yards of public swimming pools in 1971. Each square yard (unit) was estimated to provide 150 days of swimming opportunity per year, which yielded an estimated 660,000 opportunity days. To determine if there was a surplus or deficit of opportunity, estimated participation days for 1970 and estimated opportunity days were compared. For swimming there appeared to be a surplus of opportunity in 1970, but relatively substantial deficits were shown in each planning year thereafter. By 1975 the Amarillo Metro Area was estimated to require an additional 313 square yards of pools. Cumulative 1980 requirements were estimated at 1,793 square yards. By 1990 cumulative requirements should increase to 2,887 square yards and by the year 2000 Amarillo is projected to reach an additional 3,860 square yards above the 1971 supply.

Only two parks were shown to have public swimming facilities in 1971, and they were located in northwest central and southeast central Amarillo, in predominantly middle-income Black and low-income Anglo neighborhoods, respectively. This may indicate that additional facilities were needed, especially in the eastern and western extremities of the metro with special considerations given to the more rapidly expanding residential sections in the southwest and southeast.

Child's Play

In 1971, Amarillo had twenty-two acres of playground, divided among thirty-three parks within the metro boundary. Multiplying the twenty-two acre units by the playground standard (each acre was calculated to provide 27,623 days of recreation opportunity per unit per year), resulted in an estimated 608,000 annual opportunity (potential participation) days. Annual opportunity days were then compared with the forecasted participation days, as shown in the Amarillo resource requirements table for the planning horizon years 1970, 1975, 1980, 1990, and 2000. Playground area deficits were apparent for all planning periods except 1970. The cumulative requirement for 1975 was five additional acres above the existing (1971) twenty-two acres. Requirements will grow incrementally by 5 acres, 11 acres, and 8 acres in the remaining planning horizon years, respectively, to a total cumulative requirement of 29 acres by the year 2000. Therefore, if all the playground areas expected to be required by the year 2000 are constructed, the total combined available playground area within the metro area should be approximately fifty-one acres (twenty-two acres available in 1971 combined with the cumulative requirement of 29 acres). Since the existing playgrounds were relatively well distributed in 1971, additions of playgrounds should be similarly dispersed with emphasis placed on the major growth areas.

Baseball/Softball

With an existing 106 public baseball/softball fields providing approximately 1.5 million total opportunity days (the facility standard utilized was 13,804 opportunity days provided per field each year), the Amarillo Metropolitan Area appeared to have a sufficient quantity of fields to meet the activity requirements of their baseball/softball recreationists through the year 2000. However, since most of these facilities were located in only two of the ten socio-economic subsections, further local analysis may be required to insure an adequate distribution.

Picnicking

There were 167 publicly-administered picnic tables in the Amarillo Metro Area in 1971. At 1,702 days of opportunity per table per year (standard), the existing tables provided approximately 284,000 days annually. Although the existing number of tables was expected to provide adequate overall opportunity through 1980, additional tables will be required in the years 1990 and 2000. A total of 41 tables will be needed by the year 1990, and an additional 25 tables will be needed in 2000, bringing the cumulative requirement to 66 tables by the year 2000. The distribution analysis of picnicking facilities indicated good dispersion among the existing populace; however, as the metro area grows, provision of additional tables in growth areas should be considered.

Football/Soccer

Each of the sixty-one football/soccer fields in the Amarillo Metro Area provided on the average 7,224 days of opportunity annually. In total this amounted to approximately 441,000 available opportunity days per year in 1971, which was estimated to be an adequate number of opportunities to meet requirements for these activities through the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing an equitable distribution relative to growth areas and the various income-ethnic subsections.

Golf

Ross Rogers Municipal Golf Course, the only publicly-administered course in Amarillo, provided twenty-seven holes of golf in 1971. Using the urban golf standard, each golf hole was shown to be capable of providing 4,047 days of recreation opportunity annually. Amarillo golfers, then, had about 109,000 days of opportunity provided by public courses in 1971. Comparing the expected participation for the projection years with the available opportunity days shows that the golfers would have required an additional twenty-one holes (at least one eighteen-hole course or two nine-hole courses) in 1970. Incrementally, additions of 9, 10, 20, and 12 holes will be required in the years 1975, 1980, 1990, and 2000, respectively, to meet expected increases in golfing participation. As a general rule, golf facilities are constructed in multiples of nine holes or eighteen holes; therefore, by the year 2000 the Amarillo Metro Area will need eight additional nine-hole courses (72 holes), or four eighteen-hole courses, or some appropriate combination which considers local resources.

Tennis

The 113,000 opportunity days provided by the forty-two tennis courts available in 1971 (each court can make available about 2,694 days of opportunity per year) apparently were adequate to meet facility requirements of Amarillo tennis players through the year 2000. Although dispersion of these facilities cannot be discerned from available data, it is important that an adequate distribution be considered in current and future planning efforts.

Basketball

Based on an urban basketball standard of 8,795 opportunity days per year per court, the fifty basketball courts in the Amarillo Metro Area provided approximately 440,000 opportunity days in 1971. By comparing available opportunity days with estimated participation for each projection year, as expressed in the Amarillo Recreation Resource Requirement table, it was apparent that the fifty courts that were available should be sufficient to meet expected metro needs through 1980. By 1990, 2 courts should be added, and by the year 2000, 19 more, bringing the cumulative total to 21 courts by 2000. Dispersion analysis of basketball facilities could not be accomplished with available data, but adequate distribution is an important consideration.

Trails Activities

A comparison of expected participation for walking, bicycling, and nature study occurring in the park and recreation areas with opportunity days provided by the current supply of trails in the Amarillo Metropolitan Area indicated that approximately eleven miles of combined trails should have been added to the existing five miles of trail in 1971. Given the expected growth in the trails activities participation, incremental additions of 9 additional miles are projected for 1975, 9 more miles in 1980, 19 miles in 1990, and 13 miles in 2000. Overall, a total of sixty-one miles of combined trails should be added to the existing five miles by the year 2000 to meet expected participation levels.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly-administered park and recreation areas. It is likely, however, that as additional trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of additional resources required may be conservative in the long run and should be considered as minimum estimates. In addition to the expectations for increases in participation in trail and related activities at publicly-administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local neighborhoods, on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, Skiing

Surface Acres - Freshwater Lakes
(Boating, Boat Fishing, Skiing)

A total of fifty-five freshwater surface acres was located within the Amarillo Metro Area in 1971. Because of the limited area of freshwater available for skiing, no participation was reported for that activity in Amarillo in the Texas Outdoor Recreation Household Demand Survey. Using participation patterns of households recreating in the urban areas, it was estimated that boating would have totaled 38,000 days, boat fishing 19,000 days, and skiing 18,000 days

for a total of 75,000 days in 1970 if adequate freshwater lakes had been available. A comparison of estimated participation with the opportunities provided by the surface acres available in 1971 indicated that incremental resource requirements were expected to expand from an additional 125 acres needed in 1970 to 105 acres in 1975, 115 acres in 1980, 245 acres in 1990, and 168 acres in the year 2000. This brings the cumulative resource requirement to an additional 758 surface acres by the year 2000.

Freshwater Boat Ramps^{1/}

No publicly-administered freshwater boat lanes were reported for the Amarillo Metro Area in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using freshwater boat ramp facilities to gain access to the water if ramps were available, it was calculated that two boat ramps were needed in 1970. Projected increases in freshwater boat fishing, skiing, and boating participation were expected to generate a requirement for one additional freshwater boat ramp in 1975, one in 1980, three in 1990, and two in the year 2000, bringing the cumulative resource requirement to nine ramps in the year 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, the provision of freshwater surface acres and freshwater boat ramps required should be planned as joint projects, even though, in some cases, this may require the construction of boat ramps prior to the years reflected in the boat ramp resource requirement projections.

Summary of Facilities Requirements

The only type of public facility which was not provided at all within the Amarillo Metro Area in 1971 was freshwater boat ramps. Although facilities were provided for all other designated urban activities in 1971, additional facilities were required in every planning year for golf holes, miles of trail, and surface acres of freshwater. Additional public swimming pools and playgrounds were estimated to be required beginning in 1975, while additional picnic tables and basketball courts were estimated to be required beginning in 1990. The 1971 supply of baseball fields, football/soccer fields, and tennis courts were projected to be adequate, for the metro as a whole, through the year 2000. Additional facilities should consider the distribution of existing facilities, relative to growth areas and income/ethnic subsections.

^{1/} In calculating freshwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes: Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE
	Swimming (Pools)	605 ^{1/}	660		55	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	619	608	11		<1 acre	<1 acre
	Baseball/Softball	98	1,463		1,365	0 fields	0 fields
	Picnicking	215	284		69	0 tables	0 tables
	Football/Soccer	29	441		412	0 fields	0 fields
	Golf	196	109	87		21 holes	21 holes
	Tennis	51	113		62	0 courts, dbl.	0 courts, dbl.
	Basketball	47	440		393	0 courts, full	0 courts, full
1970	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	75	23	52		125 surface acres	125 surface acres
	Boating, Boat Fishing, Skiing FW . . .	57	0	57		2 ramps ^{3/}	2 ramps ^{3/}
	Trails Activities:						
	Walking	98 ^{4/}				8 miles	8 miles
	Bicycling	38 ^{4/}				3 miles	3 miles
	Nature Study	2 ^{4/}				<1 mile	<1 mile
	Combined Walking, Bicycling, Nature Study	138 ^{4/}	42	96		11 miles	11 miles
	ACTIVITY						
	Swimming (Pools)	707 ^{1/}	660	47		313 square yards ^{2/}	313 square yards ^{2/}
	Child's Play (Playgrounds)	744	608	136		5 acres	5 acres
	Baseball/Softball	119	1,463		1,344	0 fields	0 fields
	Picnicking	249	284		35	0 tables	0 tables
	Football/Soccer	31	441		410	0 fields	0 fields
	Golf	232	109	123		30 holes	9 holes
	Tennis	54	113		59	0 courts, dbl.	0 courts, dbl.
	Basketball	141	440		299	0 courts, full	0 courts, full
1975	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	119	23	96		230 surface acres	105 surface acres
	Boating, Boat Fishing, Skiing FW . . .	88	0	88		3 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	145 ^{4/}				14 miles	6 miles
	Bicycling	64 ^{4/}				6 miles	3 miles
	Nature Study	2 ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	211 ^{4/}	42	169		20 miles	9 miles

REGION 1

RECREATION RESOURCE REQUIREMENTS, 1970-2000

CITY SIZE: METROS

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	823 ^{1/}	660	163		1,793 square yards ^{2/}	1,480 square yards ^{2/}
	Child's Play (Playgrounds)	877	608	269		10 acres	5 acres
	Baseball/Softball	140	1,463		1,323	0 fields	0 fields
	Picnicking	282	284		2	0 tables	0 tables
	Football/Soccer	33	441		408	0 fields	0 fields
	Golf	269	109	160		40 holes	10 holes
	Tennis	56	113		57	0 courts, dbl.	0 courts, dbl.
	Basketball	242	440		198	0 courts, full	0 courts, full
1980	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	167	23	144		345 surface acres	115 surface acres
	Boating, Boat Fishing, Skiing FW . . .	121	0	121		4 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	194 ^{4/}				20 miles	6 miles
	Bicycling	92 ^{4/}				9 miles	3 miles
	Nature Study	2 ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	288 ^{4/}	42	246		29 miles	9 miles
	<u>ACTIVITY</u>						
	Swimming (Pools)	1,093 ^{1/}	660	433		2,887 square yards ^{2/}	1,094 square yards ^{2/}
	Child's Play (Playgrounds)	1,190	608	582		21 acres	11 acres
	Baseball/Softball	184	1,463		1,279	0 fields	0 fields
	Picnicking	354	284	70		41 tables	41 tables
	Football/Soccer	37	441		404	0 fields	0 fields
	Golf	352	109	243		60 holes	20 holes
	Tennis	61	113		52	0 courts, dbl.	0 courts, dbl.
	Basketball	459	440	19		2 courts, full	2 courts, full
1990	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	269	23	246		590 surface acres	245 surface acres
	Boating, Boat Fishing, Skiing FW . . .	191	0	191		7 ramps ^{3/}	3 ramp ^{3/}
	Trails Activities:						
	Walking	298 ^{4/}				32 miles	13 miles
	Bicycling	151 ^{4/}				16 miles	6 miles
	Nature Study	3 ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	452 ^{4/}	42	410		48 miles	19 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	1,239 ^{1/}	660	579		3,860 square yards ^{2/}	973 square yards ^{2/}
	Child's Play (Playgrounds)	1,403	608	795		29 acres	8 acres
	Baseball/Softball	213	1,463		1,250	0 fields	0 fields
	Picnicking	397	284	113		66 tables	25 tables
	Football/Soccer	38	441		403	0 fields	0 fields
	Golf	400	109	291		72 holes	12 holes
	Tennis	57	113		56	0 courts, dbl.	0 courts, dbl.
	Basketball	622	440	182		21 courts, full	19 courts, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	339	23	316		758 surface acres	168 surface acres
	Boating, Boat Fishing, Skiing FW . . .	240	0	240		9 ramps ^{3/}	2 ramps ^{3/}
	Trails Activities:						
	Walking	366 ^{4/}				40 miles	8 miles
	Bicycling	192 ^{4/}				21 miles	5 miles
	Nature Study	2 ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	560 ^{4/}	42	518		61 miles	13 miles

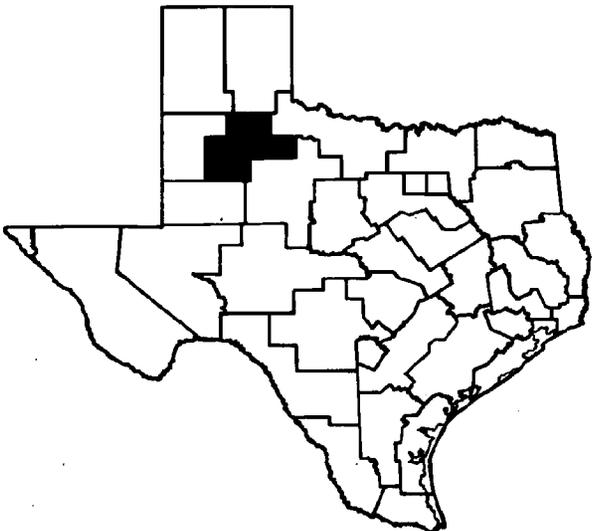
^{1/} Includes only swimming participation occurring in swimming pools, 94 percent of the total in urban areas.

^{2/} Designated freshwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.

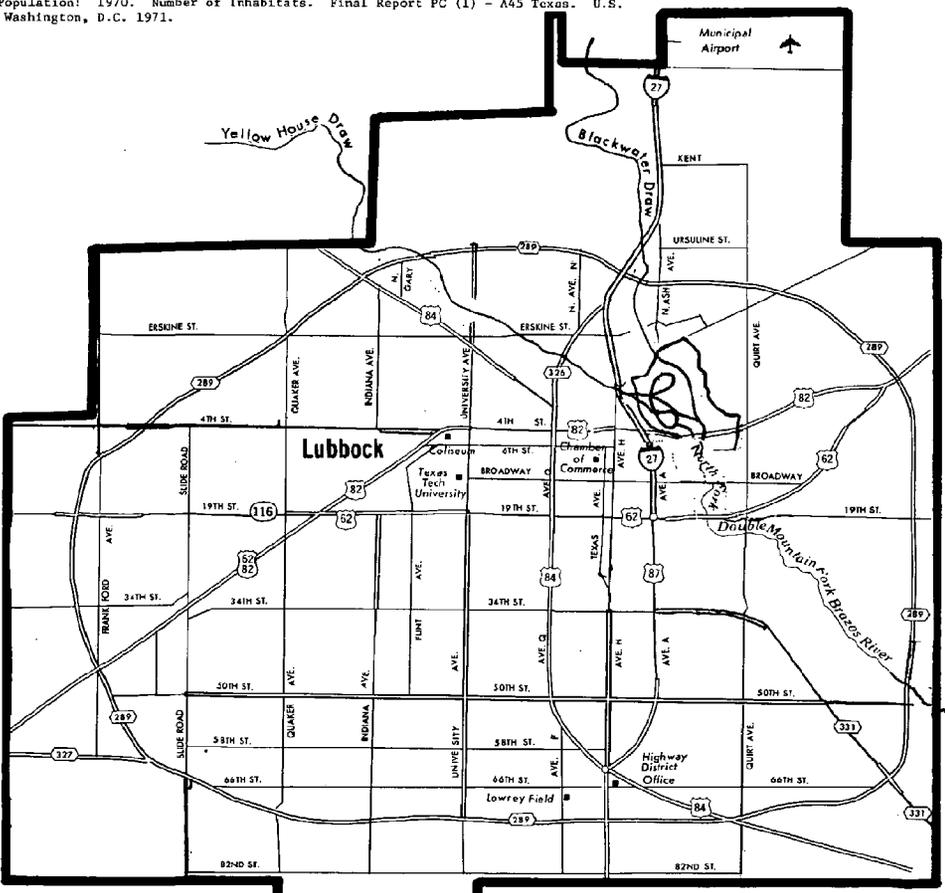
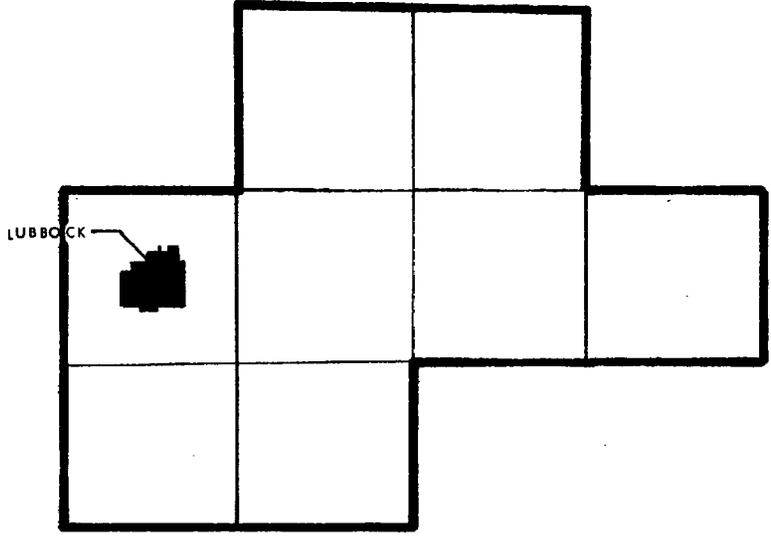
^{3/} Assumes 2.0 lanes per ramp.

^{4/} Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

Region 4



Source: Adapted from Texas Official Highway Map 1975. Texas Highway Department Travel and Information Division. Austin, Texas, and U.S. Bureau of the Census. U.S. Census of Population: 1970. Number of Inhabitants. Final Report PC (1) - A45 Texas. U.S. GPO Washington, D.C. 1971.



LUBBOCK AREA
METRO BOUNDARY

Lubbock, the county seat of Lubbock County, is a relatively new city in Texas. Originally two tiny communities, the present town was incorporated in 1909, with much of its growth resulting from the development of irrigated cotton farming in the South Plains. It is now the nation's third largest inland market for cotton and the world's largest cottonseed crushing center. It also serves as a marketing and shipping point for surrounding areas.

Located in Lubbock is Texas Technological University, the third largest state university in Texas, and the largest university campus in the world. On campus is the West Texas Museum, with emphasis on South Plains pioneer days. Ranch Headquarters, an outdoor museum developed in cooperation with Texas Tech and part of the West Texas Museum, has gained the recognition of the American Revolution Bicentennial Commission as an illustration of the continuing ideals and principles of the American Revolution. Lubbock Christian College and the Texas A&M Agricultural Research and Extension Center are also located in the town. Reese Air Force Base Pilot Training Center is just west of Lubbock.

Lubbock hosts the Panhandle-South Plains Fair (September), the Coaches' All American Football Game (June), Texas Tech Intercollegiate Rodeo (April), the Southwest Junior Livestock Show (March), and the American Kennel Club Dog Show (January).

Lubbock is one of the State's leading cultural centers with activities such as the Lubbock Symphony Orchestra, Lubbock Theatre Center, Hayloft Dinner Theatre, the Moody Planetarium at the Museum, and the Garden and Arts Center.

POPULATION

1970 Metro Area Population: 149,101

Change 1960-70: +16%

Race Composition

White 92%^{1/}

Negro 7%

Other 1%

Age Composition (years):

13 or less 27%

14 - 20 17%

21 - 44 34%

45 - 64 16%

65 and over 6%

ECONOMY

Agriculture

Processing Plants

^{1/} Includes persons of Mexican and/or Spanish descent.

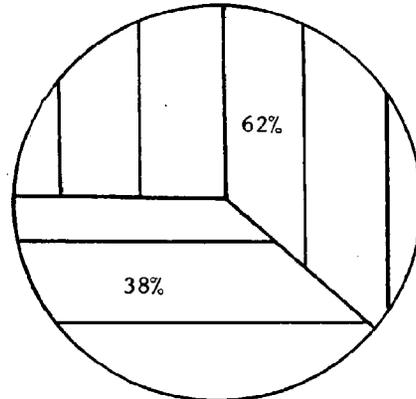
REGION 4

CITY SIZE: METRO

PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

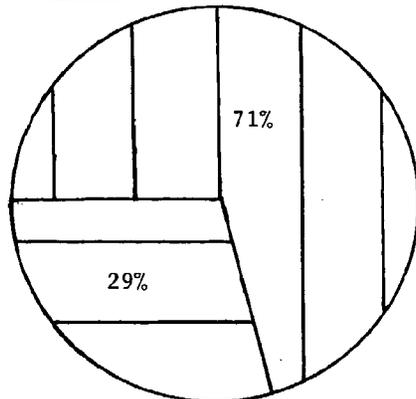
REGION
4
METRO



DEVELOPED LAND

UNDEVELOPED LAND

STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 4 METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	1,055	1,307
Undeveloped Land	651	536
Total Land	1,706	1,843
Water Within or Adjacent	72	1,006
Total Land and Water	1,778	2,849

Lubbock has a total of 1,706 acres of land set aside as park and recreation areas. In addition, 72 surface acres of water either within or adjacent to these parks were reported.

Of the total land acreage, 1,055 acres are developed with facilities, leaving 651 acres available for future development. With 62 percent of the land acreage currently developed, Lubbock is below the Statewide Metro average of 71 percent.

REGION 4

CITY SIZE: METRO

PARKS AND ACREAGE BY TYPE OF PARK

	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	5.000	17.000	5.000	13.000	40.000	72.000
Parks Per Thousand	.034	.114	.034	.087	.268	.267
People Per Park	29,820.000	8,771.000	29,820.000	11,469.000	3,728.000	3,754.000
.....						
Land Acres	832.000	156.000	59.000	659.000	1,706.000	1,843.000
Acres Per Thousand	5.580	1.046	.396	4.420	11.442	6.864
People Per Acre	179.000	956.000	2,527.000	226.000	87.000	146.000

Of the 40 parks in Lubbock, the majority are either Community or Open Land Parks with 17 and 13 respectively. The remaining 10 parks are equally divided between District and Specialty Parks. However, the acreage figures show that almost one-half of the total land acreage is in District Parks followed closely by the total acreage for Open Land Parks. The 17 Community Parks total only 156 acres while the 5 Specialty Parks consist of 59 acres of park land. The dispersion of the four types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the population of Lubbock, .268 parks per 1,000 and 11.442 acres per 1,000 population exist.

Another way to present this data is that 3,728 people share each park while 87 people share each acre of park land.

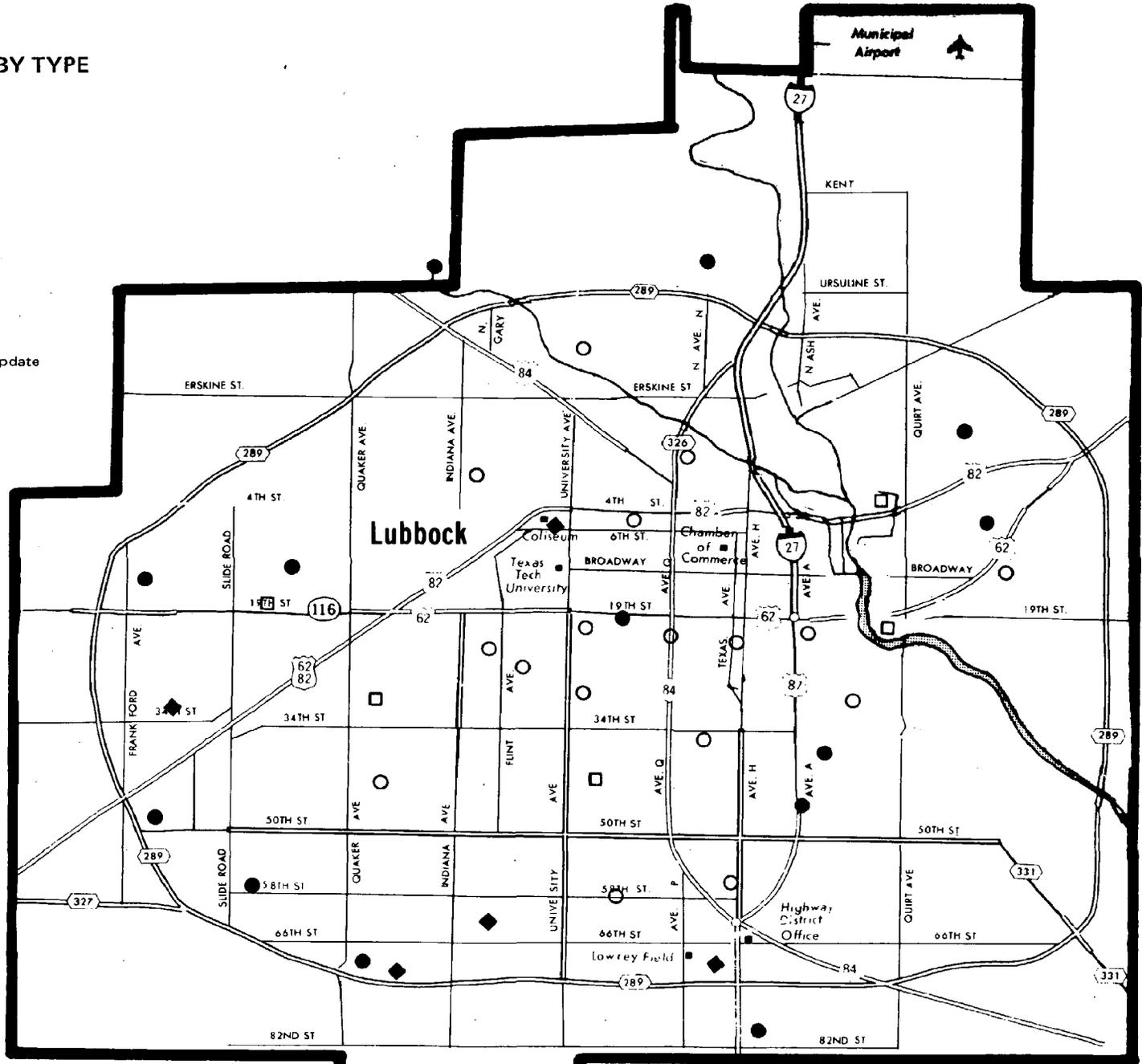
With .268 parks per 1,000, Lubbock just about matches the Statewide Metro average. The 11.442 acres per 1,000 gives Lubbock a figure almost twice that of the Statewide Metro average for acres per 1,000.

DISPERSION OF PARKS BY TYPE

URBAN PARKS

- DISTRICT PARK
- COMMUNITY PARK
- ◆ SPECIALTY PARK
- OPEN-LAND PARK

Source: 1971 Municipal Inventory Update



LUBBOCK AREA REGION 4

— METRO BOUNDARY

PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 4 METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	5	17	2	24	6,213	.161	.150
Tennis Courts.....	6	13	0	19	7,847	.128	.142
Basketball Courts.....	1	4	0	5	29,820	.034	.071
Baseball/Softball Fields.....	13	9	1	23	6,483	.154	.186
Football/Soccer Fields.....	2	0	0	2	74,551	.013	.032
Picnicking:							
Parks.....	5	16	3	24	6,213	.161	.124
Tables.....	25	20	6	51	2,924	.342	1.230
Playground:							
Parks.....	4	15	0	19	7,847	.128	.170
Acres Developed.....	10	22	0	32	4,659	.215	.258
Swimming:							
Parks.....	4	2	0	6	24,850	.040	.050
Pools (Sq. Yd.).....	2,938	855	0	3,793	39	25.456	25.950
Designated Fresh Water (Sq. Yd.)...	0	0	0	0	---	---	52.242
Boating:							
Parks.....	1	1	0	2	74,551	.013	.006
Ramp Lanes - Fresh Water.....	0	0	0	0	---	---	.008
Camping:							
Parks.....	1	0	0	1	149,101	.007	.002
Campsites.....	82	0	0	82	1,818	.550	.121
Fishing:							
Parks.....	4	1	2	7	21,300	.047	.013
Pier/Barge/Marina-Fresh Water (Yd.)	0	0	0	0	---	---	.049
Golfing:							
Courses.....	1	0	0	1	149,101	.007	.005
Holes.....	27	0	0	27	5,522	.181	.100
Trails:							
Parks.....	1	0	0	1	149,101	.007	.006
Nature (Mi.).....	10	0	0	10	14,910	.067	.009
Horseback (Mi.).....	0	0	0	0	---	---	.003
Bicycle (Mi.).....	17	0	0	17	8,771	.114	.007
Hiking (Mi.).....	0	0	0	0	---	---	.006
Total Trails (Mi.).....	27	0	0	27	5,522	.181	.021

PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 4 METRO	STATEWIDE AVERAGE METRO AREAS
Sport Shooting:							
Parks.....	0	0	0	0	---	---	.002
Traps.....	0	0	0	0	---	---	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	0	0	0	0	---	---	.011
Miscellaneous:							
Parks.....	4	13	0	17	8,771	.114	.038
Amphitheatre Seats.....	0	0	0	0	---	---	1.077
Botanical Gardens (Acres).....	96	0	0	96	1,553	.644	.077
Zoos (Acres).....	0	0	0	0	---	---	.051
Community/Recreation Centers.....	4	13	0	17	8,771	.114	.038

Most of the developed park and recreation facilities in Lubbock occur in the Community and District Parks, with games and sports, picnicking and fishing the only types of facilities in the 5 Specialty Parks. All of the facilities for trails, golf and camping are in the District Park category. It should be noted that these facilities are all in MacKenzie State Park, which is administered by the City of Lubbock. Ten miles of nature trails and 17 miles of bicycle trails were reported. Seven parks have fishing waters available and two parks have boating available although no boat ramps, fishing piers, barges or marinas were reported.

Of the 40 parks, 24 have facilities for games and sports and 24 for picnicking, 19 have playgrounds, and 17 have community/recreation centers. The most common types of games and sports facilities are baseball/softball with 23 fields, followed by tennis with 19 courts, basketball with 5 courts and football/soccer with two fields.

Looking at selected facilities in relation to the number of potential users we find the following:

74,551 persons for each football/soccer field	5,522 persons for each mile of trails
29,820 persons for each basketball court	4,659 persons for each acre of playground
8,771 persons for each community/recreation center	2,924 persons for each picnic table
7,847 persons for each tennis court	1,818 persons for each campsite
6,483 persons for each baseball/softball field	39 persons for each square yard of swimming pool
5,522 persons for each golf hole	

Lubbock is above the Statewide Metro average for facility units per 1,000 only for campsites, golf holes, trail miles, acres of botanical gardens and community/recreation centers, while falling below the average for tennis courts, basketball courts, baseball/softball fields, football/soccer fields, picnic tables, playground acres and square yards of swimming pools. No designated fresh water swimming area, boat ramp lanes, yards of fishing pier/barge/marina, sport shooting facilities, amphitheatre seats or zoo acreage were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

<u>ACTIVITY-FACILITY</u>	ANNUAL DAYS AVAILABLE	<u>DAYS PER THOUSAND POPULATION</u>	
		REGION 4 METRO	STATEWIDE AVERAGE METRO
Swimming (Pools) - square yards	568,950	3,818	3,891
Child's Play - playground acres	883,936	5,932	7,137
Baseball/Softball - fields	317,492	2,131	2,577
Picnicking - tables	86,802	583	2,093
Football/Soccer - fields	14,448	97	235
Golf - holes	109,269	733	414
Tennis - courts, double	51,186	344	384
Basketball - courts, full	43,975	295	625
Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	63,407	426	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	0	0	103
Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	228,528	1,534	164

The Lubbock Metro Area offers the most opportunity days for child's play, followed by swimming (in pools), baseball/softball and the trails activities. A comparison between the opportunity days per thousand population for the Lubbock Metro Area and the Statewide Metro average shows that the Lubbock Metro Area surpasses the statewide average for two of the activity types -- golf and the trails activities. The Lubbock Metro Area is below the Statewide Metro average for swimming (in pools), child's play, baseball/softball, picnicking, football/soccer, tennis, basketball, and surface acres for freshwater boating, boat fishing and skiing, with no opportunity days available for freshwater boat ramps.

The tenth ranking metro area, based on population, Lubbock also ranked tenth in total participation for the year 1970. Estimates for 1970 indicate that residents and non-residents in the area spent over 5.3 million recreation days in pursuit of urban outdoor recreation opportunities available within the metro area.

Resident

Total days of participation in urban outdoor recreation activities by the resident of the Lubbock Metropolitan Area, for the 16 activities shown, was estimated to be 4.6 million days in 1970. Total participation is expected to increase to 7.4 million days in 1975 and to 10.9 million days in 1980. As compared to the 1970 level, this represents an increase of 59.5 percent by 1975 and 134.3 percent by 1980. On a days per household basis, total participation is projected to increase from 99.3 days in 1970 to 136.4 days in 1975, and to 174.8 days in 1980 (increases of 37.4 and 76.0 percent, respectively). The residents of the Lubbock Metropolitan Area, in comparison of other metropolitan areas in Texas, are expected to participate at a rate of 24, 25, and 28 days per household below the average for 1970, 1975, and 1980, respectively. For the more distant years of 1990 and 2000, both total days of participation and days per household are expected to increase, but days per household will remain below the statewide average for all metropolitan areas.

Projections for specific activities indicate that each of the 16 activities will increase in total days of participation through the years 1975 and 1980. On a days per household basis, participation is expected to increase in the 16 activities by 1980. Based on total days of participation, the six most popular activities in 1970 were: bicycling, swimming, driving for pleasure, walking, child's play, and picnicking. Participation in walking is expected to increase substantially, replacing driving for pleasure as the number three activity by 1980. The six most popular activities in the Lubbock Metropolitan Area in 1980 are expected to be: bicycling, swimming, walking, child's play, driving for pleasure, and basketball, in that order.

Non-Resident

When considering participation in urban outdoor recreation activities in 1970, a total of 684,000 days of participation, was recorded by non-residents in the Lubbock Metropolitan Area. As compared to the 1970 level, total participation is expected to increase 11.7 percent to 764,000 days by 1975 and 23.8 percent to 847,000 days by 1980. This trend of increased participation is expected to continue through the years 1990 and 2000.

The estimates for 1970 indicate that the top six ranked activities, in order of popularity, were sightseeing picnicking, child's play, swimming, football, and driving for pleasure with totals of 158,000, 129,000, 86,000, 80,000, 79,000, and 77,000 days, respectively. It is anticipated that all 16 activities listed in the table will increase in participation through the year 2000, while retaining their relative positions in popularity.

CURRENT AND PROJECTED RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970				1975				1980				1990				2000			
	PART. DAYS	RANK	REG. 4 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 4 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 4 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 4 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 4 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH
Swimming	866	2	18.53	27.41	1,272	2	23.44	36.52	1,804	2	29.01	47.17	3,531	2	42.57	75.28	5,889	2	58.92	110.14
Child's Play	602	5	12.88	14.08	848	4	15.63	17.72	1,177	4	18.93	22.00	2,218	4	26.74	32.20	3,604	4	36.06	43.99
Baseball/Softball	79	10	1.69	2.78	105	10	1.94	3.19	136	11	2.19	3.59	224	12	2.70	4.41	325	12	3.25	5.22
Picnicking	234	6	5.01	5.72	288	6	5.31	5.66	349	8	5.61	5.66	519	8	6.26	5.61	693	9	6.93	5.64
Football/Soccer	76	11	1.63	1.43	89	12	1.64	1.42	103	14	1.66	1.41	138	15	1.66	1.39	168	15	1.68	1.38
Golf	200	7	4.28	3.92	279	7	5.14	4.98	377	7	6.06	6.16	667	7	8.04	8.96	1,018	7	10.19	12.07
Tennis	60	13	1.28	6.06	81	14	1.49	9.21	107	15	1.72	11.49	187	13	2.25	16.07	282	13	2.82	21.46
Basketball	70	12	1.50	1.60	237	8	4.37	2.59	449	6	7.22	3.57	1,075	6	12.96	5.52	1,868	5	18.69	7.53
Walking	629	4	13.46	18.21	1,019	3	18.78	23.09	1,500	3	24.12	29.20	2,886	3	34.79	39.89	4,544	3	45.46	50.31
Bicycling	872	1	18.66	20.30	1,916	1	35.31	32.77	3,231	1	51.96	45.25	7,070	1	85.24	68.44	11,847	1	118.53	95.49
Nature Study	16	16	.34	.72	59	15	1.09	1.67	115	13	1.85	2.64	279	11	3.36	4.63	487	11	4.87	6.70
Fishing	84	9	1.80	1.80	102	11	1.88	1.88	122	12	1.96	1.97	177	14	2.13	2.13	230	14	2.30	2.30
Boating	41	14	.88	.88	87	13	1.60	1.60	144	10	2.32	2.31	310	10	3.74	3.74	517	10	5.17	5.17
Skiing	20	15	.43	.42	34	16	.63	.62	51	16	.82	.82	101	16	1.22	1.22	162	16	1.62	1.81
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	150	8	3.21	2.25	210	9	3.87	2.34	283	9	4.55	2.50	512	9	6.17	2.70	812	8	8.12	3.01
Dr. for Pleas.	640	3	13.62	13.38	775	5	14.28	13.52	920	5	14.79	13.67	1,313	5	15.83	13.86	1,678	6	16.79	14.10
TOTAL	4,639		99.27	120.96	7,401		136.40	158.78	10,868		174.77	199.41	21,207		255.66	286.05	34,124		341.40	386.32

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000	ACTIVITY	1970	1975	1980	1990	2000
Swimming	80	90	100	125	141	Swimming	946	1,362	1,904	3,656	6,030
Child's Play	86	96	106	133	150	Child's Play	688	944	1,283	2,351	3,754
Baseball/Softball	2	2	2	2	3	Baseball/Softball	81	107	138	226	328
Picnicking	129	144	160	199	225	Picnicking	363	432	509	718	918
Football/Soccer	79	88	98	122	138	Football/Soccer	155	177	201	260	305
Golf	27	31	34	42	48	Golf	227	310	411	709	1,066
Tennis	*	*	*	*	*	Tennis	60	81	107	187	282
Basketball	5	6	6	8	9	Basketball	75	243	455	1,083	1,877
Walking	2	2	3	3	4	Walking	631	1,021	1,503	2,889	4,548
Bicycling	*	*	*	*	*	Bicycling	872	1,916	3,231	7,070	11,847
Nature Study	2	2	2	3	3	Nature Study	18	61	117	282	490
Fishing	22	24	27	33	38	Fishing	106	126	149	210	268
Boating	11	12	13	17	19	Boating	52	99	157	327	536
Skiing	4	4	5	6	7	Skiing	24	38	56	107	169
Surfing	---	---	---	---	---	Surfing	---	---	---	---	---
Sightseeing	158	177	196	245	276	Sightseeing	303	387	479	757	1,088
Dr. for Pleas.	77	86	95	119	134	Dr. for Pleas.	717	861	1,015	1,432	1,812
TOTAL	684	764	847	1,057	1,195	TOTAL	5,323	8,165	11,715	22,264	35,319

Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the Lubbock Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with the current recreation opportunities^{2/} available in the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to subsections of the Lubbock Metro characterized by residents having similar incomes and ethnic backgrounds. Particular attention was given to those subsections expected to undergo relatively rapid population growth and physical expansion in the future.

Conclusions reached from analyzing the distribution of recreation opportunities within the metropolitan area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist.

In the discussions that follow, results of the distribution analysis of parks within subsections of the Lubbock Metro are presented. Then, estimates of current and future requirements for selected recreation facilities are presented, and are qualified by conclusions reached from the distribution analysis of recreation facilities within subsections of the Lubbock Metro Area.

PARK DISTRIBUTION ANALYSIS

In analyzing the availability and distribution of parks in the Lubbock Metro, several characteristics were considered: changes in population (or trends in general, 1960 to 1970), areas of the metro which were expected to undergo relatively major expansion, and the dispersion of existing parks among the income/ethnic subsections of the metro. From these interrelated characteristics, general conclusions were reached with respect to future park developments for the metro area.

Population trends affected estimations of future recreation participation. Lubbock has more than doubled in population since 1950. Projections of population growth for the metro area indicate that rapid growth is likely to continue to the year 2000 when a population of 318,000 is projected. The major direction of growth is expected to be toward the west and southwest, as illustrated by the arrows on the accompanying map, titled "Predominant Ethnic Background and Income Subsections."

Urban planners reported sixteen income/ethnic subsections in 1971. Generally, these subsections were stratified in an east/west direction. The southeastern part of the metro was populated predominantly by low-income Blacks,

^{1/} "Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

^{2/} "Current" recreation opportunities refers to computed figures derived from the numbers of publicly-administered facilities by type available within the metro area in 1971.

while the northeastern and uppermost northwestern parts were predominantly low-income Anglos. A very large middle-income Anglo section was interspersed in the central, south central part of the metro and along the southern metro boundary. Middle-income Mexican-Americans dominated a subsection along either side of Erskine Street in north central Lubbock. High-income Anglo subsections were scattered throughout the western and southwestern parts of Lubbock; two high-income Anglo subsections were identified along the north central metro boundary. A small high-income Black subsection was located in the southeastern portion of the metro south of 19th Street and east of Quint Avenue. These subsections are expressed graphically on the "Predominant Ethnic Background and Income Subsections" map.

The urban parks reported in the Lubbock Metro Area for 1971 appeared to be well distributed within the circumference of Loop 289. Only two income-ethnic subsections were completely devoid of parks of any kind and these were: the smaller of the two high-income Anglo subsections in the north central portion of the metro and the high-income Black subsection in the east central portion of the metro near the Brazos River. Around the metro periphery, i.e., outside of Loop 289, there appeared to be only two open land parks in the large north central low-income Anglo subsection and one open land park in the middle-income Anglo area southeast of the loop near Avenue H. Otherwise, approximately the eastern one-quarter of the metro including the major portions of the two low income Anglo and Black subsections east of Quint Avenue had three parks combined. Given the reported array of parks by type only specialty parks appeared inadequately distributed. When selecting sights for future developments, considerations should be given to providing parks having recreational facilities outside of the loop giving particular attention to the major growth areas.

In addition to maintaining an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities in parks is also an important consideration. An analysis of the current and future requirements for selected recreational facilities and the current dispersion of facilities in the Lubbock Metro is presented in the following discussions.

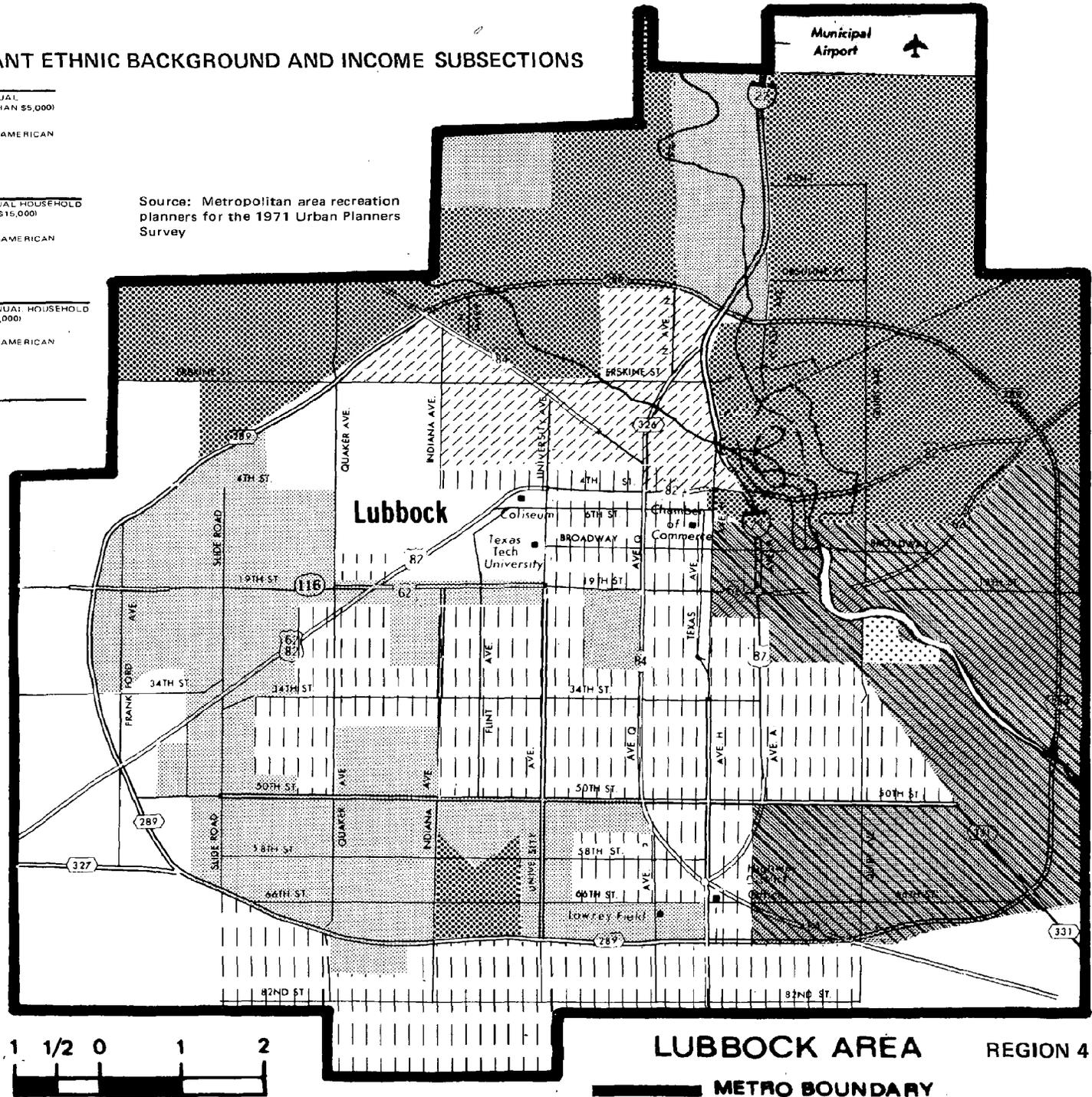
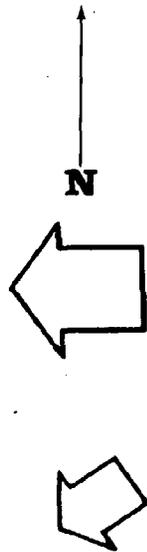
FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. Then, an analysis of the dispersion of existing facilities among the predominant income/ethnic background subsections and the major growth areas of the metro was conducted. Conclusions reached from the facility dispersion analysis were then used to qualify the facility requirement estimates, particularly in those cases where no additional facilities were estimated as being needed within the metropolitan area. Usually, special note is made where growth areas appeared to have limited facilities. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the Urban Volume. In the discussion that follows, resource requirements for recreational facilities are generally referred to by units of the most important feature necessary to allow participation. For example, when a requirement is shown for swimming pools, features such as a bathhouse, cleaning and filtering system, and other support features are implied when a requirement for the major facility is shown.

PREDOMINANT ETHNIC BACKGROUND AND INCOME SUBSECTIONS

- LOW INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS LESS THAN \$5,000)**
-  PREDOMINANTLY MEXICAN-AMERICAN
 -  PREDOMINANTLY BLACK
 -  PREDOMINANTLY ANGLO
- MID INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME VARIED FROM \$6,000 TO \$15,000)**
-  PREDOMINANTLY MEXICAN-AMERICAN
 -  PREDOMINANTLY BLACK
 -  PREDOMINANTLY ANGLO
- HIGH INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS GREATER THAN \$15,000)**
-  PREDOMINANTLY MEXICAN-AMERICAN
 -  PREDOMINANTLY BLACK
 -  PREDOMINANTLY ANGLO
-  AREAS FOR WHICH ETHNIC BACKGROUND AND INCOME DELINEATIONS WERE NOT MAPPED.

Source: Metropolitan area recreation planners for the 1971 Urban Planners Survey



Note: Arrows indicate major areas of expected growth.

Swimming

In 1971, the Lubbock Metropolitan Area reported 3,793 square yards of public swimming pools which, when multiplied by the facility standard of 150 days per year per square yard, provided approximately 569,000 days of opportunity. Demand was estimated to be about 889,000 participation days in 1970, or 320,000 days more than the 1971 supply. Accordingly, an estimated 2,133 additional square yards were required in 1970 to satisfy this deficit. An additional 2,607 square yards of pools will be required by 1975 bringing the cumulative requirement to 4,740 additional square yards above the 1971 supply. The cumulative requirements will increase to 8,140 square yards in 1990, to 19,120 square yards in 1990, and to 33,993 square yards by the year 2000.

The major areas where public swimming pools were unavailable were in the south and the west portions of the metro. In particular, the areas included those south of 50th Street and west of Quaker Avenue. Two other areas which also seemed to have inadequate swimming opportunities were in the central part of Lubbock within a one mile radius of 19th and Avenue Q and in the southeast within a one mile radius of 50th and Avenue A.

Child's Play

Given a facility standard of 27,623 days per year per acre of developed playground, the thirty-two acres enumerated in 1971 provided approximately 884,000 days of opportunity for that year. This supply level was considered adequate to accommodate the estimated 688,000 days of participation in 1970. However, by 1975 an additional two acres were required to satisfy an estimated demand of 944,000 participation days. Assuming that these two additional acres were provided, a requirement of twelve more acres by 1980 will be necessary to satisfy an estimated demand of 1,283,000 participation days. The cumulative requirement increases to fifty-three acres over the 1971 supply level in 1990, and to 104 acres by the year 2000.

With the exceptions of the southeast; generally an area bound on the south by 82nd Street, on the west by Avenue H, on the north by 34th Street, and on the east by Highway 331; the southwest; west of Quaker Avenue and south of 34th Street; and the area west of Slide Road, playgrounds appeared to be well dispersed in 1971. In addition to these areas, additional playground facilities should probably be considered for growth areas.

Baseball/Softball

The twenty-three baseball fields reported in 1971 provided a combined total of approximately 317,000 days of opportunity, given a conversion standard of 13,804 days per year per field. Estimates of demand for this activity suggest that the 1971 supply level should be adequate to the year 2000, when one additional field will be required. Although dispersion analysis was not possible from available information, consideration should be given to providing an equitable distribution relative to growth areas and the various income-ethnic subsections.

Picnicking

The Lubbock Metro area reported fifty-one public picnic tables in 1971. Using the facility standard of 1,702 days per year per picnic table, the 1971 supply amounted to approximately 87,000 opportunity days. A comparison of opportunities with estimated participation indicated a deficit of 276,000 opportunity days. A total of 162 additional tables was thus required to meet the 1970 requirements. Incremental increases of 41 tables in 1975, 45 tables in 1980, 123 tables in 1990, and 117 tables in the year 2000, will be needed to meet the demand in those respective years. A cumulative total of 488 additional tables should be needed in the Lubbock Metro by the year 2000.

Picnic tables appeared to be evenly distributed in 1971. When increasing the supply of picnic tables, consideration should be given to areas experiencing rapid growth.

Football/Soccer

In 1971 the Lubbock Metropolitan Area reported a total of two public football/soccer fields which, when multiplied by the facility standard of 7,224 days per year per field, provided approximately 14,000 days of opportunity. With a 1970 estimated demand of 155,000 participation days, twenty additional fields would have been needed to satisfy demand. If the 1971 supply level remained unchanged, the cumulative resource requirement increases from 20 additional fields in 1970, to 23 additional fields in 1975, to 26 additional fields in 1980, to 34 additional fields in 1990, and to 40 fields above the 1971 level by the year 2000. A dispersion analysis of football/soccer fields could not be accomplished using 1971 data, nevertheless, additional fields should be located so as to maximize access to potential users.

Golf

The twenty-seven hole public golf course enumerated in 1971 provided an estimated 109,000 opportunity days as compared with an estimated demand of 227,000 participation days in 1970. Thus, in order to satisfy the 118,000 days deficit, a total of twenty-nine additional holes was required in 1970. On the other hand, if the 1971 supply level remained at twenty-seven holes, then the cumulative resource requirement was calculated to increase to 50 additional holes in 1975, and should increase to 75 holes over the 1971 level by 1980, to 148 golf holes in 1990, and to 236 holes by the year 2000. Owing to the general scarcity of public courses in most areas of the metro, additional courses should be located so as to maximize access to users.

Tennis

There were nineteen public tennis courts in the Lubbock Metro Area in 1971. With a standard of 2,694 days per year per tennis court, these courts provided a combined total of 51,000 days of opportunity, which was slightly below the estimated demand of 60,000 participation days. Accordingly, three additional courts were needed in 1970 to accommodate the 1970 demand. With the 1971 supply level of nineteen courts taken as a base, the cumulative requirements for subsequent planning years were 11 courts by 1975 and 21 courts by 1980. The cumulative resource requirement has been projected to increase to 50 courts over the 1971 supply level in 1990 and to 86 courts by the year 2000. Available information for 1971 did not permit a dispersion analysis of tennis courts; however, additional courts should be located so as to maximize access to users.

Basketball

With a conversion standard of 8,795 days per year per court, the five public basketball courts enumerated in 1971 provided a combined total of 44,000 opportunity days. However, demand for this activity was estimated at 75,000 participation days, requiring four additional courts in 1970. The demand for basketball facilities is projected to increase rapidly, and thus require forty-seven additional courts over the 1971 supply level in order to satisfy demand in 1980. The cumulative requirement has been projected to reach 118 courts in 1990, and 208 courts by the year 2000. A dispersion analysis of basketball courts could not be accomplished with 1971 supply data; however, additional courts should be located so as to maximize access to users.

Trails Activities

The twenty-seven miles of trail enumerated in 1971 provided approximately 229,000 opportunity days, given a conversion standard of 8,464 days per year per mile of trail. This level of opportunities was substantially above the estimated 105,000 participation days in 1970; thus, no additional miles of trail were needed in 1970. The surplus was expected to continue into 1975; however, by 1980 the rapid rise in demand is expected to require an additional ten miles of trail for that year. The cumulative requirement has been projected to increase to 49 miles of trail, over the 1971 supply level, in 1990; and to 97 miles by the year 2000.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly administered park and recreation areas. It is likely, however, that as additional trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of additional resources required may be conservative in the long run and should be considered as minimum estimates. In addition to the expectations for increases in participation in trail and related activities at publicly administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local neighborhoods, on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, SkiingSurface Acres - Freshwater Lakes
(Boating, Boat Fishing, Skiing)

A total of 152 surface acres of freshwater lakes was located within the Lubbock Metro Area in 1971. Because of the limited freshwater available for skiing, no participation was reported in the Texas Outdoor Recreation Household

Demand Survey. Using participation patterns of households recreating in the urban areas, it was estimated that boating would have totaled 52,000 days, boat fishing 22,000 days, and skiing 24,000 days for a total of 98,000 days in 1970 if adequate freshwater lakes had been available. A comparison of estimated participation with the opportunities provided by the surface acres existing in 1971 indicated that incremental resource requirements will expand from an additional 84 acres needed in 1970 to 158 acres in 1975, 192 acres in 1980, 561 acres in 1990, and 681 acres in the year 2000. This brings the cumulative resource requirement to an additional 1,676 surface acres by the year 2000.

Freshwater Boat Ramps^{1/}

No publicly-administered freshwater boat lanes were reported for the Lubbock Metro Area in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using freshwater boat ramp facilities to gain access to the water if ramps were available, it was calculated that three boat ramps were needed in 1970. Projected increases in freshwater boat fishing, skiing, and boating participation are expected to require one additional freshwater boat ramp in 1975, three in 1980, six in 1990, and seven in the year 2000, bringing the cumulative resource requirement to twenty ramps in the year 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, the provision of freshwater surface acres and freshwater boat ramps required should be planned as joint projects, even though, in some cases, this may require the construction of boat ramps prior to the years reflected in the boat ramp resource requirement projections.

Summary of Facilities Requirements

The only type of designated facility which was not available at all in the Lubbock Metro in 1971 was freshwater boat ramps; boat ramps were estimated to be needed in every planning horizon year. Although facilities for other urban recreational activities were available in 1971, an insufficient quantity existed in most cases. Incremental resource requirements were indicated for each planning horizon year for swimming pools, picnic tables, football/soccer fields, holes of golf, tennis courts, basketball courts, and surface acres of freshwater. Playgrounds were estimated to be required beginning in 1975; trails were considered adequate through 1975, but by 1980 additional miles will be required; and baseball/softball fields were considered adequate through 1990, with one additional field needed by the year 2000.

An important criterion in planning for additional facilities for all outdoor recreation activities is a spatial distribution which considers urban growth areas, and as many different income/ethnic subsections as is practical.

^{1/} In calculating freshwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS)		RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	889 ^{1/}	569	320		2,133 square yards ^{2/}	2,133 square yards ^{2/}
	Child's Play (Playgrounds)	688	884		196	0 acres	0 acres
	Baseball/Softball	81	317		236	0 fields	0 fields
	Picnicking	363	87	276		162 tables	162 tables
	Football/Soccer	155	14	141		20 fields	20 fields
	Golf	227	109	118		29 holes	29 holes
	Tennis	60	51	9		3 courts, dbl.	3 courts, dbl.
	Basketball	75	44	31		4 courts, full	4 courts, full
1970	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	98	63	35		84 surface acres	84 surface acres
	Boating, Boat Fishing, Skiing FW . . .	75	0	75		3 ramps ^{3/}	3 ramps ^{3/}
	Trails Activities:						
	Walking	66 ^{4/}				0 miles	0 miles
	Bicycling	35 ^{4/}				0 miles	0 miles
	Nature Study	4 ^{4/}				0 miles	0 miles
	Combined Walking, Bicycling, Nature Study	105 ^{4/}	229		124	0 miles	0 miles
<hr/>							
	<u>ACTIVITY</u>						
	Swimming (Pools)	1,280 ^{1/}	569	711		4,740 square yards ^{2/}	2,607 square yards ^{2/}
	Child's Play (Playgrounds)	944	884	60		2 acres	2 acres
	Baseball/Softball	107	317		210	0 fields	0 fields
	Picnicking	432	87	345		203 tables	41 tables
	Football/Soccer	177	14	163		23 fields	3 fields
	Golf	310	109	201		50 holes	21 holes
	Tennis	81	51	30		11 courts, dbl.	8 courts, dbl.
	Basketball	243	44	199		23 courts, full	19 courts, full
1975	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	164	63	101		242 surface acres	158 surface acres
	Boating, Boat Fishing, Skiing FW . . .	120	0	120		4 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	107 ^{4/}				0 miles	0 miles
	Bicycling	77 ^{4/}				0 miles	0 miles
	Nature Study	12 ^{4/}				0 miles	0 miles
	Combined Walking, Bicycling, Nature Study	196 ^{4/}	229		33	0 miles	0 miles

YEAR	ACTIVITY	TOTAL	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION		
		PARTICIPATION (000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	1,790 ^{1/}	569	1,221			8,140 square yards ^{2/}	3,400 square yards ^{2/}
	Child's Play (Playgrounds)	1,283	884	399			14 acres	12 acres
	Baseball/Softball	138	317		179		0 fields	0 fields
	Picnicking	509	87	422			248 tables	45 tables
	Football/Soccer	201	14	187			26 fields	3 fields
	Golf	411	109	302			75 holes	25 holes
	Tennis	107	51	56			21 courts, dbl.	10 courts, dbl.
	Basketball	455	44	411			47 courts, full	24 courts, full
1980	Water-Related Activities:							
	Boating, Boat Fishing, Skiing FW . . .	244	63	181			434 surface acres	192 surface acres
	Boating, Boat Fishing, Skiing FW . . .	177	0	177			7 ramps ^{3/}	3 ramps ^{3/}
	Trails Activities:							
	Walking	158 ^{4/}					5 miles	5 miles
	Bicycling	129 ^{4/}					4 miles	4 miles
	Nature Study	24 ^{4/}					1 mile	1 mile
	Combined Walking, Bicycling, Nature Study	311 ^{4/}	229	82			10 miles	10 miles
	<u>ACTIVITY</u>							
	Swimming (Pools)	3,437 ^{1/}	569	2,868			19,120 square yards ^{2/}	10,980 square yards ^{2/}
	Child's Play (Playgrounds)	2,351	884	1,467			53 acres	39 acres
	Baseball/Softball	226	317		91		0 fields	0 fields
	Picnicking	718	87	631			371 tables	123 tables
	Football/Soccer	260	14	246			34 fields	8 fields
	Golf	709	109	600			148 holes	73 holes
	Tennis	187	51	136			50 courts, dbl.	29 courts, dbl.
	Basketball	1,083	44	1,039			118 courts, full	71 courts, full
1990	Water-Related Activities:							
	Boating, Boat Fishing, Skiing FW . . .	478	63	415			995 surface acres	561 surface acres
	Boating, Boat Fishing, Skiing FW . . .	340	0	340			13 ramps ^{3/}	6 ramps ^{3/}
	Trails Activities:							
	Walking	303 ^{4/}					23 miles	18 miles
	Bicycling	283 ^{4/}					22 miles	17 miles
	Nature Study	57 ^{4/}					4 miles	4 miles
	Combined Walking, Bicycling, Nature Study	643 ^{4/}	229	414			49 miles	39 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS) DEFICIT	(000'S OF ACTIVITY DAYS) SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	5,668 ^{1/}	569	5,099	33,993 square yards ^{2/}	14,873 square yards ^{2/}	
	Child's Play (Playgrounds)	3,754	884	2,870	104 acres	51 acres	
	Baseball/Softball	328	317	11	1 field	1 field	
	Picnicking	918	87	831	488 tables	117 tables	
	Football/Soccer	306	14	292	40 fields	6 fields	
	Golf	1,066	109	957	236 holes	88 holes	
	Tennis	282	51	231	86 courts, dbl.	36 courts, dbl.	
	Basketball	1,877	44	1,833	208 courts, full	90 courts, full	
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	762	63	669	1,676 surface acres	681 surface acres	
	Boating, Boat Fishing, Skiing FW . . .	536	0	536	20 ramps ^{3/}	7 ramps ^{3/}	
	Trails Activities:						
	Walking	478 ^{4/}			44 miles	22 miles	
	Bicycling	474 ^{4/}			44 miles	22 miles	
	Nature Study	98 ^{4/}			9 miles	4 miles	
	Combined Walking, Bicycling, Nature Study	1,050 ^{4/}	229	821	97 miles	48 miles	

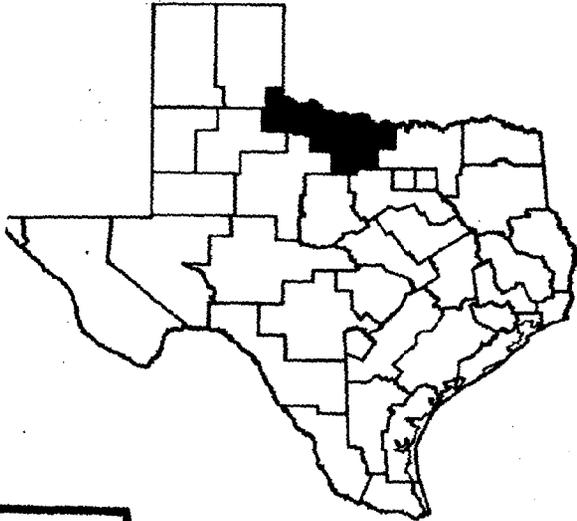
^{1/} Includes only swimming participation occurring in swimming pools, 94 percent of the total in urban areas.

^{2/} Designated freshwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.

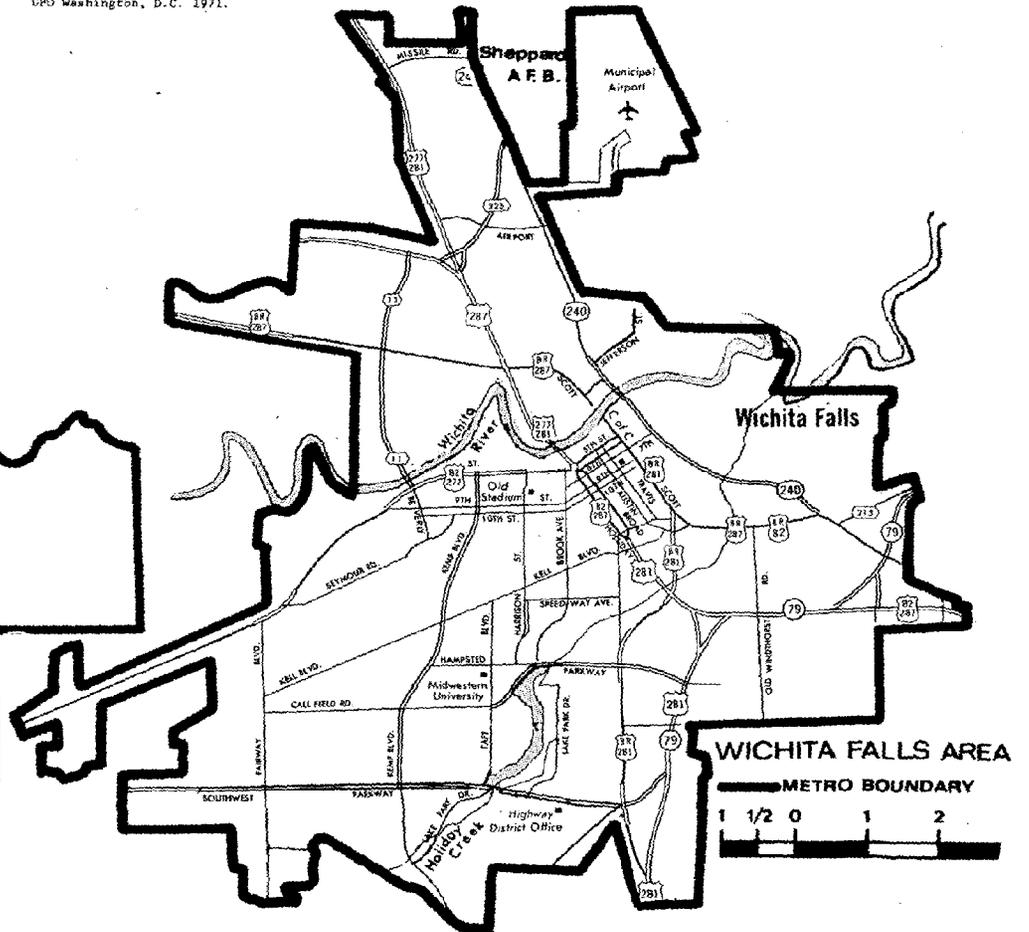
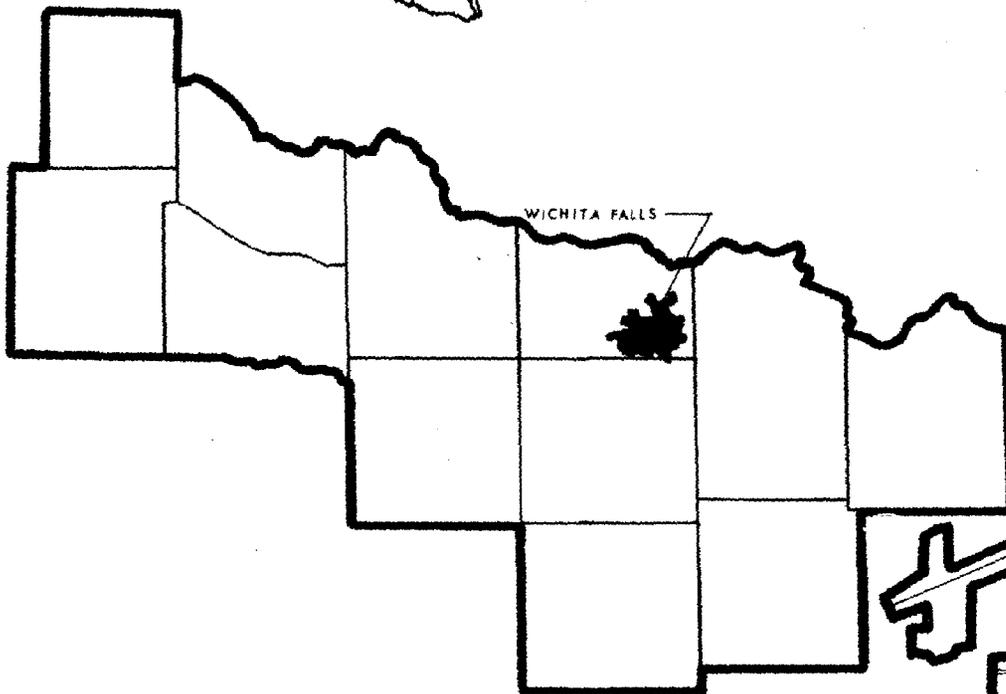
^{3/} Assumes 2.0 lanes per ramp.

^{4/} Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

Region 5



Source: Adapted from Texas Official Highway Map 1975. Texas Highway Department Travel and Information Division. Austin, Texas, and U.S. Bureau of the Census. U.S. Census of Population: 1970. Number of Inhabitants. Final Report PC (1) - 445 Texas. U.S. GPO Washington, D.C. 1971.



Wichita Falls, county seat of Wichita County, progressed from an Indian tent village, to trading post, railroad terminal, cattle town, business center, and independent oil capital of the world. Home of one of the nation's largest U.S. Air Force Technical Training Air Bases, it is one of the younger Texas cities, and was named for a waterfall which was long ago washed out by a flood. The town was laid out in 1876 by the family of J. A. Scott, a Mississippian who won the land in a poker game in 1837.

While cattle was the first large industry in the area, the discovery of oil made the oil industry dominant. Natural gas attracted industry in the early 1900's, and Wichita Falls had the first municipal gas supply in the West. A large number of independent oil companies are headquartered there today. Cultural attractions include the Wichita Falls Symphony Orchestra, the Theatre Arts Group, Wichita Falls Museum and Arts Center, North Texas Center of the Arts, Midwestern University Artist Lecture Series, Civic Music Association, Art Association, Broadway Theatre League, and Civic Playhouse Association.

Located in the city are Midwestern University, Wichita Falls State Hospital, and Sheppard Air Force Base.

Annual events include Faith City Kennel Club Show (March), Midwestern University's Science Fair (March), Antique Sales Show (March), Wichita County Junior Livestock Show (March), Art Expo (April), Flower Show (April), Red River Rodeo (June), Texas & Oklahoma Tennis Tournament (Summer), Texas & Oklahoma Golf Tournament (Summer), Oil Bowl Football Game (August), Pioneer Bowl (December), and Burn's Christmas Display (December).

POPULATION

1970 Metro Area Population: 97,564

Change 1960-1970: -4%

Race Composition:

White 90% 1/

Negro 9%

Other 1%

Age Composition (years):

13 or less 24%

14 - 20 17%

21 - 44 32%

45 - 64 18%

65 and over 9%

ECONOMY

Agribusiness

Manufacturing

Oil

1/ Includes persons of Mexican and/or Spanish descent.

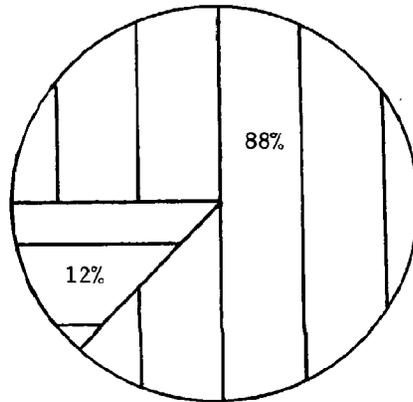
REGION 5

CITY SIZE: METRO

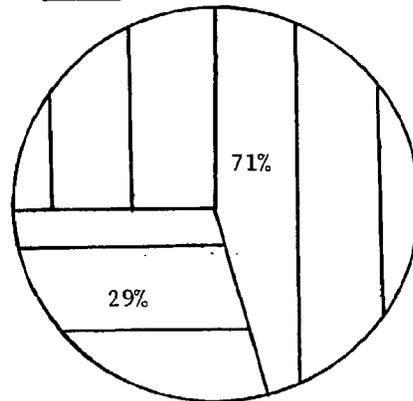
PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

REGION
5
METRO



STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 5 METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	881	1,307
Undeveloped Land	119	536
Total Land	1,000	1,843
Water Within or Adjacent	2,330	1,006
Total Land and Water	3,330	2,849

Wichita Falls has a total of 1,000 acres of land set aside as park and recreation areas. In addition, 2,330 surface acres of water either within or adjacent to these parks were reported.

Of the total land acreage, 881 acres are developed with facilities, leaving 119 acres available for future development. With 88 percent of the land acreage currently developed, Wichita Falls is well above the Statewide Metro average of 71 percent.

PARKS AND ACREAGE BY TYPE OF PARK

	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	8.000	18.000	4.000	5.000	35.000	72.000
Parks Per Thousand	.082	.184	.041	.051	.359	.267
People Per Park	12,196.000	5,420.000	24,391.000	19,513.000	2,788.000	3,754.000
.....						
Land Acres	792.000	165.000	29.000	14.000	1,000.000	1,843.000
Acres Per Thousand	8.118	1.691	.297	.143	10.250	6.864
People Per Acre	123.000	591.000	3,364.000	6,969.000	98.000	146.000

More than one-half of the parks in Wichita Falls are Community Parks. Of the remaining 17 parks, 8 are District Parks while the Specialty and Open Land Park categories divide the remaining 9 parks. The District Parks contain nearly 80 percent, 792 acres, of the total land acreage followed by the Community Parks with 165 acres. The 4 Specialty Parks average 7 acres each, while the Open Land Parks average 3 acres each. The dispersion of the four types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the population of Wichita Falls, .359 parks per 1,000 and 10.250 acres per 1,000 population exist.

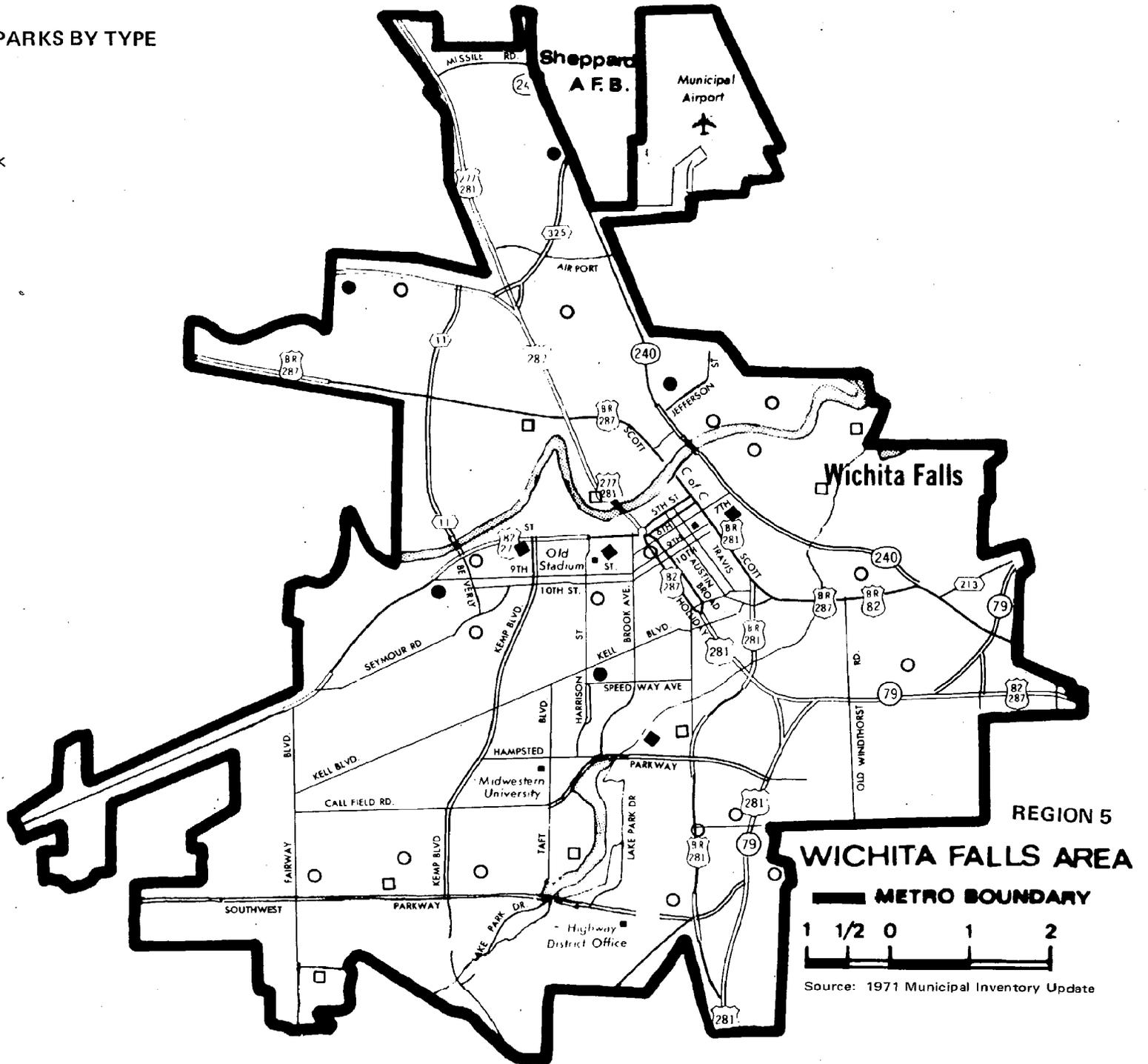
Another way to present this data is that 2,788 people share each park while 98 people share each acre of park land.

With .359 parks per 1,000, Wichita Falls ranks well above the Statewide Metro average. The 10.250 acres per 1,000 also gives Wichita Falls a figure well above the Statewide Metro average for acres per 1,000.

DISPERSION OF PARKS BY TYPE

URBAN PARKS

- DISTRICT PARK
- COMMUNITY PARK
- ◆ SPECIALTY PARK
- OPEN-LAND PARK



PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 5 METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	8	17	1	26	3,752	.265	.150
Tennis Courts.....	19	9	0	28	3,484	.286	.142
Basketball Courts.....	1	4	0	5	19,513	.051	.071
Baseball/Softball Fields.....	15	5	0	20	4,878	.204	.186
Football/Soccer Fields.....	5	3	1	9	10,840	.092	.032
Picnicking:							
Parks.....	8	18	2	28	3,484	.286	.124
Tables.....	80	66	4	150	650	1.531	1.230
Playground:							
Parks.....	7	17	1	25	3,903	.255	.170
Acres Developed.....	7	17	1	25	3,903	.255	.258
Swimming:							
Parks.....	2	1	0	3	32,521	.031	.050
Pools (Sq. Yd.).....	130	120	0	250	390	2.551	25.950
Designated Fresh Water (Sq. Yd.)...	4,840	0	0	4,840	20	49.387	52.242
Boating:							
Parks.....	1	0	0	1	97,564	.010	.006
Ramp Lanes - Fresh Water.....	0	0	0	0	---	---	.008
Camping:							
Parks.....	0	0	0	0	---	---	.702
Campsites.....	0	0	0	0	---	---	.121
Fishing:							
Parks.....	4	0	0	4	24,391	.041	.013
Pier/Barge/Marina-Fresh Water (Yd.)	0	0	0	0	---	---	.049
Golfing:							
Courses.....	1	0	0	1	97,564	.010	.005
Holes.....	18	0	0	18	5,420	.184	.100
Trails:							
Parks.....	2	0	0	2	48,782	.020	.006
Nature (Mi.).....	1	0	0	1	97,564	.010	.009
Horseback (Mi.).....	0	0	0	0	---	---	.003
Bicycle (Mi.).....	3	0	0	3	32,521	.031	.007
Hiking (Mi.).....	1	0	0	1	97,564	.010	.006
Total Trails (Mi.).....	4	0	0	4	24,391	.041	.021

REGION 5

PARK AND RECREATION FACILITIES BY TYPE OF PARK

CITY SIZE: METRO

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 5	STATEWIDE AVERAGE
						METRO	METRO AREAS
Sport Shooting:							
Parks.....	0	0	0	0	---	---	.002
Traps.....	0	0	0	0	---	---	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	0	0	0	0	---	---	.011
Miscellaneous:							
Parks.....	0	0	0	0	---	---	.038
Amphitheatre Seats.....	0	0	0	0	---	---	1.077
Botanical Gardens (Acres).....	0	0	0	0	---	---	.077
Zoos (Acres).....	0	0	0	0	---	---	.051
Community/Recreation Centers.....	0	0	0	0	---	---	.038

The District Park category contains all of the parks with boating, fishing, golf and trails facilities, although no boat ramps or fishing piers were reported. One of the District Parks has an area designated as fresh water swimming area.

Of the 35 parks, 28 have picnic facilities, 26 have facilities for games and sports and 25 have playgrounds. The most common types of games and sports facilities are tennis with 28 courts, followed by baseball/softball with 20 fields, football/soccer with 9 fields and basketball with 5 courts.

Looking at selected facilities in relation to the number of potential users we find the following:

24,391 persons for each mile of trails	3,903 persons for each acre of playground
19,513 persons for each basketball court	3,484 persons for each tennis court
10,840 persons for each football/soccer field	650 persons for each picnic table
5,420 persons for each golf hole	390 persons for each square yard of swimming pool
4,878 persons for each baseball/softball field	

Wichita Falls is above the Statewide Metro average for facility units per 1,000 for tennis courts, baseball/softball fields, football/soccer fields, picnic tables, golf holes and trail miles. Wichita Falls is below the average for basketball courts, playground acres, square yards of swimming pools and designated fresh water swimming area. No boat ramp lanes, campsites, yards of fishing pier/barge/marina, sport shooting facilities, amphitheatre seats, acres of botanical gardens, zoo acreage or community/recreation centers were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

ACTIVITY-FACILITY	ANNUAL DAYS AVAILABLE	DAYS PER THOUSAND POPULATION	
		REGION 5 METRO	STATEWIDE AVERAGE METRO
Swimming (Pools) - square yards	37,500	383	3,891
Child's Play - playground acres	690,575	7,047	7,137
Baseball/Softball - fields	276,080	2,817	2,577
Picnicking - tables	255,300	2,605	2,093
Football/Soccer - fields	65,016	663	235
Golf - holes	72,846	743	414
Tennis - courts, double	75,432	770	384
Basketball - courts, full	43,975	449	625
Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	971,966	9,918	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	0	0	103
Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	33,856	345	625

The Wichita Falls Metro Area offers the most opportunity days for surface acres for freshwater boating, boat fishing and skiing, followed by child's play, baseball/softball and picnicking. A comparison between the opportunity days per thousand population for the Wichita Falls Metro Area and the Statewide Metro average shows that the Wichita Falls Metro Area surpasses the statewide average for six types of facilities -- baseball/softball fields, picnic tables, football/soccer fields, golf courses (holes), tennis courts, and surface acres for freshwater boating, boat fishing, and skiing. The Wichita Falls Metro Area is below the Statewide Metro average for swimming (in pools), child's play, basketball and the trails activities, with no opportunity days available for freshwater boat ramps.

The thirteenth ranking metro area based on population, Wichita Falls ranked fifteenth in total participation for the year 1970. Estimates for 1970 indicate that residents and non-residents in the area spent over 2.5 million recreation days in pursuit of urban outdoor recreation opportunities available within the metro area.

Resident

Total days of participation by residents of the Wichita Falls Metropolitan Area were estimated to be 2.4 million days in 1970 and are estimated to be 3.6 million days in 1975 and 4.9 million days in 1980. These projections for the years 1975 and 1980 represent increases of 48.3 and 101.8 percent, respectively, over the 1970 participation level, and for the years 1975 and 1980, on a days per household basis, represent increases of from 73.4 days in 1970 to 108.3 days in 1975, and to 146.5 days in 1980. On a comparative basis, this is below the average for households in the other metropolitan areas across the State. The projections for 1975 and 1980 indicate increases of 47.6 and 99.6 percent, respectively, over the 1970 estimate for participation on a days per household basis.

All activities are projected to increase, both in total days of participation and participation on a days per household basis, through the year 2000 but will remain below the statewide average for all metropolitan areas. In regard to specific activities, swimming, driving for pleasure, child's play, walking, golf, and picnicking ranked one through six, respectively, in total participation days in 1970. However, the order of popularity is anticipated to change somewhat by 1975 with swimming ranking first, child's play second, driving for pleasure third, walking fourth, bicycling fifth, and golf as the sixth ranked activity. The order is expected to change again by 1980. Swimming will retain its number one ranking with child's play, walking, driving for pleasure, bicycling, and golf following in that order.

Non-Resident

Participation in urban outdoor recreation activities within the Wichita Falls Metropolitan Area by non-residents was estimated to total 95,000 days for the activities specified for 1970. By 1975, total participation is expected to remain steady at 95,000 days, and decrease 1 percent (to 94,000 days) by 1980. Slight decreases are anticipated through the years 1990 and 2000.

Of the specific activities selected, the most popular activities by non-residents for 1970 were: sightseeing, with 34,000 days; fishing, with 19,000 days; golf, with 14,000 days; swimming, with 11,000 days; driving for pleasure, with 8,000 days; and picnicking, with 4,000 days. Assuming adequate facilities are made available, 12 activities are expected to remain constant and four activities are expected to decrease through the year 2000. All activities are expected to retain their respective rankings of popularity through the year 2000.

CURRENT AND PROJECTED RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970				1975				1980				1990				2000			
	PART. DAYS	RANK	REG. 5 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 5 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 5 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 5 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 5 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH
Swimming	536	1	16.26	27.41	773	1	23.32	36.52	1,059	1	31.76	47.17	1,780	1	53.21	75.28	2,679	1	80.95	110.14
Child's Play	482	3	14.62	14.08	665	2	20.06	17.72	897	2	26.90	22.00	1,472	2	44.00	32.20	2,185	2	66.02	43.99
Baseball/Softball	59	8	1.79	2.78	77	8	2.32	3.19	96	9	2.88	3.59	141	9	4.22	4.41	192	9	5.80	5.22
Picnicking	139	6	4.22	5.72	155	7	4.68	5.66	171	7	5.13	5.66	206	8	6.16	5.61	244	8	7.37	5.64
Football/Soccer	24	13	1.73	1.43	24	13	.72	1.42	25	14	.75	1.41	26	14	.78	1.39	26	14	.79	1.38
Golf	159	5	4.82	3.92	222	6	6.70	4.98	297	6	8.91	6.16	475	6	14.20	8.96	681	6	20.58	12.07
Tennis	36	11	1.09	6.06	38	12	1.15	9.21	39	12	1.17	11.49	41	12	1.23	16.07	43	13	1.30	21.46
Basketball	5	15	.15	1.60	5	15	.15	2.59	5	15	.15	3.57	5	15	.15	5.52	5	15	.15	7.53
Walking	220	4	6.67	18.21	513	4	15.47	23.09	809	3	24.27	29.20	1,399	3	41.82	39.89	1,966	3	59.40	50.31
Bicycling	93	7	2.82	20.30	328	5	9.89	32.77	564	5	16.92	45.25	1,039	4	31.06	68.44	1,494	4	45.14	95.49
Nature Study	1	16	.03	.72	1	16	.06	1.67	2	16	.06	2.64	3	16	.06	4.63	4	16	.06	6.70
Fishing	59	8	1.79	1.80	62	10	1.87	1.88	66	11	1.98	1.97	71	11	2.12	2.13	76	11	2.30	2.30
Boating	29	12	.88	.88	53	11	1.60	1.60	77	10	2.31	2.31	125	10	3.74	3.74	171	10	5.17	5.17
Skiing	14	14	.42	.42	21	14	.63	.62	27	13	.81	.82	41	12	1.23	1.22	54	12	1.63	1.81
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	49	10	1.49	2.25	75	9	2.26	2.34	108	8	3.24	2.50	210	7	6.28	2.70	383	7	11.57	3.01
Dr. for Pleas.	514	2	15.59	13.38	576	3	17.38	13.52	641	4	19.23	13.67	783	5	23.41	13.86	934	5	28.22	14.10
TOTAL	2,419		73.37	120.96	3,588		108.26	158.78	4,883		146.47	199.41	7,817		233.67	286.05	11,137		336.45	386.32

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000	ACTIVITY	1970	1975	1980	1990	2000
Swimming	11	11	11	11	11	Swimming	547	784	1,070	1,791	2,690
Child's Play	2	2	2	2	2	Child's Play	484	667	899	1,474	2,187
Baseball/Softball	*	*	*	*	*	Baseball/Softball	59	77	96	141	192
Picnicking	4	4	4	4	3	Picnicking	143	159	175	210	247
Football/Soccer	2	2	2	2	2	Football/Soccer	26	26	27	28	28
Golf	14	14	14	13	13	Golf	173	236	311	488	694
Tennis	*	*	*	*	*	Tennis	36	38	39	41	43
Basketball	*	*	*	*	*	Basketball	5	5	5	5	5
Walking	1	1	1	1	1	Walking	221	514	810	1,400	1,967
Bicycling	*	*	*	*	*	Bicycling	93	328	564	1,039	1,494
Nature Study	*	*	*	*	*	Nature Study	1	1	2	3	4
Fishing	19	19	18	18	18	Fishing	78	81	84	89	94
Boating	*	*	*	*	*	Boating	29	53	77	125	171
Skiing	*	*	*	*	*	Skiing	14	21	27	41	54
Surfing	---	---	---	---	---	Surfing	---	---	---	---	---
Sightseeing	34	34	34	34	33	Sightseeing	83	109	142	244	416
Dr. for Pleas.	8	8	8	8	8	Dr. for Pleas.	522	584	649	791	942
TOTAL	95	95	94	93	91	TOTAL	2,514	3,683	4,977	7,910	11,228

Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the Wichita Falls Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with the 1971 recreation opportunities^{2/} available in the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to the subsections of the metro characterized by residents having similar incomes and ethnic backgrounds. Particular attention was given to those subsections expected to undergo relatively rapid population growth and physical expansion in the future.

Conclusions reached from analyzing the distribution of recreation opportunities within the metropolitan area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist.

In the discussions that follow, results of the distribution analysis of parks within subsections of the metro are presented. Then, estimates of current and future requirements for selected recreation facilities are presented, and qualified by conclusions reached from the distribution analysis of recreation facilities within subsections of the Wichita Falls Metro Area.

PARK DISTRIBUTION ANALYSIS

In analyzing the availability and distribution of parks in the Wichita Falls Metro, several characteristics were considered: changes in population (or trends in general, 1960 to 1970), areas of the metro which were expected to undergo relatively major expansion, and the dispersion of existing parks among the income/ethnic subsections of the metro. From these interrelated characteristics, general conclusions were reached with respect to future park developments for the metro area.

Population growth affected current and future participation estimates used to project recreation resource requirements. Projections of population growth indicate that the 1970 population of 94,546 in Wichita Falls will remain relatively constant through the year 2000. Information provided by urban recreation planners of the area shows that the major direction of future urban expansion was expected to occur in the extreme southwestern edge along U.S. Highway 82 or Seymour Road as illustrated by the arrow on the following map titled "Predominant Ethnic Background and Income Subsections."

A total of nine subsections was reported by urban planners in 1971. The delineated subsections characterize the homogeneous residential, or demographic patterns existing in 1971 by income and ethnic background. Two of the nine were

^{1/} "Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

^{2/} "Current" recreation opportunities refers to computed figures derived from the numbers of publicly-administered facilities by type available within the metro area in 1971.

PREDOMINANT ETHNIC BACKGROUND AND INCOME SUBSECTIONS

LOW INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS LESS THAN \$5,000)

-  PREDOMINANTLY MEXICAN-AMERICAN
-  PREDOMINANTLY BLACK
-  PREDOMINANTLY ANGLO

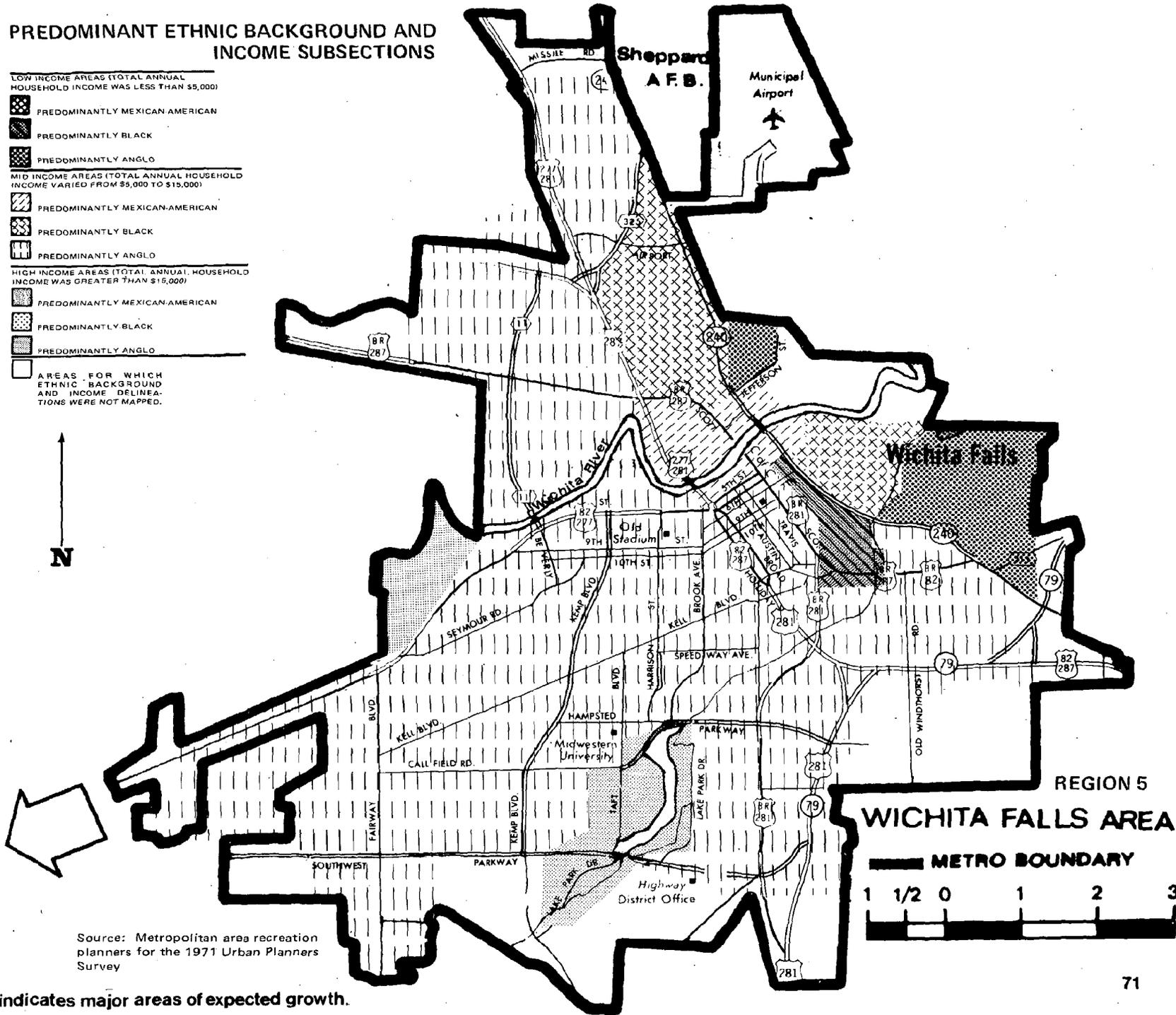
MID INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME VARIED FROM \$5,000 TO \$15,000)

-  PREDOMINANTLY MEXICAN-AMERICAN
-  PREDOMINANTLY BLACK
-  PREDOMINANTLY ANGLO

HIGH INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS GREATER THAN \$15,000)

-  PREDOMINANTLY MEXICAN-AMERICAN
-  PREDOMINANTLY BLACK
-  PREDOMINANTLY ANGLO

AREAS FOR WHICH ETHNIC BACKGROUND AND INCOME DELINEATIONS WERE NOT MAPPED.



Source: Metropolitan area recreation planners for the 1971 Urban Planners Survey

Note: Arrow indicates major areas of expected growth.

low-income subsections, both predominantly Anglo and located in the northeastern quadrant of the metro. There were four middle-income subsections one of which, the Anglo subsection, comprised seventy to eighty percent of the entire metro area. In the northeastern quadrant of Wichita Falls were two middle-income Black subsections on either side of a middle-income Mexican-American subsection. The remaining three high-income subsections were predominantly characterized by Anglo residents. One was located on the west central periphery, another was centrally located southwest of the core area on either side of the Southwest Parkway, and the remaining subsection was east and immediately adjacent to the core area.

An analysis of parks dispersion among the subsections was conducted by comparing the "Dispersion of Parks by Type" map with the "Predominant Ethnic Background and Income Subsections" map. Overall, the distribution of parks appeared adequate. However, two subsections had no parks of any type: the large low-income Anglo area east of the central business district and the west central high-income Anglo subsection west of the intersection of Highways 11 and 82. The few open-land parks were located in the northern half of the metro area leading to the conclusion that consideration should be given to the southern half when additions of open land parks are planned. The major growth area in the southwest, along Highway 82, contained very few parks. In general, the metro appeared to need additional parks in the east, northwest, and southwest subsections.

In addition to maintaining an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities in parks is also an important consideration. An analysis of the current and future requirements for selected recreational facilities and the current dispersion of facilities in the Wichita Falls Metro is presented in the following discussions.

FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. Then, an analysis of the dispersion of existing facilities among the predominant income/ethnic background subsections and the major growth areas of the metro was conducted. Conclusions reached from the facility dispersion analysis were then used to qualify the facility requirement estimates, particularly in those cases where no additional facilities were estimated as being needed within the metropolitan area. Usually, special note is made where growth areas appeared to have limited facilities. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the urban volume. In the discussion that follows, resource requirements for recreational facilities are generally referred to by units of the most important feature necessary to allow participation. For example, when a requirement is shown for swimming pools, features such as a bathhouse, cleaning and filtering system, and other support features are implied when a requirement for the major facility is shown.

Swimming

The Wichita Falls Metro Area had two public pools in 1971 for a combined total of 250 square yards. Each square yard provides approximately 150 days of swimming opportunity per year; therefore, the two pools provided about 38,000 opportunity days. The estimated participation in 1970 was 514,000 days, leaving a deficit of 476,000 days or an additionally required 3,167 square yards. It was estimated that an additional 1,493 square yards would be required to provide for the 1975 participation. By 1980 another 1,793 square yards will bring the cumulative requirements to 6,453 square yards of pools. A substantial increase was shown for 1990 and 2000 with incremental additions of 4,520 and 5,634 square yards, respectively.

The two existing pools were in the middle-income Mexican-American neighborhood in the north central edge of the metro and within a few blocks of each other. This may indicate that additional facilities were especially needed across the entire central portion of the metro with special consideration due the eastern and southern extremities.

Child's Play

There were twenty-five parks in operation in 1971, each with one acre of playground area, providing a total of approximately 691,000 days of recreation opportunity per year. Each acre was calculated to provide 27,623 opportunity days per year. The comparison of total days of opportunity to the projected demand, as shown in the Wichita Falls recreational resource requirements table indicates that Wichita Falls should have a surplus of opportunity days through 1975. By 1980 the demand should surpass the supply and eight additional acres will be needed. Requirements will grow incrementally by 20 acres for 1990 and 26 acres for the year 2000. The cumulative requirement for all planning horizon years is fifty-four. The existing playgrounds were located throughout the metro with only three small income/ethnic subsections of the metro lacking facilities. Two subsections were low-income Anglo on the north central and north-eastern edges, and the other was high-income Anglo located in the west central extremity of the metropolitan area. These subsections with no facilities and the major growth area in the extreme southwestern edge of the city should be considered when more playgrounds are developed.

Baseball/Softball

The Wichita Falls Metro Area had twenty baseball/softball fields in 1971. One field should provide 13,804 opportunity days; thus, the total days of opportunity for Wichita Falls was over 276,000. This number should meet the needs of the metro area through the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing an equitable distribution relative to growth areas and the various income-ethnic subsections.

Picnicking

With a conversion standard of 1,702 days of opportunity per table per year, the 150 picnic tables within the metropolitan area should provide over 255,000 opportunity days. This was expected to be sufficient to meet the projected demand through the year 2000. The dispersion of tables appeared to be quite adequate with two-thirds of them in the one large middle-income Anglo subsection. When planning new picnicking areas, the major growth areas should be considered.

Football/Soccer

The nine football/soccer fields available in 1971 provided 7,224 days of opportunity each, for a combined total of 65,000 days. The 1970 participation was only 26,000 days, and in the year 2000 participation is projected to be no higher than 28,000 days. Therefore, the nine fields should adequately handle all the projected demand. Although a dispersion analysis was not possible from available information, consideration should be given to providing an equitable distribution relative to growth areas and the various income-ethnic subsections.

Golf

In 1971 Wichita Falls had one publicly administered eighteen hole golf course; it was located in the south central portion of the large middle-income Anglo subsection of the metro closely proximal to the south central high-income Anglo subsection. Each golf hole was estimated to provide 4,047 days of recreation opportunity annually. An eighteen hole golf course would then provide 73,000 days of recreation opportunity. The participation for 1970 indicated a need for twenty-five additional holes. For the planning horizon years 1975, 1980, 1990, and 2000 incremental additions of 15, 19, 44, and 50, respectively, will be needed to meet expected increases in golfing participation. Any future developments should be considered for subsections in the northeast and northwest.

Tennis

The 75,000 opportunity days provided by the twenty-eight public tennis courts available in 1971 (each court provides about 2,694 opportunity days per year) are apparently adequate to meet facility requirements of Wichita Falls tennis players through the year 2000. However, dispersion analysis of these facilities indicates that the only tennis courts available were located in Jaycee Park in the extreme southeast and in Lucy Park in the extreme north central portion of the metro. Since all courts were located in the large middle-income Anglo subsection, future developments should most likely be considered in the northeast in the two middle-income Black, two low-income Anglo, one middle-income Mexican-American, and one low-income Black subsections.

Basketball

The five basketball courts in the metropolitan area should each provide 8,795 opportunity days for a total of 44,000 days per year. The Wichita Falls recreation resource requirement table makes it apparent that the five courts should

be sufficient to meet expected demands through the year 2000. Analysis of the dispersion of basketball facilities was not possible, but adequate distribution is an important consideration in determining future requirements, as is consideration of adequate facilities to support the expanding residential areas of the metro.

Trails Activities

With an urban trails facilities standard of 8,464 opportunity days per mile per year, the four miles of trails (some of which were multiple use) available in 1971 should provide about 34,000 opportunity days. This should have been adequate for the 1970 demand; but by 1975, an additional four miles should be added and by 1980, another five miles of trails would bring the cumulative requirements total to nine miles. Incremental additions are projected to amount to ten miles in 1990 and nine miles in 2000. Overall, a total of twenty-eight miles of combined additional trails should be added to the existing four miles.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly-administered park and recreation areas. It is likely, however, that as additional trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of additional resources required may be conservative in the long run and should be considered as minimum estimates. In addition to the expectations for increases in participation in trail and related activities at publicly-administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local neighborhoods, on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, Skiing

Surface Acres - Freshwater Lakes (Boating, Boat Fishing, Skiing)

A total of 2,330 surface acres of freshwater lakes was located within the Wichita Falls Metropolitan Area in 1971. Using participation patterns of households recreating in the urban areas, it was estimated that boating totaled 29,000 days, boat fishing 16,000 days, and skiing 14,000 days for a total of 59,000 days in 1970. Comparing estimated participation with the opportunities provided by the surface acres existing in 1971 indicates that existing freshwater lakes should provide adequate opportunities through the year 2000.

Freshwater Boat Ramps^{1/}

No publicly-administered freshwater boat lanes were reported for the metropolitan area in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using freshwater boat ramp facilities to gain access to the water if ramps were available, it was calculated that two boat ramps were needed in 1970. Projected increases in freshwater boat fishing, skiing, and boating participation should require one additional freshwater boat ramp in 1975, none in 1980, two in 1990, and one in the year 2000, bringing the cumulative resource requirement to six ramps in 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, the provision of freshwater boat ramps required could be constructed on existing freshwater lakes if the lakes are available for water related activities.

Summary of Facilities Requirements

Swimming areas and golf courses are the only facilities which were found to be required in each planning horizon year. In 1975 the demand for trails should exceed the supply. In 1980 more playgrounds will be needed, and the increase in demand should continue for both activities through all remaining planning horizon years. Both swimming pools were in the small middle-income Mexican-American subsections near the intersection of Highway 240 and the Big Wichita River. The location of these two pools is such that most of the metro residents may have limited or difficult access to a public pool. The single municipal golf course was located in the district park on the south central edge of the metro. When planning for new golf courses and swimming pools, insuring an adequate dispersion should be an important consideration. The dispersion of trails cannot be discerned from available data, but adequate dispersion should be considered when additional trails are provided. Playground areas were well dispersed throughout the metro, except for three small subsections of the metro in the far north central (low-income Anglo), northeastern (low-income Anglo), and west central (middle-income Black) areas which had no recreational facilities for any activity. Although surface acres of fresh water for boating, fishing, and skiing were projected to be adequate to the year 2000, several boat ramps may be needed to accommodate demand. Public facilities for basketball, baseball, picnicking, football, and tennis were projected to be adequate through the year 2000. For all activities, adequate distribution of facilities should be considered with emphasis placed on the major growth area in the extreme southwest near Lake Wichita.

^{1/} In calculating freshwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE RESOURCES REQUIRED
	Swimming (Pools)	514 ^{1/}	38	476		3,167 square yards ^{2/}	3,167 square yards ^{2/}
	Child's Play (Playgrounds)	484	691		207	0 acres	0 acres
	Baseball/Softball	59	276		217	0 fields	0 fields
	Picnicking	143	255		112	0 tables	0 tables
	Football/Soccer	26	65		39	0 fields	0 fields
	Golf	173	73	100		25 holes	25 holes
	Tennis	36	75		39	0 courts, dbl.	0 courts, dbl.
	Basketball	5	44		39	0 courts, full	0 courts, full
1970	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	59	972		913	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	47	0	47		2 ramps ^{3/}	2 ramps ^{3/}
	Trails Activities:						
	Walking	23 ^{4/}				0 miles	0 miles
	Bicycling	4 ^{4/}				0 miles	0 miles
	Nature Study	* ^{4/}				0 miles	0 miles
	Combined Walking, Bicycling, Nature Study	27 ^{4/}	34		7	0 miles	0 miles
	ACTIVITY						
	Swimming (Pools)	737 ^{1/}	38	699		4,660 square yards ^{2/}	1,493 square yards ^{2/}
	Child's Play (Playgrounds)	667	691		24	0 acres	0 acres
	Baseball/Softball	77	276		199	0 fields	0 fields
	Picnicking	159	255		96	0 tables	0 tables
	Football/Soccer	26	65		39	0 fields	0 fields
	Golf	236	73	163		40 holes	15 holes
	Tennis	38	75		37	0 courts, dbl.	0 courts, dbl.
	Basketball	5	44		39	0 courts, full	0 courts, full
1975	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	91	972		881	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	68	0	68		3 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	54 ^{4/}				3 miles	3 miles
	Bicycling	13 ^{4/}				1 mile	1 mile
	Nature Study	* ^{4/}				<1 mile	<1 mile
	Combined Walking, Bicycling, Nature Study	67 ^{4/}	34	33		4 miles	4 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	1,006 ^{1/}	38	968		6,453 square yards ^{2/}	1,793 square yards ^{2/}
	Child's Play (Playgrounds)	899	691	208		8 acres	8 acres
	Baseball/Softball	96	276		180	0 fields	0 fields
	Picnicking	175	255		80	0 tables	0 tables
	Football/Soccer	27	65		38	0 fields	0 fields
	Golf	311	73	238		59 holes	19 holes
	Tennis	39	75		36	0 courts, dbl.	0 courts, dbl.
	Basketball	5	44		39	0 courts, full	0 courts, full
1980	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	122	972		850	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	88	0			3 ramps ^{3/}	0 ramps ^{3/}
	Trails Activities:						
	Walking	85 ^{4/}				7 miles	4 miles
	Bicycling	23 ^{4/}				2 miles	1 mile
	Nature Study	* ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	108 ^{4/}	34	74		9 miles	5 miles
	<u>ACTIVITY</u>						
	Swimming (Pools)	1,684 ^{1/}	38	1,646		10,973 square yards ^{2/}	4,520 square yards ^{2/}
	Child's Play (Playgrounds)	1,474	691	783		28 acres	20 acres
	Baseball/Softball	141	276		135	0 fields	0 fields
	Picnicking	210	255		45	0 tables	0 tables
	Football/Soccer	28	65		37	0 fields	0 fields
	Golf	488	73	415		103 holes	44 holes
	Tennis	41	75		34	0 courts, dbl.	0 courts, dbl.
	Basketball	5	44		39	0 courts, full	0 courts, full
1990	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	185	972		787	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	132	0	132		5 ramps ^{3/}	2 ramps ^{3/}
	Trails Activities:						
	Walking	147 ^{4/}				15 miles	8 miles
	Bicycling	42 ^{4/}				4 miles	2 miles
	Nature Study	3 ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	192 ^{4/}	34	158		19 miles	10 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE
	Swimming (Pools)	2,529 ^{1/}	38	2,491		16,607 square yards ^{2/}	5,634 square yards ^{2/}
	Child's Play (Playgrounds)	2,187	691	1,496		54 acres	26 acres
	Baseball/Softball	192	276		84	0 fields	0 fields
	Picnicking	247	255		8	0 tables	0 tables
	Football/Soccer	28	65		37	0 fields	0 fields
	Golf	694	73	621		153 holes	50 holes
	Tennis	43	75		32	0 courts, dbl.	0 courts, dbl.
	Basketball	5	44		39	0 courts, full	0 courts, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	245	972		727	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	172	0	172		6 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	207 ^{4/}				21 miles	6 miles
	Bicycling	60 ^{4/}				6 miles	2 miles
	Nature Study	4 ^{4/}				1 mile	1 mile
	Combined Walking, Bicycling, Nature Study	271 ^{4/}	34	237		28 miles	9 miles

Note: Asterisks indicate that projected annual activity days were less than 500.

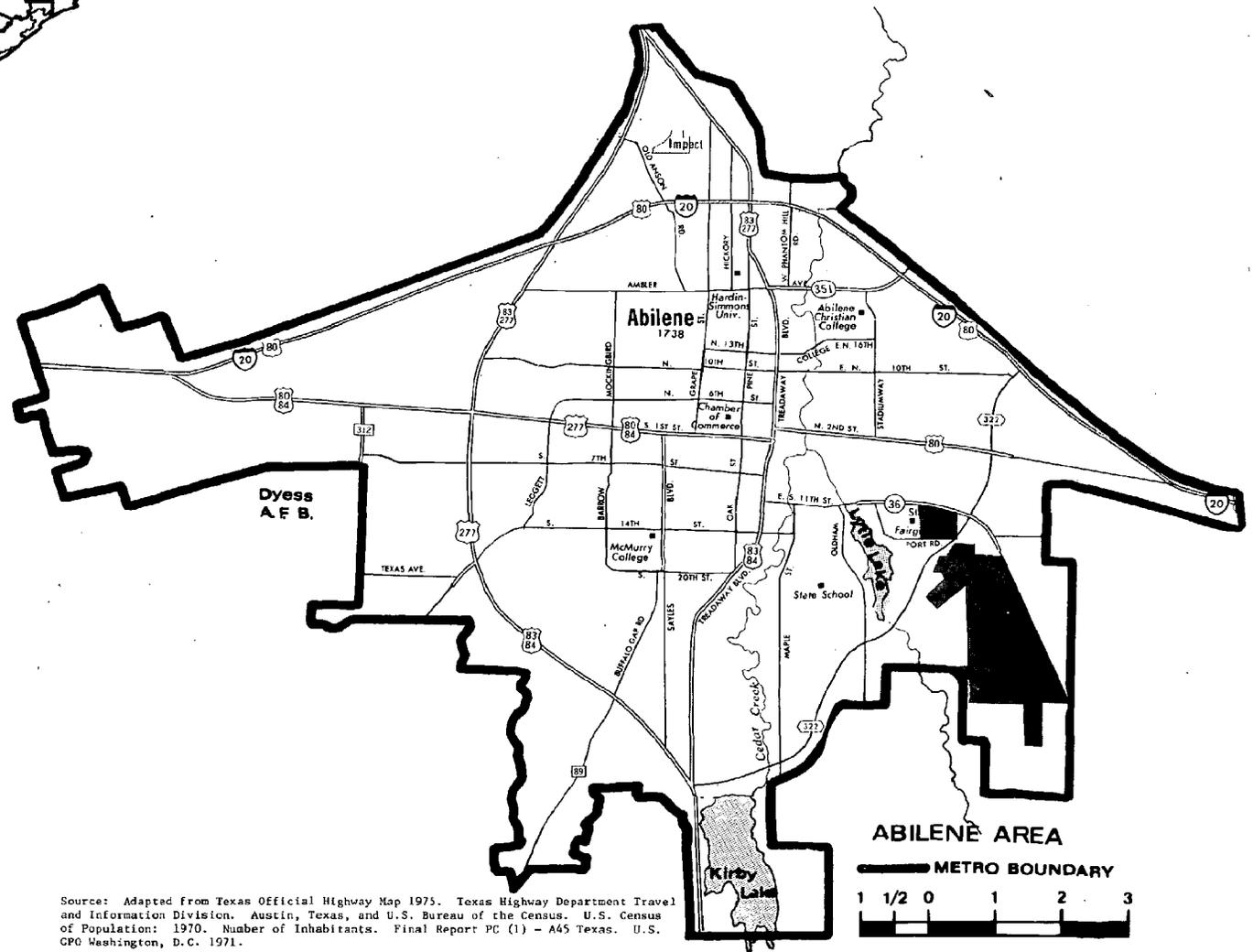
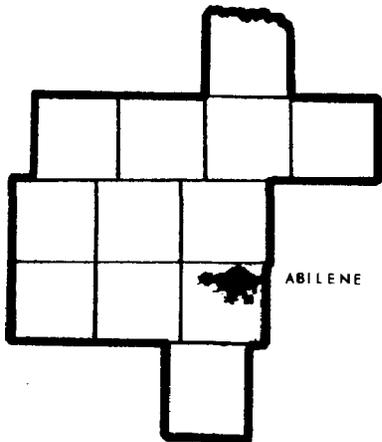
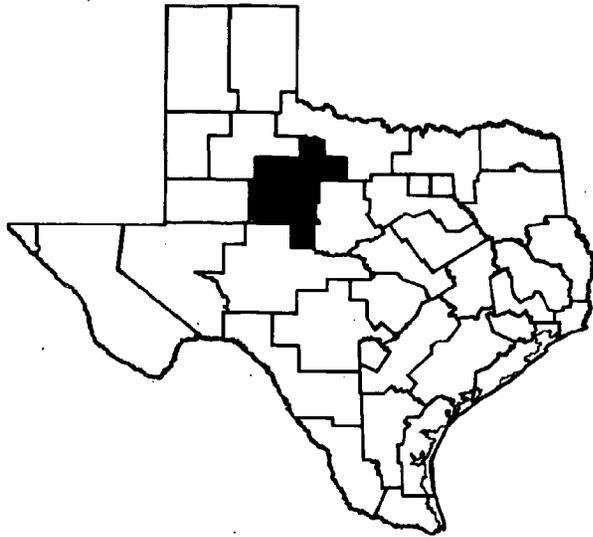
^{1/} Includes only swimming participation occurring in swimming pools, 94 percent of the total in urban areas.

^{2/} Designated freshwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.

^{3/} Assumes 2.0 lanes per ramp.

^{4/} Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

Region 7



Source: Adapted from Texas Official Highway Map 1975. Texas Highway Department Travel and Information Division. Austin, Texas, and U.S. Bureau of the Census. U.S. Census of Population: 1970. Number of Inhabitants. Final Report PC (1) - A45 Texas. U.S. GPO Washington, D.C. 1971.

Abilene, the county seat of Taylor County, was established by cattlemen as a livestock shipping point on the Texas and Pacific Railroad in 1881. The town soon became a major sheep and wool producing area as well and is now a center for various agricultural pursuits. Oil production is also important to Abilene's economy. Other industries in Abilene process dairy and livestock products; while clothing, watches, and aircraft parts are the chief manufacturing industries. Major annual events in Abilene include the Abilene Fat Stock Show (January), the Abilene Festival of Arts (April), and the West Texas Fair (September). Abilene is the home of Abilene Christian College, Hardin-Simmons University, McMurry College, and Dyess Air Force Base. Abilene has two museums: the Abilene Fine Arts Museum and the American Heritage Museum.

POPULATION

1970 Metro Area Population: 89,653

Change 1960-1970: -1%

Race Composition:

White 93% ^{1/}

Negro 6%

Other 1%

Age Composition (years):

13 or less 26%

14 - 20 15%

21 - 44 32%

45 - 64 18%

65 and over 9%

ECONOMY

Agribusiness

Food Products

Manufacturing

Oil

^{1/} Includes persons of Mexican and/or Spanish descent.

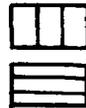
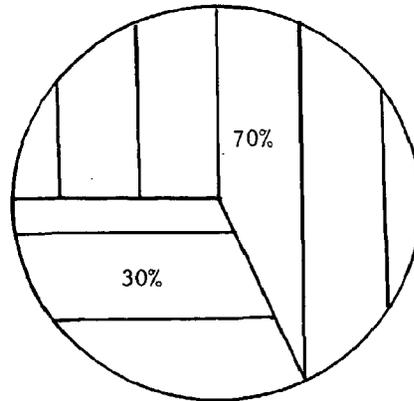
REGION 7

CITY SIZE: METRO

PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

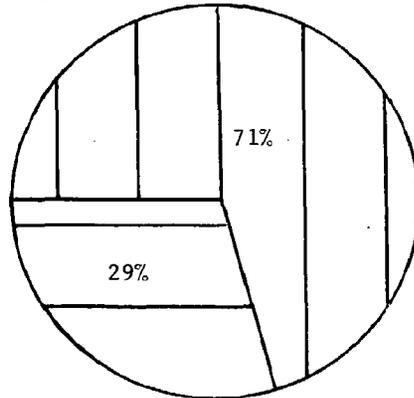
REGION
7
METRO



DEVELOPED LAND

UNDEVELOPED LAND

STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 7 METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	352	1,307
Undeveloped Land	153	536
Total Land	505	1,843
Water Within or Adjacent	2	1,006
Total Land and Water	507	2,849

Abilene has a total of 505 acres of land set aside as park and recreation areas. In addition, 2 surface acres of water either within or adjacent to these parks were reported.

Of the total land acreage, 352 acres are developed with facilities, leaving 153 acres available for future development. With 70 percent of the land acreage currently developed, Abilene is about equal to the Statewide Metro average of 71 percent.

REGION 7

CITY SIZE: METRO

PARKS AND ACREAGE BY TYPE OF PARK

	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	5.000	7.000	2.000	1.000	15.000	72.000
Parks Per Thousand	.056	.078	.022	.011	.167	.267
People Per Park	17,931.000	12,808.000	44,827.000	89,653.000	5,977.000	3,754.000
.....						
Land Acres	186.000	57.000	255.000	7.000	505.000	1,843.000
Acres Per Thousand	2.074	.636	2.844	.078	5.633	6.864
People Per Acre	482.000	1,573.000	352.000	12,808.000	178.000	146.000

Of the 15 parks in Abilene, 7 are Community Parks and 5 are District Parks. Only 2 Specialty Parks and 1 Open Land Park were reported. However, the acreage figures show that the 2 Specialty Parks occupy more than one-half of the total acreage. District Parks follow with 186 acres, Community Parks total 57 acres, while the one Open Land Park contains 7 acres. The dispersion of the four types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the population of Abilene, .167 parks per 1,000 and 5.633 acres per 1,000 population exist.

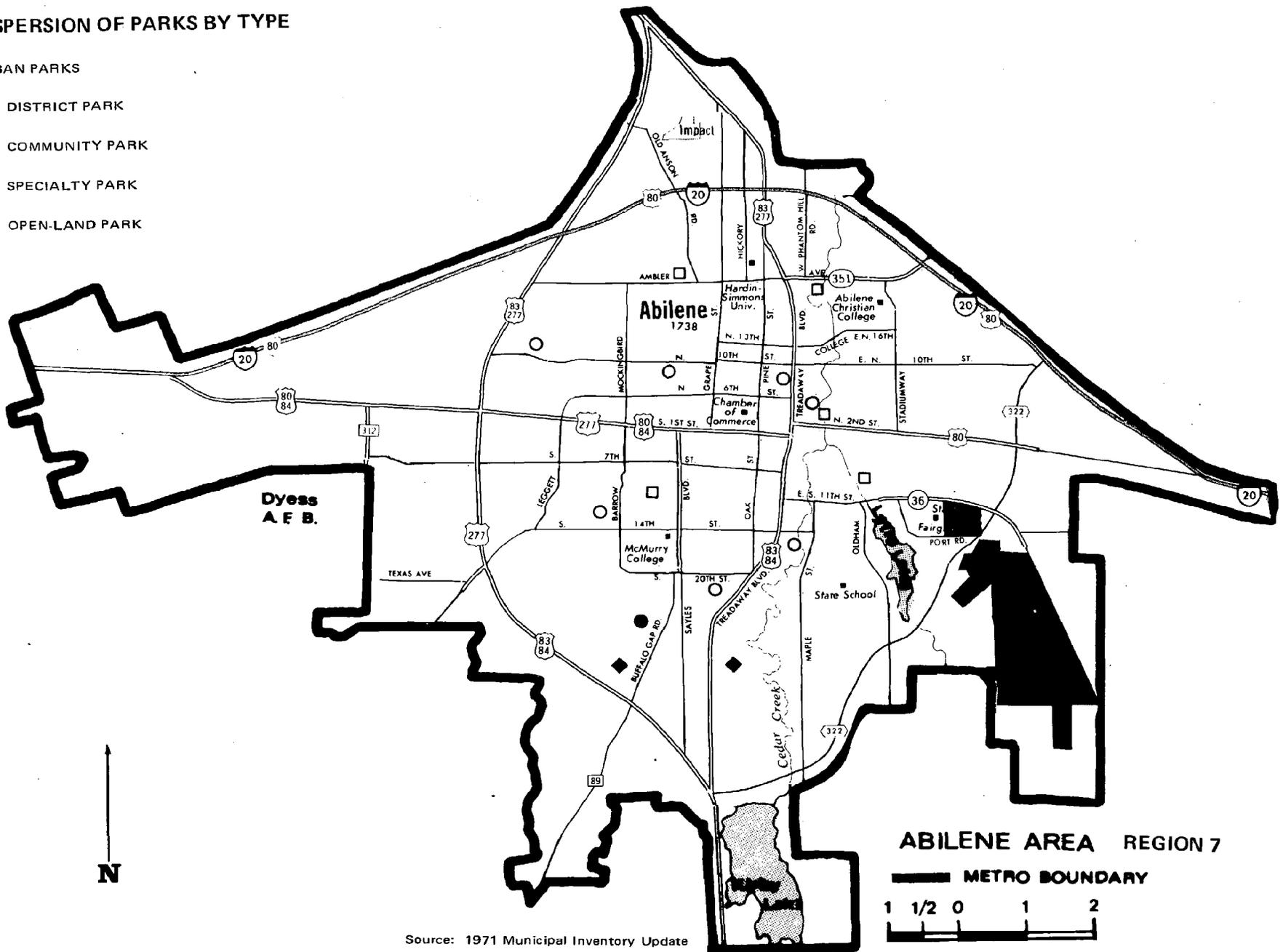
Another way to present this data is that 5,977 people share each park while 178 people must share each acre of park land.

With only .167 parks per 1,000, Abilene ranks well below the Statewide Metro average. The 5.633 acres per 1,000 also gives Abilene a figure below the Statewide Metro average for acres per 1,000.

DISPERSION OF PARKS BY TYPE

URBAN PARKS

- DISTRICT PARK
- COMMUNITY PARK
- ◆ SPECIALTY PARK
- OPEN-LAND PARK



Source: 1971 Municipal Inventory Update

PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 7 METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	5	5	1	11	8,150	.122	.150
Tennis Courts.....	17	0	0	17	5,274	.188	.142
Basketball Courts.....	4	3	0	7	12,808	.077	.071
Baseball/Softball Fields.....	8	4	0	12	7,471	.133	.186
Football/Soccer Fields.....	4	0	0	4	22,413	.044	.032
Picnicking:							
Parks.....	5	7	0	12	7,471	.133	.124
Tables.....	49	34	0	83	1,080	.922	1.230
Playground:							
Parks.....	5	7	0	12	7,471	.133	.170
Acres Developed.....	4	4	0	8	11,207	.088	.258
Swimming:							
Parks.....	1	0	0	1	89,653	.011	.050
Pools (Sq. Yd.).....	378	0	0	378	237	4.200	25.950
Designated Fresh Water (Sq. Yd.)...	0	0	0	0	---	---	52.242
Boating:							
Parks.....	0	0	0	0	---	---	.006
Ramp Lanes - Fresh Water.....	0	0	0	0	---	---	.008
Camping:							
Parks.....	0	0	0	0	---	---	.002
Campsites.....	0	0	0	0	---	---	.121
Fishing:							
Parks.....	2	1	0	3	29,884	.033	.013
Pier/Barge/Marina-Fresh Water (Yd.)	0	0	0	0	---	---	.049
Golfing:							
Courses.....	0	0	1	1	89,653	.011	.005
Holes.....	0	0	18	18	4,981	.200	.100
Trails:							
Parks.....	0	0	0	0	---	---	.006
Nature (Mi.).....	0	0	0	0	---	---	.009
Horseback (Mi.).....	0	0	0	0	---	---	.003
Bicycle (Mi.).....	0	0	0	0	---	---	.007
Hiking (Mi.).....	0	0	0	0	---	---	.006
Total Trails (Mi.).....	0	0	0	0	---	---	.021

PARK AND RECREATION FACILITIES BY TYPE OF PARK

CITY SIZE: METRO

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 7 METRO	STATEWIDE AVERAGE METRO AREAS
Sport Shooting:							
Parks.....	0	0	0	0	---	---	.002
Traps.....	0	0	0	0	---	---	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	0	0	0	0	---	---	.011
Miscellaneous:							
Parks.....	2	2	0	4	22,413	.044	.038
Amphitheatre Seats.....	0	0	0	0	---	---	1.077
Botanical Gardens (Acres).....	0	0	0	0	---	---	.077
Zoos (Acres).....	0	0	0	0	---	---	.051
Community/Recreation Centers.....	2	2	0	4	22,413	.044	.038

Most of Abilene's park and recreation facilities are in either the District or Community Park categories. The only types of facilities in the two Specialty Parks are for golf and games and sports. Only one swimming pool was reported and that in a District Park, while one of the Specialty Parks contains the only golf course. Four community/recreation centers exist, two in District Parks and two in Community Parks. A total of three parks have fishing waters available although no specific facilities were reported.

Of the 15 parks, 12 have facilities for picnicking, 12 have playgrounds and 11 have facilities for games and sports. The most common types of games and sports facilities are tennis with 17 courts (all in District Parks), followed by baseball/softball with 12 fields, basketball with 7 courts, and football/soccer with 4 fields.

Looking at the facilities in relation to the number of potential users we find the following:

- | | |
|---|---|
| 22,413 persons for each football/soccer field | 5,274 persons for each tennis court |
| 22,413 persons for each community/recreation center | 4,981 persons for each golf hole |
| 12,808 persons for each basketball court | 1,080 persons for each picnic table |
| 11,207 persons for each acre of playground | 237 persons for each square yard of swimming pool |
| 7,471 persons for each baseball/softball field | |

Abilene is above the Statewide Metro average for facility units per 1,000 only for tennis courts, basketball courts, football/soccer fields, golf holes and community/recreation centers, while falling below the average for baseball/softball fields, picnic tables, playground acres and square yards of swimming pools. No designated fresh water swimming area, boat ramp lanes, campsites, yards of fishing pier/barge/marina, trail miles, sport shooting facilities, amphitheatre seats, acres of botanical gardens or zoo acreage were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

ACTIVITY-FACILITY	ANNUAL DAYS AVAILABLE	DAYS PER THOUSAND POPULATION	
		REGION 7 METRO	STATEWIDE AVERAGE METRO
Swimming (Pools) - square yards	56,700	630	3,891
Child's Play - playground acres	220,984	2,455	7,137
Baseball/Softball - fields	165,648	1,841	2,577
Picnicking - tables	141,266	1,570	2,093
Football/Soccer - fields	28,896	321	235
Golf - holes	72,846	809	414
Tennis - courts, double	45,798	509	384
Basketball - courts, full	61,565	684	625
Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	2,320,621	25,785	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	0	0	103
Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	0	0	164

The Abilene Metro Area offers the most opportunity days for surface acres for freshwater boating, boat fishing and skiing, followed by child's play, baseball/softball, and picnicking. A comparison between the opportunity days per thousand population for the Abilene Metro Area and the Statewide Metro average shows that the Abilene Metro Area surpasses the statewide average for five types of facilities -- football/soccer fields, golf courses (holes), tennis courts, basketball courts, and surface acres for freshwater boating, boat fishing, and skiing. The Abilene Metro Area is below the Statewide Metro average for swimming (in pools), child's play, baseball/softball and picnicking, with no opportunity days available for freshwater boat ramps and the trails activities.

The fourteenth ranking metro area, based on population, Abilene ranked seventeenth in total participation for the year 1970. Estimates for 1970 indicate that residents and non-residents in the area spent over 2.5 million recreation days in pursuit of urban outdoor recreation opportunities available within the metro area.

Resident

Total days of participation by residents of the Abilene Metropolitan Area were estimated to be 2.3 million days in 1970 and are projected to be 3.1 million days in 1975 and 3.9 million days in 1980. These projections for the years 1975 and 1980 represent increases of 32.7 and 67.2 percent, respectively, over the 1970 participation level. Participation on a days per household basis will increase from 76.9 days in 1970 to 101.5 days in 1975, and to 127.7 days in 1980. On a comparative basis, this is significantly below the average for households in the other metropolitan areas across the State. The estimates for 1975 and 1980 indicate increases of 32.0 and 66.0 percent, respectively, over the 1970 estimate for participation on a days per household basis.

Of the activities pursued on a days per household basis, all the activities are expected to increase in participation through the year 2000. With respect to total days of participation, all 16 activities will increase in participation. When considering the ranking of activities, driving for pleasure, walking, swimming, child's play, bicycling, and golf ranked one through six in that order in total days of participation in 1970, and were projected to retain those positions in 1975 and 1980.

Non-Resident

For the urban outdoor recreation activities specified for 1970, participation within the Abilene Metropolitan Area by non-residents was estimated to total 152,000 days. Compared to the 1970 level, total participation is expected to decrease 5.3 percent (to 144,000 days) by 1975 and 10.5 percent (to 136,000 days) by 1980. Similar decreases are anticipated for the years 1990 and 2000.

In terms of days of participation for 1970, the most popular non-resident activities were: driving for pleasure, with 47,000 days; sightseeing, with 43,000 days; football, with 20,000 days; swimming, with 9,000 days; picnicking, with 8,000 days; and boating, with 6,000 days. A moderate decrease in participation for all activities except fishing and skiing is expected through the year 2000 by non-residents. Neither the character nor relative ranking of the top six activities, over that of 1970, is projected to change by the year 2000.

REGION 7

CURRENT AND PROJECTED RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

CITY SIZE: METROS

ACTIVITY	1970				1975				1980				1990				2000			
	PART.		REG. 7	STATE-																
	DAYS	RANK	METROS AVERAGE	WIDE AVERAGE	DAYS	RANK	METROS AVERAGE	WIDE AVERAGE	DAYS	RANK	METROS AVERAGE	WIDE AVERAGE	DAYS	RANK	METROS AVERAGE	WIDE AVERAGE	DAYS	RANK	METROS AVERAGE	WIDE AVERAGE
Swimming	331	3	10.89	27.41	436	4	14.23	36.52	553	3	18.01	47.17	870	3	27.26	75.28	1,194	2	38.50	110.14
Child's Play	319	4	10.50	14.08	408	5	13.32	17.72	509	4	16.58	22.00	776	4	24.31	32.20	1,044	4	33.67	43.99
Baseball/Softball	16	14	.53	2.78	19	14	.62	3.19	23	15	.75	3.59	32	14	1.00	4.41	40	13	1.29	5.22
Picnicking	114	7	3.75	5.72	125	7	4.08	5.66	139	7	4.53	5.66	173	8	5.42	5.61	200	8	6.45	5.64
Football/Soccer	35	11	1.15	1.43	35	12	1.14	1.42	36	12	1.17	1.41	39	12	1.22	1.39	39	14	1.26	1.38
Golf	115	6	3.78	3.92	145	6	4.73	4.98	178	6	5.80	6.16	260	6	8.15	8.96	334	7	10.77	12.07
Tennis	26	13	.86	6.06	27	13	.88	9.21	28	13	.91	11.49	31	15	.97	16.07	32	15	1.03	21.46
Basketball	89	8	2.93	1.60	90	9	2.94	2.59	90	9	2.93	3.57	94	10	2.94	5.52	91	10	2.93	7.53
Walking	415	2	13.65	18.21	529	2	17.26	23.09	641	2	20.87	29.20	897	2	28.10	39.89	1,095	3	35.31	50.31
Bicycling	289	5	9.51	20.30	626	1	20.43	32.77	963	1	31.36	45.25	1,699	1	53.23	68.44	2,329	1	75.10	95.49
Nature Study	1	16	.03	.72	1	16	.03	1.67	2	16	.07	2.64	3	16	.09	4.63	4	16	.13	6.70
Fishing	55	10	1.66	1.80	58	10	1.89	1.88	60	11	1.95	1.97	68	11	2.13	2.13	71	11	2.29	2.30
Boating	27	12	.82	.88	49	11	1.60	1.60	71	7	2.31	2.31	119	9	3.73	3.74	160	9	5.16	5.17
Skiing	13	15	.39	.42	19	15	.62	.62	25	14	.81	.82	39	12	1.22	1.22	50	12	1.61	1.81
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	71	9	2.34	2.25	94	8	3.07	2.34	130	8	4.23	2.50	235	7	7.36	2.70	381	6	12.29	3.01
Dr. for Pleas.	429	1	14.12	13.38	450	3	14.69	13.52	473	5	15.40	13.67	533	5	16.70	13.86	558	5	17.99	14.10
TOTAL	2,345		76.91	120.96	3,111		101.53	158.78	3,921		127.68	199.41	5,868		183.83	286.05	7,622		245.78	386.32

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000	ACTIVITY	1970	1975	1980	1990	2000
Swimming	9	9	8	8	8	Swimming	340	445	561	878	1,202
Child's Play	1	1	1	*	*	Child's Play	320	409	510	776	1,044
Baseball/Softball	2	2	2	1	1	Baseball/Softball	18	21	25	33	41
Picnicking	8	7	7	7	6	Picnicking	122	132	146	180	205
Football/Soccer	20	19	18	17	17	Football/Soccer	55	54	54	56	56
Golf	5	5	4	4	4	Golf	120	150	182	264	338
Tennis	*	*	*	*	*	Tennis	26	27	28	31	32
Basketball	2	2	2	1	1	Basketball	91	92	92	95	92
Walking	4	4	4	4	3	Walking	419	533	645	901	1,098
Bicycling	*	*	*	*	*	Bicycling	289	626	963	1,699	2,329
Nature Study	*	*	*	*	*	Nature Study	1	1	2	3	4
Fishing	1	1	1	1	1	Fishing	56	59	61	69	72
Boating	6	5	5	5	5	Boating	33	54	76	124	165
Skiing	4	4	4	4	4	Skiing	17	23	29	43	54
Surfing	---	---	---	---	---	Surfing	---	---	---	---	---
Sightseeing	43	41	38	36	36	Sightseeing	114	135	168	271	417
Dr. for Pleas.	47	44	42	39	39	Dr. for Pleas.	476	494	515	572	597
TOTAL	152	144	136	127	125	TOTAL	2,497	3,255	4,057	5,995	7,747

Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the Abilene Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with the current recreation opportunities^{2/} available in the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to subsections of Abilene characterized by residents having similar incomes and ethnic backgrounds. Particular attention was given to those subsections expected to undergo relatively rapid population growth and physical expansion in the future.

Conclusions reached from analyzing the distribution of recreation opportunities within the metropolitan area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist.

In the discussions that follow, results of the distribution analysis of parks within subsections of the Abilene Metro Area are presented. Then, estimates of current and future requirements for selected recreational facilities are presented, and are qualified by conclusions reached from the distribution analysis of recreational facilities within subsections of the Abilene Metro Area.

PARK DISTRIBUTION ANALYSIS

In analyzing the availability and distribution of parks in the Abilene Metro Area, several characteristics were considered: changes in population (or trends in general, 1960 to 1970), areas of the metro which were expected to exhibit relatively major expansion, and the dispersion of existing parks among the income/ethnic subsections of the metro. From these interrelated characteristics general conclusions were reached with respect to future park developments for the metro area.

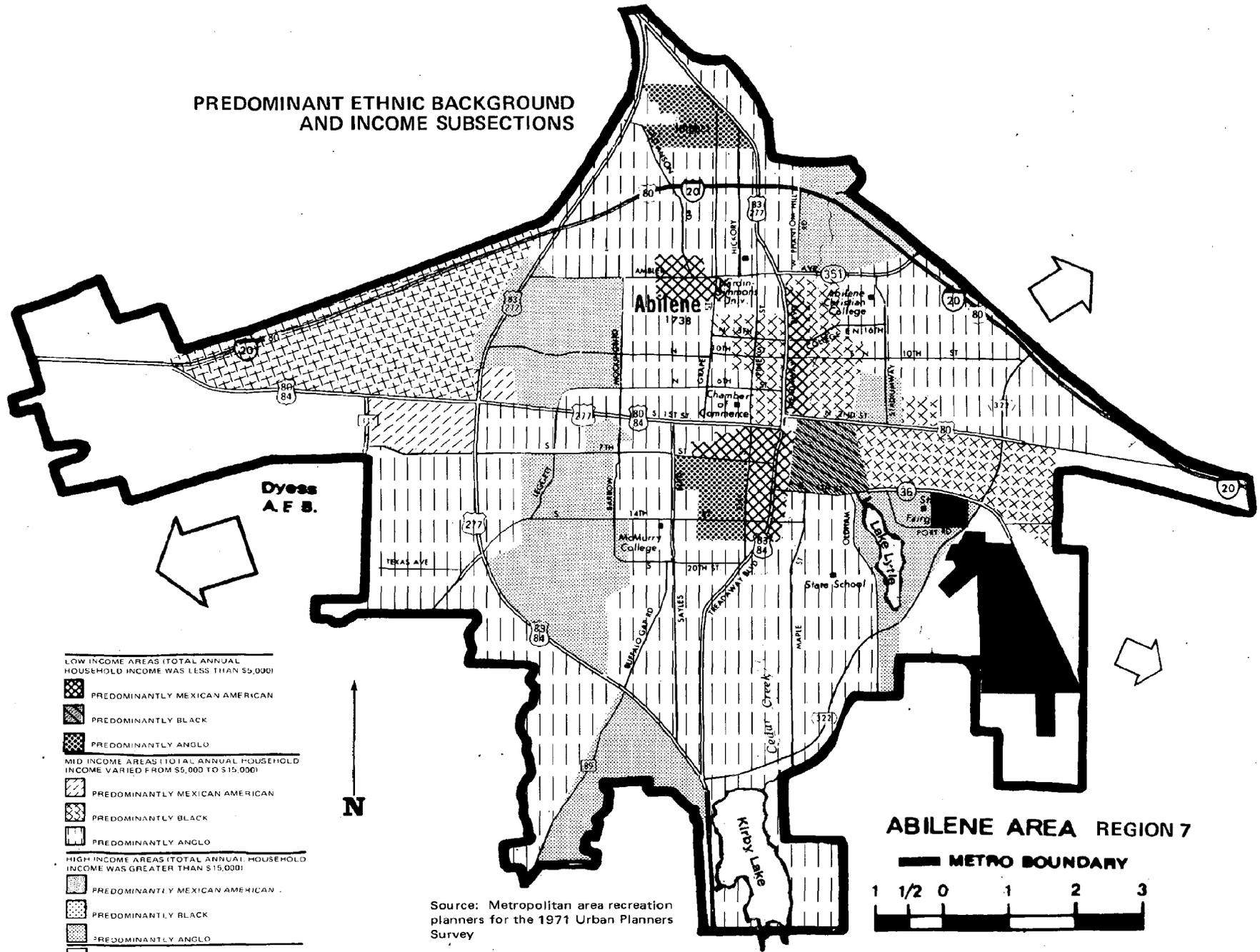
Population trends affected estimations of future recreation participation. Projections of population growth for the Abilene Metro indicated that the 1970 population of 89,653 would increase to 92,412 persons by the year 2000. In addition, information provided by urban recreation planners of the area shows that major directions of future urban expansion were expected to occur (illustrated by arrows of decreasing size on the following map, titled "Predominant Ethnic Background and Income Subsections") in the southwest--near Dyess Air Force Base; in the northwest--in the general vicinity of State Highway 351; and in the southeast--around State Highway 36.

For the Abilene Metropolitan Area, local metro area planners delineated nineteen subsections which are indicated on the map titled "Predominant Ethnic Background and Income Subsections". The delineated subsections characterize the homogeneous residential, or demographic, patterns existing in 1971 by two major socio-economic factors.

^{1/} "Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

^{2/} "Current" recreation opportunities refers to computed figures derived from the numbers of publicly administered facilities by type available within the metro area in 1971.

PREDOMINANT ETHNIC BACKGROUND AND INCOME SUBSECTIONS



Source: Metropolitan area recreation planners for the 1971 Urban Planners Survey

Note: Arrows indicate major areas of expected growth.

There were six low-income subsections reported. The two small Anglo subsections were located in the central core area and in the north central area north of Interstate Highway 20. The single small Black subsection was southeast of the core area, and the three small low-income Mexican-American subsections were located in the vicinity of the central core area. Seven of the subsections were characterized by middle-income residents making up well over half of the metro area. One Anglo subsection comprised the majority of the southern half and extended all the way through the north central portion of the metro. The other Anglo subsection was northeast of the core area. There were four middle-income Black subsections, three near the eastern core area and one in the northwestern quadrant toward Dyess Air Force Base and the western growth area. Also toward the air base was a middle-income Mexican-American subsection immediately south of the mid-income Black area. Six high-income Anglo subsections were located around, but not immediately adjacent to, the central core area with one approximately three miles south near Kirby Lake.

An analysis of parks dispersion among the subsections was conducted by comprising the "Dispersion of Parks by Type" map with the "Predominant Ethnic Background and Income Subsections" map. Overall, parks appeared to be adequately distributed in the core area of the metro. Ten subsections had no publicly available urban parks of any type. Both low-income Anglo subsections and the low-income Mexican-American subsection just south of the core area had no parks. Four middle-income subsections were completely devoid of parks, the northeastern Anglo section, the most eastern and the most western Black subsections, and the western Mexican-American subsection. Three high-income Anglo subsections lacked parks, the very small subsection east of the core area and the subsections near Lakes Lytle and Kirby. All of those subsections, however, appeared to be relatively close to a park of some type, i.e., within two to three miles. Parks with recreation facilities appeared to be needed throughout the metro area, with consideration most apparently needed for the peripheral and growth areas particularly in the west, southwest, east, and northeast. Open land parks should be considered throughout the metro where resources are available.

In addition to maintaining an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities in parks is also an important consideration. An analysis of the current and future requirements for selected recreational facilities and the current dispersion of facilities in the Abilene Metro Area is presented in the following discussions.

FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. Then, an analysis of the dispersion of existing facilities among the predominant income/ethnic background subsections and the major growth areas of the metro was conducted. Conclusions reached from the facility dispersion analysis were then used to qualify the facility requirement estimates, particularly in those cases where no additional facilities were estimated as being needed within the metropolitan area. Usually, special note is made where growth areas appeared to have limited facilities. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the urban volume. In the discussion that follows, resource requirements for recreational facilities are generally referred to by units of the most important

feature necessary to allow participation. For example, when a requirement is shown for swimming pools, features such as a bathhouse, cleaning and filtering system, and other support features are implied when a requirement for the major facility is shown.

Swimming

The Abilene Metro Area had 378 square yards of public swimming pools in 1971. Each square yard (unit) was estimated to provide 150 days of swimming opportunity per year, which yielded an estimated 57,000 opportunity days. To determine if there was a surplus or deficit of opportunity, estimated participation days and estimated opportunity days were compared. For swimming, there appeared to be a deficit of 263,000 opportunity days, or a requirement for an additional 1,753 square yards in 1970. By 1975, the metro area was estimated to require an additional 660 square yards of pools. Cumulative 1980 requirements were estimated at 3,133 square yards. In the years 1990 and 2000, an additional 1,987 and 2,033 square yards, respectively, will be needed for an estimated cumulative swimming requirement of 7,153 square yards by the year 2000. Only one park was shown to have swimming facilities in 1971, and it was located in (northwest) Abilene in a predominantly middle-income Black neighborhood. It is important that the other subsections of the metro be considered in any future expansion of facilities with special considerations given to the more rapidly expanding residential sections in the west and east.

Child's Play

The Abilene Metro Area in 1971 had a total of eight acres of playgrounds divided among twelve parks within the metro. Multiplying the eight acre units by the playground standard (each acre was calculated to provide 27,623 days of recreation opportunity per unit per year) resulted in an estimated 221,000 annual opportunity (potential participation) days. Annual opportunity days were then compared with the forecasted demands, as shown in the Abilene resource requirements table. Playground acre deficits were apparent for all planning periods. In 1970 an additional four acres were necessary to meet projected demand. The cumulative requirement for 1975 was seven additional acres above the existing eight acres reported in 1971. Requirements will grow incrementally by four acres, nine acres, and ten acres in the remaining planning horizon years, respectively, to a total requirement of thirty acres by the year 2000. Dispersion analysis indicated an additional need for facilities in the outlying subsections of western, northern and southern portions of the metro. Additions of playgrounds should be adequately dispersed with consideration for the major growth areas.

Baseball/Softball

With an existing twelve baseball/softball fields providing approximately 166,000 total opportunity days (the facility standard utilized was 13,804 opportunity days provided per field per year), the Abilene Metropolitan Area appeared to have had a sufficient quantity of fields to meet the facility requirements for their baseball/softball recreationists through the year 2000. Although dispersion analysis of these facilities could not be performed from available data, consideration should be given to maintaining an adequate dispersion of fields, particularly in the areas of rapid growth.

Picnicking

There were eighty-three public picnic tables in Abilene in 1971. At 1,702 days of opportunity per table per year (standard) the existing tables provided approximately 141,000 days annually. Although the existing number of tables was expected to be adequate through 1975, additional tables will be required in the planning years subsequent to 1975. Three additional tables will be needed by the year 1980, another 20 needed by 1990, and an additional 15 tables will be needed by the year 2000, to bring the Abilene Metro Area total requirement to 38 tables. The distribution analysis of picnicking facilities indicated adequate dispersion among the existing subsections, except for the outlying subsections of northern, western, and southern Abilene. As the metro area grows, provision of additional tables in the growth areas should be considered.

Football/Soccer

Each of the four football/soccer fields in the Abilene Metro Area provided on the average 7,224 days of opportunity annually. In total, this amounted to approximately 29,000 available opportunity days in 1971. In 1970, there was a need for four additional fields which was estimated to be adequate to meet facility requirements through the year 2000. The distribution of football/soccer facilities could not be discerned from available data, but local analysis can insure adequate distribution and attention to growth areas.

Golf

The only publicly-administered course in Abilene in 1971 provided eighteen holes of golf. Each golf hole was calculated to be capable of providing 4,047 days of recreation opportunity annually. Abilene golfers, then, should have had about 73,000 days of opportunity provided annually by this public course. Comparing the expected participation for the projection years with the number of opportunity days available in 1971 shows that an additional twelve holes (at least one nine-hole course would have been required) in 1970. Incremental additions of 7, 8, 20, and 18 holes were calculated to be needed in the years 1975, 1980, 1990, and 2000, respectively, to meet expected increases in golfing participation. As a general rule, golf courses are constructed in multiples of nine holes; therefore, by the year 2000, the Abilene Metro Area will need slightly over seven additional nine-hole courses (sixty-five holes) or three eighteen-hole courses and one nine-hole course, or some appropriate combination which considers local resources.

Tennis

The 46,000 opportunity days provided by the seventeen public tennis courts available in 1971 (each court can make available about 2,694 days of opportunity per year) apparently were adequate to meet facility requirements for the metro through the year 2000. Although dispersion of these facilities cannot be discerned from available data, it is important that an adequate distribution be considered in current and future planning efforts.

Basketball

Based on a standard of 8,795 days per year per court, the seven basketball courts reported in 1971 provided approximately 62,000 opportunity days. By comparing available opportunity days with estimated demand for each projection year, as expressed in the Abilene recreation resource requirement table, it is apparent that three additional courts were needed for 1970 with one additional court needed by 1990 to make a cumulative requirement of four courts through the year 2000. Dispersion analysis of basketball facilities could not be accomplished with available data for 1971, but adequate distribution is an important planning consideration.

Trails Activities

There were no walking, bicycling, and nature study trails reported in the Abilene Metropolitan Area in 1971. Estimates of expected participation for walking, bicycling, and nature study occurring in the park and recreation areas compared with the absence of opportunity days indicates that approximately seven miles of combined trails would have been required in 1970. Given the expected increase in participation in trails activities, incremental additions were projected to be 3 miles in 1975, 3 miles in 1980, 6 miles in 1990, and 6 miles in the year 2000. Overall, a total of twenty-five miles of additional trails should be added by the year 2000 to meet expected participation levels.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly-administered park and recreation areas. It is likely, however, that as trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of resources required may be conservative in the long run and should be considered as minimum estimates. In addition to the expectations for increases in participation in trail and related activities at publicly-administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local neighborhoods, on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, SkiingSurface Acres - Freshwater Lakes
(Boating, Boat Fishing, Skiing)

A total of 5,563 surface acres of freshwater lakes were reported as available for water-related recreation within the Abilene Metro in 1971. Using participation patterns of the households recreating within the urban areas, it was estimated that a total of 62,000 days of freshwater boating, boat fishing, and skiing participation occurred in 1970. Of these 62,000 days, 33,000 were boating participation days, 12,000 were boat fishing days, and 17,000 were skiing days. Projections developed for the water-related activities indicated no additional resource requirements for surface acres of freshwater lakes through the year 2000.

Freshwater Boat Ramps^{1/}

No publicly administered freshwater boat lanes were reported for the Abilene Metro in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would occur using boat ramp facilities to gain access to the water, it was estimated that two boat ramps were needed in 1970. Increases in boat fishing, skiing, and boating participation were projected to require incremental freshwater boat ramp additions of one by 1980, two by 1990, and one by the year 2000, bringing the cumulative requirement to six ramps by the year 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, the provision of freshwater boat ramps required could be constructed on existing freshwater lakes if the lakes are available for water-related activities.

Summary of Facilities Requirements

The following selected types of recreational facilities were found to be required in every planning horizon year: swimming pools; playgrounds; football/soccer fields; golf courses; basketball courts; and designated trails for walking, bicycling, and/or nature study. In addition, freshwater boat ramps were needed in all planning horizon years except 1975.

The only existing public swimming pool was located in the district park located in a predominantly middle-income Black neighborhood south of Abilene Christian College. Location of additional swimming pools should be an important consideration in providing adequate dispersion throughout the metro.

Dispersion of football/soccer fields and basketball courts was not discernable from available data; therefore, requirements for the income/ethnic subsections were not determined, but indications were that many of the subsections needed facilities. Playgrounds appeared to be relatively well dispersed among the eighteen socio-economic subsections. Future playground development should focus on maintaining this distribution with special attention given to growth areas. The only publicly-administered golf course was at the specialty park adjacent to Cedar Creek and east of Treadway Boulevard in south central Abilene. It appeared that any new golf courses should be considered for the northeastern half of the metro. The dispersion analysis revealed that no existing trails or publicly-administered boat ramps were available.

In terms of the other designated activities, additional picnicking facilities will be required beginning in 1980; baseball fields, tennis courts, and surface acres of fresh water were calculated to be adequate through the year 2000.

^{1/} In calculating freshwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	320 ^{1/}	57	263		1,753 square yards ^{2/}	1,753 square yards ^{2/}
	Child's Play (Playgrounds)	320	221	99		4 acres	4 acres
	Baseball/Softball	18	166		148	0 fields	0 fields
	Picnicking	122	141		19	0 tables	0 tables
	Football/Soccer	55	29	26		4 fields	4 fields
	Golf	120	73	47		12 holes	12 holes
	Tennis	26	46		20	0 courts, dbl.	0 courts, dbl.
	Basketball	91	62	29		3 courts, full	3 courts, full
1970	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	62	2,321		2,259	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	47	0	47		2 ramps ^{3/}	2 ramps ^{3/}
	Trails Activities:						
	Walking	44 ^{4/}				5 miles	5 miles
	Bicycling	12 ^{4/}				2 miles	2 miles
	Nature Study	* ^{4/}				<1 mile	<1 mile
	Combined Walking, Bicycling, Nature Study	56 ^{4/}	0	56		7 miles	7 miles
	<u>ACTIVITY</u>						
	Swimming (Pools)	418 ^{1/}	57	361		2,413 square yards ^{2/}	660 square yards ^{2/}
	Child's Play (Playgrounds)	409	221	188		7 acres	3 acres
	Baseball/Softball	21	166		145	0 fields	0 fields
	Picnicking	132	141		9	0 tables	0 tables
	Football/Soccer	54	29	25		4 fields	0 fields
	Golf	150	73	77		19 holes	7 holes
	Tennis	27	46		19	0 courts, dbl.	0 courts, dbl.
	Basketball	92	62	30		3 courts, full	0 courts, full
1975	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	89	2,321		2,232	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	65	0	65		2 ramps ^{3/}	0 ramps ^{3/}
	Trails Activities:						
	Walking	56 ^{4/}				7 miles	2 miles
	Bicycling	25 ^{4/}				3 miles	1 mile
	Nature Study	* ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	81 ^{4/}	0	81		10 miles	3 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED		
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL	
	Swimming (Pools)	527 ^{1/}	57	470		3,133 square yards ^{2/}	720 square yards ^{2/}	
	Child's Play (Playgrounds)	510	221	289		11 acres	4 acres	
	Baseball/Softball	25	166		141	0 fields	0 fields	
	Picnicking	146	141	5		3 tables	3 tables	
	Football/Soccer	54	29	25		4 fields	0 fields	
	Golf	182	73	109		27 holes	8 holes	
	Tennis	28	46		18	0 courts, dbl.	0 courts, dbl.	
	Basketball	92	62	30		3 courts, full	0 courts, full	
1980	Water-Related Activities:							
	Boating, Boat Fishing, Skiing FW . . .	118	2,321		2,203	0 surface acres	0 surface acres	
	Boating, Boat Fishing, Skiing FW . . .	85	0	85		3 ramps ^{3/}	1 ramp ^{3/}	
	Trails Activities:							
	Walking	68 ^{4/}				8 miles	1 mile	
	Bicycling	39 ^{4/}				5 miles	2 miles	
	Nature Study	* ^{4/}				<1 mile	0 miles	
	Combined Walking, Bicycling, Nature Study	107 ^{4/}	0	107		13 miles	3 miles	
<hr/>								
	<u>ACTIVITY</u>							
	Swimming (Pools)	825 ^{1/}	57	768		5,120 square yards ^{2/}	1,987 square yards ^{2/}	
	Child's Play (Playgrounds)	776	221	555		20 acres	9 acres	
	Baseball/Softball	33	166		133	0 fields	0 fields	
	Picnicking	180	141	39		23 tables	20 tables	
	Football/Soccer	56	29	27		4 fields	0 fields	
	Golf	264	73	191		47 holes	20 holes	
	Tennis	31	46		15	0 courts, dbl.	0 courts, dbl.	
	Basketball	95	62	33		4 courts, full	1 court, full	
1990	Water-Related Activities:							
	Boating, Boat Fishing, Skiing FW . . .	182	2,321		2,139	0 surface acres	0 surface acres	
	Boating, Boat Fishing, Skiing FW . . .	128	0	128		5 ramps ^{3/}	2 ramps ^{3/}	
	Trails Activities:							
	Walking	95 ^{4/}				11 miles	3 miles	
	Bicycling	68 ^{4/}				8 miles	3 miles	
	Nature Study	1 ^{4/}				<1 mile	0 miles	
	Combined Walking, Bicycling, Nature Study	164 ^{4/}	0	164		19 miles	6 miles	

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	1,130 ^{1/}	57	1,073		7,153 square yards ^{2/}	2,033 square yards ^{2/}
	Child's Play (Playgrounds)	1,044	221	823		30 acres	10 acres
	Baseball/Softball	41	166		125	0 fields	0 fields
	Picnicking	206	141	65		38 tables	15 tables
	Football/Soccer	56	29	27		4 fields	0 fields
	Golf	338	73	265		65 holes	18 holes
	Tennis	32	46		14	0 courts, dbl.	0 courts, dbl.
	Basketball	92	62	30		4 courts, full	0 court, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW	234	2,321		2,087	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW	164	0	164		6 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	115 ^{4/}				14 miles	3 miles
	Bicycling	93 ^{4/}				11 miles	3 miles
	Nature Study	1 ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	209 ^{4/}	0	209		25 miles	6 miles

Note: Asterisks indicate that projected annual activity days were less than 500.

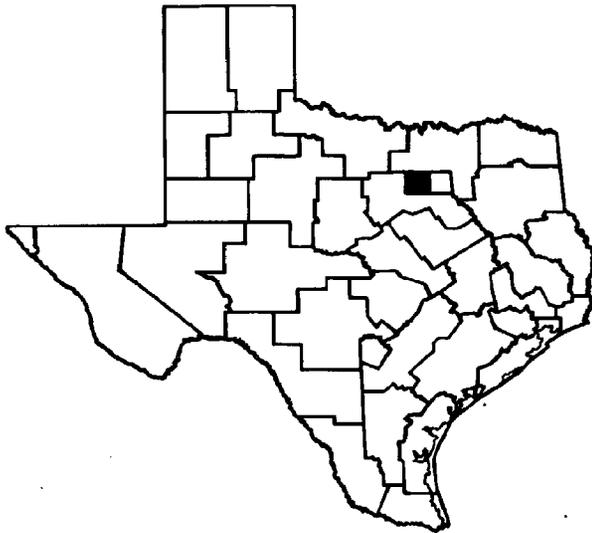
^{1/} Includes only swimming participation occurring in swimming pools, 94 percent of the total in urban areas.

^{2/} Designated freshwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.

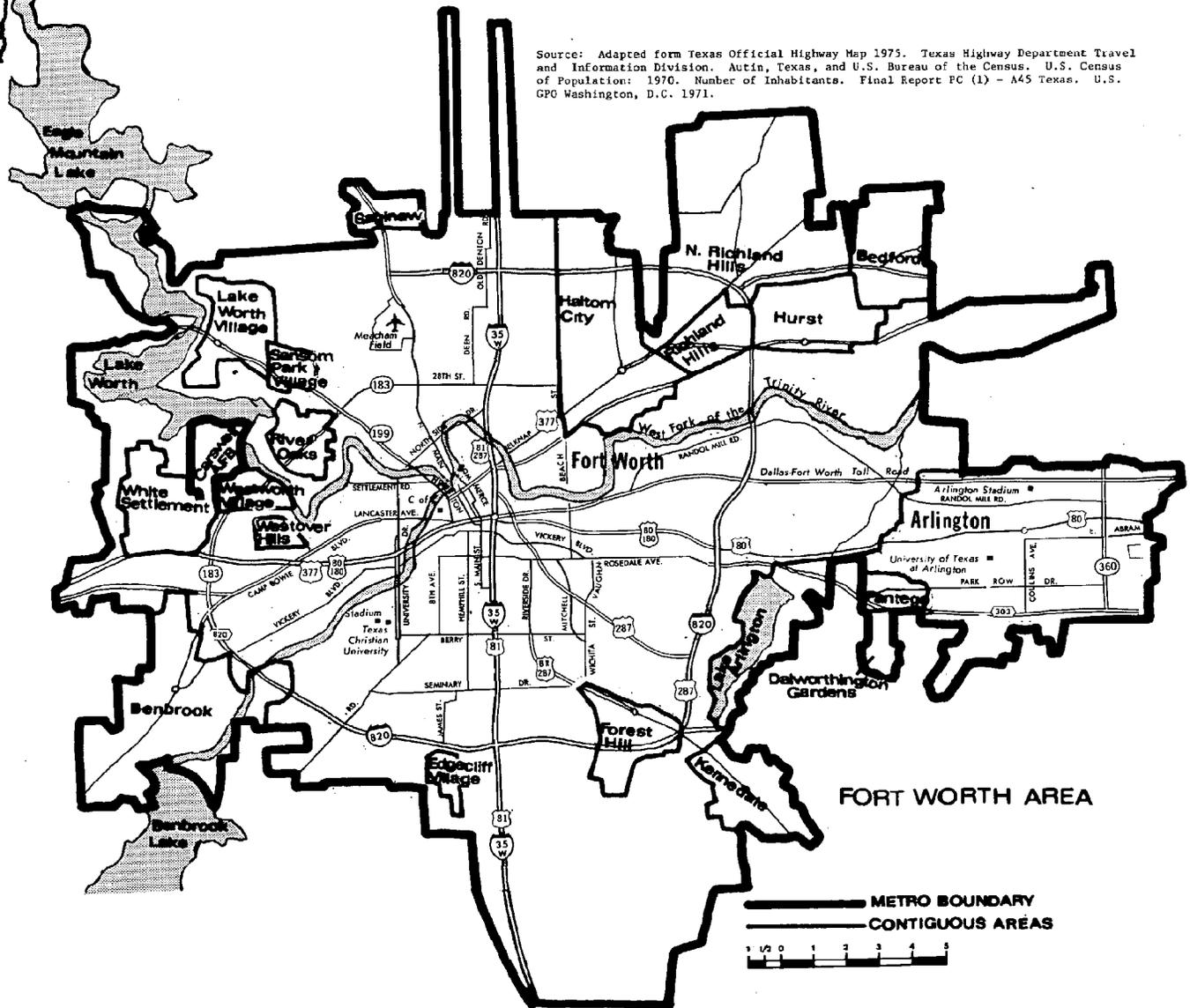
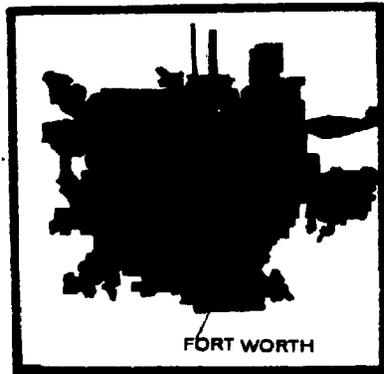
^{3/} Assumes 2.0 lanes per ramp.

^{4/} Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

Region 10



Source: Adapted from Texas Official Highway Map 1975. Texas Highway Department Travel and Information Division. Austin, Texas, and U.S. Bureau of the Census. U.S. Census of Population: 1970. Number of Inhabitants. Final Report PC (1) - A45 Texas. U.S. GPO Washington, D.C. 1971.



The Fort Worth Metropolitan Area is composed of the cities of Fort Worth, Arlington, Haltom City, Hurst, North Richland Hills, White Settlement, and Bedford, and the towns of Richland, Forest Hill, River Oaks, Benbrook, Lake Worth Village, Sansom Park Village, Westworth Village, Kennedale, Saginaw, Pantego, Edgecliff Village, Dalworthington Gardens, and Westover Hills. Contrary to its name, Fort Worth has never been a fort. It began as a camp where federal troops under General Winfield Scott were stationed in 1849 to maintain control over Indian tribes, particularly the Comanches. The name came from General William Jenkins Worth, a hero of the Mexican War. Fort Worth's first prosperity came from the livestock and meat packing industry, then shipping oil and oil well supplies became major aspects of the economy. Aerospace and various other industries contribute further to the city's economy.

Fort Worth, known as "where the West begins," has several museums and sites which reflect the frontier heritage of the Old West. The Amon G. Carter Museum of Western Art features among other things a permanent collection of paintings by Frederic Remington and Charles Russell. Heritage Hall describes the early development of the Fort Worth Metropolitan Area and life in the old Southwest. Seven authentic pioneer homes built in the 1850's are grouped together in Forest Park and are known as Log Cabin Village. The stockyards area has western-style stores and restaurants.

Other museums include the Fort Worth Museum of Science and History and the Fort Worth Art Center. The Lord's Supper is a life-sized wax model exhibit of Leonardo da Vinci's famous painting. The Dr. May Owen Hall of Medical Science is the largest health museum in the world. This metropolitan area also has a large botanical garden at Trinity Park, the James R. Record Aquarium, and Forest Park Zoo at Forest Park. The longest miniature train in the world is there. The Greer Island Nature Center and Refuge, nine miles northwest of town, is designed to teach principles of conservation and nature appreciation to young people.

The performing arts are represented by the Casa Manana Theater (a nationally-known theater-in-the-round in which summer musicals are held), William Edrington Scott Theater, and the Will Rogers Memorial Coliseum, Auditorium and Exhibit Buildings, which span 14 blocks of downtown Fort Worth.

The fine arts are further represented by the Fort Worth Community Theater, Civic Opera, Fort Worth Symphony, Ballet Theater, Texas Boys' Choir, Children's Theater, Civic Music, and the Woman's Club.

^{1/} Due to lack of information for some suburbs in the metropolitan area, data for the entire county was used from the 1970 Census.

^{2/} Includes persons of Mexican and/or Spanish descent.

POPULATION

1970 Metro Area Population: 636,143

Change 1960-1970: +28%

Race Composition: ^{1/}

White 88% ^{2/}

Negro 11%

Other 1%

Age Composition (years): ^{1/}

13 or less 28%

14 - 20 13%

21 - 44 33%

45 - 64 19%

65 and over 7%

ECONOMY

Aerospace

Agribusiness

Transportation

REGION 10 - Continued

The institutions of higher education in the Fort Worth Metropolitan Area include Texas Christian University, Southwestern Baptist Theological Seminary, Texas Wesleyan College, Fort Worth Christian College, and Tarrant County Junior College.

Major events include the Automobile Show (January), Fort Worth Fat Stock Show & Rodeo (late January and early February), World-Wide Antique Show (February), State Golden Gloves Tournament (February), Boat Show (February), Mardi Gras Carnival (week before Lent), Southwestern Track & Field & Golf Tournament (March), Six Flags Park (Easter through Thanksgiving), Tarrant County Art Show (April), Colonial National Invitational Golf Tournament (May), Miss Texas Pageant (July), Texas League Baseball (summer months), and National Cutting Horse Festivity (December).

Arlington is the location of Six Flags Over Texas, the top tourist attraction in Texas according to the Texas Tourist Development Agency, and the site of Seven Seas, an amusement park featuring sea life and attractions from each of the seven seas of the world. Turnpike Stadium is the home of the Texas League Baseball Spurs.

Surpassing its beginnings as a rail stop between Dallas and Fort Worth, Arlington is now home for the world's largest planned industrial development, the Great Southwest Industrial District. The University of Texas at Arlington is located there along with Bible Baptist Junior College and Bible Baptist Seminary.

Annual attractions are the Pecan Bowl, the Arlington Relays (one of the outstanding outdoor meets in the State), the Starving Artist Art Show (May and September), the Miss Arlington Contest (May), and the Miss Flame Contest (September). The former Washington Senators Baseball Club, now named the Texas Rangers, began the 1972 season in Turnpike Stadium.

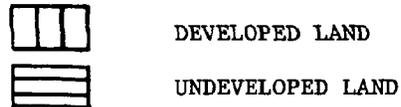
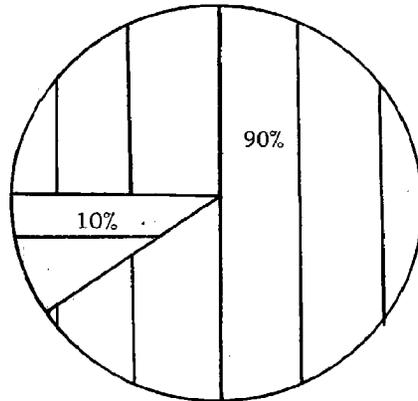
REGION 10

CITY SIZE: METRO

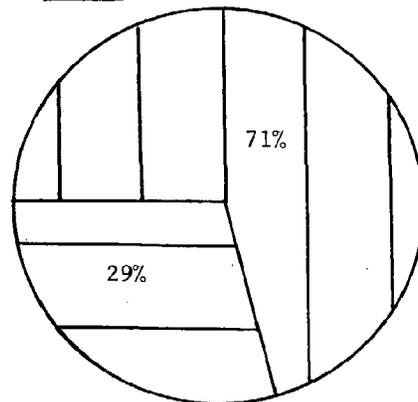
PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

REGION
10
METRO



STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 10 METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	7,903	1,307
Undeveloped Land	868	536
Total Land	8,771	1,843
Water Within or Adjacent	9,964	1,006
Total Land and Water	18,735	2,849

The Fort Worth Metro Area has a total of 8,771 acres of land set aside as park and recreation areas. In addition, 9,964 surface acres of water either within or adjacent to these parks were reported.

Of the total land acreage, 7,903 acres are developed with facilities, leaving 868 acres available for future development. With 90 percent of the land acreage currently developed, the Area is well above the Statewide Metro average of 71 percent.

PARKS AND ACREAGE BY TYPE OF PARK

	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	32.000	70.000	28.000	37.000	167.000	72.000
Parks Per Thousand	.050	.110	.044	.058	.263	.267
People Per Park	19,879.000	9,088.000	22,719.000	17,193.000	3,809.000	3,754.000
.....						
Land Acres	4,043.000	366.000	3,703.000	659.000	8,771.000	1,843.000
Acres Per Thousand	6.355	.575	5.821	1.036	13.788	6.864
People Per Acre	157.000	1,738.000	172.000	965.000	73.000	146.000

Seventy parks of the total of 167 are Community Parks. The Open Land Park category has 37 parks followed by 32 District and 28 Specialty Parks. The District Parks occupy 46 percent of the total land acreage with 4,043 acres, followed by 42 percent, or 3,703 acres, in Specialty Parks. The Community Parks average only about 5 acres each while the Open Land Parks average about 18 acres each. The dispersion of the four types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

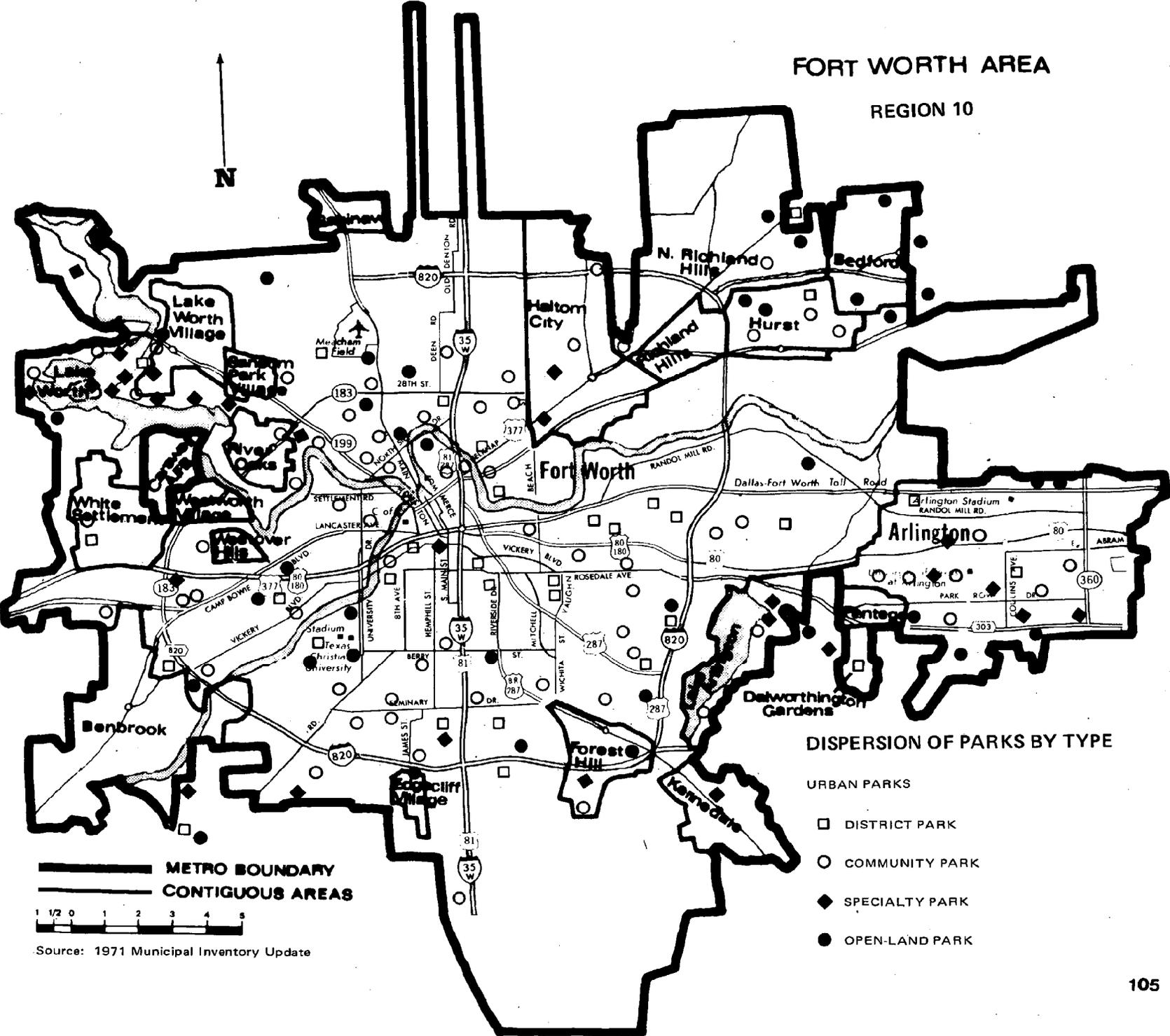
Looking at the total park and acreage figures in relation to the total population of the Fort Worth Metro Area, .263 parks per 1,000 and 13.788 acres per 1,000 population exist.

Another way to present this data is that 3,809 people share each park while 73 people share each acre of park land.

With .263 parks per 1,000, the Fort Worth Metro Area almost matches the Statewide Metro average. However, the 13.788 acres per 1,000 gives the area a figure double that of the Statewide Metro average for acres per 1,000.

FORT WORTH AREA

REGION 10



PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 10 METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	28	53	6	87	7,311	.136	.150
Tennis Courts.....	36	19	1	56	11,359	.088	.142
Basketball Courts.....	3	7	1	11	57,831	.017	.071
Baseball/Softball Fields.....	48	23	3	74	8,596	.116	.186
Football/Soccer Fields.....	6	7	1	14	45,439	.022	.032
Picnicking:							
Parks.....	28	41	4	73	8,714	.114	.124
Tables.....	229	123	43	395	1,610	.621	1.230
Playground:							
Parks.....	30	68	7	105	6,058	.165	.170
Acres Developed.....	27	70	6	103	6,176	.161	.258
Swimming:							
Parks.....	11	8	0	19	33,481	.029	.050
Pools (Sq. Yd.).....	7,353	4,765	0	12,118	52	19.053	25.950
Designated Fresh Water (Sq. Yd.)...	5,000	0	0	5,000	127	7.861	52.242
Boating:							
Parks.....	4	5	8	17	37,420	.026	.006
Ramp Lanes - Fresh Water.....	10	8	2	20	31,807	.031	.008
Camping:							
Parks.....	0	1	0	1	636,143	.001	.002
Campsites.....	0	0	0	0	---	---	.121
Fishing:							
Parks.....	8	4	9	21	30,292	.033	.013
Pier/Barge/Marina-Fresh Water (Yd.)	0	80	0	80	7,951	.125	.049
Golfing:							
Courses.....	2	0	4	6	106,023	.009	.005
Holes.....	27	0	81	108	5,890	.169	.100
Trails:							
Parks.....	2	0	1	3	212,047	.004	.006
Nature (Mi.).....	0	0	8	8	79,518	.013	.009
Horseback (Mi.).....	2	0	0	2	318,071	.003	.003
Bicycle (Mi.).....	3	0	0	3	212,047	.004	.007
Hiking (Mi.).....	3	0	0	3	212,047	.004	.006
Total Trails (Mi.).....	8	0	8	16	39,758	.025	.021

PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 10	STATEWIDE AVERAGE
						METRO	METRO AREAS
Sport Shooting:							
Parks.....	0	0	1	1	636,143	.001	.002
Traps.....	0	0	6	6	106,023	.009	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	0	0	0	0	---	---	.011
Miscellaneous:							
Parks.....	8	7	2	17	37,420	.026	.038
Amphitheatre Seats.....	0	0	0	0	---	---	1.077
Botanical Gardens (Acres).....	125	0	0	125	5,089	.196	.077
Zoos (Acres).....	150	0	0	150	4,240	.235	.051
Community/Recreation Centers.....	8	7	3	18	35,341	.028	.038

Most of the park and recreation facilities in the Fort Worth Metro Area are in the District and Community Park categories where all of the swimming facilities exist. Designated fresh water swimming area was also reported in the District Park category. One Specialty Park has sport shooting facilities while the District Park category has zoo and botanical garden facilities. Twenty-one parks have water acreage for fishing although most of these have no specific fishing facilities. Camping is permitted in only one park, and that a Community Park. Eighteen community/recreation centers and 16 miles of trails were reported. Seventeen parks have boating waters available and 6 have golf courses.

Of the 167 parks, 105 have playgrounds, 87 have facilities for games and sports, 73 have picnicking facilities and 19 have swimming facilities. The most common types of games and sports facilities are baseball/softball with 74 fields, followed by tennis with 56 courts, football/soccer with 14 fields and basketball with 11 courts.

Looking at selected facilities in relation to the number of potential users we find the following:

57,831 persons for each basketball court	8,596 persons for each baseball/softball field
45,439 persons for each football/soccer field	6,176 persons for each acre of playground
39,758 persons for each mile of trails	5,890 persons for each golf hole
35,341 persons for each community/recreation center	1,610 persons for each picnic table
11,359 persons for each tennis court	52 persons for each square yard of swimming pool

The Fort Worth Metro Area is above the Statewide Metro average for facility units per 1,000 for boat ramp lanes, yards of fishing pier/barge/marina, golf holes, trail miles, shooting traps, acres of botanical gardens and zoo acreage. The Area is below the average for tennis courts, basketball courts, baseball/softball fields, football/soccer fields, picnic tables, playground acres, square yards of swimming pools, designated fresh water swimming area and community/recreation centers. No campsites, shooting targets, archery targets or amphitheatre seats were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

<u>ACTIVITY-FACILITY</u>	<u>ANNUAL DAYS AVAILABLE</u>	<u>DAYS PER THOUSAND POPULATION</u>	
		<u>REGION 10 METRO</u>	<u>STATEWIDE AVERAGE METRO</u>
Swimming (Pools) - square yards	1,817,700	2,858	3,891
Child's Play - playground acres	2,845,169	4,474	7,137
Baseball/Softball - fields	1,021,496	1,606	2,577
Picnicking - tables	672,290	1,057	2,093
Football/Soccer - fields	101,136	159	235
Golf - holes	437,076	687	414
Tennis - courts, double	150,864	237	384
Basketball - courts, full	96,745	152	625
Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	4,156,510	6,535	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	269,720	424	103
Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	118,496	186	164

The Fort Worth Metro Area offers the most opportunity days for surface acres for freshwater boating, boat fishing and skiing, followed by child's play, swimming (in pools) and baseball/softball. A comparison between the opportunity days per thousand population for the Fort Worth Metro Area and the Statewide Metro average shows that the Fort Worth Metro Area surpasses the statewide average for four types of facilities -- golf courses (holes), surface acres for freshwater boating, boat fishing and skiing, freshwater boat ramps and the miles of trails for the trails activities. The Fort Worth Metro Area is below the Statewide Metro average for swimming (in pools), child's play, baseball/softball, picnicking, football/soccer, tennis and basketball.

The fourth ranking metro area, based on population, Fort Worth ranked fourth in total participation for the year 1970. Estimates for 1970 indicate that residents and non-residents in the area spent over 30.4 million recreation days in pursuit of urban outdoor recreation opportunities available within the metro area.

Resident

Total days of participation in urban outdoor recreation activities by the residents of the Fort Worth Metropolitan Area for the 16 activities shown were estimated to be 28.9 million days in 1970. Total participation is expected to increase to 42.7 million days in 1975 and to 59.2 million days in 1980. These projections represent increases of 47.8 percent by 1975 and 104.6 percent by 1980. Participation on a days per household basis is projected to increase from 138.6 days in 1970 to 178.5 days in 1975, and to 220.6 days in 1980--increases of 28.8 and 59.1 percent, respectively, over the 1970 level. Residents of the Fort Worth Metropolitan Area are expected to participate at a rate of 15, 17, and 18 days per household above the statewide average for the other Texas metropolitan areas in 1970, 1975, and 1980, respectively. For the more distant years of 1990 and 2000, total days of participation and days per household are expected to increase and days per household will remain above the statewide average for all metropolitan areas.

Projections for specific activities indicate that each of the 16 activities will increase in total days of participation through the years of 1975 and 1980. On a days per household basis, participation is expected to increase in 15 activities by 1980, while football will decline slightly. Based on total days of participation, the six most popular activities in 1970 were: bicycling, walking, swimming, child's play, driving for pleasure, and picnicking. Participation in golf is expected to increase 50.5 percent by 1975 and this activity will replace picnicking as the sixth ranked activity. By 1980 the six most popular activities in the Fort Worth Metropolitan Area are expected to be: bicycling, swimming, walking, child's play, driving for pleasure, and golf.

Non-Resident

Participation in urban outdoor recreation activities within the Fort Worth Metropolitan Area by non-residents was estimated to total 1,491,000 days for the activities specified for 1970. Compared to the 1970 level, total participation is expected to increase 17.3 percent (to 1,749,000 days) by 1975, and 34.1 percent (to 2,000,000 days) by 1980. Similar increases are anticipated through the years 1990 and 2000.

Of the specified activities, the most popular activities by non-residents for 1970 were: picnicking, with 311,000 days; swimming, with 292,000 days; sightseeing, with 282,000 days; fishing, with 163,000 days; driving for pleasure, with 141,000 days; and baseball, with 87,000 days. Assuming adequate facilities are made available, all activities are expected to increase significantly through the year 2000, but the relative ranking of individual activities should remain the same as the 1970 standings.

CURRENT AND PROJECTED RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970				1975				1980				1990				2000			
	PART. DAYS	RANK	REC. 10 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REC. 10 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REC. 10 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REC. 10 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REC. 10 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH
Swimming	4,300	3	20.62	27.41	6,747	3	28.18	36.52	9,975	2	37.07	47.17	19,990	2	59.54	75.28	33,780	2	87.99	110.14
Child's Play	2,661	4	12.76	14.08	3,974	4	16.60	17.72	5,642	4	20.97	22.00	10,510	4	31.30	32.20	16,720	4	43.55	43.99
Baseball/Softball	430	10	2.06	2.78	585	10	2.44	3.19	763	10	2.84	3.59	1,225	12	3.65	4.41	1,723	12	4.49	5.22
Picnicking	936	6	4.49	5.72	1,092	9	4.56	5.66	1,244	9	4.62	5.66	1,592	9	4.74	5.61	1,856	11	4.83	5.64
Football/Soccer	285	13	1.37	1.43	326	15	1.36	1.42	365	15	1.36	1.41	452	15	1.35	1.39	513	16	1.34	1.38
Golf	842	7	4.04	3.92	1,267	6	5.29	4.98	1,803	6	6.70	6.16	3,356	6	10.00	8.96	5,331	5	13.89	12.07
Tennis	786	9	3.77	6.06	1,248	7	5.21	9.21	1,658	7	6.16	11.49	2,655	7	7.91	16.07	3,721	7	9.69	21.46
Basketball	825	8	3.96	1.60	1,112	8	4.64	2.59	1,436	8	5.34	3.57	2,254	8	6.71	5.52	3,108	8	8.10	7.53
Walking	5,286	2	25.34	18.21	7,391	2	30.87	23.09	9,791	3	37.05	29.20	15,923	3	47.43	39.89	22,445	3	58.39	50.31
Bicycling	9,462	1	45.37	20.30	14,872	1	62.11	32.77	21,217	1	78.84	45.25	37,712	1	112.33	68.44	55,973	1	145.80	95.49
Nature Study	120	15	.53	.72	378	14	1.58	1.67	706	11	2.62	2.64	1,582	10	4.71	4.63	2,611	9	6.80	6.70
Fishing	374	11	1.79	1.80	450	11	1.88	1.88	529	13	1.97	1.97	717	14	2.14	2.13	885	14	2.31	2.30
Boating	184	14	.88	.88	382	13	1.60	1.60	622	12	2.31	2.31	1,256	11	3.74	3.74	1,985	10	5.17	5.17
Skiing	87	16	.42	.42	148	16	.62	.62	220	16	.82	.82	409	16	1.22	1.22	622	15	1.62	1.81
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	320	12	1.53	2.25	412	12	1.72	2.34	510	14	1.90	2.50	744	13	2.22	2.70	960	13	2.50	3.01
Dr. for Pleas.	2,017	5	9.67	13.38	2,355	5	9.83	13.52	2,685	5	9.98	13.67	3,445	5	10.23	13.86	4,012	6	10.45	14.10
TOTAL	28,915		138.60	120.96	42,739		178.49	158.78	59,166		220.55	199.41	103,812		309.22	286.05	156,245		406.92	213.83

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000	ACTIVITY	1970	1975	1980	1990	2000
Swimming	292	342	391	506	602	Swimming	4,592	7,089	10,366	20,496	34,382
Child's Play	68	80	91	118	140	Child's Play	2,729	4,054	5,733	10,628	16,860
Baseball/Softball	87	102	116	151	179	Baseball/Softball	517	687	879	1,376	1,902
Picnicking	311	364	417	539	641	Picnicking	1,247	1,456	1,661	2,131	2,497
Football/Soccer	43	50	57	74	88	Football/Soccer	328	376	422	526	601
Golf	67	78	89	115	137	Golf	909	1,345	1,892	3,471	5,468
Tennis	1	1	1	2	2	Tennis	787	1,249	1,659	2,657	3,723
Basketball	*	*	*	*	*	Basketball	825	1,112	1,436	2,254	3,108
Walking	19	22	25	32	39	Walking	5,305	7,413	9,816	15,955	22,484
Bicycling	*	*	1	1	1	Bicycling	9,462	14,872	21,218	37,713	55,974
Nature Study	*	*	*	*	*	Nature Study	120	378	706	1,582	2,611
Fishing	163	196	224	290	345	Fishing	537	646	753	1,007	1,230
Boating	16	19	21	28	33	Boating	200	401	643	1,284	2,018
Skiing	1	1	1	2	2	Skiing	88	149	221	411	624
Surfing	---	---	---	---	---	Surfing	---	---	---	---	---
Sightseeing	282	330	378	489	581	Sightseeing	602	742	888	1,233	1,541
Dr. for Pleas.	141	164	188	243	289	Dr. for Pleas.	2,158	2,519	2,873	3,678	4,301
TOTAL	1,491	1,749	2,000	2,590	3,079	TOTAL	30,406	44,488	61,166	106,402	159,324

Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the Fort Worth Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with the current recreation opportunities^{2/} available in the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to subsections of the metro characterized by residents having similar incomes and ethnic backgrounds. Particular attention was given to those subsections expected to undergo relatively rapid population growth and physical expansion in the future.

Conclusions reached from analyzing the distribution of recreation opportunities within the metropolitan area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist.

In the discussions that follow, results of the distribution analysis of parks within subsections of the Fort Worth Metro Area are presented. Then, estimates of current and future requirements for selected recreation facilities are presented, and are qualified by conclusions reached from the distribution analysis of recreation facilities within subsections of the Fort Worth Metro Area.

PARK DISTRIBUTION ANALYSIS

In analyzing the availability and distribution of parks in the Fort Worth Metro Area, several characteristics were considered: changes in population (or trends in general from 1960 to 1970), areas of the metro which were expected to exhibit relatively major expansion, and the dispersion of existing parks among income/ethnic subsections of the metro. From these interrelated characteristics, general conclusions were reached with respect to future park developments for the metro area.

Population trends affected estimations of future recreation participation. Projections of population growth for the Fort Worth Metro indicated that the 1970 population of 636,143 would more than double to about 1,358,555 persons by the year 2000. In addition, information provided by urban recreation planners of the area showed that major directions of future urban expansion were expected to occur (illustrated by arrows of decreasing size on the following map titled "Predominant Ethnic Background and Income Subsections") in the north-- north of Haltom City; in the northwest-- in the general vicinity of Lake Worth; and in the east along the Dallas Fort Worth Toll Road and Trinity River. An area directly south of the core area also appeared to be rapidly expanding along Interstate Highway 35 south, even though not indicated as such by the planners of the area.

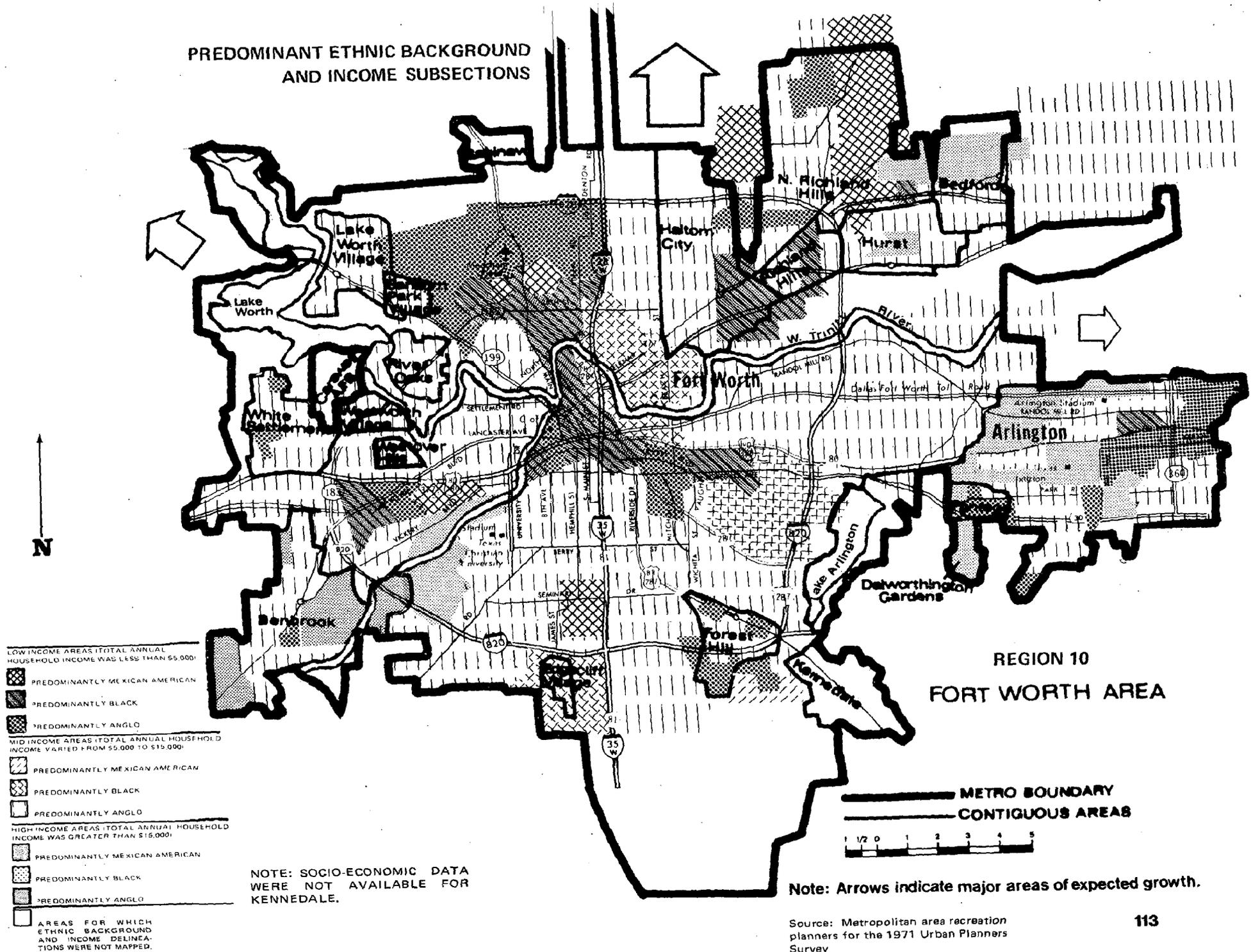
^{1/} "Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

^{2/} "Current" recreation opportunities refers to computed figures derived from the numbers of publicly-administered facilities by type available within the metro area in 1971.

For the Fort Worth Metropolitan Area, local metro area recreation planners also delineated over fifty subsections which are indicated on the accompanying map titled "Predominant Ethnic Background and Income Subsections." The delineated subsections characterize the homogeneous residential, or demographic, patterns existing in 1971 by two major socio-economic factors, income and ethnic background. As shown on the map, approximately thirty subsections comprised low-income residents, fifteen were predominantly characterized by middle-income residents, and ten comprised high-income residents. As this general distribution indicated, low-income residents lived in a significant percentage of the area. The majority of the low-income areas were found in the Fort Worth core area and the northeastern quadrant of the metro where Anglos and Blacks predominated. Arlington, Forest Hills, Haltom City, North Richland Hills, Pantego, and Richland Hills also had significant compliments of low-income residents, mainly Anglos and Mexican-Americans. Fort Worth was typical of most other metro areas in Texas wherein middle-income Anglo residents were predominant in the major portions of the metro. Rather than a large number of small subsections, in Fort Worth, most of the southern half and north-eastern quadrant of the metro area was characterized by four or five large middle-income Anglo subsections. There were three middle-income Black subsections in the metro area, one located in the central core area, one northwest of Lake Arlington, and one comprising all of Edgecliff Village and some of the surrounding area south of Loop 820. The single small middle-income Mexican-American subsection was west of Kennedale and southeast of Forest Hills. Only two high-income subsections were reported in the metro area and those were Anglo subsections adjacent to Texas Christian University on the west side, one on each side of the south fork of the Trinity River. Other high income subsections were also Anglo areas located in the contiguous urban areas of Arlington, Bedford, Benbrook, Dalworthington Gardens, and Hurst.

An analysis of parks dispersion among the subsections was conducted by generally comparing the "Dispersion of Parks by Type" map with the "Predominant Ethnic Background and Income Subsections" map. Overall, the analysis revealed that the distribution for all park types among the different subsection patterns was generally good. However, several of the contiguous urban areas (specifically Benbrook, Westover Hills, Westworth Village, Sansom Park Village, Saginaw, and Pantego) indicated no parks at all in 1971. With the exception of Benbrook, those areas are relatively small and in all cases were located within three miles of a park. In addition, two small subsections (predominantly low-income Anglo and Black) in Arlington, the low-income Anglo subsection in North Richland Hills, the low-income Mexican-American subsection north of Haltom City (and west of North Richland Hills), and the small middle-income Mexican-American subsection south of Forest Hills did not have parks. All of those subsections were close to parks in other subsections, however. The major inadequacy appeared to be the lack of parks of any type in the major areas of expected growth to the north and northeast. Parks with recreation facilities, i.e., community, district, and/or specialty, may need to be considered in those areas. Other portions of the metro with apparent inadequacies were indicated to the south and east along Interstate Highway 35 South, south of Edgecliff Village. The northeastern extremity of the metro (east of Bedford, north of the Trinity River) appeared to be rapidly changing land uses as the Fort Worth and Dallas metropolitan areas are converging. Efforts by both metros and the affected contiguous urban areas will be necessary to assure that an adequate dispersion of parks of all types is attained and maintained between them. Open land parks are especially important in urban areas like Fort Worth. While the reported parks of this type were fairly well distributed in the metro area, the southeastern quadrant especially, and much of the eastern half may need consideration for additional open land parks where resources are available.

PREDOMINANT ETHNIC BACKGROUND
AND INCOME SUBSECTIONS



Source: Metropolitan area recreation planners for the 1971 Urban Planners Survey

In addition to maintaining an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities in parks is also an important consideration. An analysis of the current and future requirements for selected recreational facilities and the current dispersion of facilities in the Fort Worth Metro Area is presented in the following discussions.

FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. Then, an analysis of the dispersion of existing facilities among the predominant income/ethnic subsections and the major growth areas of the metro was conducted. Conclusions reached from the facility dispersion analysis were then used to qualify the facility requirement estimates, particularly in those cases where no additional facilities were estimated as being needed within the metropolitan area. Usually, special note is made where growth areas appeared to have limited facilities. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the Urban Volume. In the discussions that follow, resource requirements for recreational facilities are generally referred to by units of the most important feature necessary to allow participation. For example, when a requirement is shown for swimming pools, features such as a bathhouse, cleaning and filtering system, and other support features are implied when a requirement for the major facility is shown.

Swimming

The Fort Worth Metro had 12,118 square yards of public swimming pools in 1971. Each square yard (unit) was estimated to provide 150 days of swimming opportunity per year, which resulted in approximately 1,818,000 opportunity days in 1971. To determine if there was a surplus or deficit of opportunity, estimated participation days and estimated opportunity days were compared. For swimming, there appeared to be a deficit of opportunity in 1970-- 2,498,000 opportunity days, or 16,653 square yards. Deficits were shown in each planning year thereafter. By 1975, the metro area was estimated to require an incremental addition of 15,654 square yards of pools. Cumulative 1980 requirements are estimated at 52,840 square yards. The years 1990 and 2000 will require incremental additions of 63,480 and 87,020 square yards, respectively. Additional swimming facilities may be indicated for the southern portions of the metro, and all contiguous urban areas except White Settlement, Hurst, and Arlington, which appeared to have an adequate distribution in 1971. Special consideration should be given to the more rapidly expanding portions of the metro, especially in the north.

Child's Play

The Fort Worth Metro in 1971 had a total of 103 acres of playgrounds divided among 105 parks within the metro boundary. Multiplying the 103 acres by the playground standard (each acre was calculated to provide 27,623 days of recreation opportunity per unit per year) yielded an estimated 2,845,000 annual opportunity (potential participation) days. Annual opportunity days were then compared with the forecasted demands, in terms of participation days, as shown in the Fort Worth resource requirements table. Playground area deficits were apparent for all planning periods after 1970. The

The cumulative requirement for 1975 was forty-four additional acres above the existing 103 acres in 1971. Requirements should grow incrementally by 61 acres, 177 acres, and 225 acres in the remaining planning horizon years of 1980, 1990, and 2000, respectively, to a cumulative requirement of 507 acres by the year 2000. The existing playgrounds appeared to be relatively well distributed among the population except for noted deficiencies in Lake Worth Village, Sansom Park Village, North Richland Hills, Bedford, Kennedale, Everman (a small community on the south central extremity of the metro area near I-35 south; not noted on the 1971 map), Edgecliff Village, Benbrook, Westover Hills, and Westworth Village. Additions of playgrounds should be similarly dispersed with emphasis placed on the major growth areas.

Baseball/Softball

With an existing seventy-four baseball/softball fields providing approximately one million total opportunity days (the facility standard utilized was 13,804 opportunity days provided per field each year), the Fort Worth metropolitan area appeared to have a sufficient quantity of fields to meet the activity requirements of their baseball/softball recreationists through the year 1980. Thereafter, in 1990, 26 fields will be needed with 38 additional fields needed for 2000, which brings the cumulative total to 64 fields by the year 2000. Although dispersion analysis could not be accomplished with available data, local analysis may indicate that additional fields are required prior to 1980 to insure an adequate distribution and to fulfill growth area requirements.

Picnicking

There were 395 public picnic tables in the Fort Worth Metro in 1971. At 1,702 days of opportunity per table per year (standard) the existing tables provided approximately 672,000 days annually. An additional 338 tables are estimated to be required for 1970 with 123 and 120 tables needed for the years 1975 and 1980, respectively. Another 276 tables will be needed by the year 1990, and an additional 215 tables will be needed to bring the year 2000 Fort Worth Metro Area total requirements to 1,072 tables over the 1971 supply. The distribution analysis of picnicking facilities indicated relatively good dispersion among the existing populace, except for Westover Hills, Westworth Village, Sansom Park Village, North Richland Hills, Bedford, Kennedale, Everman, Edgecliff Village, and Benbrook. Picnic tables should be considered for these areas. The area north and west of Haltom City also appeared to be particularly devoid of public picnicking facilities.

Football/Soccer

Each of the fourteen football/soccer fields in the Fort Worth Metro Area provides on the average 7,224 days of opportunity annually. In total, this amounts to approximately 101,000 available opportunity days per year. The estimated requirement for 1970 is thirty-one additional fields with an additional 7, 6, 15, and 10 fields needed in the planning years 1975, 1980, 1990, and 2000, respectively. Although dispersion analysis of football/soccer facilities could not be performed from available data, additional fields may be needed to provide a more adequate dispersion within the metro area. This factor should be considered in any future expansions of facilities with attention to growth area requirements.

Golf

In 1971 there were six golf courses in the Fort Worth Metro providing 108 holes of golf. Using the urban golf standard, each golf hole was shown to be capable of providing 4,047 days of recreation opportunity annually. Fort Worth golfers, then, should have about 437,000 days of opportunity provided annually by public courses. Comparing the expected participation for the projection years with the available opportunity days shows that the golfers would have required an additional 117 holes (at least thirteen nine-hole courses) in 1970. Incrementally, additions of 107, 136, 390, and 493 holes would be needed in the years 1975, 1980, 1990, and 2000, respectively, to meet expected increases in golfing participation. As a general rule, golf courses are constructed in multiples of nine holes; therefore, by the year 2000 the Fort Worth Metro Area will need slightly over 138 additional nine-hole courses (1,243 holes) or sixty-nine eighteen-hole courses, or some appropriate combination which considers local resources.

Tennis

Comparison of 1970 participation estimates with the 151,000 opportunity days provided by the fifty-six tennis courts available in 1971 (each court can make available about 2,694 days of opportunity per year) resulted in a requirement of 236 additional courts for that year. Incremental additions of 172 courts in 1975, 152 in 1980, 370 in 1990, and 396 in 2000 were projected. Tennis facilities in Fort Worth were concentrated in a portion just southeast of the metro center. It is important that an adequate distribution throughout the metro be considered in current and future planning efforts.

Basketball

According to the urban basketball standard, each of the eleven basketball courts in the Fort Worth Metro Area should provide approximately 8,795 days of opportunity per year for a total of about 97,000 basketball opportunity days. In 1970, there was an estimated requirement of eighty-three basketball courts. Incremental additions of 32, 37, 93, and 97 courts were needed for the years 1975, 1980, 1990, and 2000, respectively. Dispersion analysis of basketball facilities could not be accomplished with available data, but adequate distribution is an important consideration.

Trails Activities

Analyzing and comparing expected participation for walking, bicycling, and nature study occurring in the park and recreation areas with opportunity days provided by the 1971 supply of trails in the Fort Worth Metropolitan Area indicates that approximately ninety-nine miles of combined trails should have been added to the existing 14 miles of trail by 1970. (Although the total actually amounted to sixteen miles, two of these were horseback riding trail miles. Because resource requirements were not computed for urban horseback riding trails and because these two miles in the Fort Worth Metro Area were not designated for other types of trail usage, they were excluded from the computation of opportunity days.) Given the expected participation growth in the trails activities, incremental additions are projected for 58 miles in 1975, 68 miles in 1980, 175 miles in 1990, and 191 miles in 2000. Overall, a total of 591 miles of combined trails should be added to the existing fourteen miles by the year 2000 to meet expected participation levels.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly-administered park and recreation areas. It is likely, however, that as additional trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of additional resources required may be conservative in the long run and should be considered as minimum estimates. In addition to the expectations for increases in participation in trail and related activities at publicly-administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local neighborhoods, on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, Skiing

Surface Acres - Freshwater Lakes
(Boating, Boat Fishing, Skiing)

A total of 9,964 surface acres of freshwater lakes was located within the Fort Worth Metro Area in 1971. Using participation patterns of households recreating in the urban area, it was estimated that boating totaled 200,000 days, boat fishing 113,000 days, and skiing 88,000 days for a total of 401,000 days in 1970. Comparing estimated participation with the opportunities provided by the surface acres existing in 1971 indicates that existing freshwater lakes should be adequate through the year 2000 to support the water-related activities.

Freshwater Boat Ramps^{1/}

Twenty publicly-administered freshwater boat lanes were reported for the Fort Worth Metro Area in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using freshwater boat ramp facilities to gain access to the water if sufficient ramps were available, it was calculated that one boat ramp was needed in 1970. Projected increases in freshwater boat fishing, skiing, and boating participation are expected to require eight additional freshwater boat ramps in 1975, nine in 1980, twenty-three in 1990, and twenty-five in the year 2000, bringing the cumulative resource requirement to sixty-six ramps in 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, freshwater boat ramps required could be constructed on existing freshwater lakes since they appear to be sufficient.

^{1/} In calculating freshwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

Summary of Facilities Requirements

The aggregate analysis indicates that the Fort Worth Metro had, in 1971, at least some facilities for all activities specified. However, in order to increase the number of opportunity days to a level which matches participation days, additional public facilities were estimated to be required for every planning horizon year for swimming, child's play, picnicking, football, golf, tennis, basketball, trail activities, and activities requiring freshwater boat ramps. Also, additional public baseball/softball fields were estimated to be required (to accommodate estimated demand), beginning in 1990. The only type of facility which was estimated to be sufficient in number through the year 2000 (for the metro as a whole) was surface acres of freshwater lakes.

Dispersion analysis was possible only for a few types of facilities. There were apparent inadequacies in the supply of public swimming pools for all of the contiguous urban areas except White Settlement, Hurst, and Arlington. An inadequate supply of playground acres was apparent for Lake Worth Village, Sansom Park Village, North Richland Hills, Bedford, Kennedale, Everman, Edgecliff Village, Benbrook, Westover Hills, and Westworth Village. There appeared to be an inadequate supply of public picnic tables for the area north and west of Haltom City, for Westover Hills, Westworth Village, Sansom Park Village, North Richland Hills, Bedford, Kennedale, Everman, Edgecliff Village, and Benbrook.

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	4,316 ^{1/}	1,818	2,498		16,653 square yards ^{2/}	16,653 square yards ^{2/}
	Child's Play (Playgrounds)	2,729	2,845		116	0 acres	0 acres
	Baseball/Softball	517	1,021		504	0 fields	0 fields
	Picnicking	1,247	672	575		338 tables	338 tables
	Football/Soccer	328	101	227		31 fields	31 fields
	Golf	909	437	472		117 holes	117 holes
	Tennis	787	151	636		236 courts, dbl.	236 courts, dbl.
	Basketball	825	97	728		83 courts, full	83 courts, full
1970	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	401	4,157		3,756	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	310	270	40		1 ramp ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	557 ^{4/}				58 miles	58 miles
	Bicycling	378 ^{4/}				39 miles	39 miles
	Nature Study	22 ^{4/}				2 miles	2 miles
	Combined Walking, Bicycling, Nature Study	957 ^{4/}	118	839		99 miles	99 miles
	<u>ACTIVITY</u>						
	Swimming (Pools)	6,664 ^{1/}	1,818	4,846		32,307 square yards ^{2/}	15,654 square yards ^{2/}
	Child's Play (Playgrounds)	4,054	2,845	1,209		44 acres	44 acres
	Baseball/Softball	687	1,021		334	0 fields	0 fields
	Picnicking	1,456	672	784		461 tables	123 tables
	Football/Soccer	376	101	275		38 fields	7 fields
	Golf	1,345	437	908		224 holes	107 holes
	Tennis	1,249	151	1,098		408 courts, dbl.	172 courts, dbl.
	Basketball	1,112	97	1,015		115 courts, full	32 courts, full
1975	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	686	4,157		3,471	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	512	270	242		9 ramps ^{3/}	8 ramps ^{3/}
	Trails Activities:						
	Walking	778 ^{4/}				84 miles	26 miles
	Bicycling	595 ^{4/}				65 miles	26 miles
	Nature Study	76 ^{4/}				8 miles	6 miles
	Combined Walking, Bicycling, Nature Study	1,449 ^{4/}	118	1,331		157 miles	58 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION		
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	9,744 ^{1/}	1,818	7,926			52,840 square yards ^{2/}	20,533 square yards ^{2/}
	Child's Play (Playgrounds)	5,733	2,845	2,888			105 acres	61 acres
	Baseball/Softball	879	1,021		142		0 fields	0 fields
	Picnicking	1,661	672	989			581 tables	120 tables
	Football/Soccer	422	101	321			44 fields	6 fields
	Golf	1,892	437	1,455			360 holes	136 holes
	Tennis	1,659	151	1,508			560 courts, dbl.	152 courts, dbl.
	Basketball	1,436	97	1,339			152 courts, full	37 courts, full
1980	Water-Related Activities:							
	Boating, Boat Fishing, Skiing FW . . .	1,023	4,157		3,134		0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	747	270	477			18 ramps ^{3/}	9 ramps ^{3/}
	Trails Activities:							
	Walking	1,031 ^{4/}					115 miles	31 miles
	Bicycling	849 ^{4/}					94 miles	29 miles
	Nature Study	142 ^{4/}					16 miles	8 miles
	Combined Walking, Bicycling, Nature Study	2,022 ^{4/}	118	1,904			225 miles	68 miles
	<u>ACTIVITY</u>							
	Swimming (Pools)	19,266 ^{1/}	1,818	17,448			116,320 square yards ^{2/}	63,480 square yards ^{2/}
	Child's Play (Playgrounds)	10,628	2,845	7,783			282 acres	177 acres
	Baseball/Softball	1,376	1,021	355			26 fields	26 fields
	Picnicking	2,131	672	1,459			857 tables	276 tables
	Football/Soccer	526	101	425			59 fields	15 fields
	Golf	3,471	437	3,034			750 holes	390 holes
	Tennis	2,657	151	2,506			930 courts, dbl.	370 courts, dbl.
	Basketball	2,254	97	2,157			245 courts, full	93 courts, full
1990	Water-Related Activities:							
	Boating, Boat Fishing, Skiing FW . . .	1,907	4,157		2,250		0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	1,364	270	1,094			41 ramps ^{3/}	23 ramps ^{3/}
	Trails Activities:							
	Walking	1,675 ^{4/}					192 miles	77 miles
	Bicycling	1,508 ^{4/}					172 miles	78 miles
	Nature Study	318 ^{4/}					36 miles	20 miles
	Combined Walking, Bicycling, Nature Study	3,501 ^{4/}	118	3,383			400 miles	175 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION RESOURCES REQUIRED	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE
	Swimming (Pools)	32,319 ^{1/}	1,818	30,501		203,340 square yards ^{2/}	87,020 square yards ^{2/}
	Child's Play (Playgrounds)	16,860	2,845	14,015		507 acres	225 acres
	Baseball/Softball	1,902	1,021	881		64 fields	38 fields
	Picnicking	2,497	672	1,825		1,072 tables	215 tables
	Football/Soccer	601	101	500		69 fields	10 fields
	Golf	5,468	437	5,031		1,243 holes	493 holes
	Tennis	3,723	151	3,572		1,326 courts, dbl.	396 courts, dbl.
	Basketball	3,108	97	3,011		342 courts, full	97 courts, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	2,902	4,157		1,255	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	2,054	270	1,784		66 ramps ^{3/}	25 ramps ^{3/}
	Trails Activities:						
	Walking	2,358 ^{4/}				272 miles	80 miles
	Bicycling	2,239 ^{4/}				258 miles	86 miles
	Nature Study	525 ^{4/}				61 miles	25 miles
	Combined Walking, Bicycling, Nature Study	5,122 ^{4/}	118	5,004		591 miles	191 miles

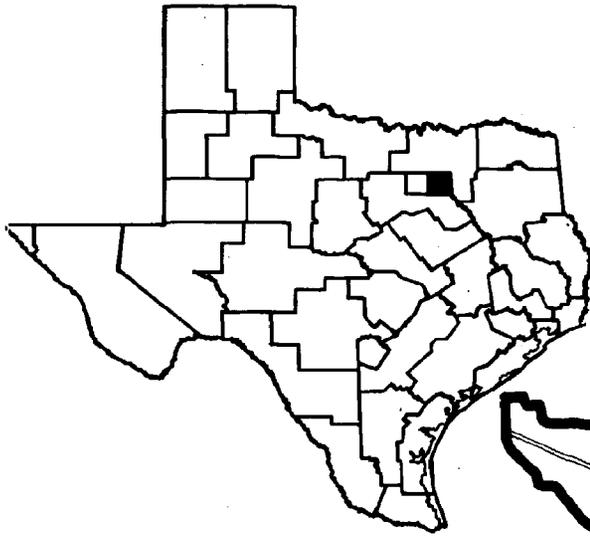
^{1/} Includes only swimming participation occurring in swimming pools, 94 percent of the total in urban areas.

^{2/} Designated freshwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.

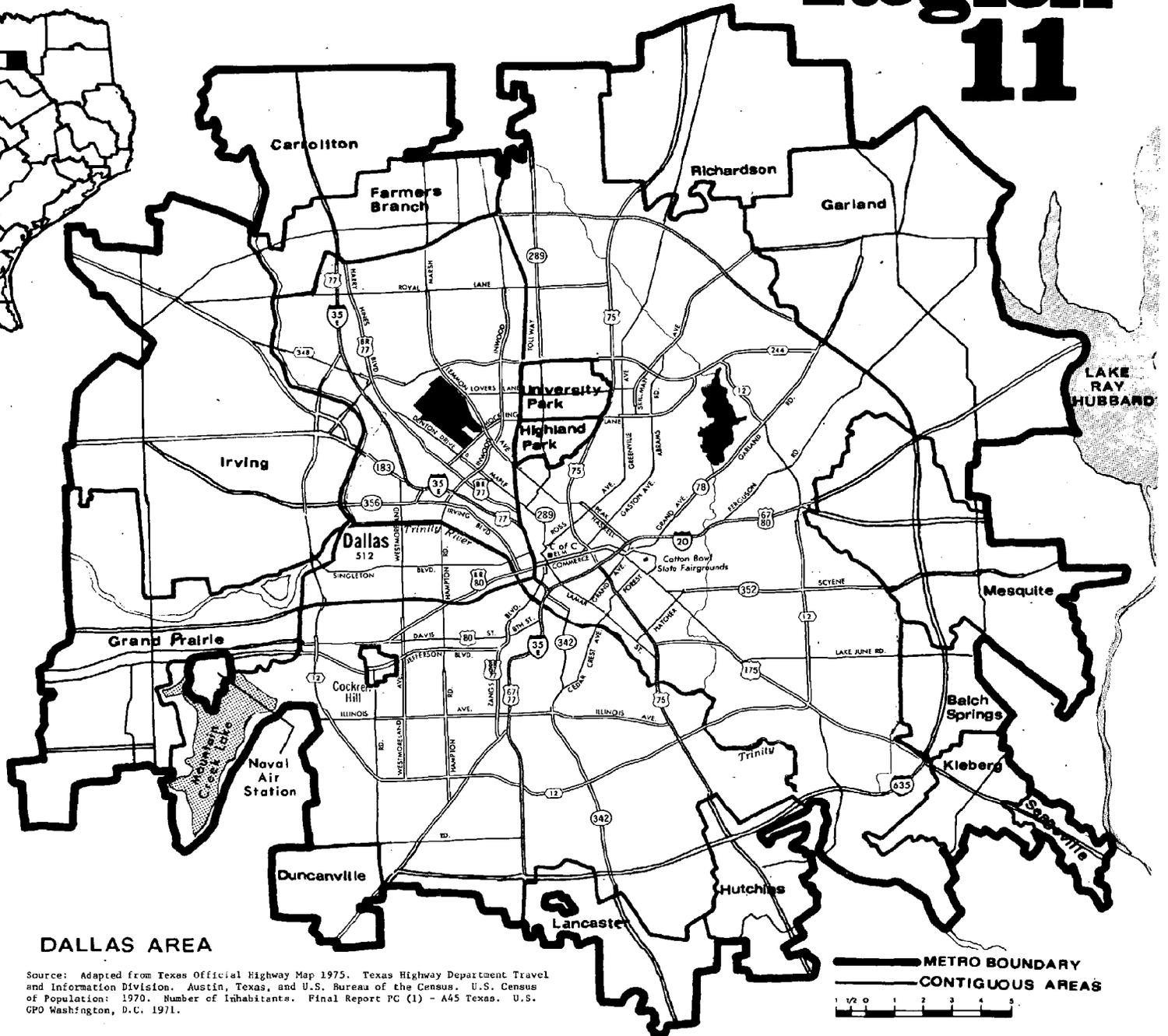
^{3/} Assumes 2.0 lanes per ramp.

^{4/} Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

Region 11



DALLAS



DALLAS AREA

Source: Adapted from Texas Official Highway Map 1975. Texas Highway Department Travel and Information Division. Austin, Texas, and U.S. Bureau of the Census. U.S. Census of Population: 1970. Number of Inhabitants. Final Report PC (1) - A45 Texas. U.S. GPO Washington, D.C. 1971.



The Dallas Metropolitan Area consists of the cities of Dallas, Irving, Garland, Mesquite, Grand Prairie, Richardson, Farmers Branch, University Park, Duncanville, Carrollton, Lancaster, Balch Springs, and Highland Park; and of the towns of Kleberg, Seagoville, Cockrell Hill, and Hutchins. Dallas or "Big D" began as a trading post on the Trinity River, with no special advantages in natural resources or geography to predestine it. The advantage proved to be people. When two railroads planned to bypass the tiny town, the Dallasites used imagination, pressure and gifts of money and land to change the minds of railroad officials. After this success, Dallas produced many more achievements.

The metropolitan area boasts the site of the State Fair of Texas (the nation's largest annual exposition in attendance), the hub for a huge highway network, and the 11th District Federal Reserve Bank. A channel was dug for the Trinity River to reclaim 10,000 acres of flood plain in the heart of the area. It has achieved a leading position in the nation's airline transportation system. Far-sighted master plans for the physical and aesthetic development of the area have been implemented. The Dallas Metropolitan Area has one of the most sustained growth records of any major metropolitan center. Of a total exceeded only by New York, Chicago, and Los Angeles, there are now 619 companies based here, each with assets of one million dollars or more. Forty-seven degree-granting institutions are within a 100-mile radius of the metropolitan area, and the seven-campus Dallas Junior College District will put a junior college within 20 minutes driving time of every resident in the county.

The Dallas Metropolitan Area has required and supported visitor accommodations and attractions disproportionate to its population rank because of the size and character of its visitor trade. Dallas, according to the Texas Highway Department, is the number one destination for out-of-state visitors entering Texas. The city is among the top five convention/exposition centers in the country.

This metropolitan area is a marketing center, the 12th largest in the United States, servicing 1/5 of the nation's marketing areas. The largest market center in the nation in square footage devoted to display is the Dallas Market Center, which is a permanent international trade fair. The gross annual sales here exceed \$1 billion. Dallas is one of the nation's principal fashion centers and one of the world's biggest international cotton markets.

1/ Due to lack of information for some suburbs in the metropolitan area, data for the entire county was used from the 1970 Census.

2/ Includes persons of Mexican and/or Spanish descent.

POPULATION

1970 Metro Area Population: 1,302,242

Change 1960-1970: +42%

Race Composition: 1/

White 82% 2/

Negro 17%

Other 1%

Age Composition (years): 1/

13 or less 28%

14 - 20 12%

21 - 44 35%

45 - 64 18%

65 and over 7%

ECONOMY

Business

Distribution

Education

Industry

Manufacturing

Transportation

REGION 11 - Continued

The area is also a financial center, claiming the largest bank in the South. Transportation, too, is important here. Dallas is the most accessible city from any point in the nation. The Dallas/Fort Worth Regional Airport is the world's largest and is able to accommodate any future supersonic aircraft. This 18,000-acre facility is within 35 minutes driving time of all major office buildings.

Education, conventions, and insurance all play important roles in the area's economy. Dallas has the largest number of headquartered life insurance companies of any city in the United States. It is also the leader in the Southwest in medical research in the areas of kidney transplants, heart research and surgery, circulatory diseases, cancer, and leukemia.

Fun is a password in the city, with events for everyone. There is the Cotton Bowl Classic (January), Southwest Boat Show (January-February), United Sports & Vacation Show (March), Byron Nelson Golf Classic -- Greater Dallas Open (April), Dallas Flower & Garden Show (April), Dallas Invitational Tennis Tournament (April), Dallas Gun Club Metropolitan Open (April or May), Southwest Home Builders Show (April), Texas Palomino Horse Show (April), Dallas Charity Horse Show (May), Dallas Civitan Women's Open Golf Tournament (May), Metropolitan Opera of New York (May), Dallas Summer Musicals (June-August), Annual Fourth of July Parade (July), Dallas Symphony Orchestra (September-April), Pan American Livestock Exposition (October), State Fair of Texas (October), Dallas Civic Opera (November), and the National Junior Indoor Tennis Championship (November).

Professional sports may be seen throughout the year. The metropolitan area is home to the Dallas Cowboys of the National Football League, the Dallas Chaparrals of the American Basketball League, the Dallas Black Hawks of the Central Hockey League, and the Dallas Rockets of the Continental Football League.

In addition to these special events are numerous other places and attractions. State Fair Park is open year round for various events. The Summer Musicals are presented in the State Fair Music Hall. The Dallas Museum of Fine Arts, the Age of Steam Historical Wax Museum, the Texas Hall of State which records 400 years of Texas history in its decorative motifs, and the Texas Sports Hall of Fame are located in Fair Park.

Educational institutions include Southern Methodist University, University of Dallas, Bishop College, Dallas Baptist College, Dallas Theological Seminary, Baylor University College of Dentistry, and the University of Texas Southwestern Medical School.

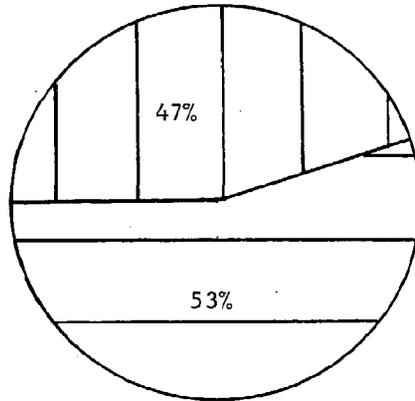
REGION 11

CITY SIZE: METRO

PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

REGION
11
METRO

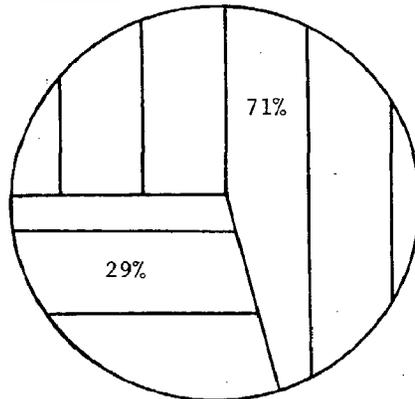


DEVELOPED LAND



UNDEVELOPED LAND

STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 11 METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	4,909	1,307
Undeveloped Land	5,621	536
Total Land	10,530	1,843
Water Within or Adjacent	2,860	1,006
Total Land and Water	13,390	2,849

The Dallas Metro Area has a total of 10,530 acres of land set aside as park and recreation areas. In addition, 2,860 surface acres of water either within or adjacent to these parks were reported.

Of the total land acreage, 4,909 acres are developed with facilities, leaving 5,621 acres available for development in the future. With only 47 percent of the land acreage currently developed, the Area is well below the Statewide Metro average of 71 percent.

PARKS AND ACREAGE BY TYPE OF PARK

	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	42.000	185.000	48.000	63.000	338.000	72.000
Parks Per Thousand	.032	.142	.037	.048	.260	.267
People Per Park	31,006.000	7,039.000	27,130.000	20,672.000	3,853.000	3,754.000
.....						
Land Acres	7,183.000	1,594.000	934.000	819.000	10,530.000	1,843.000
Acres Per Thousand	5.516	1.224	.717	.629	8.086	6.864
People Per Acre	181.000	817.000	1,394.000	1,590.000	124.000	146.000

Of the 338 parks in the Dallas Metro Area, almost fifty-five percent, or 185 are Community Parks. Sixty-three Open Land Parks were reported along with 48 and 42 in the Specialty and District Park categories respectively. However, 7,183 acres, or just over two-thirds of the total land acreage, are in District Parks. The 185 Community Parks total 1,594 acres while the Specialty Parks have a total of 934 acres. The 63 Open Land Parks average 13 acres each. The dispersion of the four types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the total population of the Dallas Metro Area, .260 parks per 1,000 and 8.086 acres per 1,000 population exist.

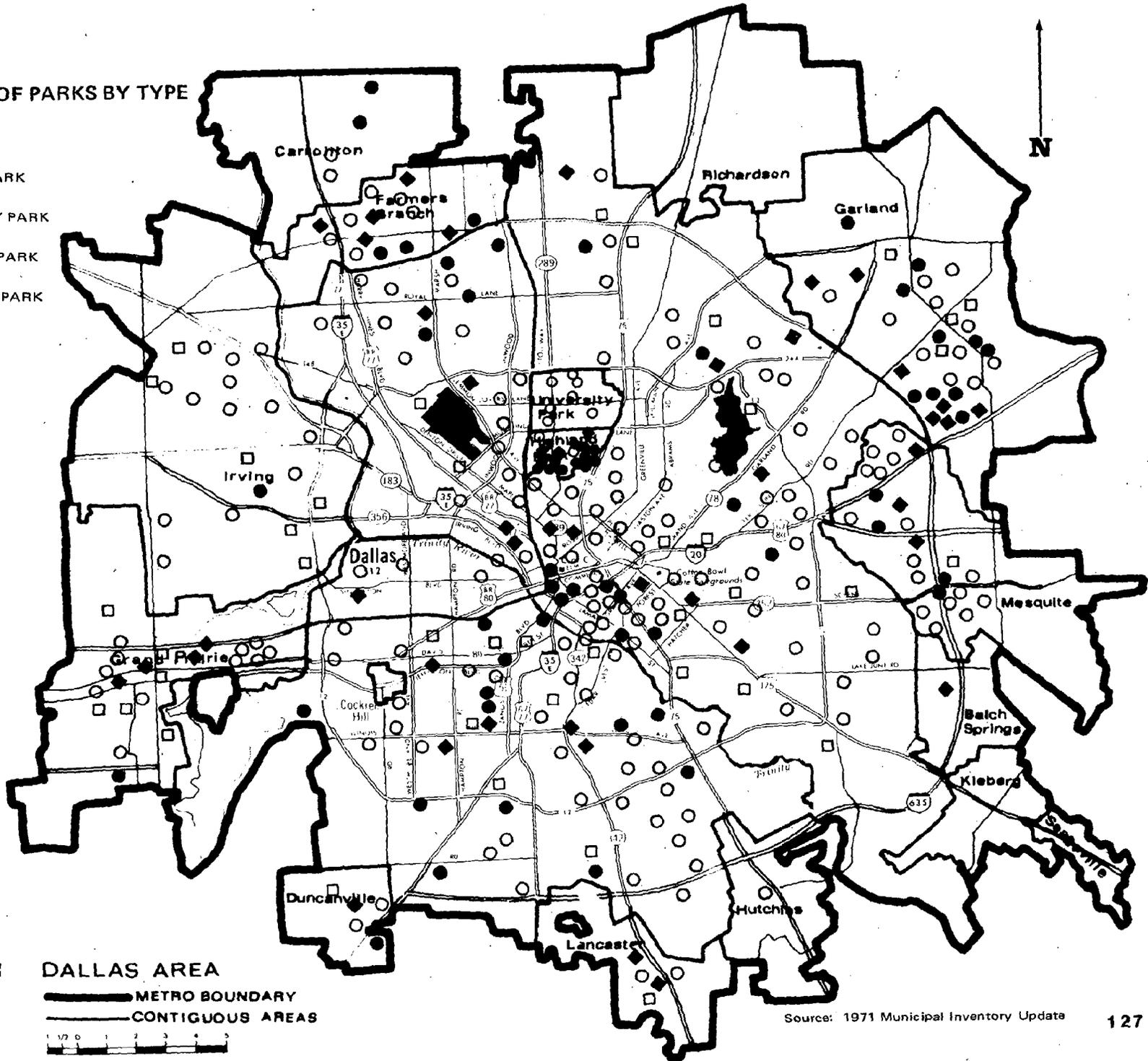
Another way to present this data is that 3,853 people share each park while 124 people share each acre of park land.

With .260 parks per 1,000, the Dallas Metro Area almost matches the Statewide Metro average. The 8.086 acres per 1,000 gives the area a figure above the Statewide Metro average for acres per 1,000.

DISPERSION OF PARKS BY TYPE

URBAN PARKS

- DISTRICT PARK
- COMMUNITY PARK
- ◆ SPECIALTY PARK
- OPEN-LAND PARK



REGION 11

DALLAS AREA

— METRO BOUNDARY
 — CONTIGUOUS AREAS

0 1 2 3 4 5

Source: 1971 Municipal Inventory Update

PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 11 METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	40	145	10	195	6,678	.150	.150
Tennis Courts.....	90	144	5	239	5,449	.184	.142
Basketball Courts.....	23	52	0	75	17,363	.058	.071
Baseball/Softball Fields.....	116	138	14	268	4,859	.206	.186
Football/Soccer Fields.....	16	22	0	38	34,270	.029	.032
Picnicking:							
Parks.....	40	155	8	203	6,415	.156	.124
Tables.....	1,110	756	38	1,904	684	1.462	1.230
Playground:							
Parks.....	39	168	20	227	5,737	.174	.170
Acres Developed.....	99	275	25	399	3,265	.306	.258
Swimming:							
Parks.....	30	93	3	126	10,335	.097	.050
Pools (Sq. Yd.).....	17,111	25,321	3,000	45,432	29	36.894	25.950
Designated Fresh Water (Sq. Yd.)...	5,000	8,140	0	13,140	99	10.092	52.242
Boating:							
Parks.....	2	0	0	2	651,121	.002	.006
Ramp Lanes - Fresh Water.....	14	0	0	14	93,017	.011	.008
Camping:							
Parks.....	1	0	0	1	1,302,242	.001	.002
Campsites.....	0	0	0	0	---	---	.121
Fishing:							
Parks.....	4	1	2	7	186,035	.005	.013
Pier/Barge/Marina-Fresh Water (Yd.)	186	0	0	186	7,001	.143	.049
Golfing:							
Courses.....	2	0	2	4	325,561	.003	.005
Holes.....	45	0	36	81	16,077	.062	.100
Trails:							
Parks.....	3	2	4	9	144,694	.007	.006
Nature (Mi.).....	4	2	9	15	86,816	.012	.009
Horseback (Mi.).....	0	0	0	0	---	---	.003
Bicycle (Mi.).....	1	0	0	1	1,302,242	.001	.007
Hiking (Mi.).....	1	0	0	1	1,302,242	.001	.006
Total Trails (Mi.).....	5	2	9	16	81,390	.012	.021

PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 11 METRO	STATEWIDE AVERAGE METRO AREAS
Sport Shooting:							
Parks.....	0	0	0	0	---	---	.002
Traps.....	0	0	0	0	---	---	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	0	0	0	0	---	---	.011
Miscellaneous:							
Parks.....	19	25	6	50	26,045	.038	.038
Amphitheatre Seats.....	700	0	0	700	1,860	.538	1.077
Botanical Gardens (Acres).....	0	1	0	1	1,302,242	.001	.077
Zoos (Acres).....	1	0	48	49	26,576	.038	.051
Community/Recreation Centers.....	19	24	5	48	27,130	.037	.038

The majority of the park and recreation facilities in the Dallas Metro Area are in either the District or Community Park categories. All of the boating facilities are in two of the District Parks. In addition, one District Park has a camping area available, although no specific camping facilities were reported. Seven parks with fishing waters available were inventoried. A total of 126 parks were reported with swimming facilities. In addition to the swimming pools, designated fresh water swimming area was reported in both the District and Community Park categories. Two zoos, one in a District Park and one in a Specialty Park were reported. A total of 16 miles of trails, with all but one mile of this nature trails, were inventoried. The Dallas Metro Area has a total of 48 community/recreation centers. Only four parks with golf courses were reported.

Of the 338 parks, 227 have playgrounds, 203 have picnicking facilities, 195 have games and sports facilities and 126 have swimming facilities. The most common types of games and sports facilities are baseball/softball with 268 fields, followed by tennis with 239 courts, basketball with 75 courts and football/soccer with 38 fields.

Looking at selected facilities in relation to the number of potential users we find the following:

81,390 persons for each mile of trails	5,449 persons for each tennis court
34,270 persons for each football/soccer field	4,859 persons for each baseball/softball field
27,130 persons for each community/recreation center	3,265 persons for each acre of playground
17,363 persons for each basketball court	684 persons for each picnic table
16,077 persons for each golf hole	29 persons for each square yard of swimming pool

The Dallas Metro Area is above the Statewide Metro average for facility units per 1,000 for tennis courts, baseball/softball fields, picnic tables, playground acres, square yards of swimming pools, boat ramp lanes and yards of fishing pier/ barge/marina. The Area is below the average for basketball courts, football/soccer fields, designated fresh water swimming area, golf holes, trail miles, amphitheatre seats, acres of botanical gardens, zoo acreage and community/recreation centers. No campsites or sport shooting facilities were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

<u>ACTIVITY-FACILITY</u>	<u>ANNUAL DAYS AVAILABLE</u>	<u>DAYS PER THOUSAND POPULATION</u>	
		<u>REGION 11 METRO</u>	<u>STATEWIDE AVERAGE METRO</u>
Swimming (Pools) - square yards	6,819,800	5,238	3,891
Child's Play - playground acres	11,021,577	8,465	7,137
Baseball/Softball - fields	3,699,472	2,841	2,577
Picnicking - tables	3,240,608	2,489	2,093
Football/Soccer - fields	274,512	211	235
Golf - holes	327,807	252	414
Tennis - courts, double	643,866	495	384
Basketball - courts, full	659,625	507	625
Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	1,193,057	916	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	188,804	145	103
Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	135,424	104	164

The Dallas Metro Area offers the most opportunity days for child's play, followed by swimming (in pools), baseball/softball and picnicking. A comparison between the opportunity days per thousand population for the Dallas Metro Area and the Statewide Metro average shows that the Dallas Metro Area surpasses the statewide average for six types of facilities -- swimming pools, children's playgrounds (in acres), baseball/softball fields, picnic tables, tennis courts, and freshwater boat ramps. The Dallas Metro Area is below the Statewide Metro average for football/soccer, golf, basketball, surface acres for freshwater boating, boat fishing and skiing, and the trails activities.

The second ranking metro area, based on population, Dallas ranked first in total participation for the year 1970. Estimates for 1970 indicate that residents and non-residents in the area spent over 63.8 million recreation days in pursuit of urban outdoor recreation opportunities available within the metro area.

Resident

Total days of participation in urban outdoor recreation activities by the residents of the Dallas Metropolitan Area for the 16 activities shown were estimated to be 62.5 million days in 1970. Total participation is expected to increase to 94.8 million days in 1975 and to 137.9 million days in 1980. These projections represent increases of 51.8 percent by 1975 and 120.7 percent by 1980. Participation on a days per household basis is projected to increase from 145.9 days in 1970 to 185.2 days in 1975, and to 226.7 days in 1980--increases of 26.9 and 55.4 percent, respectively, over the 1970 level. Residents of the Dallas Metropolitan Area are expected to participate at a rate of 22, 24, and 24 days per household above the statewide average for the other Texas metropolitan areas in 1970, 1975, and 1980, respectively. For the more distant years of 1990 and 2000, both total days of participation and days per household are expected to increase, and days per household will remain above the statewide average for the other Texas metropolitan areas.

Projections for specific activities indicate that each of the 16 activities will increase in total days of participation through the years 1975 and 1980. On a days per household basis, participation is expected to increase in 15 activities, while football will decline slightly. Based on total days of participation, the six most popular activities in 1970 were: swimming, walking, bicycling, child's play, driving for pleasure, and tennis, respectively. By 1975 bicycling will replace walking as the second ranked activity and tennis will move into fifth place replacing driving for pleasure. In 1980 the six most popular activities in the Dallas Metropolitan Area are expected to be: swimming, bicycling, walking, child's play, tennis, and driving for pleasure, respectively.

Non-Resident

Participation in urban outdoor recreation activities within the Dallas Metropolitan Area by non-residents was estimated to total 1,266,000 days for the activities specified for 1970. Compared to the 1970 level, total participation is expected to increase 21.3 percent (to 1,536,000 days) by 1975 and 42.6 percent (1,805,000 days) by 1980. Similar increases are anticipated through the years 1990 and 2000.

Of the specific activities selected, the most popular activities by non-residents for 1970 were: sightseeing, with 500,000 days; football, with 232,000 days; swimming, with 195,000 days; driving for pleasure, with 123,000 days; golf, with 83,000 days, and picnicking with 37,000 days. Assuming adequate facilities are made available, all activities are expected to increase at a moderate rate through the year 2000 and retain their relative ranking in terms of popularity.

ACTIVITY	1970				1975				1980				1990				2000			
	PART.		STATE-WIDE		PART.		STATE-WIDE		PART.		STATE-WIDE		PART.		STATE-WIDE		PART.		STATE-WIDE	
	DAYS	RANK	METROS AVERAGE DAYS/HH	METROS AVERAGE DAYS/HH	DAYS	RANK	METROS AVERAGE DAYS/HH	METROS AVERAGE DAYS/HH	DAYS	RANK	METROS AVERAGE DAYS/HH	METROS AVERAGE DAYS/HH	DAYS	RANK	METROS AVERAGE DAYS/HH	METROS AVERAGE DAYS/HH	DAYS	RANK	METROS AVERAGE DAYS/HH	METROS AVERAGE DAYS/HH
Swimming	17,580	1	41.06	27.41	28,470	1	55.61	36.52	44,300	1	73.17	47.17	98,670	1	117.77	75.28	179,200	1	174.35	110.14
Child's Play	8,077	4	18.86	14.08	12,170	4	23.77	17.72	17,970	4	29.68	22.00	36,340	3	43.37	32.20	60,880	3	59.23	43.99
Baseball/Softball	1,018	9	2.38	2.78	1,435	9	2.80	3.19	1,948	9	3.22	3.59	3,405	9	4.06	4.41	5,032	9	4.90	5.22
Picnicking	1,915	8	4.47	5.72	2,327	8	4.55	5.66	2,784	8	4.60	5.66	3,958	8	4.72	5.61	4,972	10	4.84	5.64
Football/Soccer	555	12	1.30	1.43	661	13	1.29	1.42	780	14	1.29	1.41	1,074	14	1.28	1.39	1,310	15	1.27	1.38
Golf	2,404	7	5.61	3.92	3,579	7	7.19	4.98	5,400	7	8.92	6.16	10,730	6	12.81	8.96	17,640	6	17.16	12.07
Tennis	3,780	6	8.83	6.06	6,695	5	13.08	9.21	9,996	5	16.51	11.49	20,110	5	24.00	16.07	33,760	5	32.85	21.46
Basketball	600	11	1.40	1.60	748	12	1.46	2.59	921	13	1.52	3.57	1,375	13	1.64	5.52	1,810	13	1.76	7.53
Walking	10,712	2	25.02	18.21	14,286	3	27.90	23.09	18,641	3	29.78	29.20	30,630	4	36.56	39.89	43,505	4	42.33	50.31
Bicycling	9,370	3	21.88	20.30	15,487	2	30.25	32.77	23,380	2	38.61	45.25	46,370	2	55.34	68.44	74,078	2	72.07	95.49
Nature Study	164	16	.38	.72	560	14	1.09	1.67	1,092	12	1.80	2.64	2,701	11	3.22	4.63	4,773	11	4.64	6.70
Fishing	769	10	1.80	1.80	963	10	1.88	1.88	1,190	11	1.97	1.97	1,789	12	2.14	2.13	2,369	12	2.30	2.30
Boating	377	13	.88	.88	817	11	1.60	1.60	1,399	10	2.31	2.31	3,134	10	3.74	3.74	5,314	8	5.17	5.17
Skiing	179	15	.42	.42	317	16	.62	.62	496	16	.82	.82	1,021	15	1.21	1.22	1,664	14	1.62	1.81
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	301	14	.70	2.25	413	15	.81	2.34	532	15	.88	2.50	852	16	1.02	2.70	1,148	16	1.12	3.01
Dr. for Pleas.	4,685	5	10.94	13.38	5,810	6	11.35	13.52	7,057	6	11.66	13.67	10,261	7	12.25	13.86	13,094	7	12.74	14.10
TOTAL	62,486		145.93	120.96	94,838		185.25	158.78	137,866		226.74	199.41	272,420		325.13	286.05	450,549		438.35	386.32

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000	ACTIVITY	1970	1975	1980	1990	2000
Swimming	195	237	278	379	471	Swimming	17,775	28,707	44,578	99,049	179,671
Child's Play	13	16	19	26	32	Child's Play	8,090	12,186	17,989	36,366	60,912
Baseball/Softball	9	11	13	18	23	Baseball/Softball	1,027	1,446	1,961	3,423	5,055
Picnicking	37	44	52	71	89	Picnicking	1,952	2,371	2,836	4,029	5,061
Football/Soccer	232	281	330	451	560	Football/Soccer	787	942	1,110	1,525	1,870
Golf	83	101	119	162	201	Golf	2,487	3,780	5,519	10,892	17,841
Tennis	6	7	9	12	15	Tennis	3,786	6,702	10,005	20,122	33,775
Basketball	11	14	16	22	28	Basketball	611	762	937	1,397	1,838
Walking	15	19	22	30	37	Walking	10,727	14,305	18,663	30,660	43,542
Bicycling	2	2	3	4	4	Bicycling	9,372	15,489	23,383	46,374	74,082
Nature Study	*	*	*	*	*	Nature Study	164	560	1,092	2,701	4,773
Fishing	28	34	40	54	67	Fishing	797	997	1,230	1,843	2,436
Boating	9	11	13	17	22	Boating	386	828	1,412	3,151	5,336
Skiing	3	4	5	7	8	Skiing	182	321	501	1,028	1,672
Surfing	---	---	---	---	---	Surfing	---	---	---	---	---
Sightseeing	500	606	711	971	1,206	Sightseeing	801	1,019	1,243	1,823	2,354
Dr. for Pleas.	123	149	175	238	296	Dr. for Pleas.	4,808	5,959	7,232	10,499	13,390
TOTAL	1,266	1,536	1,805	2,462	3,059	TOTAL	63,752	96,374	139,691	274,882	453,608

Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the Dallas Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with the 1971 recreation opportunities^{2/} available within the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to subsections of the Dallas Metro characterized by residents having similar incomes and ethnic backgrounds. Particular attention was given to those subsections expected to undergo relatively rapid population growth and physical expansion in the future.

Conclusions reached from analyzing the distribution of recreation opportunities within the metropolitan area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist.

In the discussions that follow, results of the distribution analysis of parks within subsections of the Dallas Metro Area are presented. Then, estimates of current and future requirements for selected recreation facilities are presented, and are qualified by conclusions reached from the distribution analysis of recreation facilities within subsections of the Dallas Metro.

PARK DISTRIBUTION ANALYSIS

In analyzing the availability and distribution of parks in the Dallas Metro Area, several characteristics were considered: changes in population (or trends in general, 1960 to 1970), areas of the metro which were expected to exhibit relatively major expansion, and the dispersion of existing parks among the income/ethnic subsections of the metro. From these interrelated characteristics general conclusions were reached with respect to future park developments for the metro area.

Population trends affected estimations of future recreation participation. Projections of population growth for Dallas indicated that the 1970 metro population of 1,302,242 will increase to about 3,186,193 persons by the year 2000. The observed growth and physical expansion has been greatest in the northwestern, northern, northeastern, and southwestern portions of the metropolitan area and those portions likely will continue to be the major growth areas.

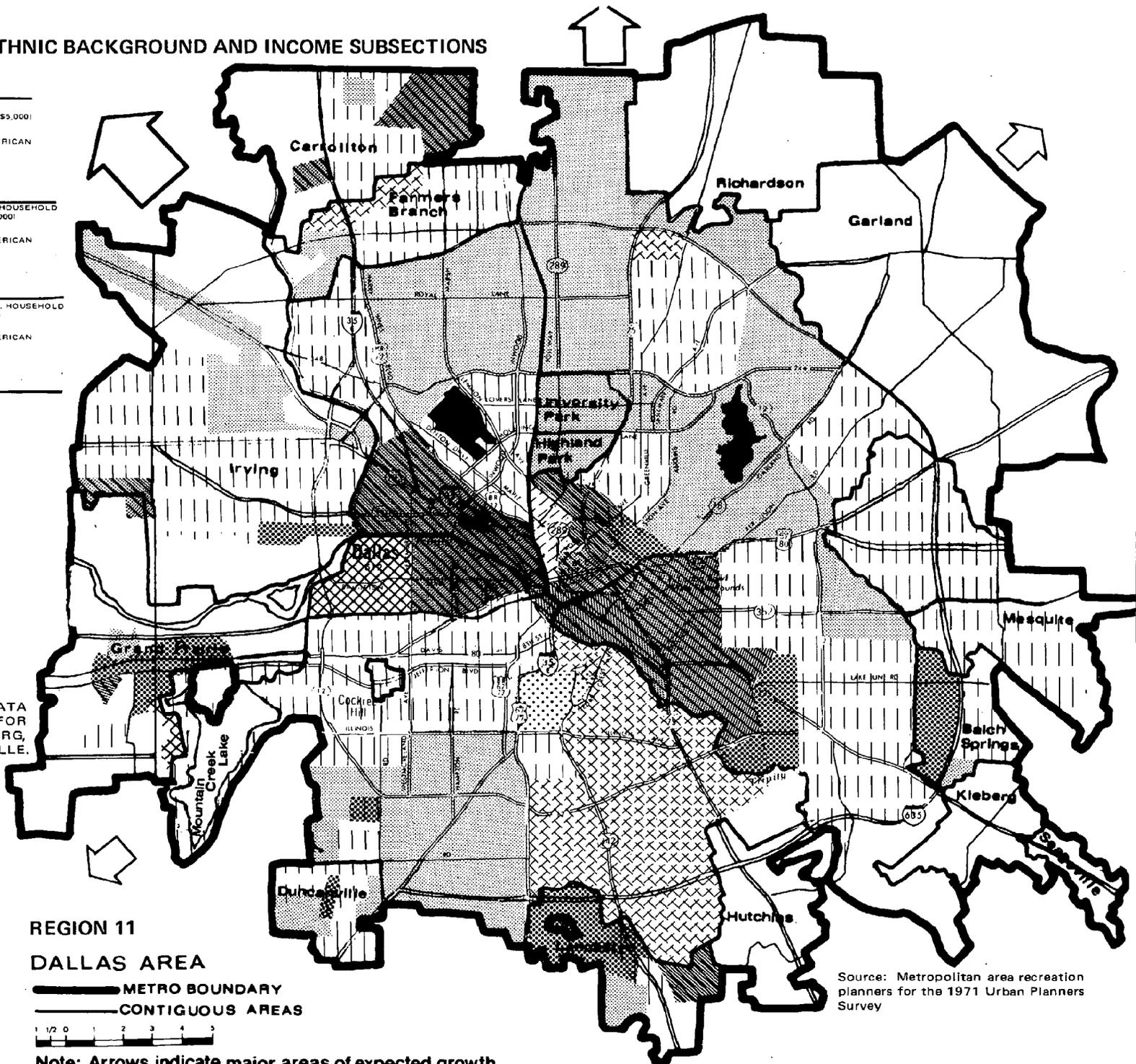
The "Predominant Ethnic Background and Income Subsections" map shows that in 1971 the Dallas Metro had over thirty income/ethnic subsections, as delineated by recreation planners from Dallas and the contiguous urban areas. Dallas was populated predominantly by Anglos and Blacks. There were only two small Mexican-American subsections, a low-income and a middle-income subsection located on either side of the largest low-income Black subsection located in the central core area. Other than the large low-income Black subsection in Dallas' central core area, there were two smaller low-

^{1/} "Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

^{2/} "Current" recreation opportunities refers to computed figures derived from the numbers of publicly-administered facilities by type available within the metro area in 1971.

PREDOMINANT ETHNIC BACKGROUND AND INCOME SUBSECTIONS

- LOW INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS LESS THAN \$5,000)**
- PREDOMINANTLY MEXICAN-AMERICAN
 - PREDOMINANTLY BLACK
 - PREDOMINANTLY ANGLO
- MID INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME VARIED FROM \$5,000 TO \$15,000)**
- PREDOMINANTLY MEXICAN-AMERICAN
 - PREDOMINANTLY BLACK
 - PREDOMINANTLY ANGLO
- HIGH INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS GREATER THAN \$15,000)**
- PREDOMINANTLY MEXICAN-AMERICAN
 - PREDOMINANTLY BLACK
 - PREDOMINANTLY ANGLO
- AREAS FOR WHICH ETHNIC BACKGROUND AND INCOME DELINEATIONS WERE NOT MAPPED.



NOTE: SOCIO-ECONOMIC DATA WERE NOT AVAILABLE FOR GARLAND, HUTCHINS, KLEBERG, RICHARDSON, AND SEAGOVILLE.



REGION 11
DALLAS AREA
 METRO BOUNDARY
 CONTIGUOUS AREAS



Note: Arrows indicate major areas of expected growth.

Source: Metropolitan area recreation planners for the 1971 Urban Planners Survey

income Black subsections located in Carrollton, one more located between Grand Prairie and Irving, and another in Lancaster. There was a large middle-income Black subsection south of the central core area, and two more very small middle-income Black subsections located in Farmer's Branch and one within the core area about a mile southwest of Richardson. The remaining Black subsection was a small high-income area northeast of the intersection of Illinois Avenue and Highways 67 and 77 in the south central core area. Most of the northeastern one-half of the metro was composed of interspersed middle and high-income Anglo subsections including the two contiguous areas of University Park and Highland Park (both high-income Anglo). The western third of the metro was also predominantly characterized by middle and high-income Anglos. All of the seven low-income Anglo subsections were relatively small. One of these was located in the central core area; one each was located in Irving, Duncanville, and Lancaster. Another was located just north of Duncanville in the core area, and the remaining two were located to the southeast of the core area on either side of a relatively large middle-income Anglo area.

The "Dispersion of Parks by Type" map indicates the geographic distribution of parks in Dallas and most of the contiguous urban areas for 1971. Analysis of parks distribution with regard to the income-ethnic background characteristics reveals that all types of parks were generally well-distributed in the metro area. All but six very small subsections had at least one or more parks. Those six specific subsections, however, were within one mile of a park. The two low-income Black subsections and the one high-income Anglo subsection in Carrollton had no parks. The low-income Black subsection between Irving and Grand Prairie, the low-income Anglo subsection north of, and the high-income Anglo subsection within Duncanville also had no parks. Information relevant to the dispersion of parks among subsections in Richardson and Kleberg was not available. With the exception of those two contiguous urban areas, all of the remaining contiguous areas had parks, indicating that the metro as a whole had an adequate distribution of parks in 1971, when analyzed according to income and ethnic subsections. Regarding new developments of parks, the major growth areas in the northwest, north, northeast, and southwest should receive consideration.

In addition to maintaining an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities in parks is also an important consideration. An analysis of the current and future requirements for selected recreational facilities and the current dispersion of facilities in the Dallas Metro is presented in the following discussions.

FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. Then, an analysis of the dispersion of existing facilities among the predominant income/ethnic subsections and the major growth areas of the metro was conducted. Conclusions reached from the facility dispersion analysis were then used to qualify the facility requirement estimates, particularly in those cases where no additional facilities were estimated as being needed within the metropolitan area. Usually, special note is made where growth areas appeared to have limited facilities. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the Urban Volume. In the discussions that follow,

resource requirements for recreational facilities are generally referred to by units of the most important feature necessary to allow participation. For example, when a requirement is shown for swimming pools, features such as a bathhouse, cleaning and filtering system, and other support features are implied when a requirement for the major facility is shown.

Swimming

The Dallas Metro had 45,432 square yards of public swimming pools in 1971. Each square yard (unit) was estimated to provide 150 days of swimming opportunity per year, which yielded an estimated 6,815,000 opportunity days. To determine if there was a surplus or deficit of opportunity, estimated participation days and estimated opportunity days were compared. For swimming there appeared to be a deficit of 9,894,000 days of opportunity in 1970, which translated to 65,960 square yards of pools. Additional deficits were estimated in each planning year thereafter. By 1975, the metro area was estimated to require an additional 68,507 square yards of pools. Cumulative 1980 requirements were estimated at 233,920 square yards. Requirements should continue to grow incrementally by 341,353 square yards and 505,234 square yards in 1990 and 2000, respectively. Only one subsection on the northeast edge of the Dallas core area had no pools, but four contiguous urban areas (Balch Springs, Kleberg, Cockrell Hill, and Hutchins) had no public outdoor pools, and several other contiguous urban areas and subsections had only one pool. Future consideration probably should be given to these areas as well as the more rapidly expanding residential sections in the northwestern, northern, northeastern, and southwestern portions of the metro.

Child's Play

The Dallas Metro in 1971 had 399 acres of playground dispersed through 227 parks. Multiplying the 399 acre units by the playground standard (each acre was calculated to provide 27,623 days of recreation opportunity per unit per year) resulted in an estimated 11,022,000 annual opportunity (potential participation) days. Annual opportunity days were then compared with the forecasted demands, as shown in the Dallas resource requirements table. Playground area deficits were apparent for all planning periods after 1970. The cumulative requirement for 1975 was forty-two additional acres above the 399 acres existing in 1971. Requirements should grow incrementally by 210 acres, 665 acres, and 889 acres in the remaining planning horizon years, respectively, to a total requirement of 1,806 acres by the year 2000. Except for the high-income Anglo subsection in the northeast, which had no public playgrounds, the existing playgrounds were relatively well distributed among the core area population. Balch Springs, Kleberg, Cockrell Hill, and Seagoville had no public playgrounds. Additions of playgrounds should be made with emphasis also placed on the major growth areas.

Baseball/Softball

With an existing 268 baseball/softball fields providing approximately 3.7 million opportunity days (the facility standard utilized was 13,804 opportunity days provided per field each year), the Dallas Metropolitan Area appeared to have a sufficient quantity of fields in 1971 to meet the activity requirements of their baseball/softball recreationists through the year 1990. By the year 2000, an estimated ninety-eight more fields may be needed. Although dispersion of these facilities cannot be discerned from available data, it is important that an adequate distribution be considered in current and future planning efforts.

Picnicking

There were 1,904 public picnic tables in the Dallas Metro in 1971. At 1,702 days of opportunity per table per year (standard) the existing tables provided approximately 3,241,000 days annually. Although the 1971 supply level was expected to provide adequate overall opportunity through 1980, additional picnic facilities will be required in the years from 1980 through 2000. Another 463 tables will be needed by the year 1990, and an additional 606 tables will be needed by the year 2000 to bring the cumulative total to 1,069 tables. These tables, when added to tables existing in 1971, would bring the Dallas Metro Area total to 2,973 tables in the year 2000. The distribution analysis of picnicking facilities indicated good dispersion among the existing populace with only the northern growth area, Balch Springs, Cockrell Hill, Kleberg, and Seagoville showing no picnic tables in 1971.

Football/Soccer

Each of the thirty-eight football/soccer fields in the Dallas Metro Area provided approximately 7,224 days of opportunity annually. This amounts to approximately 275,000 available opportunity days per year, which was estimated to be insufficient for 1970, with another seventy-one fields needed to meet demand. If these fields had been provided, 21 more fields would have been necessary to meet the 1975 requirement, and in 1980 an additional 24 fields would bring the cumulative requirement to 116 fields. The incremental requirements for 1990 and 2000 were estimated to be 57 fields and 48 fields, respectively. Data were not available to determine the distribution in Dallas, but seven contiguous urban areas had no fields, or had only one.

Golf

The four publicly-administered golf courses in the Dallas Metropolitan Area provided eighty-one holes in 1971. Using the urban golf standard of 4,047 days per year per hole, a total of 328,000 days of opportunity were provided annually by the public courses. A comparison of projected participation days with the available opportunity days (1971) showed that the golfers would have required an additional 533 holes (at least fifty-nine, nine-hole courses) in 1970. Incrementally, additions of 320, 430, 1,327, and 1,717 holes would be required in 1975, 1980, 1990, and 2000, respectively, to meet expected increases in golfing participation. As a general rule, golf courses are constructed in multiples of nine holes; therefore, by the year 2000 the Dallas Metro Area will need nearly 481 additional nine-hole courses (4,327 holes) or 240 eighteen-hole courses, or some other appropriate combination of eighteen and nine-hole courses which considers local resources.

Tennis

The 644,000 opportunity days provided by the 239 public tennis courts available in 1971 (each court can make available about 2,694 days of opportunity per year) apparently were insufficient to meet facility requirements for the Dallas Metro. Tennis court deficits were indicated for all planning periods. The 1970 deficit was approximately 3,142,000 opportunity days, or 1,166 courts. Requirements will grow incrementally by 1,083 courts, 1,227 courts, 3,754 courts,

and 5,068 courts in the remaining horizon years, respectively, to a total requirement of 12,298 courts by the year 2000. Because of a general absence of courts throughout the metropolitan area, most sections should be given consideration in current and future planning efforts.

Basketball

Based on an urban basketball standard of 8,795 days per year per court, a total of 660,000 opportunity days was provided by the seventy-five basketball courts enumerated in 1971. By comparing available opportunity days with estimated participation for each projection year as expressed in the Dallas recreation resource requirement table, it appeared that the seventy-five courts would meet only the 1970 requirements. By 1975, an additional twelve courts would be needed. An incremental addition of nineteen courts in 1980 would bring the cumulative total to thirty-one. For 1990 and 2000 incremental additions of 53 courts and 50 courts respectively were estimated. Dispersion analysis of basketball facilities could not be accomplished with available data. However, consideration should be given to a balanced distribution relative to growth areas and income/ethnic subsections, in the allocation of additional basketball facilities.

Trails Activities

Comparing expected participation for walking, bicycling, and nature study occurring in the park and recreation areas with opportunity days provided by the 1971 supply of trails in the Dallas Metro Area indicated that approximately 165 miles of combined trails were needed in 1970, in addition to the sixteen miles of trail (some of which were multiple use) enumerated in 1971. Given the expected increase in participation for the trail activities, incremental additions were projected to increase by 83 miles in 1975, by 96 miles in 1980, by 304 miles in 1990, and by 340 miles in 2000. Overall, a total of 988 miles of combined trails should be added to the existing 16 miles by the year 2000 to meet expected participation levels.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly-administered park and recreation areas. It is likely, however, that as additional trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of additional resources required may be conservative in the long run and should be considered as minimum estimates. In addition to the expectations for increases in participation in trail and related activities at publicly-administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local neighborhoods, on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, SkiingSurface Acres - Freshwater Lakes
(Boating, Boat Fishing, Skiing)

A total of 2,860 surface acres of freshwater lakes was located within the Dallas Metropolitan Area in 1971. Using participation patterns of households recreating in the urban areas, it was estimated that boating would have totaled 386,000 days, boat fishing 168,000 days, and skiing 182,000 days for a total of 736,000 days in 1970. A comparison of estimated participation with the opportunities provided by the surface acres existing in 1971 indicated that from an adequate supply in 1970, incremental resource requirements were expected to increase by 398 acres in 1975, 1,951 acres in 1980, 5,742 acres in 1990, and 7,081 acres in the year 2000, bringing the cumulative resource requirement to an additional 15,172 surface acres needed by the year 2000.

Freshwater Boat Ramps^{1/}

Fourteen publicly-administered freshwater boat lanes were reported for the Dallas Metro Area in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using freshwater boat ramp facilities to gain access to the water if sufficient ramps were available, it was calculated that fourteen additional boat ramps were needed in 1970. Projected increases in freshwater boat fishing, skiing, and boating participation were expected to require sixteen additional freshwater boat ramps in 1975, twenty-one in 1980, sixty-two in 1990, and seventy-six in the year 2000, bringing the cumulative resource requirement to 189 ramps in 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, the provision of freshwater surface acres and freshwater boat ramps required should be planned as joint projects, even though, in some cases, this may require the construction of boat ramps prior to the years reflected in the boat ramp resource requirement projections.

Summary of Facilities Requirements

Although the Dallas Metro had at least some public facilities for all of the designated outdoor recreation activities in 1971, additional square yards of swimming pool, football/soccer fields, holes of golf, tennis courts, miles of designated trail, and freshwater boat ramps were estimated to be required (to adequately accommodate demand) in every planning horizon year. Resource requirements appeared, beginning in 1975, for playgrounds, basketball courts, and acres of freshwater lakes. It should be emphasized that while no additional acres of freshwater lakes were needed in 1970, the number of surface acres required beginning in 1975 increases very rapidly through the year 2000. Existing facilities for baseball/softball and picnicking appeared to be sufficient through most of the planning horizon years.

^{1/} In calculating freshwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

A dispersion analysis was possible only for a few types of facilities. Many subsections in Dallas and the contiguous urban areas apparently needed considerably more facilities, particularly the types required for all planning horizon years. Areas which appear to have had an especially serious deficiency of public swimming pools included the high-income Anglo subsections on the northeast edge of Dallas, and the contiguous urban areas of Balch Springs, Kleberg, and Hutchins, none of which had public pools in 1971; also some of the subsections in the northeast, northwest, and west portions of the metro had only one public pool each. Playgrounds appear to have been reasonably well distributed throughout the metro. Some of the contiguous urban areas, however, (Balch Springs, Kleberg, Cockrell Hill, and Seagoville) had no playgrounds. Public picnic tables also appear to have been reasonably well distributed in 1971. Balch Springs, Cockrell Hill, Kleberg, and Seagoville did not have any public picnic facilities, however.

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE RESOURCES REQUIRED
	Swimming (Pools)	16,709 ^{1/}	6,815	9,894		65,960 square yards ^{2/}	65,960 square yards ^{2/}
	Child's Play (Playgrounds)	8,090	11,022		2,932	0 acres	0 acres
	Baseball/Softball	1,027	3,699		2,672	0 fields	0 fields
	Picnicking	1,952	3,241		1,289	0 tables	0 tables
	Football/Soccer	787	275	512		71 fields	71 fields
	Golf	2,487	328	2,159		533 holes	533 holes
	Tennis	3,786	644	3,142		1,166 courts, dbl.	1,166 courts, dbl.
	Basketball	611	660		49	0 courts, full	0 courts, full
1970	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	736	1,193		457	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	560	189	371		14 ramps ^{3/}	14 ramps ^{3/}
	Trails Activities:						
	Walking	1,126 ^{4/}				121 miles	121 miles
	Bicycling	375 ^{4/}				40 miles	40 miles
	Nature Study	33 ^{4/}				4 miles	4 miles
	Combined Walking, Bicycling, Nature Study	1,534 ^{4/}	135	1,399		165 miles	165 miles
	ACTIVITY						
	Swimming (Pools)	26,985 ^{1/}	6,815	20,170		134,467 square yards ^{2/}	68,507 square yards ^{2/}
	Child's Play (Playgrounds)	12,186	11,022	1,164		42 acres	42 acres
	Baseball/Softball	1,446	3,699		2,253	0 fields	0 fields
	Picnicking	2,371	3,241		870	0 tables	0 tables
	Football/Soccer	942	275	667		92 fields	21 fields
	Golf	3,780	328	3,452		853 holes	320 holes
	Tennis	6,702	644	6,058		2,249 courts, dbl.	1,083 courts, dbl.
	Basketball	762	660	102		12 courts, full	12 courts, full
1975	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	1,359	1,193	166		398 surface acres	398 surface acres
	Boating, Boat Fishing, Skiing FW . . .	997	189	808		30 ramps ^{3/}	16 ramps ^{3/}
	Trails Activities:						
	Walking	1,502 ^{4/}				167 miles	46 miles
	Bicycling	620 ^{4/}				69 miles	29 miles
	Nature Study	113 ^{4/}				12 miles	8 miles
	Combined Walking, Bicycling, Nature Study	2,235 ^{4/}	135	2,100		248 miles	83 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	41,903 ^{1/}	6,815	35,088		233,920 square yards ^{2/}	99,453 square yards ^{2/}
	Child's Play (Playgrounds)	17,989	11,022	6,967		252 acres	210 acres
	Baseball/Softball	1,961	3,699		1,738	0 fields	0 fields
	Picnicking	2,836	3,241		405	0 tables	0 tables
	Football/Soccer	1,110	275	835		116 fields	24 fields
	Golf	5,519	328	5,191		1,283 holes	430 holes
	Tennis	10,005	644	9,361		3,476 courts, dbl.	1,227 courts, dbl.
	Basketball	937	660	277		31 courts, full	19 courts, full
1980	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	2,173	1,193	980		2,349 surface acres	1,951 surface acres
	Boating, Boat Fishing, Skiing FW . . .	1,566	189	1,377		51 ramps ^{3/}	21 ramps ^{3/}
	Trails Activities:						
	Walking	1,895 ^{4/}				214 miles	47 miles
	Bicycling	935 ^{4/}				105 miles	36 miles
	Nature Study	219 ^{4/}				25 miles	13 miles
	Combined Walking, Bicycling, Nature Study	3,049 ^{4/}	135	2,914		344 miles	96 miles
	<u>ACTIVITY</u>						
	Swimming (Pools)	93,106 ^{1/}	6,815	86,291		575,273 square yards ^{2/}	341,353 square yards ^{2/}
	Child's Play (Playgrounds)	36,366	11,022	25,344		917 acres	665 acres
	Baseball/Softball	3,423	3,699		276	0 fields	0 fields
	Picnicking	4,029	3,241	788		463 tables	463 tables
	Football/Soccer	1,525	275	1,250		173 fields	57 fields
	Golf	10,892	328	10,564		2,610 holes	1,327 holes
	Tennis	20,122	644	19,478		7,230 courts, dbl.	3,754 courts, dbl.
	Basketball	1,397	660	737		84 courts, full	53 courts, full
1990	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	4,568	1,193	3,375		8,091 surface acres	5,742 surface acres
	Boating, Boat Fishing, Skiing FW . . .	3,235	189	3,046		113 ramps ^{3/}	62 ramps ^{3/}
	Trails Activities:						
	Walking	3,219 ^{4/}				371 miles	157 miles
	Bicycling	1,855 ^{4/}				214 miles	109 miles
	Nature Study	543 ^{4/}				63 miles	38 miles
	Combined Walking, Bicycling, Nature Study	5,617 ^{4/}	135	5,482		648 miles	304 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	168,891 ^{1/}	6,815	162,076		1,080,507 square yards ^{2/}	505,234 square yards ^{2/}
	Child's Play (Playgrounds)	60,912	11,022	49,890		1,806 acres	889 acres
	Baseball/Softball	5,055	3,699	1,356		98 fields	98 fields
	Picnicking	5,061	3,241	1,820		1,069 tables	606 tables
	Football/Soccer	1,870	275	1,595		221 fields	48 fields
	Golf	17,841	328	17,513		4,327 holes	1,717 holes
	Tennis	33,775	644	33,131		12,298 courts, dbl.	5,068 courts, dbl.
	Basketball	1,838	660	1,178		134 courts, full	50 courts, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	7,522	1,193	6,329		15,172 surface acres	7,081 surface acres
	Boating, Boat Fishing, Skiing FW . . .	5,280	189	5,091		189 ramps ^{3/}	76 ramps ^{3/}
	Trails Activities:						
	Walking	4,572 ^{4/}				532 miles	161 miles
	Bicycling	2,963 ^{4/}				345 miles	131 miles
	Nature Study	959 ^{4/}				111 miles	48 miles
	Combined Walking, Bicycling, Nature Study	8,494 ^{4/}	135	8,359		988 miles	340 miles

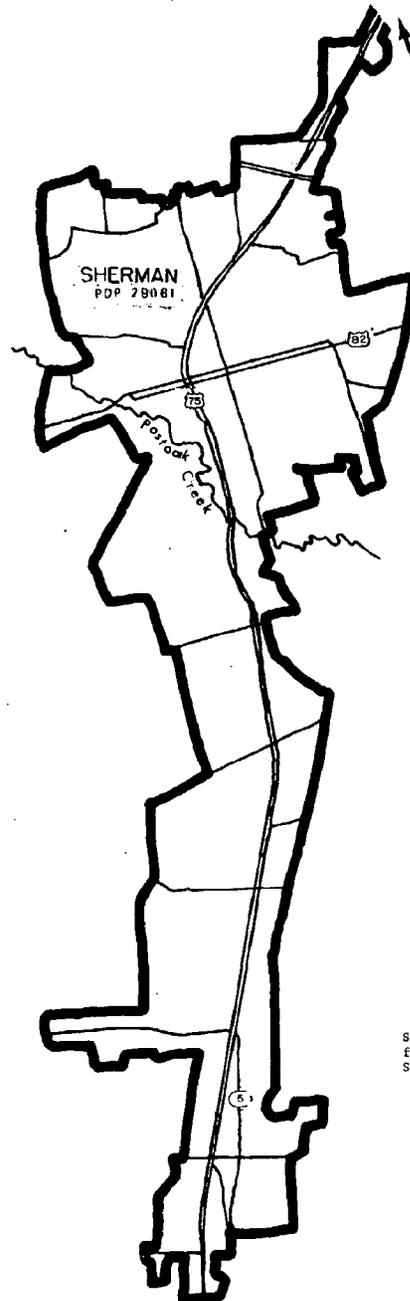
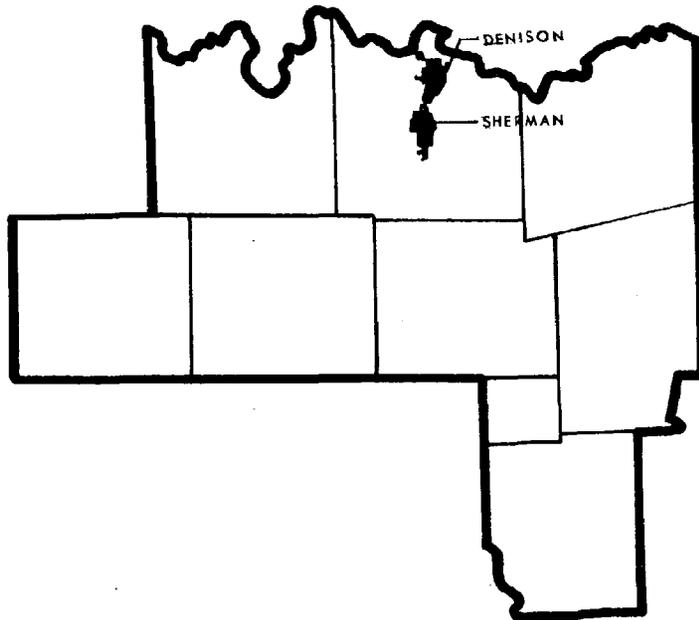
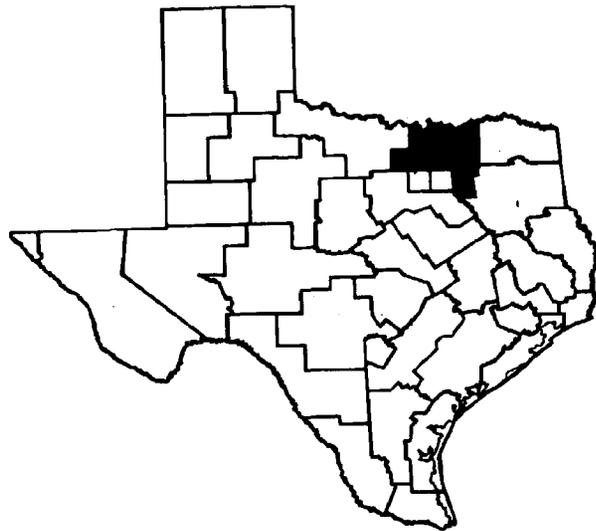
1/ Includes only swimming participation occurring in swimming pools, 94 percent of the total in urban areas.

2/ Designated freshwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.

3/ Assumes 2.0 lanes per ramp.

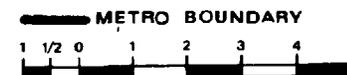
4/ Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

Region 12



Source: Adapted from General Highway Map Grayson County Texas. 1970, 1970 Census figures, Highways revised to May 1, 1973. Texas State Highway Department Planning Survey Division. Austin, Texas.

SHERMAN-DENISON AREA



Sherman and Denison lie only a short distance apart at the northern extremity of Central Texas near the Red River and form one metropolitan area.

Sherman is the older of the two cities and is the county seat of Grayson County. The city is a commercial, industrial, and educational center. Products of industry in the city include cottonseed, grain and food processing, business machines, petroleum, and aluminum products. Austin College and Grayson County Junior College are located in the city along with Perrin Air Force Base. Annual events in Sherman include the Arts Festival (March), Grayson County Livestock Fair (April), and the Old Settlers Picnic (August).

Denison is the site of large railroad shops and yards. In addition, electronic components, boats, petroleum products, and food products are manufactured here. Denison is distinguished as the birthplace of Dwight D. Eisenhower. Major annual events in Denison are the Texoma Junior Livestock Show (April), National Sand Bass Festival (June), and the Texoma Rockhounds Show (October).

POPULATION: Sherman
1970 Metro Area Population: 29,061
Change 1960-70: +16%

Race Composition
White 89% ^{1/}
Negro 10%
Other <.5%
Age Composition (years):
13 or less 24%
14 - 20 14%
21 - 44 30%
45 - 64 20%
65 and over 12%

ECONOMY: Sherman
Agribusiness
Business
Manufacturing
Transportation: Motor Freight,
Railroads

POPULATION: Denison
1970 Metro Area Population: 24,923
Change 1960-70: +10%

Race Composition
White 88% ^{1/}
Negro 11%
Other 0.5%
Age Composition (years):
13 or less 26%
14 - 20 12%
21 - 44 28%
45 - 64 21%
65 and over 13%

ECONOMY: Denison
Agribusiness
Manufacturing
Transportation: Railroads

^{1/} Includes persons of Mexican and/or Spanish descent.

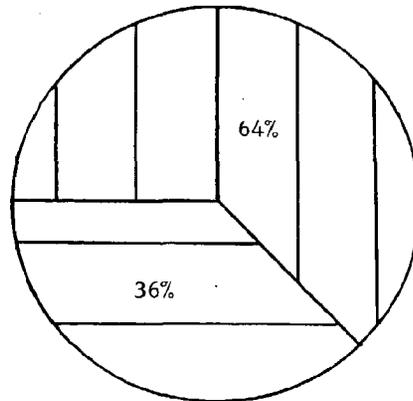
REGION 12

CITY SIZE: METRO

PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

REGION
12
METRO

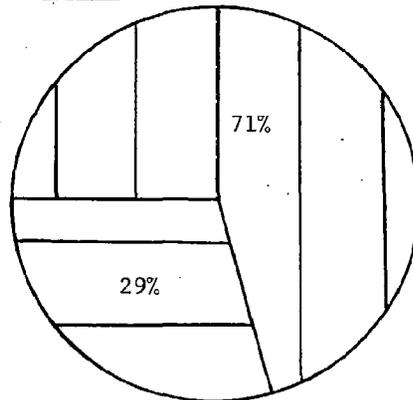


DEVELOPED LAND



UNDEVELOPED LAND

STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 12 METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	173	1,307
Undeveloped Land	97	536
Total Land	270	1,843
Water Within or Adjacent	0	1,006
Total Land and Water	270	2,849

Sherman and Denison have a total of 270 acres of land set aside as park and recreation areas. No surface acres of water either within or adjacent to the parks were reported.

Of the total land acreage, 173 acres are developed with facilities, leaving 97 acres available for future development. With 64 percent of the land acreage currently developed, Sherman and Denison are below the Statewide Metro average of 71 percent.

REGION 12

CITY SIZE: METRO

PARKS AND ACREAGE BY TYPE OF PARK

	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	2.000	15.000	3.000	0	20.000	72.000
Parks Per Thousand	.037	.278	.056	0	.370	.267
People Per Park	26,992.000	3,599.000	17,995.000	0	2,699.000	3,754.000
.....						
Land Acres	186.000	80.000	4.000	0	270.000	1,843.000
Acres Per Thousand	3,445	1.482	.074	0	5.000	6.864
People Per Acre	290.000	675.000	13,496.000	0	200.000	146.000

Three-fourths of the total of 20 parks are Community Parks. Three Specialty Parks were reported along with two District Parks. The District Parks comprise about two-thirds of the total land acreage followed by Community Parks with a total of 80 acres. The four Specialty Parks average a little over one acre each. The dispersion of the three types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the total population of the two cities. .370 parks per 1,000 and 5.000 acres per 1,000 population exist.

Another way to present this data is that 2,699 people share each park while 200 people must share each acre of park land.

With .370 parks per 1,000, Sherman and Denison rank well above the Statewide Metro average. However, the 5.000 acres per 1,000 gives the area a figure well below the Statewide Metro average for acres per 1,000.

DISPERSION OF PARKS BY TYPE

URBAN PARKS

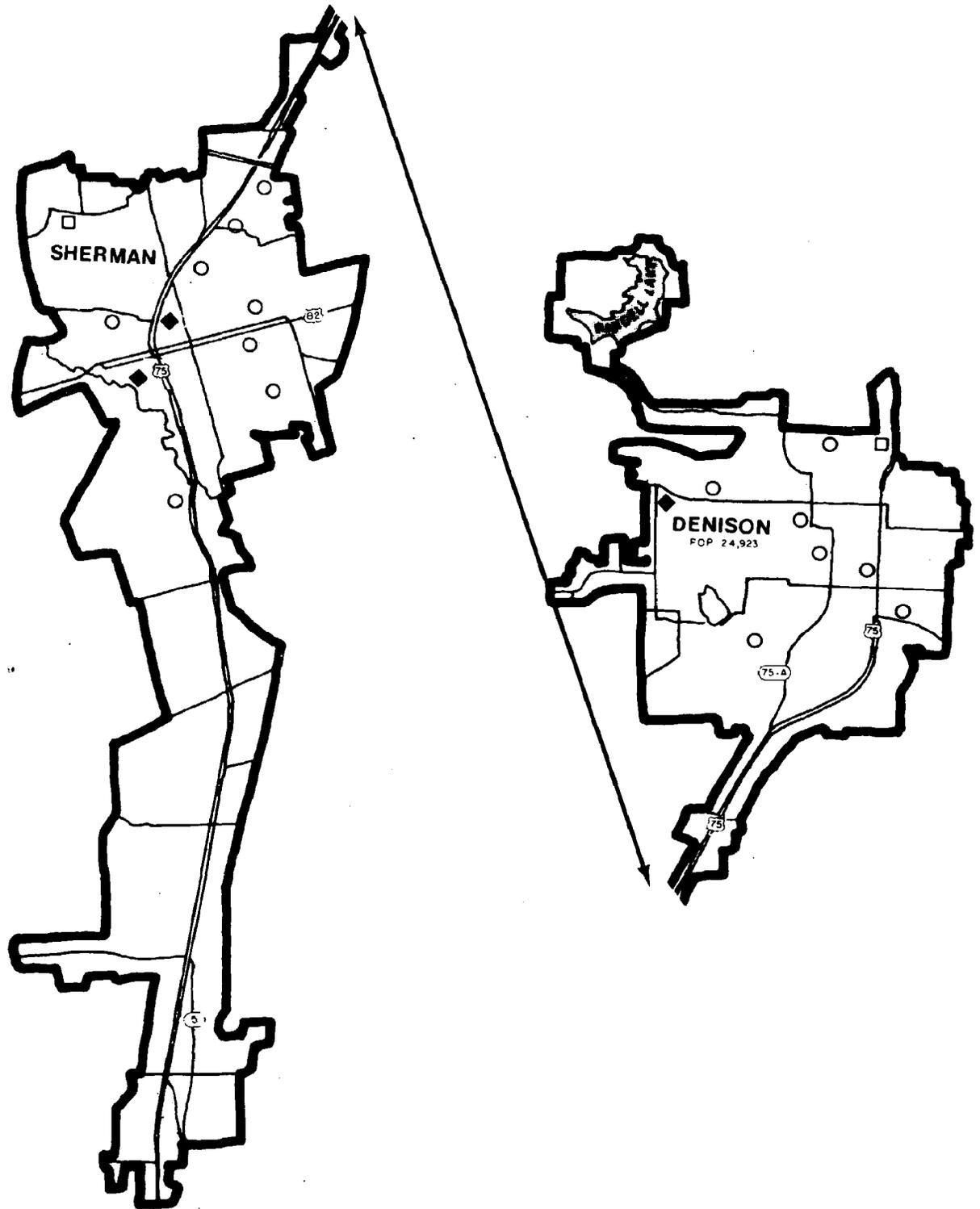
- DISTRICT PARK
- COMMUNITY PARK
- ◆ SPECIALTY PARK
- OPEN-LAND PARK

Source: 1971 Municipal Inventory Update



REGION 12
SHERMAN-DENISON AREA

— METRO BOUNDARY



PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 12 METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	2	12	0	14	3,856	.259	.150
Tennis Courts.....	2	8	0	10	5,398	.185	.142
Basketball Courts.....	0	2	0	2	26,992	.037	.071
Baseball/Softball Fields.....	5	13	0	18	2,999	.333	.186
Football/Soccer Fields.....	1	0	0	1	53,984	.018	.032
Picnicking:							
Parks.....	2	9	0	11	4,907	.203	.124
Tables.....	50	30	0	80	674	1.481	1.230
Playground:							
Parks.....	2	15	1	18	2,999	.333	.170
Acres Developed.....	7	15	1	23	2,347	.425	.258
Swimming:							
Parks.....	2	3	0	5	10,796	.092	.050
Pools (Sq. Yd.).....	2,280	3,280	0	5,560	10	102.962	25.950
Designated Fresh Water (Sq. Yd.)...	0	0	0	0	---	---	52.242
Boating:							
Parks.....	0	0	0	0	---	---	.006
Ramp Lanes - Fresh Water.....	0	0	0	0	---	---	.008
Camping:							
Parks.....	0	0	0	0	---	---	.002
Campsites.....	0	0	0	0	---	---	.121
Fishing:							
Parks.....	0	0	0	0	---	---	.013
Pier/Barge/Marina-Fresh Water (Yd.)	0	0	0	0	---	---	.049
Golfing:							
Courses.....	0	0	1	1	53,984	.018	.005
Holes.....	0	0	9	9	5,998	.166	.100
Trails:							
Parks.....	1	0	0	1	53,984	.018	.006
Nature (Mi.).....	2	0	0	2	26,992	.037	.009
Horseback (Mi.).....	2	0	0	2	26,992	.037	.003
Bicycle (Mi.).....	1	0	0	1	53,984	.018	.007
Hiking (Mi.).....	0	0	0	0	---	---	.006
Total Trails (Mi.).....	5	0	0	5	10,796	.092	.021

PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION	STATEWIDE
						12 METRO	AVERAGE METRO AREAS
Sport Shooting:							
Parks.....	0	0	1	1	53,984	.018	.002
Traps.....	0	0	0	0	---	---	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	0	0	4	4	13,496	.074	.011
Miscellaneous:							
Parks.....	0	0	1	1	53,984	.018	.038
Amphitheatre Seats.....	0	0	0	0	---	---	1.077
Botanical Gardens (Acres).....	0	0	0	0	---	---	.077
Zoos (Acres).....	0	0	0	0	---	---	.051
Community/Recreation Centers.....	0	0	1	1	53,984	.018	.038

Almost all of the park and recreation facilities in Sherman and Denison are in the District and Community Park categories. The three Specialty Parks have facilities only for archery, golf, a playground, and a community/recreation center. All of the trail facilities are in the District Park category. A total of 5,560 square yards of swimming pool area in 5 parks was reported.

Of the 20 parks, 18 have playgrounds, 14 have games and sports facilities and 11 have picnicking facilities. The most common types of games and sports facilities are baseball/softball with 18 fields, followed by tennis with 10 courts, basketball with 2 courts and football/soccer with 1 field.

Looking at selected facilities in relation to the number of potential users we find the following:

- | | |
|---|--|
| 53,984 persons for each football/soccer field | 2,999 persons for each baseball/softball field |
| 53,984 persons for each community/recreation center | 2,347 persons for each acre of playground |
| 26,992 persons for each basketball court | 674 persons for each picnic table |
| 10,796 persons for each mile of trails | 10 persons for each square yard of swimming pool |
| 5,998 persons for each golf hole | |
| 5,398 persons for each tennis court | |

Sherman and Denison are above the Statewide Metro average for facility units per 1,000 for tennis courts, baseball/softball fields, picnic tables, playground acres, square yards of swimming pools, golf holes, trail miles and archery targets. Sherman and Denison are below the average for basketball courts, football/soccer fields, and community/recreation centers. No designated freshwater swimming area, boat ramp lanes, campsites, yards of fishing pier/bergo/marina, shooting traps, shooting targets, amphitheatre seats, acres of botanical gardens or zoo acreage were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

ACTIVITY-FACILITY	ANNUAL DAYS AVAILABLE	DAYS PER THOUSAND POPULATION	
		REGION 12 METRO	STATEWIDE AVERAGE METRO
Swimming (Pools) - square yards	834,000	15,444	3,891
Child's Play - playground acres	635,329	11,765	7,137
Baseball/Softball - fields	248,472	4,601	2,577
Picnicking - tables	136,160	2,521	2,093
Football/Soccer - fields	7,224	134	235
Golf - holes	36,423	676	414
Tennis - courts, double	26,940	499	384
Basketball - courts, full	17,590	326	625
Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	0	0	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	0	0	103
Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	25,392	470	164

The Sherman-Denison Metro Area offers the most opportunity days for swimming (in pools), followed by child's play and baseball/softball. A comparison between the opportunity days per thousand population for the Sherman-Denison Metro Area and the Statewide Metro average shows that the Sherman-Denison Metro Area surpasses the statewide average for seven of the activity types -- swimming (in pools), child's play, baseball/softball, picnicking, golf, tennis and the trails activities. The Sherman-Denison Metro Area is below the Statewide Metro average for football/soccer and basketball, with no opportunity days available for surface acres for freshwater boating, boat fishing, and skiing, and freshwater boat ramps.

The twenty-second ranking metro area, based on population, Sherman-Denison ranked twenty-second in total participation for the year 1970. Estimates for 1970 indicate that residents and non-residents in the area spent over 1.4 million recreation days in pursuit of urban outdoor recreation opportunities available within the metro area.

Resident

For the 16 activities shown, total participation in urban outdoor recreation activities by the residents of the Sherman-Denison Metropolitan Area is expected to increase, as compared to the 1970 level of 843,000 days by 25.6 percent to nearly 1.1 million days in 1975 and by 54.9 percent to 1.3 million days in 1980. Participation on a days per household basis is projected to increase from 45.4 days in 1970 to 53.6 days in 1975, and to 62.3 days in 1980--increases of 17.9 and 37.1 percent, respectively. In comparison to the other metropolitan areas across the State, residents of the Sherman-Denison Metropolitan Area are expected to participate at a rate of 78, 108, and 140 days per household below the average for 1970, 1975, and 1980, respectively. For the years 1990 and 2000, both total days of participation and days per household are expected to increase, but days per household will still remain below the statewide average for all metropolitan areas.

Projections for specific activities indicate that 14 of the 16 activities will increase in total days of participation through the year 1980. Participation on a days per household basis is expected to increase in 15 of the activities, while football will decrease slightly. In 1970, the six most popular activities based on total participation were estimated to be: driving for pleasure, swimming, child's play, picnicking, golf, and sightseeing, respectively. By 1980, the top three activities will remain the same, but picnicking will be replaced by basketball as the fourth ranked activity, with picnicking ranked as fifth and golf in the sixth position.

Non-Resident

For the urban outdoor recreation activities specified for 1970, participation within the Sherman-Denison Metropolitan Area by non-residents was estimated to total 539,000 days. Compared to the 1970 level, total participation is expected to increase 5.8 percent (to 570,000 days) by 1975 and 11.7 percent (to 602,000 days) by 1980. Similar increases are anticipated for the years 1990 and 2000.

In terms of days of participation for 1970, the popular ranking of the specific activities estimated is: fishing, with 243,000 days; picnicking, with 90,000 days; sightseeing, with 72,000 days; boating, with 66,000 days; skiing, with 23,000 days; and walking, with 15,000 days. Assuming adequate facilities are made available, a moderate increase in participation for all activities is expected through the year 2000, with the activities retaining their order of popularity.

CURRENT AND PROJECTED RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970				1975				1980				1990				2000			
	PART. DAYS	RANK	REG. 12 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 12 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 12 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 12 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 12 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH
Swimming	154	2	8.30	27.41	202	2	10.22	36.52	258	2	12.31	47.17	398	1	17.03	75.28	579	1	22.45	110.14
Child's Play	141	3	7.60	14.08	186	3	9.41	17.72	240	3	11.45	22.00	378	2	16.17	32.20	560	2	21.72	43.99
Baseball/Softball	34	7	1.83	2.78	42	8	2.13	3.19	52	8	2.48	3.59	76	9	3.25	4.41	104	9	4.03	5.22
Picnicking	82	4	4.42	5.72	89	4	4.50	5.66	95	5	4.53	5.66	109	6	4.66	5.61	122	8	4.73	5.64
Football/Soccer	2	15	.11	1.43	2	15	.10	1.42	2	15	.10	1.41	2	15	.09	1.39	2	15	.08	1.38
Golf	42	5	2.26	3.92	57	6	2.89	4.98	76	6	3.63	6.16	124	5	5.31	8.96	189	5	7.33	12.07
Tennis	12	12	.65	6.06	13	12	.66	9.21	14	13	.67	11.49	16	13	.68	16.07	17	13	.66	21.46
Basketball	24	9	1.29	1.60	59	5	2.99	2.59	98	4	4.67	3.57	189	4	8.09	5.52	295	4	11.44	7.53
Walking	20	10	1.08	18.21	21	11	1.06	23.09	23	11	1.10	29.20	25	12	1.07	39.89	28	12	1.09	50.31
Bicycling	*	0	---	20.30	*	16	---	32.77	*	16	---	45.25	*	16	---	68.44	*	16	---	95.49
Nature Study	3	14	.16	.72	3	14	.15	1.67	3	14	.14	2.64	4	14	.17	4.63	4	14	.16	6.70
Fishing	33	8	1.78	1.80	37	9	1.87	1.88	41	10	1.96	1.97	50	10	2.14	2.13	59	10	2.29	2.30
Boating	16	11	.86	.88	32	10	1.62	1.60	48	9	2.29	2.31	87	8	3.72	3.74	133	7	5.16	5.17
Skiing	8	13	.43	.42	12	13	.61	.62	17	12	.81	.82	28	11	1.20	1.22	42	11	1.63	1.81
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	40	6	2.16	2.25	52	7	2.63	2.34	66	7	3.15	2.50	97	7	4.15	2.70	134	6	5.20	3.01
Dr. for Pleas.	232	1	12.51	13.38	252	1	12.75	13.52	273	1	13.02	13.67	314	3	13.43	13.86	354	3	13.73	14.10
TOTAL	843		45.44	120.96	1,059		53.59	158.78	1,306		62.31	199.41	1,897		81.16	286.05	2,622		101.70	386.32

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000	ACTIVITY	1970	1975	1980	1990	2000
Swimming	7	7	7	7	8	Swimming	161	209	265	405	587
Child's Play	*	*	*	*	*	Child's Play	141	186	240	378	560
Baseball/Softball	3	4	4	4	4	Baseball/Softball	37	46	56	80	108
Picnicking	90	95	100	101	113	Picnicking	172	184	195	210	235
Football/Soccer	5	5	5	5	6	Football/Soccer	7	7	7	7	8
Golf	1	1	1	1	1	Golf	43	58	77	125	190
Tennis	*	*	*	*	*	Tennis	12	13	14	16	17
Basketball	*	*	*	*	*	Basketball	24	59	98	189	295
Walking	15	16	17	17	19	Walking	35	37	40	42	47
Bicycling	*	*	*	*	*	Bicycling	*	*	*	*	*
Nature Study	*	*	*	*	*	Nature Study	3	3	3	4	4
Fishing	243	257	272	274	307	Fishing	276	294	313	324	366
Boating	66	70	74	75	83	Boating	82	102	122	162	216
Skiing	23	24	26	26	29	Skiing	31	36	43	54	71
Surfing	---	---	---	---	---	Surfing	---	---	---	---	---
Sightseeing	72	76	80	81	91	Sightseeing	112	128	146	178	225
Dr. for Pleas.	14	15	16	16	18	Dr. for Pleas.	246	267	289	330	372
TOTAL	539	570	602	607	679	TOTAL	1,382	1,629	1,908	2,504	3,301

Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the Sherman-Denison Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with the current recreation opportunities^{2/} available in the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to subsections of the Sherman-Denison Metro characterized by residents having similar incomes and ethnic backgrounds. Particular attention was given to those subsections expected to undergo relatively rapid population growth and physical expansion in the future.

Conclusions reached from analyzing the distribution of recreation opportunities within the metropolitan area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist.

In the discussions that follow, results of the distribution analysis of parks within subsections of the Sherman-Denison Metro Area are presented. Then, estimates of current and future requirements for selected recreation facilities are presented, and qualified by conclusions reached from the distribution analysis of recreation facilities within subsections of the metro.

PARK DISTRIBUTION ANALYSIS

In analyzing the availability and distribution of parks in the Sherman-Denison Metro Area, several characteristics were considered: changes in population (or trends in general, 1960 to 1970), areas of the metro which were expected to exhibit relatively major expansion, and the dispersion of existing parks among the income/ethnic subsections of the metro. From these interrelated characteristics general conclusions were reached with respect to future park developments for the metro area.

Population trends affected estimations of future recreation participation. Projections of population growth for Sherman-Denison indicated that the 1970 metro population of 53,984 would increase by about one-third by the year 2000. In addition, information provided by urban recreation planners in 1971 shows that major direction of future urban expansion is expected to occur in the southwest area of Denison toward Sherman along U.S. Highway 75, as illustrated by arrows on the accompanying map, titled "Predominant Ethnic Background and Income Delineations."

This same map shows twenty-one income/ethnic subsections which characterize homogenous residential or demographic patterns by two major socio-economic factors. As illustrated by that map, the northern half of Denison was populated mainly by low-income and middle-income Anglo residents with one low-income Black subsection. The southwest corner consisted of middle-income and high-income Anglo and low-income Black subsections. The southeast corner was comprised of

^{1/} "Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

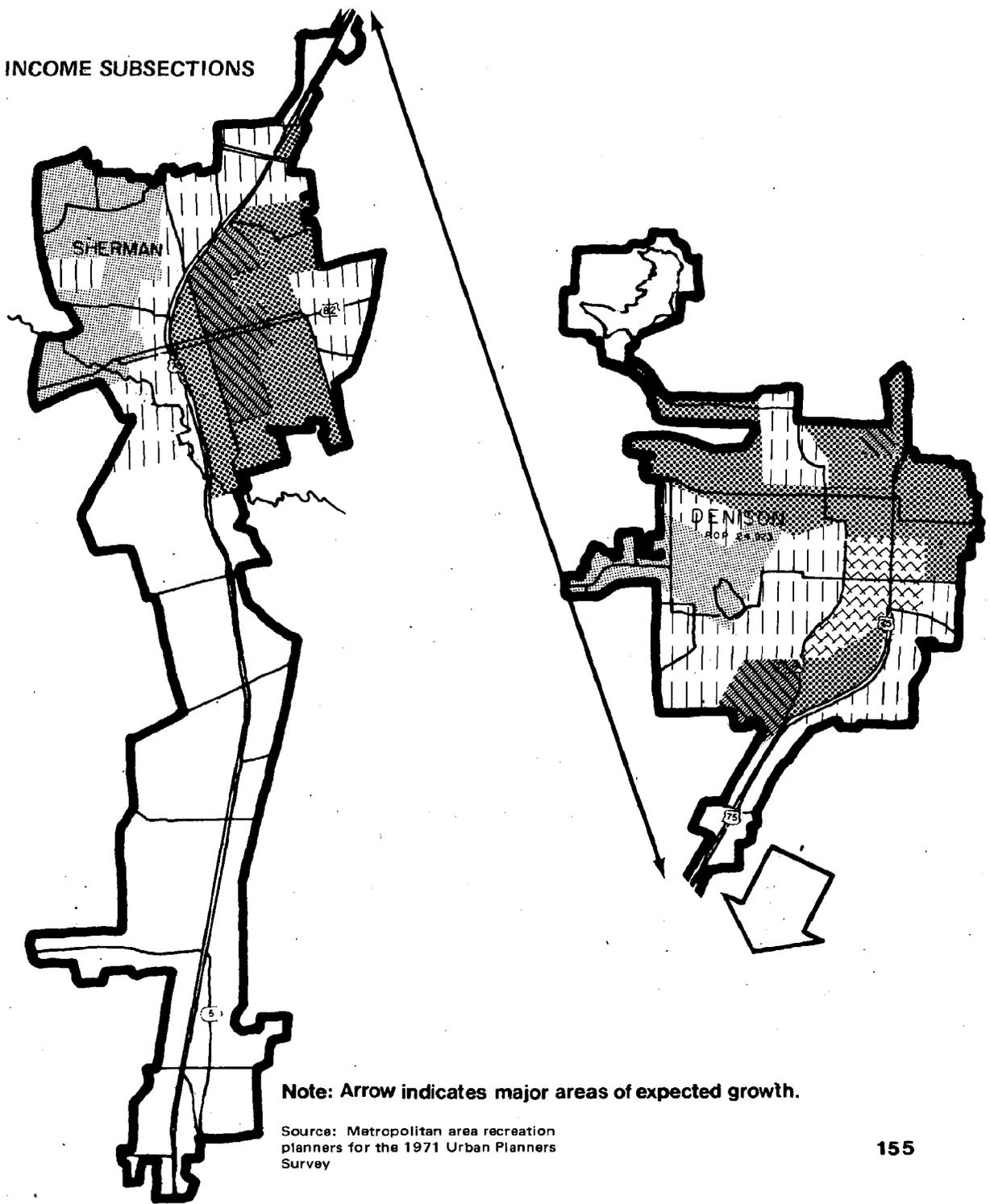
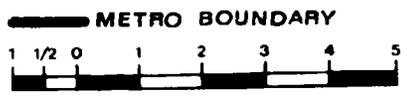
^{2/} "Current" recreation opportunities refers to computed figures derived from the numbers of publicly administered facilities by type available within the metro area in 1971.

PREDOMINANT ETHNIC BACKGROUND AND INCOME SUBSECTIONS

- LOW INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS LESS THAN \$5,000)**
-  **PREDOMINANTLY MEXICAN-AMERICAN**
 -  **PREDOMINANTLY BLACK**
 -  **PREDOMINANTLY ANGLO**
- MID INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME VARIED FROM \$5,000 TO \$15,000)**
-  **PREDOMINANTLY MEXICAN-AMERICAN**
 -  **PREDOMINANTLY BLACK**
 -  **PREDOMINANTLY ANGLO**
- HIGH INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS GREATER THAN \$15,000)**
-  **PREDOMINANTLY MEXICAN-AMERICAN**
 -  **PREDOMINANTLY BLACK**
 -  **PREDOMINANTLY ANGLO**
-  **AREAS FOR WHICH ETHNIC BACKGROUND AND INCOME DELINEATIONS WERE NOT MAPPED.**



**REGION 12
SHERMAN-DENISON AREA**



Note: Arrow indicates major areas of expected growth.

Source: Metropolitan area recreation planners for the 1971 Urban Planners Survey

middle-income Black, low-income and middle-income Anglo households. The western half of Sherman was primarily high-income Anglo, while the center area, from north to south and west of Highway 75, was chiefly middle-income Anglo families. The area east of Highway 75 was made up of low-income Anglo and Black and middle-income Anglo subsections.

An examination of the "Dispersion of Parks by Type" map reveals that community parks appeared to be fairly well distributed throughout the metro area. District parks and specialty parks did not appear to be adequately distributed, however, and no open-land parks were reported. One district park (located in the high-income Anglo subsection in northwestern Sherman) and one district park (located in the low-income Black subsection in northeastern Denison) were reported, and specialty parks appeared to be confined to the central area of Sherman and western half of Denison. In Denison, areas without parks of any type included one small low-income Anglo subsection in the northeast tip of the metro east of Highway 75 and two middle-income Anglo subsections on the eastern and western extremities. Subsections in Denison for which no parks were reported were: two small low-income subsections at the south end of the city, one Black and one Anglo; two were middle-income Anglo subsections, one on the southeastern city limits and one in the north central portion of the metro; and one was a high-income Anglo subsection in the western portion of the metro. The growth areas of the Sherman-Denison Metro also appeared to be without parks of any type. Therefore, in any new park developments, consideration should be given to those subsections without parks, and the faster-growing areas, such as the section between Denison and Sherman.

In addition to maintaining an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities in parks is also an important consideration. An analysis of the current and future requirements for selected recreational facilities and the current dispersion of facilities in the Sherman-Denison Metro Area is presented in the following discussions.

FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. Then, an analysis of the dispersion of facilities reported in 1971 among the predominant income/ethnic background subsections and the major growth areas of the metro was conducted. Conclusions reached from the facility dispersion analysis were then used to qualify the facility requirement estimates, particularly in those cases where no additional facilities were estimated as being needed within the metropolitan area. Usually, special note is made where growth areas appeared to have limited facilities. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the Urban Volume. In the discussion that follows, resource requirements for recreational facilities are generally referred to by units of the most important feature necessary to allow participation. For example, when a requirement is shown for swimming pools, features such as a bathhouse, cleaning and filtering system, and other support features are implied when a requirement for the major facility is shown.

Swimming

The Sherman-Denison Metro Area had 5,560 square yards of public swimming pools in 1971. Each square yard was estimated to provide 150 days of swimming opportunity per year, yielding a total of 834,000 opportunity days. Projected participation for each year was then compared to opportunity days to determine if a surplus or deficit of opportunity existed. For each year a surplus resulted, indicating that the existing facilities should be adequate to satisfy participation through the year 2000. Distribution of swimming facilities appeared to be even; although, in any future expansion of facilities, consideration should be given to maintaining an even dispersion of facilities, particularly in the faster growing areas.

Child's Play

In 1971, there were twenty-three acres of public playground within the Sherman-Denison Metropolitan Area. These twenty-three acres were estimated to provide some 635,000 opportunity days annually (assuming a standard of 27,623 opportunity days per acre per year). It was estimated that these facilities will be sufficient to meet demand for all planning years, 1970, 1975, 1980, 1990, and 2000. The distribution of playgrounds in Sherman-Denison appeared to be adequate, as all subsections either had a playground, or were within reasonable distance to one. However, in order to insure adequate dispersions in the future, playgrounds may be needed in the growth areas.

Baseball/Softball

The eighteen baseball/softball fields existing in 1971 provided approximately 248,000 opportunity days annually (assuming a standard of 13,804 days of opportunity provided by a field per year). These eighteen fields were expected to be sufficient to meet demand for baseball/softball through the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Picnicking

There were eighty public picnic tables in Sherman-Denison in 1971. At 1,702 opportunity days per table per year, these eight tables provided 136,000 days of opportunity annually. These opportunity days were then compared with projected participation for each year to determine facility surpluses or deficits, and facility requirements were found to exist in all planning years. For 1970, it was estimated that twenty-one additional tables were required. By 1975, twenty-eight tables should be required. Between 1975 and 1980, seven more tables should be added for a cumulative requirement to thirty-five by 1980. Another eight tables should be required by 1990, and another fifteen by 2000, bringing the cumulative requirement to fifty-eight tables by 2000. The dispersion of picnicking facilities seemed adequate within Sherman. It appears that facilities for picnicking were needed in the western and northwestern portion of Denison, however, in any future picnicking facility development, consideration should be given to these areas, as well as the fast growing areas to the south of Denison.

Football/Soccer

In 1971 the one football/soccer field provided a total of approximately 7,224 opportunity days per field per year (the same as the standard). It is expected that this field, located in Sherman, will be adequate to meet expected participation through the year 2000 for the metro as a whole. However, since Sherman and Denison are physically separated, it appeared that there may be a requirement for a field in Denison.

Golf

In 1971, there was one publicly administered golf course in the Sherman-Denison Metropolitan Area. Projections for golf indicated that increments of 2, 3, 5, 12, and 16 holes should be added to meet expected participation for the years 1970, 1975, 1980, 1990, and 2000, respectively. This would bring the cumulative requirement for 2000 to thirty-eight holes; or the equivalent of four nine-hole courses, two eighteen-hole courses, or some more appropriate combination which considers available resources.

Tennis

The Sherman-Denison Metro Area in 1971 reported ten tennis courts which, when multiplied by the standard of 2,694 days per court per year, yields nearly 27,000 opportunity days annually. These ten public courts were expected to be sufficient to meet participation levels for all planning years. However, the distribution of tennis facilities appeared to be uneven. There was only one public tennis facility in Sherman, and it was located in the northwest corner; and, while Denison had several facilities, all were located in the north. Therefore, although no requirements for tennis courts were projected, in any future development of tennis facilities planners should carefully consider dispersion and try to achieve and maintain an adequate distribution.

Basketball

Based on a conversion standard of 8,795 days of opportunity per court per year, the two public basketball courts enumerated in 1971 provided a combined total of approximately 18,000 opportunity days. A comparison of this total with projected participation for each year indicates that 1 additional court was needed in 1970, 4 more in 1975, 4 more in 1980, bringing the cumulative requirement to 9 by 1980. Ten additional courts should be added between 1980 and 1990, and twelve more between 1990 and 2000 for a cumulative requirement of 31 courts by the year 2000. Although distribution could not be discerned from available information, maintaining an even distribution should be an important consideration in the future development of basketball courts.

Trails Activities

There were, in 1971, three miles of trails in Sherman-Denison for walking, bicycling, and nature study. This total multiplied by the standard of 8,464 days per mile per year yields over 25,000 days of opportunity annually. (Although the total actually amounted to five miles, two of these were horseback riding trail miles. Because resource requirements were not computed for urban horseback riding trails and because these two miles in the Sherman-Denison Metro Area were not designated for other types of trail usage, they were excluded from the computation of opportunity days.) A comparison of the opportunity days with projected participation indicated no expected requirements for trails for all projection years.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly-administered park and recreation areas. It is likely, however, that even though no resource requirements are shown through the year 2000, the relative proportion of total participation may increase at these recreation areas. Thus, the above estimates of additional resources required may be conservative in the long run and should be considered as minimum estimates. It is clear that the major proportion of walking, bicycling, and nature study is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local neighborhoods, on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, SkiingSurface Acres - Freshwater Lakes
(Boating, Boat Fishing, Skiing)

No surface acres of freshwater lakes were reported available for water-related recreation within the Sherman-Denison Metro Area in 1971. Using participation patterns of the households recreating within the urban areas, it was estimated that a total of 171,000 days of freshwater boating, boat fishing, and skiing participation would have occurred in 1970 if adequate freshwater lakes had been available. Of these 171,000 days, 82,000 were boating participation days, 58,000 were boat fishing days, and 31,000 were skiing days. Sherman and Denison are very close to Lake Texoma; as a result, some of the demand for water-oriented activities may have been satisfied by this reservoir. Projections developed for the water-related activities indicate incremental resource requirements of 410 surface acres in 1970, 69 surface acres in 1975, 75 surface acres in 1980, 127 surface acres in 1990, and 192 surface acres in 2000. This brings the cumulative resource requirement to 873 surface acres by the year 2000.

Freshwater Boat Ramps^{1/}

No publicly-administered freshwater boat lanes were reported for the Sherman-Denison Metro Area in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using freshwater boat ramp facilities to gain access to the water if ramps were available, it was calculated that five boat ramps were needed in 1970. Projected increases in freshwater boat fishing, skiing, and boating participation are expected to require one additional freshwater boat ramp in 1975, one in 1980, one in 1990, and two in the year 2000, bringing the cumulative resource requirement to ten ramps in 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, the provision of freshwater surface acres and freshwater boat ramps required should be planned as joint projects, even though, in some cases, this may require the construction of boat ramps prior to the years reflected in the boat ramp resource requirement projections.

Summary of Facilities Requirements

In 1971 the only two types of designated facilities not available within the metro boundary were surface acres of recreational freshwater, and freshwater boat ramps. However, much of the demand for water-oriented activities probably was fulfilled by Lake Texoma located only a few miles from the metro.

A comparison of opportunity days with estimated participation days for other activities showed a requirement in each planning year for public picnic tables, holes of golf, and basketball courts. It appears that there was a scarcity of picnic tables in the western and northwestern subsections of Denison.

Although the one public football field was estimated to be adequate through the year 2000 for the metro as a whole, no public fields were reported in Denison in 1971. Facilities for swimming, child's play, baseball, and tennis were estimated to be adequate through the year 2000. In planning additional facilities, a major criterion should be the geographic distribution of existing facilities relative to growth areas and major income/ethnic subsections.

^{1/} In calculating freshwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION		
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL	
1970	Swimming (Pools)	151 ^{1/}	834		683	0 square yards ^{2/}	0 square yards ^{2/}	
	Child's Play (Playgrounds)	141	635		494	0 acres	0 acres	
	Baseball/Softball	37	248		211	0 fields	0 fields	
	Picnicking	172	136	36		21 tables	21 tables	
	Football/Soccer	7	7	0	0	0 fields	0 fields	
	Golf	43	36	7		2 holes	2 holes	
	Tennis	12	27		15	0 courts, dbl.	0 courts, dbl.	
	Basketball	24	18	6		1 court, full	1 court, full	
	Water-Related Activities:							
		Boating, Boat Fishing, Skiing FW . . .	171	0	171		410 surface acres	410 surface acres
		Boating, Boat Fishing, Skiing FW . . .	134	0	134		5 ramps ^{3/}	5 ramps ^{3/}
	Trails Activities:							
		Walking	4 ^{4/}				0 miles	0 miles
		Bicycling	* ^{4/}				0 miles	0 miles
	Nature Study	1 ^{4/}				0 miles	0 miles	
	Combined Walking, Bicycling, Nature Study	5 ^{4/}	25		20	0 miles	0 miles	
<hr/>								
ACTIVITY								
1975	Swimming (Pools)	196 ^{1/}	834		638	0 square yards ^{2/}	0 square yards ^{2/}	
	Child's Play (Playgrounds)	186	635		449	0 acres	0 acres	
	Baseball/Softball	46	248		202	0 fields	0 fields	
	Picnicking	184	136	48		28 tables	7 tables	
	Football/Soccer	7	7	0	0	0 fields	0 fields	
	Golf	58	36	22		5 holes	3 holes	
	Tennis	13	27		14	0 courts, dbl.	0 courts, dbl.	
	Basketball	59	18	41		5 courts, full	4 courts, full	
	Water-Related Activities:							
		Boating, Boat Fishing, Skiing FW . . .	200	0	200		479 surface acres	69 surface acres
		Boating, Boat Fishing, Skiing FW . . .	155	0	155		6 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:							
		Walking	4 ^{4/}				0 miles	0 miles
		Bicycling	* ^{4/}				0 miles	0 miles
	Nature Study	1 ^{4/}				0 miles	0 miles	
	Combined Walking, Bicycling, Nature Study	5 ^{4/}	25		20	0 miles	0 miles	

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION RESOURCES REQUIRED	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	249 ^{1/}	834		585	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	240	635		395	0 acres	0 acres
	Baseball/Softball	56	248		192	0 fields	0 fields
	Picnicking	195	136	59		35 tables	7 tables
	Football/Soccer	7	7	0	0	0 fields	0 fields
	Golf	77	36	41		10 holes	5 holes
	Tennis	14	27		13	0 courts, dbl.	0 courts, dbl.
	Basketball	98	18	80		9 courts, full	4 courts, full
1980	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	231	0	231		554 surface acres	75 surface acres
	Boating, Boat Fishing, Skiing FW . . .	177	0	177		7 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	4 ^{4/}				0 miles	0 miles
	Bicycling	* 4 ^{4/}				0 miles	0 miles
	Nature Study	1 ^{4/}				0 miles	0 miles
	Combined Walking, Bicycling, Nature Study	5 ^{4/}	25		20	0 miles	0 miles
<hr/>							
	<u>ACTIVITY</u>						
	Swimming (Pools)	381 ^{1/}	834		453	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	378	635		257	0 acres	0 acres
	Baseball/Softball	80	248		168	0 fields	0 fields
	Picnicking	210	136	74		43 tables	8 tables
	Football/Soccer	7	7	0	0	0 fields	0 fields
	Golf	125	36	89		22 holes	12 holes
	Tennis	16	27		11	0 courts, dbl.	0 courts, dbl.
	Basketball	189	18	171		19 courts, full	10 courts, full
1990	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	284	0	284		681 surface acres	127 surface acres
	Boating, Boat Fishing, Skiing FW . . .	214	0	214		8 ramps ^{2/}	1 ramp ^{2/}
	Trails Activities:						
	Walking	4 ^{4/}				0 miles	0 miles
	Bicycling	* 4 ^{4/}				0 miles	0 miles
	Nature Study	1 ^{4/}				0 miles	0 miles
	Combined Walking, Bicycling, Nature Study	5 ^{4/}	25		20	0 miles	0 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE
	Swimming (Pools)	552 ^{1/}	834		282	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	560	635		75	0 acres	0 acres
	Baseball/Softball	108	248		140	0 fields	0 fields
	Picnicking	235	136	99		58 tables	15 tables
	Football/Soccer	8	7	1		0 fields	0 fields
	Golf	190	36	154		38 holes	16 holes
	Tennis	17	27		10	0 courts, dbl.	0 courts, dbl.
	Basketball	295	18	277		31 courts, full	12 courts, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW	364	0	364		873 surface acres	192 surface acres
	Boating, Boat Fishing, Skiing FW	271	0	271		10 ramps ^{3/}	2 ramps ^{3/}
	Trails Activities:						
	Walking	5 ^{4/}				0 miles	0 miles
	Bicycling	* ^{4/}				0 miles	0 miles
	Nature Study	1 ^{4/}				0 miles	0 miles
	Combined Walking, Bicycling, Nature Study	6 ^{4/}	25		19	0 miles	0 miles

Note: Asterisks indicate that projected annual activity days were less than 500.

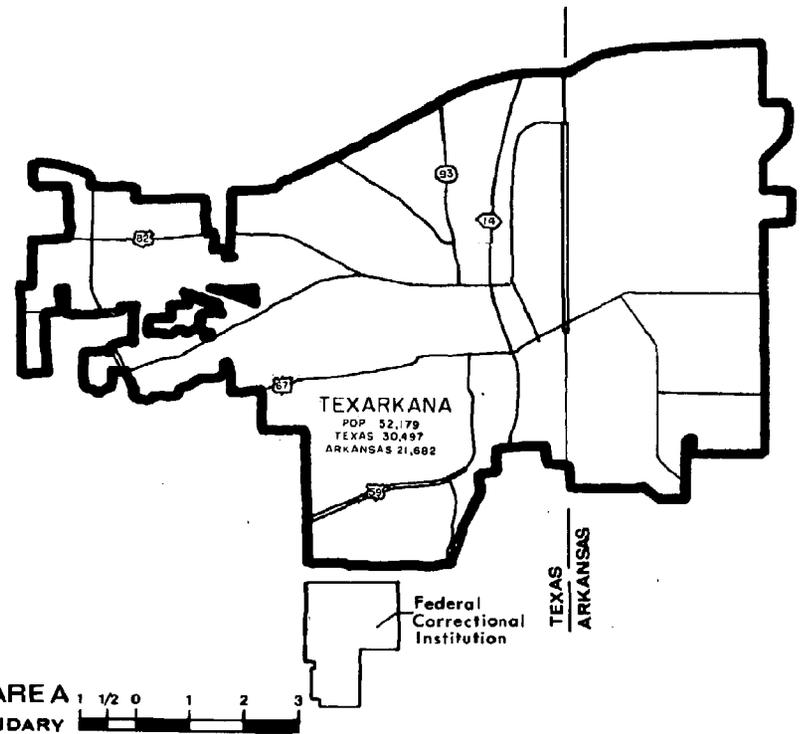
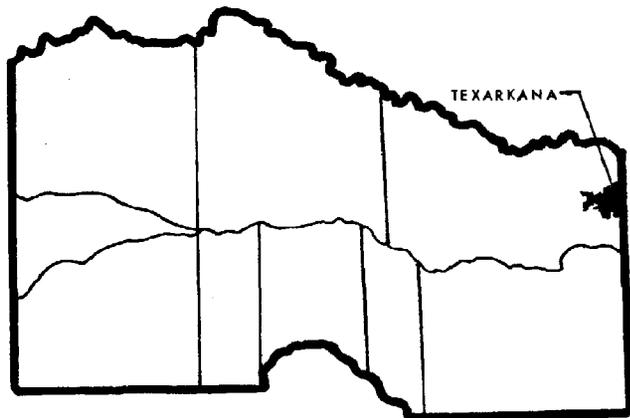
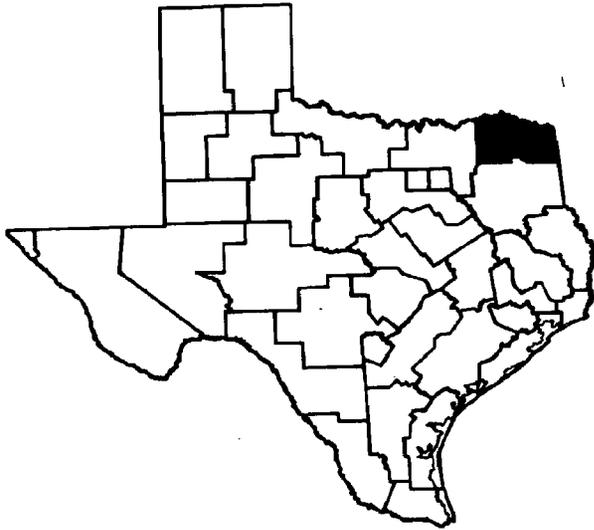
^{1/} Includes only swimming participation occurring in swimming pools, 94 percent of the total in urban areas.

^{2/} Designated freshwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.

^{3/} Assumes 2.0 lanes per ramp.

^{4/} Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

Region 13



Source: Adapted from General Highway Map Bowie County Texas, 1967, 1970 Census figures, Highways revised to September 1, 1973. Texas State Highway Department Planning and Research Division. Austin, Texas.

Texarkana is located on the Texas-Arkansas border and is commercially one city, but consists of two municipalities, one in Texas and the other in Arkansas. The city is the site of varied industries and is a distribution center of industrial products for a three-state area. Located near Texarkana is the Red River Army Depot which stores, reconditions, and issues supplies for the U.S. Army. A major annual event in Texarkana is the Four States' Fair and Rodco (September). The city is also the site of Texarkana College.

POPULATION

1970 Metro Area Population: 51,585

Change 1960-1970: +1%

Race Composition

White 71% 1/

Negro 28%

Other <.5%

Age Composition (years):

13 or less 24%

14 - 20 13%

21 - 44 26%

45 - 64 23%

65 and over 14%

ECONOMY

Agribusiness

Distribution

Lumbering

1/ Includes persons of Mexican and/or Spanish descent.

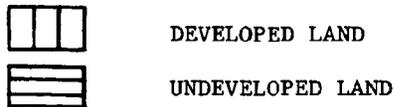
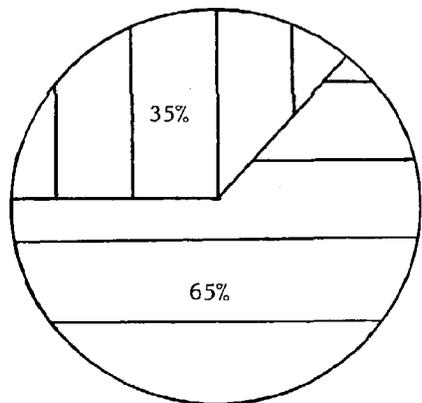
REGION 13

CITY SIZE: METRO

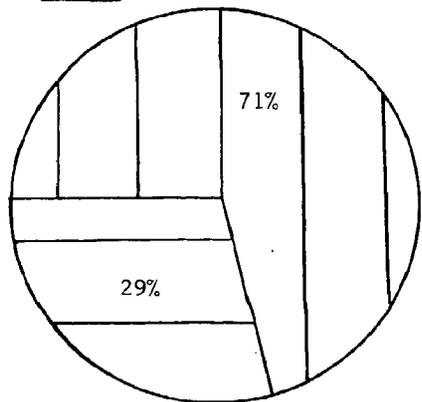
PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

REGION
13
METRO



STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 13 METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	149	1,307
Undeveloped Land	280	536
Total Land	429	1,843
Water Within or Adjacent	6	1,006
Total Land and Water	435	2,849

The Texarkana Metro Area has a total of 429 acres of land set aside as park and recreation areas. In addition, 6 surface acres of water either within or adjacent to these parks were reported.

Of the total land acreage, 149 acres are developed with facilities, leaving 280 acres available for future development. With only 35 percent of the land acreage currently developed, the Area is well below the Statewide Metro average of 71 percent.

PARKS AND ACREAGE BY TYPE OF PARK

	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	3.000	11.000	8.000	1.000	23.000	72.000
Parks Per Thousand	.058	.213	.155	.019	.446	.267
People Per Park	17,195.000	4,690.000	6,448.000	51,585.000	2,243.000	3,754.000
.....						
Land Acres	346.000	47.000	5.000	31.000	429.000	1,843.000
Acres Per Thousand	6.707	.911	.097	.601	8.316	6.864
People Per Acre	149.000	1,098.000	10,317.000	1,664.000	120.000	146.000

Community Parks comprise almost one-half of the total of 23 parks followed by Specialty Parks with eight. Three District Parks and one Open Land Park were inventoried. The acreage figures, however, show eighty percent of the acreage to be in District Parks. The eleven Community Parks average a little over 4 acres each while the eight Specialty parks average only .6 acre each. The one Open Land Park amounted to 31 acres. The dispersion of the four types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the total population of the Texarkana Metro Area, .446 parks per 1,000 and 8.316 acres per 1,000 population exist.

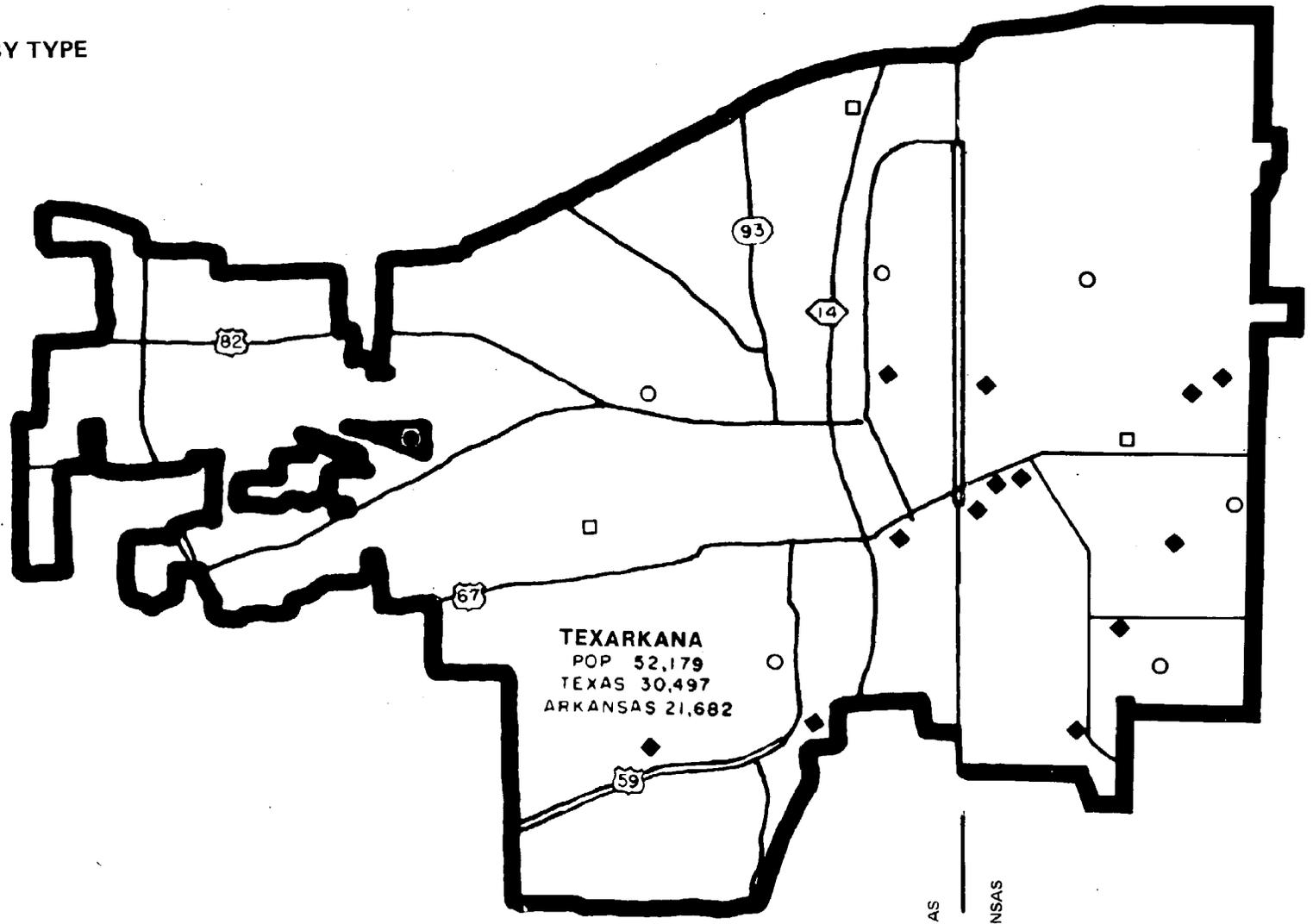
Another way to present this data is that 2,243 people share each park while 120 people share each acre of park land.

With .446 parks per 1,000, the Texarkana Metro Area ranks well above the Statewide Metro average. The 8.316 acres per 1,000 also gives the area a figure well above the Statewide Metro average for acres per 1,000.

DISPERSION OF PARKS BY TYPE

URBAN PARKS

- DISTRICT PARK
- COMMUNITY PARK
- ◆ SPECIALTY PARK
- OPEN-LAND PARK



TEXARKANA
 POP 52,179
 TEXAS 30,497
 ARKANSAS 21,682

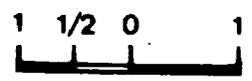
FEDERAL
 CORRECTIONAL
 INSTITUTION

TEXAS
 ARKANSAS

REGION 13

TEXARKANA AREA

METRO BOUNDARY



Source: 1971 Municipal Inventory Update

PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 13 METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	2	7	1	10	5,158	.192	.150
Tennis Courts.....	0	5	0	5	10,317	.096	.142
Basketball Courts.....	1	6	1	8	6,448	.154	.071
Baseball/Softball Fields.....	6	1	0	7	7,369	.134	.186
Football/Soccer Fields.....	1	0	0	1	51,585	.019	.032
Picnicking:							
Parks.....	2	11	1	14	3,684	.269	.124
Tables.....	51	28	2	81	636	1.557	1.230
Playground:							
Parks.....	3	11	5	19	2,715	.366	.170
Acres Developed.....	7	24	4	35	1,473	.673	.258
Swimming:							
Parks.....	1	1	0	2	25,792	.038	.050
Pools (Sq. Yd.).....	800	333	0	1,133	46	21.788	25.950
Designated Fresh Water (Sq. Yd.)...	24,200	0	0	24,200	2	465.384	52.242
Boating:							
Parks.....	0	0	0	0	---	---	.006
Ramp Lanes - Fresh Water.....	0	0	0	0	---	---	.008
Camping:							
Parks.....	0	0	0	0	---	---	.002
Campsites.....	0	0	0	0	---	---	.121
Fishing:							
Parks.....	1	1	0	2	25,792	.038	.013
Pier/Barge/Marina-Fresh Water (Yd.)	0	0	0	0	---	---	.049
Golfing:							
Courses.....	0	0	0	0	---	---	.005
Holes.....	0	0	0	0	---	---	.100
Trails:							
Parks.....	0	0	0	0	---	---	.006
Nature (Mi.).....	0	0	0	0	---	---	.009
Horseback (Mi.).....	0	0	0	0	---	---	.003
Bicycle (Mi.).....	0	0	0	0	---	---	.007
Hiking (Mi.).....	0	0	0	0	---	---	.006
Total Trails (Mi.).....	0	0	0	0	---	---	.021

PARK AND RECREATION FACILITIES BY TYPE OF PARK

CITY SIZE: METRO

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 13 METRO	STATEWIDE AVERAGE METRO AREAS
Sport Shooting:							
Parks.....	0	0	0	0	---	---	.002
Traps.....	0	0	0	0	---	---	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	0	0	0	0	---	---	.011
Miscellaneous:							
Parks.....	3	4	2	9	5,731	.172	.038
Amphitheatre Seats.....	20	20	0	40	1,289	.769	1.077
Botanical Gardens (Acres).....	0	0	1	1	51,585	.019	.077
Zoos (Acres).....	0	0	0	0	---	---	.051
Community/Recreation Centers.....	1	2	1	4	12,896	.077	.038

Most of the park and recreation facilities are in District or Community Parks. The only facilities in Specialty Parks are for games and sports (one basketball court), picnicking, playgrounds, a community/recreation center and a small botanical garden. One District Park and one Community Park have water acreage for fishing although no specific fishing facilities were reported. Along with a swimming pool, the District Park category shows designated fresh water swimming area. A total of 4 community/recreation centers were reported.

Of the 23 parks, 19 have playgrounds, 14 have picnicking facilities, and 10 have games and sports facilities. The most common types of games and sports facilities are basketball with 8 courts, followed by baseball/softball with 7 fields, tennis with 5 courts and football/soccer with one field.

Looking at selected facilities in relation to the number of potential users we find the following:

51,585 persons for each football/soccer field	6,448 persons for each basketball court
12,896 persons for each community/recreation center	1,473 persons for each acre of playground
10,317 persons for each tennis court	636 persons for each picnic table
7,369 persons for each baseball/softball field	46 persons for each square yard of swimming pool

The Texarkana Metro Area is above the Statewide Metro average for facility units per 1,000 only for basketball courts, picnic tables, playground acres, designated fresh water swimming area and community/recreation centers, while falling below the average for tennis courts, baseball/softball fields, football/soccer fields, square yards of swimming pools, amphitheatre seats and acres of botanical gardens. No boat ramp lanes, campsites, yards of fishing pier/barge/marina, golf holes, trail miles, sport shooting facilities or zoo acreage were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

<u>ACTIVITY-FACILITY</u>	<u>ANNUAL DAYS AVAILABLE</u>	<u>DAYS PER THOUSAND POPULATION</u>	
		<u>REGION 13 METRO</u>	<u>STATEWIDE AVERAGE METRO</u>
Swimming (Pools) - square yards	169,950	3,268	3,891
Child's Play - playground acres	966,805	18,592	7,137
Baseball/Softball - fields	96,628	1,858	2,577
Picnicking - tables	137,862	2,651	2,093
Football/Soccer - fields	7,224	139	235
Golf - holes	0	0	414
Tennis - courts, double	13,470	259	384
Basketball - courts, full	70,360	1,353	625
Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	417	8	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	0	0	103
Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	0	0	164

The Texarkana Metro Area offers the most opportunity days for child's play, followed by swimming (in pools) and picnicking. A comparison between the opportunity days per thousand population for the Texarkana Metro Area and the Statewide Metro average shows that the Texarkana Metro Area surpasses the statewide average for three of the activity types-- child's play, picnicking, and basketball. The Texarkana Metro Area is below the Statewide Metro average for swimming (in pools), baseball/softball, football/soccer, tennis, and surface acres for freshwater boating, boat fishing and skiing, with no opportunity days available for golf, freshwater boat ramps and the trails activities.

The twenty-third ranking metro area, based on population, Texarkana ranked twenty-third in total participation for the year 1970. Estimates for 1970 indicate that residents and non-residents in the area spent over 1.2 million recreation days in pursuit of urban outdoor recreation opportunities available within the metro area.

Resident

For the 16 activities shown, total days of participation in urban outdoor recreation by residents of the Texarkana Metropolitan Area was estimated to be 1.1 million days in 1970. Total participation is expected to increase to 1.6 million days in 1975 and to 2.2 million days in 1980. These projections represent increases of 45.5 percent by 1975 and 98.9 percent by 1980. Participation on a days per household basis is projected to increase from 61.8 days in 1970 to 89.4 days in 1975, and to 121.7 days in 1980--increases of 44.8 percent and 97.0 percent, respectively. Residents of the Texarkana Metropolitan Area are expected to participate at a rate of 62, 72, and 81 days per household below the statewide average for the other Texas metropolitan areas in 1970, 1975, and 1980, respectively. For the more distant years of 1990 and 2000, both total days of participation and days per household are expected to increase, but days per household will remain below the statewide average for all metropolitan areas.

Projections for specific activities indicate that 13 of the 16 activities will increase in total days of participation through the year 1975 and 1980. Participation on a days per household basis is expected to increase in 11 activities by 1980, while football and bicycling will decline. Basketball and nature study will remain relatively constant. In 1970, the six most popular activities based on total participation were estimated to be: swimming, child's play, driving for pleasure, walking, picnicking, and golf, respectively. By 1975, participation days in walking is expected to increase by 65.7 percent and the activity will replace driving for pleasure as the number three ranked activity. Driving for pleasure will then become the fourth most popular activity. Child's play, which ranked second in 1970, will remain the second most popular activity. Picnicking, which ranked fifth, will exchange places with golf, which was sixth. In 1980 swimming is expected to remain the first ranked activity, child's play second, and walking will remain third. Driving for pleasure, golf, and picnicking will continue to be the fourth, fifth, and sixth ranked activities.

Non-Resident

For the urban outdoor recreation activities specified for 1970, participation within the Texarkana Metropolitan Area by non-residents was estimated to total 93,000 days. Compared to the 1970 level, total participation is expected to remain constant at 93,000 days in 1975 and increase by 2.2 percent (to 95,000 days) by 1980. A decrease of 6.4 percent (to 87,000 days) is expected in 1990 with an increase in the year 2000 of 1.0 percent (to 94,000 days) in comparison to 1970 figures.

In terms of days of participation for 1970, the most popular non-resident activities, of the specific activities projected, were: sightseeing, with 45,000 days; driving for pleasure, with 17,000 days; picnicking and walking, with 9,000 days; child's play, with 5,000 days; and football, with 4,000 days. Assuming adequate facilities are made available, participation for all activities is expected to remain relatively constant through the year 2000, with no anticipated change in popularity.

CURRENT AND PROJECTED RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970				1975				1980				1990				2000			
	PART.		REG. 13	STATE-																
	DAYS	RANK	METROS AVERAGE	METROS AVERAGE	DAYS	RANK	METROS AVERAGE	METROS AVERAGE	DAYS	RANK	METROS AVERAGE	METROS AVERAGE	DAYS	RANK	METROS AVERAGE	METROS AVERAGE	DAYS	RANK	METROS AVERAGE	METROS AVERAGE
Swimming	265	1	14.54	27.41	429	1	23.42	36.52	645	1	35.05	47.17	1,212	1	67.54	75.28	1,960	1	112.03	110.14
Child's Play	249	2	13.66	14.08	387	2	21.13	17.72	557	2	30.27	22.00	959	2	53.44	32.20	1,483	2	84.77	43.99
Baseball/Softball	16	8	.88	2.78	25	10	1.37	3.19	35	10	1.90	3.59	50	9	2.79	4.41	67	9	3.83	5.22
Picnicking	79	5	4.33	5.72	85	6	4.64	5.66	89	6	4.84	5.66	89	6	4.96	5.61	89	7	5.09	5.64
Football/Soccer	12	12	.66	1.43	12	12	.66	1.42	12	13	.65	1.41	11	13	.61	1.39	11	13	.63	1.38
Golf	66	6	3.62	3.92	111	5	6.06	4.98	169	5	9.18	6.16	310	4	17.27	8.96	491	4	28.07	12.07
Tennis	10	13	.55	6.06	11	13	.60	9.21	11	14	.60	11.49	11	13	.61	16.07	11	13	.63	21.46
Basketball	3	15	.16	1.60	3	15	.16	2.59	3	15	.16	3.57	2	15	.11	5.52	2	15	.11	7.53
Walking	137	4	7.52	18.21	227	3	12.39	23.09	317	3	17.23	29.20	483	3	26.91	39.89	641	3	36.64	50.31
Bicycling	14	11	.77	20.30	14	11	.76	32.77	14	12	.76	45.25	14	12	.78	68.44	13	12	.74	95.49
Nature Study	*	0	---	.72	1	16	.05	1.67	1	10	.05	2.64	2	15	.11	4.63	2	15	.11	6.70
Fishing	33	7	1.81	1.80	34	7	1.86	1.88	36	9	1.96	1.97	38	10	2.12	2.13	40	10	2.29	2.30
Boating	16	8	.88	.88	29	9	1.58	1.60	43	8	2.34	2.31	67	8	3.73	3.74	90	6	5.14	5.17
Skiing	8	14	.44	.42	11	13	.60	.62	15	11	.82	.82	22	11	1.23	1.22	28	11	1.60	1.81
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	15	10	.82	2.25	34	7	1.86	2.34	53	7	2.88	2.50	70	7	3.90	2.70	86	8	4.92	3.01
Dr. for Pleas.	203	3	11.14	13.38	225	4	12.29	13.52	240	4	13.04	13.67	243	5	13.54	13.86	245	5	14.00	14.10
TOTAL	1,126		61.78	120.96	1,638		89.43	158.78	2,240		121.73	199.41	3,583		199.65	286.05	5,259		300.60	386.32

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000	ACTIVITY	1970	1975	1980	1990	2000
Swimming	2	2	2	2	2	Swimming	267	431	647	1,214	1,962
Child's Play	5	5	5	5	5	Child's Play	254	392	562	964	1,488
Baseball/Softball	*	*	*	*	*	Baseball/Softball	16	25	35	50	67
Picnicking	9	9	9	9	9	Picnicking	88	94	98	98	98
Football/Soccer	4	4	4	4	4	Football/Soccer	16	16	16	15	15
Golf	*	*	*	*	*	Golf	66	111	169	310	491
Tennis	*	*	*	*	*	Tennis	10	11	11	11	11
Basketball	1	1	1	1	1	Basketball	4	4	4	3	3
Walking	9	9	9	9	9	Walking	146	236	326	492	650
Bicycling	*	*	*	*	*	Bicycling	14	14	14	14	13
Nature Study	*	*	*	*	*	Nature Study	*	1	1	2	2
Fishing	1	1	1	1	1	Fishing	34	35	37	39	41
Boating	*	*	*	*	*	Boating	16	29	43	67	90
Skiing	*	*	*	*	*	Skiing	8	11	15	22	28
Surfing	---	---	---	---	---	Surfing	---	---	---	---	---
Sightseeing	45	45	46	46	46	Sightseeing	60	79	99	116	132
Dr. for Pleas.	17	17	18	18	17	Dr. for Pleas.	220	242	258	265	262
TOTAL	93	93	95	95	94	TOTAL	1,219	1,731	2,335	3,678	5,353

Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the Texarkana Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with the current recreation opportunities^{2/} available in the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to subsections of the Texarkana Metro characterized by residents having similar incomes and ethnic backgrounds. Particular attention was given to those subsections expected to undergo relatively rapid population growth and physical expansion in the future.

Conclusions reached from analyzing the distribution of recreation opportunities within the metropolitan area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist.

In the discussions that follow, results of the distribution analysis of parks within subsections of the Texarkana Metro Area are presented. Then, estimates of current and future requirements for selected recreation facilities are presented, and are qualified by conclusions reached from the distribution analysis of recreation facilities within subsections of the Texarkana Metro.

PARK DISTRIBUTION ANALYSIS

In analyzing the availability and distribution of parks in the Texarkana Metro, several characteristics were considered: changes in population (or trends in general, 1960 to 1970), areas of the metro which were expected to exhibit relatively major expansion, and the dispersion of existing parks among the income/ethnic subsections of the metro. From these interrelated characteristics general conclusions were reached with respect to future park developments for the metro area.

Population trends affected estimations of future recreation participation. Projections of population growth for Texarkana indicated that the 1970 population of 51,585 would decline slightly to about 49,512 persons by the year 2000. In addition, information provided by urban recreation planners of the area shows that the major direction of future urban expansion was expected in the west (as illustrated by the arrow on the map, titled "Predominant Ethnic Background and Income Subsections").

In the Texarkana, Texas portion of the metropolitan area there were four subsections, as indicated by local urban recreation planners in 1971, which are delineated on the accompanying "Predominant Ethnic Background and Income Subsections" map. Socio-economic data were not available were not available for Texarkana, Arkansas. The four subsections

^{1/} "Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

^{2/} "Current" recreation opportunities refers to computed figures derived from the numbers of publicly-administered facilities by type available within the metro area in 1971.

LOW INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS LESS THAN \$5,000)

-  PREDOMINANTLY MEXICAN AMERICAN
-  PREDOMINANTLY BLACK
-  PREDOMINANTLY ANGLO

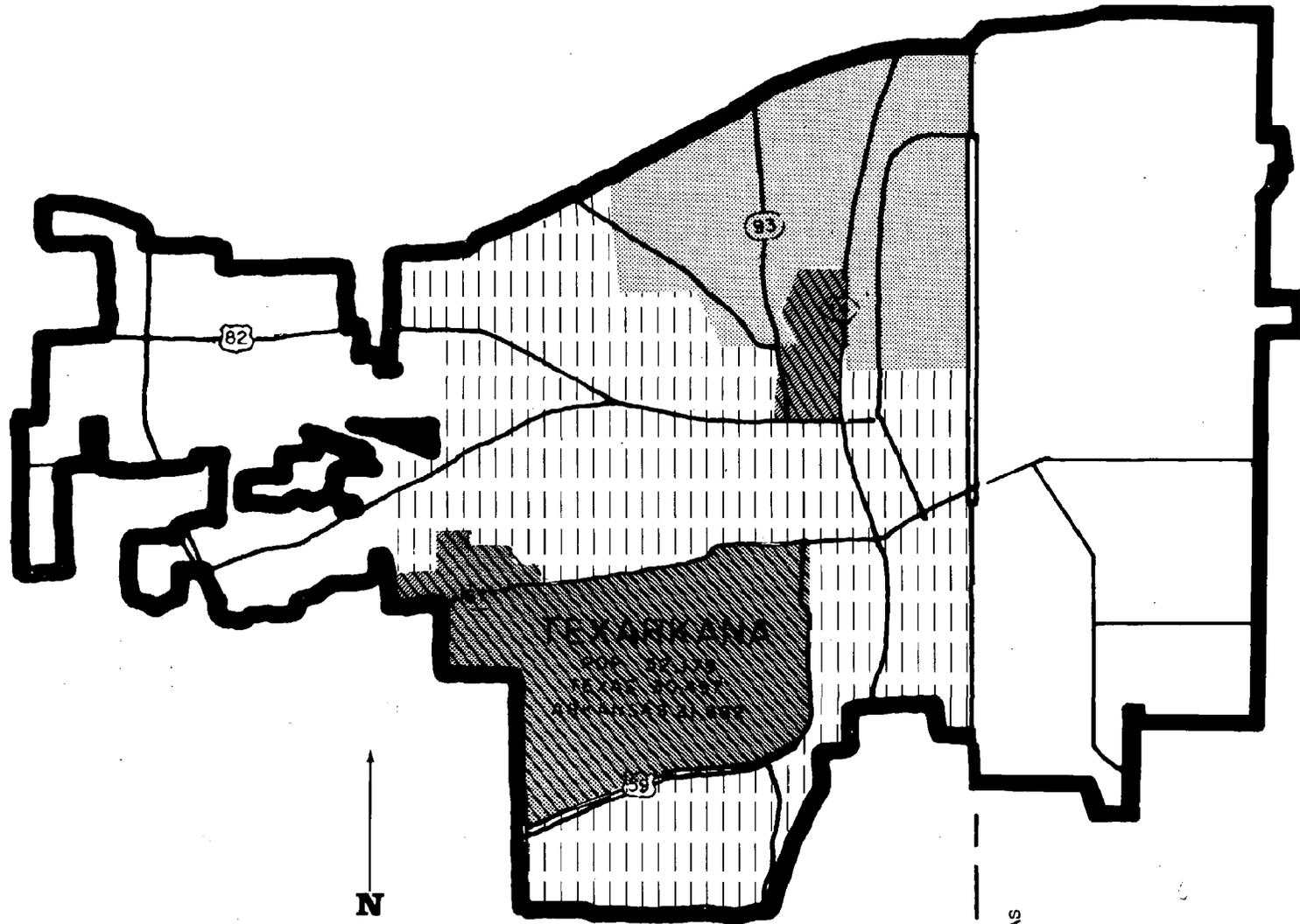
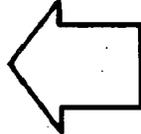
MID INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME VARIED FROM \$5,000 TO \$15,000)

-  PREDOMINANTLY MEXICAN AMERICAN
-  PREDOMINANTLY BLACK
-  PREDOMINANTLY ANGLO

HIGH INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS GREATER THAN \$15,000)

-  PREDOMINANTLY MEXICAN AMERICAN
-  PREDOMINANTLY BLACK
-  PREDOMINANTLY ANGLO

 AREAS FOR WHICH ETHNIC BACKGROUND AND INCOME DELINEATIONS WERE NOT MAPPED.



TEXAS
ARKANSAS

PREDOMINANT ETHNIC BACKGROUND AND INCOME SUBSECTIONS

REGION 13

TEXARKANA AREA

 METRO BOUNDARY



Note: Arrow indicates major areas of expected growth.

Source: Metropolitan area recreation planners for the 1971 Urban Planners Survey

NOTE: SOCIO-ECONOMIC DATA FOR TEXARKANA, ARKANSAS WERE NOT AVAILABLE.

in Texas comprised as follows: two subsections of low-income Blacks; one, a relatively large subsection, located in southwestern portion of the metro and generally between Highways 59 and 67 before their junction, and the other a smaller subsection, located close to the business district of the metro between Highways 14 and 93 and north of Highway 82; one very large subsection of middle-income Anglos comprising the majority of the metro area west and south of the core area excepting only the larger Black subsectional area; and one large high-income Anglo subsection located in the north central portion of the metro.

In analyzing the dispersion of parks among the subsections, a comparison of the "Dispersion of Parks by Type" map and the "Predominant Ethnic Background and Income Subsections" map indicated that the community, district, and specialty parks reported in 1971 were adequately distributed with two exceptions. One, there were no parks reported in the smaller of the two Black subsections, and two, there no parks indicated in the western major growth area. While the dispersion of parks having facilities appeared to be adequate, the metro area had only one open land park located in the western major growth area. Also, parks in the Arkansas portion of the metro appeared to be concentrated in the southern half of the area, leaving the northeastern portion of the whole metro area lacking in parks of any type. Future developments of additional parks probably should be considered for the entire metro area with emphasis on the outlying portions northeast, northwest, west, and southwest of the central core area. Where resources are available, consideration should be given to providing open-land parks throughout the metropolitan area.

In addition to maintaining an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities in parks is also an important consideration. An analysis of the current and future requirements for selected recreational facilities and the current dispersion of facilities in the Texarkana Metro is presented in the following discussions.

FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. Then, an analysis of the dispersion of existing facilities among the predominant income/ethnic subsections and potential growth areas of the metro was conducted. Conclusions reached from the facility dispersion analysis were then used to qualify the facility requirement estimates, particularly in those cases where no additional facilities were estimated as being needed within the metropolitan area. Usually, special note is made where growth areas appeared to have limited facilities. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the Urban Volume. In the discussion that follows, resource requirements for recreational facilities are generally referred to by units of the most important feature necessary to allow participation. For example, when a requirement is shown for swimming pools, features such as a bathhouse, cleaning and filtering system, and other support features are implied when a requirement for the major facility is shown.

Swimming

Based on a facility standard of 150 days per year per square yard of pool, the 1,133 square yards reported in 1971 provided approximately 170,000 opportunity days. Accordingly, an additional 540 square yards would have been required to adequately accommodate demand, estimated at 251,000 participation days in 1970. On the basis of the 1971 opportunities level, the cumulative resource requirement was calculated to increase from 540 square yards in 1970 to 1,567 square yards in 1975, to 2,920 square yards in 1980, to 6,473 square yards in 1990, and to 11,160 square yards by the year 2000. A dispersion analysis indicates that there were no public swimming pools in the central or southern portions of the metro.

Child's Play

The Texarkana Metro in 1971 had thirty-five acres of playground dispersed through nineteen parks within the metro. Multiplying the thirty-five acre units by the playground standard (each acre was calculated to provide 27,623 days of recreation opportunity per unit per year) provided an estimated 967,000 annual opportunity (potential participation) days. Annual opportunity days were then compared with the forecasted demands, as shown in the Texarkana resource requirements table. Playgrounds appear to be adequate for all planning periods until the year 2000 when nineteen additional acres will be needed. Since the existing playgrounds were relatively well distributed among the population in 1971, additional playgrounds should be similarly dispersed with emphasis placed on potential growth areas.

Baseball/Softball

With an existing seven baseball/softball fields providing approximately 97,000 opportunity days (the facility standard utilized was 13,804 opportunity days provided per field each year), overall the Texarkana Metro Area appeared to have a sufficient number of fields to meet facility requirements through the year 2000. Although dispersion analysis could not be performed from available data, maintaining a distribution which considers growth areas and the various income/ethnic subsections is important in the allocation of additional fields.

Picnicking

There were eighty-one public picnic tables in Texarkana in 1971. At 1,702 days of opportunity per table per year (standard), the existing tables provided approximately 138,000 days annually. The existing number of tables was expected to provide adequate overall opportunity through the year 2000. The distribution of picnicking facilities appeared to be balanced. Additional picnic tables probably should be considered for potential growth areas.

Football/Soccer

The one football/soccer field in the Texarkana Metro Area provided about 7,000 days of opportunity annually. The addition of one field in 1970, was estimated to be an adequate number of fields to meet requirements for these

activities through the year 2000. The distribution of football/soccer facilities could not be discerned from data available for 1971, but local analysis can insure an equitable distribution with attention to potential growth areas and income/ethnic subsections.

Golf

There were no publicly-administered golf courses in Texarkana in 1971. Using the urban golf standard, each golf hole was calculated to be capable of providing 4,047 days of recreation opportunity annually. Comparing the expected participation for the projection years with the available opportunity days shows that the metro would have required sixteen holes (or at least one eighteen-hole course) in 1970. Incrementally, additions of 11, 15, 35, and 44 holes would be needed in the years 1975, 1980, 1990, and 2000, respectively, to meet expected increases in golfing participation. As a general rule, golf courses are constructed in multiples of nine holes; therefore, by the year 2000 the Texarkana Metro Area will need slightly over thirteen nine-hole courses (121 holes), six eighteen-hole courses and one nine-hole course, or some appropriate combination which considers local resources.

Tennis

The 13,000 opportunity days provided by the five tennis courts available in 1971 (each court can provide about 2,694 days of opportunity per year) should be adequate to meet resource requirements through the year 2000. Although dispersion of these facilities could not be discerned from available data, adequate distribution should be considered in current and future planning efforts.

Basketball

Based on the urban basketball standard, each of the eight basketball courts in the Texarkana Metro Area provided approximately 8,795 days of opportunity per year, for a total of about 70,000 annual basketball opportunity days. By comparing available opportunity days with demand for each projection year as expressed in the Texarkana recreation resource requirement table, the eight courts available appeared to be sufficient to meet expected requirements through the year 2000. Dispersion analysis of basketball facilities could not be accomplished with available data, but maintaining an adequate distribution is an important consideration relative to growth areas and income/ethnic subsections.

Trails Activities

Since there were no designated trails reported for the Texarkana Metro Area in 1971, analysis of expected participation for walking, bicycling, and nature study indicated a need for two miles of trail by 1970. Given the expected growth in participation in trail activities, incremental needs were projected for one mile in 1975, one mile in 1980, two miles in 1990, and two miles by the year 2000, bringing the cumulative resource requirement to eight miles of trail by the year 2000.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly-administered park and recreation areas. It is likely, however, that as trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of resources required may be conservative in the long run and should be considered as minimum estimates. In addition to the expectations for increases in participation in trail and related activities at publicly-administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local neighborhoods, on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, Skiing

Surface Acres - Freshwater Lakes
(Boating, Boat Fishing, Skiing)

A total of one surface acre of freshwater was located within the Texarkana Metropolitan Area in 1971. Because of the limited freshwater available, no boating, boat fishing, or skiing participation was reported in the Texas Outdoor Recreation Household Demand Survey. Using participation patterns of households recreating in the urban areas, it was estimated that boating would have totaled 16,000 days, boat fishing 7,000 days, and skiing 8,000 days for a total of 31,000 days in 1970 if adequate freshwater lakes had been available. An analysis of estimated participation indicated that incremental resource requirements should increase from an additional 74 acres needed in 1970, to 39 acres by 1975, 45 acres by 1980, 75 acres in 1990, and 71 acres in the year 2000. This brings the cumulative resource requirement to an additional 304 surface acres by the year 2000.

Freshwater Boat Ramps^{1/}

No publicly-administered freshwater boat lanes were reported for the Texarkana Metro in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using freshwater boat ramp facilities to gain access to the water if ramps were available, it was calculated that one boat ramp was needed in 1970. Projected increases in freshwater boat fishing, skiing, and boating participation are expected to require one additional in 1980, one in 1990, and none in the year 2000, bringing the cumulative resource requirement to three ramps by 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain

^{1/} In calculating freshwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

access to freshwater lakes, the provision of freshwater surface acres and freshwater boat ramps required should be planned as joint projects, even though, in some cases, this may require the construction of boat ramps prior to the years reflected in the boat ramp resource requirement projections.

Summary of Facilities Requirements

In 1971 the Texarkana Metro reported no public golf courses, designated trails, or freshwater boat ramps. In order for the number of opportunity days to equal the estimated number of participation days, incremental resource requirements were indicated in all planning horizon years for golf courses and designated trail facilities, and were indicated as necessary in 1970, 1980, and 1990 for freshwater boat ramps. The metro had one football/soccer field, with one additional field estimated to be required in 1970 to adequately accommodate demand for all subsequent planning horizon years. Also, only one acre of freshwater lake was available within the metro boundary, with incremental resource requirements indicated for all planning horizon years.

To augment existing facilities, additional square yards of public swimming facilities were estimated to be required in 1970, 1975, 1980, 1990, and 2000. Additional acres of playground were estimated to be necessary, beginning in the year 2000. On the other hand, the number of existing baseball/softball fields, public picnic tables, tennis courts, and basketball courts was calculated to be adequate through the year 2000.

A dispersion analysis was possible only for a few of the facility types. There was an apparent absence of public swimming pools in the central and southern portions of the metro. Playgrounds and picnic tables appeared to be reasonably well dispersed in 1971. In the provision of additional facilities for all types of outdoor recreation activities, an important criterion is a balanced distribution which considers the various income/ethnic subsections and growth areas.

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	251 ^{1/}	170	81		540 square yards ^{2/}	540 square yards ^{2/}
	Child's Play (Playgrounds)	254	967		713	0 acres	0 acres
	Baseball/Softball	16	97		81	0 fields	0 fields
	Picnicking	88	138		50	0 tables	0 tables
	Football/Soccer	16	7	9		1 field	1 field
	Golf	66	0	66		16 holes	16 holes
	Tennis	10	13		3	0 courts, dbl.	0 courts, dbl.
	Basketball	4	70		66	0 courts, full	0 courts, full
1970	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	31	0	31		74 surface acres	74 surface acres
	Boating, Boat Fishing, Skiing FW . . .	24	0	24		1 ramp ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	15 ^{4/}				2 miles	2 miles
	Bicycling	1 ^{4/}				<1 mile	<1 mile
	Nature Study	* ^{4/}				<1 mile	<1 mile
	Combined Walking, Bicycling, Nature Study	16 ^{4/}	0	16		2 miles	2 miles
<hr/>							
	<u>ACTIVITY</u>						
	Swimming (Pools)	405 ^{1/}	170	235		1,567 square yards ^{2/}	1,027 square yards ^{2/}
	Child's Play (Playgrounds)	392	967		575	0 acres	0 acres
	Baseball/Softball	25	97		72	0 fields	0 fields
	Picnicking	94	138		44	0 tables	0 tables
	Football/Soccer	16	7	9		1 field	0 fields
	Golf	111	0	111		27 holes	11 holes
	Tennis	11	13		2	0 courts, dbl.	0 courts, dbl.
	Basketball	4	70		66	0 courts, full	0 courts, full
1975	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	47	0	47		113 surface acres	39 surf e acres
	Boating, Boat Fishing, Skiing FW . . .	35	0	35		1 ramp ^{3/}	0 ramps ^{3/}
	Trails Activities:						
	Walking	25 ^{4/}				3 miles	1 mile
	Bicycling	1 ^{4/}				<1 mile	0 miles
	Nature Study	* ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	26 ^{4/}	0	26		3 miles	1 mile

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS) DEFICIT	(000'S OF ACTIVITY DAYS) SURPLUS	CUMULATIVE	RESOURCES REQUIRED INCREMENTAL
	Swimming (Pools)	608 ^{1/}	170	438		2,920 square yards ^{2/}	1,353 square yards ^{2/}
	Child's Play (Playgrounds)	562	967		405	0 acres	0 acres
	Baseball/Softball	35	97		62	0 fields	0 fields
	Picnicking	98	138		40	0 tables	0 tables
	Football/Soccer	16	7	9		1 field	0 fields
	Golf	169	0	169		42 holes	15 holes
	Tennis	11	13		2	0 courts, dbl.	0 courts, dbl.
	Basketball	4	70		66	0 courts, full	0 courts, full
1980	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	66	0	66		158 surface acres	45 surface acres
	Boating, Boat Fishing, Skiing FW . . .	47	0	47		2 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	34 ^{4/}				4 miles	1 mile
	Bicycling	1 ^{4/}				<1 mile	0 miles
	Nature Study	* ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	35 ^{4/}	0	35		4 miles	1 mile
	<u>ACTIVITY</u>						
	Swimming (Pools)	1,141 ^{1/}	170	971		6,473 square yards ^{2/}	3,553 square yards ^{2/}
	Child's Play (Playgrounds)	964	967		3	0 acres	0 acres
	Baseball/Softball	50	97		47	0 fields	0 fields
	Picnicking	98	138		40	0 tables	0 tables
	Football/Soccer	15	7	8		1 field	0 fields
	Golf	310	0	310		77 holes	35 holes
	Tennis	11	13		2	0 courts, dbl.	0 courts, dbl.
	Basketball	3	70		67	0 courts, full	0 courts, full
1990	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	97	0	97		233 surface acres	75 surface acres
	Boating, Boat Fishing, Skiing FW . . .	69	0	69		3 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	52 ^{4/}				6 miles	2 miles
	Bicycling	1 ^{4/}				<1 mile	0 miles
	Nature Study	* ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	53 ^{4/}	0	53		6 miles	2 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	1,844 ^{1/}	170	1,674		11,160 square yards ^{2/}	4,687 square yards ^{2/}
	Child's Play (Playgrounds)	1,488	967	521		19 acres	19 acres
	Baseball/Softball	67	97		30	0 fields	0 fields
	Picnicking	98	138		40	0 tables	0 tables
	Football/Soccer	15	7	8		1 field	0 field
	Golf	491	0	491		121 holes	44 holes
	Tennis	11	13		2	0 courts, dbl.	0 courts, dbl.
	Basketball	3	70		67	0 courts, full	0 courts, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW	127	0	127		304 surface acres	71 surface acres
	Boating, Boat Fishing, Skiing FW	88	0	88		3 ramps ^{3/}	0 ramps ^{3/}
	Trails Activities:						
	Walking	68 ^{4/}				8 miles	2 miles
	Bicycling	1 ^{4/}				< 1 mile	0 miles
	Nature Study	* ^{4/}				< 1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	69 ^{4/}	0	69		8 miles	2 miles

Note: Asterisks indicate that projected annual activity days were less than 500.

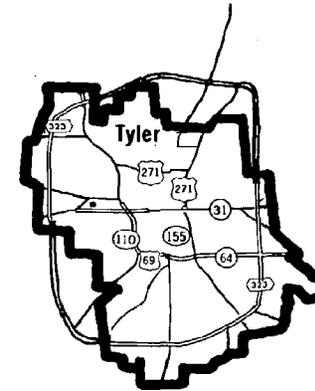
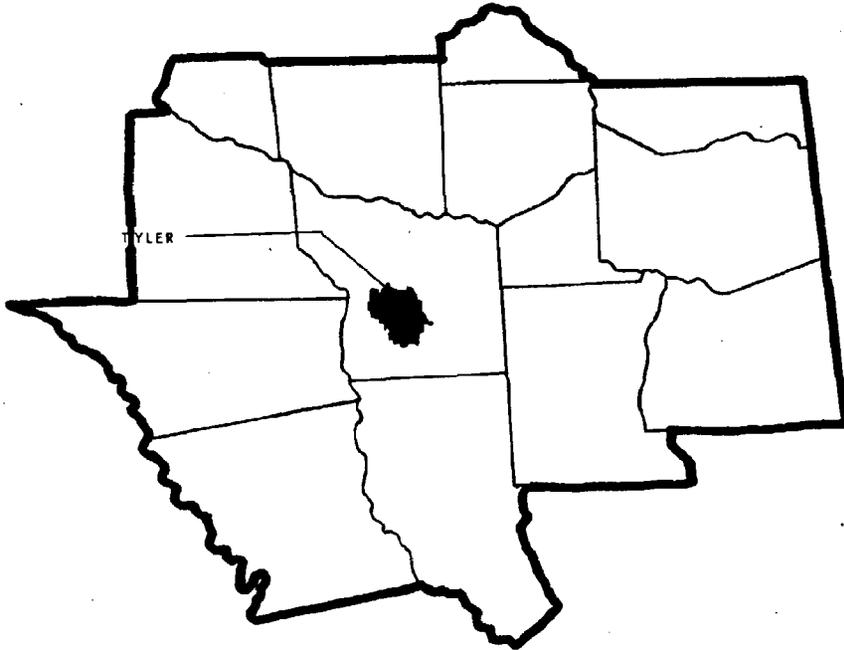
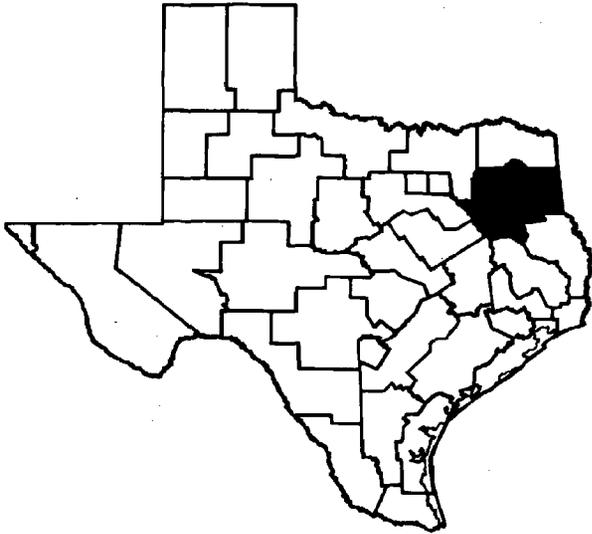
^{1/} Includes only swimming participation occurring in swimming pools, 94 percent of the total in urban areas.

^{2/} Designated freshwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.

^{3/} Assumes 2.0 lanes per ramp.

^{4/} Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

Region 14



1 1/2 0 1 2 3
TYLER AREA
METRO BOUNDARY

Source: Adapted from Texas Official Highway Map 1975. Texas Highway Department Travel and Information Division. Austin, Texas, and U.S. Bureau of the Census. U.S. Census of Population: 1970. Number of Inhabitants. Final Report PC (1) - A45 Texas. U.S. GPO Washington, D.C. 1971.

Tyler, once a quiet farming community, made its real surge for development in 1930 with the discovery of the great East Texas Oil Field. Since that time, Tyler has become East Texas' largest and foremost city of commerce and industry.

Tyler boasts the nation's largest rose garden and is the center of a vast rosebush growing area. The city hosts the Texas Rose Festival (October), East Texas Fair (September), and the Azalea Trail (March or April). Tyler also has a symphony orchestra, civic theater, and is the home of Tyler Junior College, with an enrollment of over 5,000.

Numerous medical facilities are in Tyler, the Medical Center Hospital being one of the most modern and best-equipped facilities in the Southwest.

Tyler is the center of a diversified agricultural area. Live-stock and pasture improvement, dairying, forestry, vegetables, and fruit-growing are among agricultural pursuits. Tyler is also the main headquarters for major and independent oil exploration and development companies. The city has approximately 125 manufacturing and processing plants, which make a wide variety of products.

POPULATION

1970 Metro Area Population: 57,770

Change 1960-70: +13%

Race Composition ^{1/}

White 77%

Negro 22%

Other <.5%

Age Composition (years):

13 or less 25%

14 - 20 14%

21 - 44 29%

45 - 64 21%

65 and over 11%

ECONOMY

Lumbering

Manufacturing

Oil

Processing

^{1/} Includes persons of Mexican and/or Spanish descent.

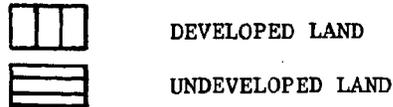
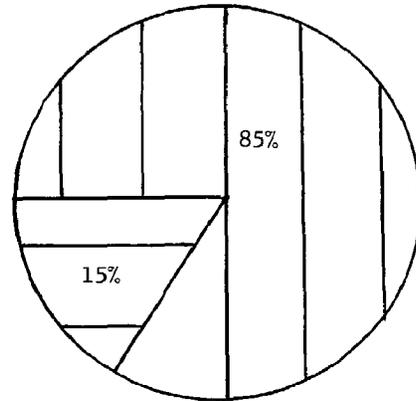
REGION 14

CITY SIZE: METRO

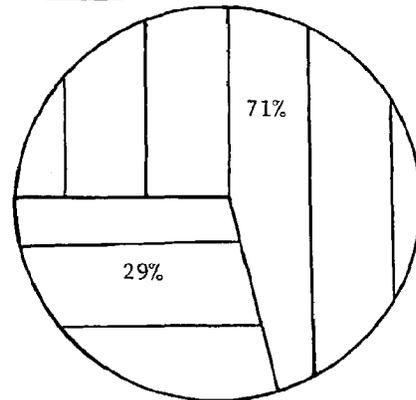
PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

REGION
14
METRO



STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 14 METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	321	1,307
Undeveloped Land	55	536
Total Land	376	1,843
Water Within or Adjacent	0	1,006
Total Land and Water	376	2,849

Tyler has a total of 376 acres of land set aside as park and recreation areas. No surface acres of water either within or adjacent to the parks were reported.

Of the total land acreage, 321 acres are developed with facilities, leaving 55 acres available for future development. With 85 percent of the land acreage currently developed, Tyler is well above the Statewide Metro average of 71 percent.

PARKS AND ACREAGE BY TYPE OF PARK

	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	2.000	9.000	6.000	2.000	19.000	72.000
Parks Per Thousand	.035	.156	.103	.035	.329	.267
People Per Park	28,885.000	6,419.000	9,628.000	28,885.000	3,041.000	3,754.000
.....						
Land Acres	48.000	46.000	227.000	55.000	376.000	1,843.000
Acres Per Thousand	.830	.796	3.929	.952	6.509	6.864
People Per Acre	1,204.000	1,256.000	254.000	1,050.000	154.000	146.000

Nearly one-half of the 19 parks in Tyler are Community Parks. Six Specialty Parks were inventoried along with two parks each in the District and Open Land Park categories. Two-thirds of the total acreage is in Specialty Parks. The remaining acreage is divided almost equally between the three other categories with 48 acres in District Parks, 46 acres in Community Parks and 55 acres in Open Land Parks. The dispersion of the four types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the population of Tyler, .329 parks per 1,000 and 6.509 acres per 1,000 population exist.

Another way to present this data is that 3,041 people share each park while 154 people must share each acre of park land.

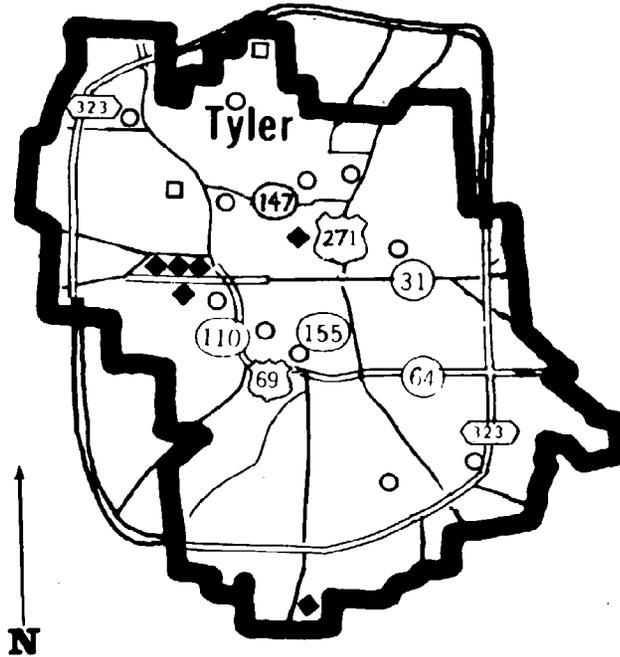
With .329 parks per 1,000, Tyler ranks above the Statewide Metro average. The 6.509 acres per 1,000 gives Tyler a figure just below the Statewide Metro average for acres per 1,000.

DISPERSION OF PARKS BY TYPE

URBAN PARKS

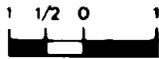
- DISTRICT PARK
- COMMUNITY PARK
- ◆ SPECIALTY PARK
- OPEN-LAND PARK

Source: 1971 Municipal Inventory Update



REGION 14

TYLER AREA



■ METRO BOUNDARY

PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 14 METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	2	9	1	12	4,814	.206	.150
Tennis Courts.....	5	5	0	10	5,777	.172	.142
Basketball Courts.....	1	0	0	1	57,770	.017	.071
Baseball/Softball Fields.....	4	9	3	16	3,610	.275	.186
Football/Soccer Fields.....	0	0	1	1	57,770	.017	.032
Picnicking:							
Parks.....	2	2	1	5	11,554	.086	.124
Tables.....	11	4	2	17	3,398	.293	1.230
Playground:							
Parks.....	2	9	4	15	3,851	.258	.170
Acres Developed.....	4	15	7	26	2,221	.448	.258
Swimming:							
Parks.....	2	0	0	2	28,885	.034	.050
Pools (Sq. Yd.).....	1,700	0	0	1,700	34	29.310	25.950
Designated Fresh Water (Sq. Yd.)...	0	0	0	0	---	---	52.242
Boating:							
Parks.....	0	0	0	0	---	---	.006
Ramp Lanes - Fresh Water.....	0	0	0	0	---	---	.008
Camping:							
Parks.....	0	0	1	1	57,770	.017	.002
Campsites.....	0	0	0	0	---	---	.121
Fishing:							
Parks.....	0	0	0	0	---	---	.013
Pier/Barge/Marina-Fresh Water (Yd.)	0	0	0	0	---	---	.049
Golfing:							
Courses.....	0	0	0	0	---	---	.005
Holes.....	0	0	0	0	---	---	.100
Trails:							
Parks.....	0	0	2	2	28,885	.034	.006
Nature (Mi.).....	0	0	3	3	19,256	.051	.009
Horseback (Mi.).....	0	0	0	0	---	---	.003
Bicycle (Mi.).....	0	0	0	0	---	---	.007
Hiking (Mi.).....	0	0	0	0	---	---	.006
Total Trails (Mi.).....	0	0	3	3	19,256	.051	.021

PARK AND RECREATION FACILITIES BY TYPE OF PARK

CITY SIZE: METRO

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 14 METRO	STATEWIDE AVERAGE METRO AREAS
Sport Shooting:							
Parks.....	0	0	0	0	---	---	.002
Traps.....	0	0	0	0	---	---	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	0	0	0	0	---	---	.011
Miscellaneous:							
Parks.....	0	1	1	2	28,885	.034	.038
Amphitheatre Seats.....	0	3,000	0	3,000	1,925	51.724	1.077
Botanical Gardens (Acres).....	0	0	20	20	2,888	.344	.077
Zoos (Acres).....	0	0	0	0	---	---	.051
Community/Recreation Centers.....	0	0	0	0	---	---	.038

The park and recreation facilities in Tyler are distributed among all three park categories. Both of the District Parks have swimming pools, the only two in the city. The Specialty Park category contains a park with camping permitted although no specific camping facilities were reported. An amphitheatre in a Community Park and a botanical gardens in a Specialty Park were inventoried. In addition the only trail miles are found in the Specialty Park category.

Of the 19 parks, 15 have playgrounds, 12 have facilities for games and sports and 5 have picnicking facilities. The most common types of games and sports facilities are baseball/softball with 16 fields, followed by tennis with 10 courts, basketball with one court and football/soccer with one field.

Looking at selected facilities in relation to the number of potential users we find the following:

57,770 persons for each football/soccer field	3,610 persons for each baseball/softball field
57,770 persons for each basketball court	3,398 persons for each picnic table
19,256 persons for each mile of trails	2,221 persons for each acre of playground
5,777 persons for each tennis courts	34 persons for each square yard of swimming pool

Tyler is above the Statewide Metro average for facility units per 1,000 for tennis courts, baseball/softball fields, playground acres, square yards of swimming pools, trail miles, amphitheatre seats and acres of botanical gardens. Tyler is below the average for basketball courts, football/soccer fields and picnic tables. No designated fresh water swimming area, boat ramp lanes, campsites, yards of fishing pier/barge/marina, golf holes, sport shooting facilities, zoo acreage or community/recreation centers were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

<u>ACTIVITY-FACILITY</u>	<u>ANNUAL DAYS AVAILABLE</u>	<u>DAYS PER THOUSAND POPULATION</u>	
		<u>REGION 14 METRO</u>	<u>STATEWIDE AVERAGE METRO</u>
Swimming (Pools) - square yards	255,000	4,397	3,891
Child's Play - playground acres	718,198	12,383	7,137
Baseball/Softball - fields	220,864	3,808	2,577
Picnicking - tables	28,934	499	2,093
Football/Soccer - fields	7,224	125	235
Golf - holes	0	0	414
Tennis - courts, double	26,940	464	384
Basketball - courts, full	8,795	152	625
 Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	0	0	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	0	0	103
 Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	25,392	438	164

The Tyler Metro Area offers the most opportunity days for child's play, followed by swimming (in pools) and baseball/softball. A comparison between the opportunity days per thousand population for the Tyler Metro Area and the Statewide Metro average shows that the Tyler Metro Area surpasses the statewide average for five of the activity types-- swimming (in pools), child's play, baseball/softball, tennis, and the trails activities. The Tyler Metro Area is below the Statewide Metro average for picnicking, football/soccer, and basketball, with no opportunity days available for golf, surface acres for freshwater boating, boat fishing, and skiing, and freshwater boat ramps.

The twenty-first ranking metro area, based on population, Tyler ranked nineteenth in total participation for the year 1970. Estimates for 1970 indicate that residents and non-residents in the area spent over 1.7 million recreation days in pursuit of urban outdoor recreation opportunities available within the metro area.

Resident

Total days of participation in urban outdoor recreation activities by the residents of the Tyler Metropolitan Area for 16 activities shown was estimated to be 1.6 million days in 1970. Total participation is expected to increase to 2.4 million days in 1975 and to 3.4 million days in 1980. These projections represent increases of 52.1 percent by 1975 and 112.2 percent by 1980. Participation on a days per household basis is projected to increase from 81.2 days in 1970 to 115.7 days in 1975, and to 151.6 days in 1980--increases of 42.3 and 86.8 percent, respectively, over the 1970 level. Residents of the Tyler Metropolitan Area are expected to participate at a rate of 43, 46, and 51 days per household below the statewide average for the other Texas metropolitan areas in 1970, 1975, and 1980, respectively. For the more distant years of 1990 and 2000, both total days of participation and days per household are expected to increase, but will remain below the statewide average for all metropolitan areas.

Projections for specific activities indicate that each of the 16 activities will increase in total days of participation through the years 1975 and 1980. On a days per household basis, participation is expected to increase in 14 activities by 1980, while football and tennis will decrease. Based on total participation, the six most popular activities in 1970 were: bicycling, swimming, driving for pleasure, child's play, picnicking, and basketball. In 1980 the six most popular activities in the Tyler Metropolitan Area are expected to be bicycling, swimming, driving for pleasure, child's play, basketball, and walking.

Non-Resident

For the urban outdoor recreation activities specified for 1970, participation within the Tyler Metropolitan Area by non-residents, was estimated to total 157,000 days. Compared to the 1970 level, total participation is expected to increase 3.2 percent (to 162,000 days) by 1975 and 7.6 percent (to 169,000 days) by 1980. Similar increases are projected for the years 1990 and 2000.

In terms of days of participation for 1975, the most popular non-resident activities were: sightseeing, with 61,000 days; golf, with 25,000 days; fishing, with 19,000 days; and picnicking, with 16,000 days. Assuming adequate facilities are made available, a moderate increase in participation for all activities is expected through the year 2000, with no change in the order of activity popularity anticipated.

CURRENT AND PROJECTED RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970				1975				1980				1990				2000			
	REG. 14		STATE-WIDE		REG. 14		STATE-WIDE		REG. 14		STATE-WIDE		REG. 14		STATE-WIDE		REG. 14		STATE-WIDE	
	PART. DAYS	RANK	AVERAGE DAYS/HH	AVERAGE METROS	PART. DAYS	RANK	AVERAGE DAYS/HH	AVERAGE METROS	PART. DAYS	RANK	AVERAGE DAYS/HH	AVERAGE METROS	PART. DAYS	RANK	AVERAGE DAYS/HH	AVERAGE METROS	PART. DAYS	RANK	AVERAGE DAYS/HH	AVERAGE METROS
Swimming	247	2	12.70	27.41	354	2	17.06	36.52	494	2	22.36	47.17	862	2	35.22	75.28	1,397	2	51.44	110.14
Child's Play	172	4	8.84	14.08	242	4	11.66	17.72	330	3	14.94	22.00	555	3	22.68	32.20	888	3	32.70	43.99
Baseball/Softball	7	14	.36	2.78	10	14	.48	3.19	13	14	.59	3.59	20	14	.82	4.41	29	13	1.07	5.22
Picnicking	80	5	4.11	5.72	87	7	4.19	5.66	94	7	4.25	5.66	108	8	4.41	5.61	122	9	4.49	5.64
Football/Soccer	23	10	1.18	1.43	24	11	1.16	1.42	25	11	1.13	1.41	28	12	1.14	1.39	30	12	1.10	1.38
Golf	44	7	2.26	3.92	65	8	3.13	4.98	93	8	4.21	6.16	169	7	6.91	8.96	286	7	10.53	12.07
Tennis	18	11	.93	6.06	19	12	.92	9.21	20	12	.91	11.49	22	13	.90	16.07	23	15	.85	21.46
Basketball	63	6	3.24	1.60	132	5	6.36	2.59	210	5	9.50	3.57	386	4	15.77	5.52	598	5	22.02	7.53
Walking	40	8	2.06	18.21	114	6	5.49	23.09	196	6	8.87	29.20	383	5	15.65	39.89	609	4	22.42	50.31
Bicycling	596	1	30.64	20.30	1,003	1	48.33	32.77	1,458	1	65.99	45.25	2,480	1	101.33	68.44	3,712	1	136.68	95.49
Nature Study	1	16	.05	.72	1	16	.05	1.67	1	16	.05	2.64	2	16	.08	4.63	3	16	.11	6.70
Fishing	35	9	1.80	1.80	39	9	1.88	1.88	43	10	1.95	1.97	52	10	2.12	2.13	63	10	2.32	2.30
Boating	17	12	.87	.88	33	10	1.59	1.60	51	9	2.31	2.31	92	9	3.76	3.74	140	8	5.15	5.17
Skating	8	13	.41	.42	13	13	.63	.62	18	13	.81	.82	30	11	1.23	1.22	44	11	1.62	1.81
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	6	15	.31	2.25	9	15	.43	2.34	11	15	.50	2.50	18	15	.74	2.70	28	14	1.03	3.01
Dr. for Pleas.	222	3	11.41	13.38	256	3	12.33	13.52	293	4	13.26	13.67	374	6	15.28	13.86	472	6	17.38	14.10
TOTAL	1,579		81.17	120.96	2,401		115.69	158.78	3,350		151.63	199.41	5,581		228.04	286.05	8,444		310.91	386.32

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000	ACTIVITY	1970	1975	1980	1990	2000
Swimming	2	2	3	3	3	Swimming	249	356	497	865	1,400
Child's Play	*	*	*	*	*	Child's Play	172	242	330	555	888
Baseball/Softball	*	*	*	*	*	Baseball/Softball	7	10	13	20	29
Picnicking	16	16	17	17	18	Picnicking	95	103	111	125	140
Football/Soccer	8	8	8	9	9	Football/Soccer	31	32	33	37	39
Golf	25	26	27	28	29	Golf	69	91	120	197	315
Tennis	*	*	*	*	*	Tennis	18	19	20	22	23
Basketball	*	*	*	*	*	Basketball	63	132	210	386	598
Walking	13	14	14	15	16	Walking	53	128	210	398	625
Bicycling	*	*	*	*	*	Bicycling	596	1,003	1,458	2,480	3,712
Nature Study	*	*	*	*	*	Nature Study	1	1	1	2	3
Fishing	19	20	21	21	23	Fishing	54	59	64	73	86
Boating	*	*	*	*	*	Boating	17	33	51	92	140
Skating	*	*	*	*	*	Skating	8	13	18	30	44
Surfing	---	---	---	---	---	Surfing	---	---	---	---	---
Sightseeing	61	63	65	68	71	Sightseeing	67	72	76	86	99
Dr. for Pleas.	13	13	14	14	15	Dr. for Pleas.	235	269	307	388	487
TOTAL	157	162	169	175	184	TOTAL	1,736	2,563	3,519	5,756	8,628

Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the Tyler Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with the current recreation opportunities^{2/} available in the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to subsections of Tyler characterized by residents having similar incomes and ethnic backgrounds.

Conclusions reached from analyzing the distribution of recreation opportunities within the metropolitan area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist.

In the discussions that follow, results of the distribution analysis of parks within subsections of Tyler are presented. Then, estimates of current and future requirements for selected recreation facilities are presented for the metropolitan area and are qualified by conclusions reached from the distribution analysis of recreation facilities within subsections of Tyler.

PARK DISTRIBUTION ANALYSIS

In analyzing the availability and distribution of parks in Tyler, two characteristics were considered: changes in population (or trends in general, 1960-1970), and the dispersion of existing parks among the income/ethnic subsections of the metro. From these characteristics, general conclusions were reached with respect to future park developments for the metro area.

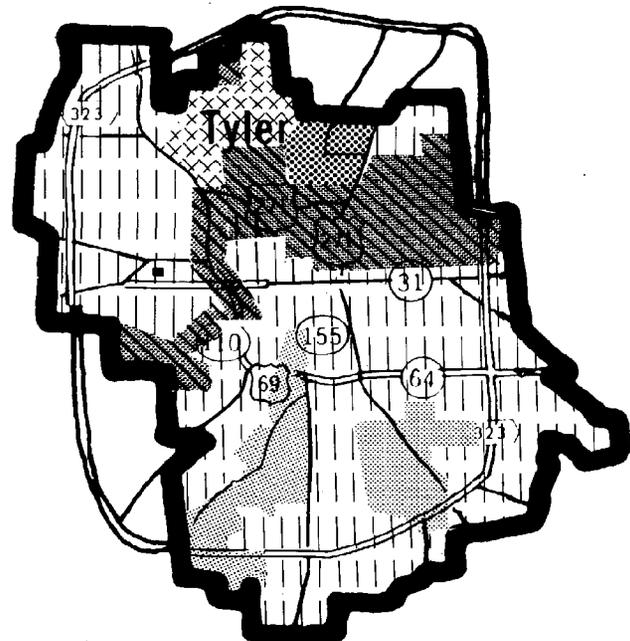
Population trends affected estimations of future recreation participation. Projections of population growth for Tyler indicated that the 1970 population of 57,770 would increase about 40 percent by the year 2000. Information on the major directions of future urban expansion was not available.

The "Predominant Ethnic Background and Income Subsections" map shows nine subsections, as delineated by planners in 1971. Low-income households tended to be concentrated in the northern portion of Tyler, particularly north of Highway 31. This area had a mixture of low-income Blacks and Anglos. A large part of the southern half of the metro was made up of predominantly middle-income Anglos. Middle-income Anglos and Blacks were located in the northwest third of Tyler. Planners reported two subsections of predominantly high-income Anglos, both in the southern portion of the metro.

^{1/} "Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

^{2/} "Current" recreation opportunities refers to computed figures derived from the numbers of publicly-administered facilities by type available within the metro area in 1971.

PREDOMINANT ETHNIC BACKGROUND AND INCOME SUBSECTIONS



Source: Metropolitan area recreation planners for the 1971 Urban Planners Survey

A comparison of the "Predominant Ethnic Background and Income Subsections" map with the "Dispersion of Parks by Type" map indicates that park distribution was not evenly balanced in 1971. Two income/ethnic subsections had no parks at all: the small low-income Black area on the northern fringe of the metro, and a small middle-income Anglo area in the northeastern corner of Tyler. Moreover, the southeastern half of the metro (the area roughly south and south-east of Highway 31, on the map) had only a few parks in spite of the fact that a substantial proportion of the population (predominantly middle and high-income Anglos) resided in this part of the metro. District parks, the larger parks with facilities for at least two major urban activities, were located in the northwest third of Tyler. Although community parks appear to have been fairly well dispersed throughout the metro, specialty parks tended to be highly concentrated in west central Tyler. In 1971 there were two open land parks. This type of park is important in providing a balanced and aesthetically pleasing environment. In the development of additional parks, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

In addition to maintaining an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities in parks is also an important consideration. An analysis of the current and future requirements for selected recreational facilities and the current dispersion of facilities in Tyler is presented in the following discussions.

FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. Then, an analysis of the dispersion of existing facilities among the predominant income/ethnic background subsections of the metro was conducted. Conclusions reached from the facility dispersion analysis were then used to qualify the facility requirement estimates, particularly in those cases where no additional facilities were estimated as being needed within the metropolitan area. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the urban volume. In the discussion that follows, resource requirements for recreational facilities are generally referred to by units of the most important feature necessary to allow participation. For example, when a requirement is shown for swimming pools, features such as a bathhouse, cleaning and filtering system, and other support features are implied when a requirement for the major facility is shown.

Swimming

The Tyler Metropolitan Area in 1971 had 1,700 square yards of public swimming pools, which, using a standard of 150 days of swimming opportunity per year, provided an estimated 255,000 swimming days annually. It was estimated that the existing facilities were sufficient to meet participation in 1970. A comparison of opportunity days with projected participation days revealed, however, that 527 additional square yards of swimming pools would be needed by 1975. An incremental addition of 886 square yards will be needed by 1980, bringing the cumulative requirement to 1,413 square yards in 1980. Incremental additions of 2,307 square yards and 3,353 square yards should be made by 1990 and 2000, respectively. This would bring the cumulative requirement to 7,073 square yards over all projection years. The two

swimming facilities in Tyler were located in the northern and northwestern portions of the metro in predominantly middle-income Black and Anglo areas. In the development of additional facilities, consideration should be given to maintaining a balanced distribution relative to growth areas and the various income/ethnic subsections.

Child's Play

Tyler had twenty-six acres of public playground in 1971. Each acre was estimated to provide 27,623 opportunity days per year, which yielded approximately 718,000 opportunity days annually. Annual opportunity days were then compared with projected participation for each planning year to determine deficits or surpluses. It was estimated that the reported twenty-six acres of playground should be sufficient to meet participation through the year 1990. By 2000, six acres of playground should be added for a cumulative requirement of six acres for the thirty-year period. Since virtually all of the parks had at least some playground facilities, the distribution of playgrounds was essentially the same as the distribution of parks. In view of this, any additional facilities probably should be considered for the two small subsections which had no public recreation facilities, the southern and southeastern parts of Tyler (predominantly middle and high-income Anglo), and growth areas.

Baseball/Softball

With an existing sixteen baseball/softball fields providing an estimated 221,000 days of opportunity (the facility standard utilized was 13,804 opportunity days per field annually), the Tyler Metro Area appeared to have a sufficient number to meet activity requirements for baseball/softball through the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Picnicking

Given a standard of 1,702 opportunity days per table per year, the seventeen public picnic tables existing in Tyler in 1971 should provide approximately 29,000 opportunity days for picnicking each year. A comparison of these opportunity days with expected participation revealed that, in 1970, there was a requirement for an additional thirty-nine public picnic tables. By 1975, a requirement for 43 tables should exist, and by 1980 it is estimated that a cumulative total of 48 tables will be needed. Incremental additions of 8 tables and 9 tables should be made by 1990 and 2000, respectively, which will bring the cumulative requirement to 65 tables needed by 2000. There were no public picnicking facilities at all reported south of Highway 31; therefore, in the future, consideration should be given to the placement of public picnic tables in the southern half of the metro (comprised of predominantly middle and high-income Anglos).

Football/Soccer

In 1971, there existed only one football/soccer field in the Tyler Metro Area and it provided 7,224 opportunity days annually. In 1970, there was a requirement for three additional fields, the provision of which is expected to satisfy participation until 1975. Between 1975 and 1980, another field should be added for a cumulative total of four by 1980. It is expected that no additional fields will be required until 2000, when one more should be added, bringing the cumulative total to five. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Golf

In 1971, there were no publicly-administered golf courses within the Tyler Metro Area. In 1970 it was estimated that a requirement existed for seventeen holes of golf (the equivalent of two nine-hole courses or one eighteen-hole course). It is projected that incremental additions of 5, 8, 19, and 29 holes will be necessary for the years 1975, 1980, 1990, and 2000, respectively. This will bring the cumulative requirement to seventy-eight holes by the year 2000. Since golf courses are usually constructed in multiples of nine holes, this would mean that the Tyler Metro Area would require by 2000 nine nine-hole courses, or slightly over four eighteen-hole courses and a nine-hole course, or some other appropriate combination that considers local resources. In the allocation of municipal golf courses, consideration should be given to locations which would maximize access for the largest number of potential users, as well as provide convenient access for persons in the various income/ethnic subsections.

Tennis

In 1971, the Tyler Metro Area reported ten public tennis courts which provided an estimated 27,000 opportunity days annually. A comparison of opportunity days with participation days showed that the ten tennis courts should be sufficient to satisfy participation through the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections, if additional facilities are provided.

Basketball

The one basketball court enumerated in 1971 provided about 8,800 days of opportunity per year. A comparison of estimated participation with the existing opportunity showed that six additional basketball courts were needed in 1970. Another eight were needed in 1975, and nine more between 1975 and 1980. This brings the cumulative requirement to twenty-three by 1980. The incremental addition of twenty courts in 1990, and twenty-four in the year 2000 brings the cumulative requirement to sixty-seven courts by the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Trails Activities

The three miles of trail available in the Tyler Metropolitan Area should provide approximately 25,000 opportunity days per year, assuming a standard for combined walking, bicycling, and nature study trails of 8,464 days per mile per year. A comparison of opportunity days with participation days shows that 1 mile of trail was required in 1970 to meet participation in trails activities, and incremental additions of 2 miles by 1975, 3 miles by 1980, 8 miles by 1990, and 9 miles by the year 2000 were expected in order to satisfy participation levels. These additions will bring the cumulative requirement to twenty-three miles of trail (for walking, bicycling, and nature study) by the year 2000.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly-administered park and recreation areas. It is likely, however, that as additional trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of additional resources required may be conservative in the long run and should be considered as minimum estimates. In addition to the expectations for increases in participation in trail and related activities at publicly administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local neighborhoods, on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, SkiingSurface Acres - Freshwater Lakes
(Boating, Boat Fishing, Skiing)

No surface acres of freshwater lakes were reported available for water-related recreation within the Tyler Metro Area in 1971. Using participation patterns of the households recreating within other urban areas, it was estimated that a total of 36,000 days of freshwater boating, boat fishing, and skiing participation would have occurred in 1970 if adequate freshwater lakes had been available. Of the 36,000 days, about 17,000 were boating participation days, 11,000 were boat fishing days, and 8,000 were skiing days. Projections developed for the water-related activities indicated incremental metro area resource requirements of 86 surface acres in 1970, 53 surface acres in 1975, 60 surface acres in 1980, 129 surface acres in 1990, and 156 surface acres in 2000. This brings the cumulative resource requirement to 484 surface acres by the year 2000.

Freshwater Boat Ramps^{1/}

No publicly-administered freshwater boat lanes were reported for the Tyler Metro Area in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using freshwater boat ramp facilities to gain access to the water if ramps were available, it was calculated that one boat ramp was needed in 1970. Projected increases in freshwater boat fishing, skiing, and boating participation were expected to require one additional freshwater boat ramp in 1975, none in 1980, two in 1990, and one in the year 2000, bringing the cumulative resource requirement to five ramps in 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, the provision of freshwater surface acres and freshwater boat ramps required should be planned as joint projects, even though, in some cases, this may require the construction of boat ramps prior to the years reflected in the boat ramp resource requirement projections.

Summary of Facilities Requirements

In 1971 three types of outdoor recreation facilities were unavailable within the Tyler Metro Area: public golf courses, surface acres of freshwater lakes, and freshwater boat ramps. Resource requirements for golf holes, and acres of freshwater lakes were shown for all planning horizon years. Freshwater boat ramps were estimated to be required in all planning horizon years except 1980. At least some public facilities were reported for all other selected activities; however, opportunities were estimated to be inadequate for all except baseball/softball fields and tennis courts, both of which were estimated to be adequate through the year 2000.

The distribution analysis indicated that parks and facilities tended to be concentrated in the northern half of Tyler, particularly toward the northwest. The southern half of the metro (comprised mainly of middle and high-income Anglos), on the other hand, had relatively few parks and facilities. Although information was not available regarding directions of major urban expansion, this consideration, together with the distribution of facilities relative to the various income/ethnic subsections, is an important criterion in locating additional facilities.

^{1/} In calculating freshwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	234 ^{1/}	255		21	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	172	718		546	0 acres	0 acres
	Baseball/Softball	7	221		214	0 fields	0 fields
	Picnicking	96	29	67		39 tables	39 tables
	Football/Soccer	31	7	24		3 fields	3 fields
	Golf	69	0	69		17 holes	17 holes
	Tennis	18	27		9	0 courts, dbl.	0 courts, dbl.
	Basketball	63	9	54		6 courts, full	6 courts, full
1970	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	36	0	36		86 surface acres	86 surface acres
	Boating, Boat Fishing, Skiing FW . . .	29	0	29		1 ramp ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	6 ^{4/}				< 1 mile	< 1 mile
	Bicycling	24 ^{4/}				1 mile	1 mile
	Nature Study	* ^{4/}				< 1 mile	< 1 mile
	Combined Walking, Bicycling, Nature Study	30 ^{4/}	25	5		1 mile	1 mile
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	Swimming (Pools)	335 ^{1/}	255	80		527 square yards ^{2/}	527 square yards ^{2/}
	Child's Play (Playgrounds)	242	718		476	0 acres	0 acres
	Baseball/Softball	10	221		211	0 fields	0 fields
	Picnicking	103	29	74		43 tables	4 tables
	Football/Soccer	32	7	25		3 fields	0 fields
	Golf	91	0	91		22 holes	5 holes
	Tennis	19	27		8	0 courts, dbl.	0 courts, dbl.
	Basketball	132	9	123		14 courts, full	8 courts, full
1975	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	46	0	46		139 surface acres	53 surface acres
	Boating, Boat Fishing, Skiing FW . . .	44	0	44		2 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	13 ^{4/}				1 mile	1 mile
	Bicycling	40 ^{4/}				2 miles	1 mile
	Nature Study	* ^{4/}				< 1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	53 ^{4/}	25	28		3 miles	2 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	467 ^{1/}	255	212		1,413 square yards ^{2/}	886 square yards ^{2/}
	Child's Play (Playgrounds)	330	718		388	0 acres	0 acres
	Baseball/Softball	13	221		208	0 fields	0 fields
	Picnicking	111	29	82		48 tables	5 tables
	Football/Soccer	33	7	26		4 fields	1 field
	Golf	120	0	120		30 holes	8 holes
	Tennis	20	27		7	0 courts, dbl.	0 courts, dbl.
	Basketball	210	9	201		23 courts, full	9 courts, full
1980	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	83	0	83		199 surface acres	60 surface acres
	Boating, Boat Fishing, Skiing FW . . .	61	0	61		2 ramps ^{3/}	0 ramps ^{3/}
	Trails Activities:						
	Walking	22 ^{4/}				2 miles	1 mile
	Bicycling	58 ^{4/}				4 miles	2 miles
	Nature Study	* ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	80 ^{4/}	25	55		6 miles	3 miles
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	Swimming (Pools)	813 ^{1/}	255	558		3,720 square yards ^{2/}	2,307 square yards ^{2/}
	Child's Play (Playgrounds)	555	718		163	0 acres	0 acres
	Baseball/Softball	20	221		201	0 fields	0 fields
	Picnicking	125	29	96		56 tables	8 tables
	Football/Soccer	37	7	30		4 fields	0 fields
	Golf	197	0	197		49 holes	19 holes
	Tennis	22	27		5	0 courts, dbl.	0 courts, dbl.
	Basketball	386	9	377		43 courts, full	20 courts, full
1990	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	137	0	137		328 surface acres	129 surface acres
	Boating, Boat Fishing, Skiing FW . . .	99	0	99		4 ramps ^{3/}	2 ramps ^{3/}
	Trails Activities:						
	Walking	42 ^{4/}				4 miles	2 miles
	Bicycling	99 ^{4/}				10 miles	6 miles
	Nature Study	* ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	141 ^{4/}	25	116		14 miles	8 miles

YEAR	ACTIVITY	TOTAL	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		PARTICIPATION (000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	1,316 ^{1/}	255	1,061		7,073 square yards ^{2/}	3,353 square yards ^{2/}
	Child's Play (Playgrounds)	888	718	170		6 acres	6 acres
	Baseball/Softball	29	221		192	0 fields	0 fields
	Picnicking	140	29	111		65 tables	9 tables
	Football/Soccer	39	7	32		5 fields	1 field
	Golf	315	0	315		78 holes	29 holes
	Tennis	23	27		4	0 courts, dbl.	0 courts, dbl.
	Basketball	598	9	589		67 courts, full	24 courts, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	202	0	202		484 surface acres	156 surface acres
	Boating, Boat Fishing, Skiing FW . . .	143	0	143		5 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	67 ^{4/}				7 miles	3 miles
	Bicycling	148 ^{4/}				16 miles	6 miles
	Nature Study	1 ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	216 ^{4/}	25	191		23 miles	9 miles

Note: Asterisks indicate that projected annual activity days were less than 500.

^{1/} Includes only swimming participation occurring in swimming pools, 94 percent of the total in urban areas.

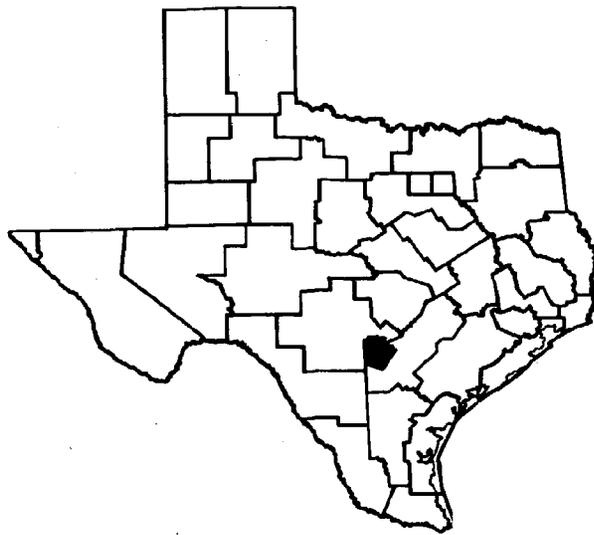
^{2/} Designated freshwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.

^{3/} Assumes 2.0 lanes per ramp.

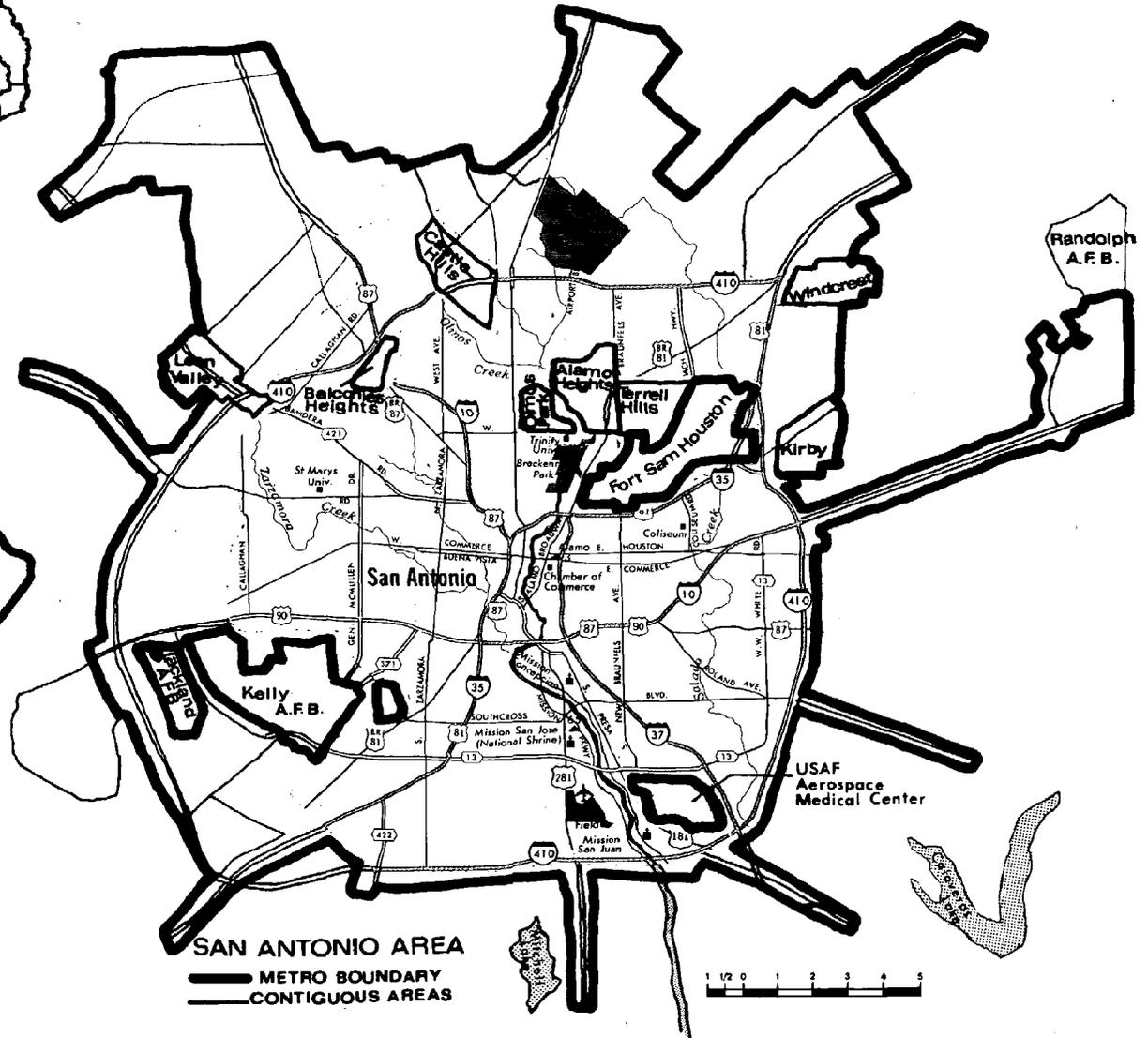
^{4/} Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

Region 16

Source: Adapted from Texas Official Highway Map 1975. Texas Highway Department Travel and Information Division. Austin, Texas, and U.S. Bureau of the Census. U.S. Census of Population: 1970. Number of Inhabitants. Final Report PC (1) - A45 Texas. U.S. GPO Washington, D.C. 1971.



SAN ANTONIO METRO AREA



The San Antonio Metropolitan Area consists of the city of San Antonio and of the towns of Alamo Heights, Castle Hills, Terrell Hills, Windcrest, Kirby, Balcones Heights, Olmos Park, and Leon Valley. San Antonio is one of the oldest and most colorful of Texas' cities. In 1691, a group of Spanish priests and soldiers dedicated the site. Fearing the westward expansion of France, New Spain determined to strengthen its hold on Texas by constructing a fort and mission system from East Texas to New Spain. The San Antonio settlement, midway between the line of missions, was to serve as a feeder and support mission for the others. After the French threat dissipated in the 1760's, the East Texas missions were closed and their inhabitants relocated here. At the peak of Spanish influence in the West, it was the most important northern mission of New Spain.

The area was wrested from the newly independent Republic of Mexico in 1836 by the Republic of Texas. It became the headquarters for the Army of the Republic and for the Texas Rangers. During the Civil War, it was the center of Confederate activity in Texas. In 1898 the Rough Riders, who saw action in the Spanish-American War, trained here.

During World War I, this metropolitan area was a major training and recruiting center for the U. S. Army. The U. S. Air Corps was organized here in 1910. Today it is the site of one Army base, Fort Sam Houston, and four Air Force bases, Brooks, Kelly, Lackland, and Randolph. A museum dedicated to astronaut Edward H. White, II is located here in Hangar 9, the oldest aircraft hangar in the Air Force.

The San Antonio Metropolitan Area is the headquarters of major research in technical, medical, and surgical fields. The Southwest Research Center is comprised of several institutes conducting naval research, bio-medical, and agricultural research. The Aerospace Medical Division at Brooks Air Force Base is the United States' most comprehensive military research establishment. The Surgical-Research Institute at Brooks Army Medical Center is another major research facility.

Numerous 18th century Spanish missions still stand throughout the area. These include Mission Concepcion, the oldest church in Texas intact and still in use as a church, Mission San Juan Capistrano, praised for the graceful

POPULATION

1970 Metro Area Population: 684,265

Change 1960-70: +12%

Race Composition ^{1/}

White 92% ^{2/}

Negro 7%

Other 1%

Age Composition (years): ^{1/}

13 or less 29%

14 - 20 15%

21 - 44 30%

45 - 64 18%

65 and over 8%

ECONOMY

Agribusiness

Business

Federal Government

Manufacturing

Tourism

^{1/} Due to lack of information for some suburbs in the metropolitan area, data for the entire county was used from the 1970 census.

^{2/} Includes persons of Mexican and/or Spanish descent.

REGION 16 - Continued

proportions of its chapel, Mission San Jose, the "Queen of the Missions" and noted for its Rose Window, and Mission San Francisco de la Espada, used as a church for Indians.

La Villita, another major attraction in downtown San Antonio, is a replica of the village built on the same site some 200 years earlier. The Buckhorn Hall of Horns, now located at the Lone Star Brewery, contains hundreds of horns from the symbolic longhorn cattle and from a wide variety of wild game. Here, also, is the Hall of Fins with specimens of marine life. In Brackenridge Park is the famous San Antonio Zoo, the second largest in America. Two important museums are the Witte Memorial Museum and the Pioneer Memorial Building. On the grounds of Fort Sam Houston are the former headquarters of Teddy Roosevelt, John J. Pershing, and Dwight D. Eisenhower. Also of interest are the O'Henry House, Alligator Garden, McNay Art Institute, and the Sunken Gardens.

In 1968, San Antonio sponsored the Hemisfair, which drew tourists from all parts of America and a number of foreign countries. A large complex of buildings known as Hemisfair Plaza now houses numerous shops, restaurants, museums, and exhibits of interest to tourists. Still open to the public are the Mexican-American Institute of Culture, the Institute of Texan Cultures which traces the origin and impact of immigrants in Texas, the Tower of the Americas, the Plaza Dinner Theater with an entertainment package that includes a Broadway show and gourmet dinner, the Witte Confluence Museum, and the Lone Star Pavilion Hall of Texas History-Museum.

The San Antonio River, which winds its way across the metropolitan area, has been developed into a delightful tourist attraction known as the Paseo del Rio. Heavily trafficked downtown streets form overpasses as the quiet stream flows between tree-shaded banks. Opening onto the river on both sides are a variety of shops and restaurants. At one bend in the river is the Arneson Theater with open-air seating for 1,000 persons. It is the setting for Fiesta Noche del Rio.

Schools of higher learning include two junior colleges, St. Phillips College and San Antonio College, and five senior colleges: Our Lady of the Lake College; St. Mary's University; Trinity University; Incarnate Word College; and the University of Texas Medical School at San Antonio.

Among the annual events held in San Antonio are: Ice Capades (September); Art League Jamboree (September); River Art Show (October); San Antonio Symphony (October-May); Alsafar Shrine Circus (October); Noche De Luna (October); Los Pastores, a Christmas miracle play (December); Christmas Pilgrimage (December); Las Posadas (December); and the Sport & Boat Show (January).

Others include the Junior Livestock Show - Bexar County (January), San Antonio Symphony Pops Concert (January, April, November, December), San Antonio Livestock Exposition & Rodeo (February) Southwest Gem and Mineral Show (March), Grand Opera Festival (March), Shrine Charity Horse Show (March), Home & Hobby Show (April), Fiesta Noche Del Rio (June-August), International Film Festival (June), and Fun-Tier Nights (July).

Fiesta Week, held in April, includes: The Jaycees' Food Festival; Noche Mexicana; Coronation of King Antonio XLX; Patriotic & Historical Ball; Band Concert & Retreat Review; King's River Parade; Pilgrimage to the Alamo; Flower & Fashion Show; "A Night in Old San Antonio;" Mariachi Festival; Battle of Flowers Band Festival; Battle of Flowers Parade; Square & Round Dance Festival; and the Fiesta Flambeau Parade (the largest night parade in America).

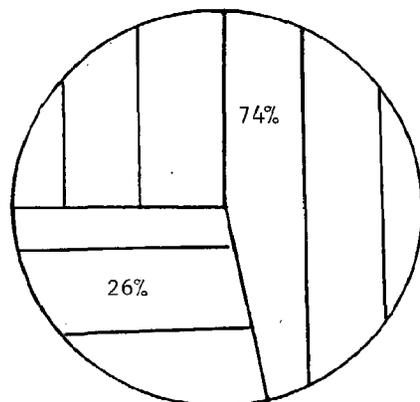
REGION 16

CITY SIZE: METRO

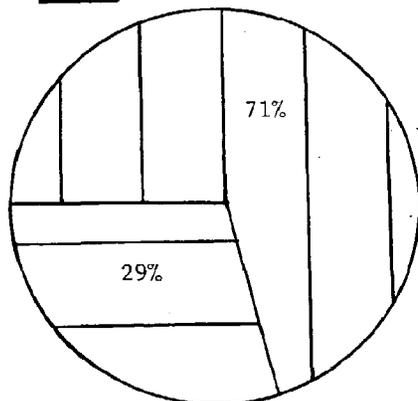
PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

REGION
16
METRO



STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 16 METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	2,107	1,307
Undeveloped Land	739	536
Total Land	2,846	1,843
Water Within or Adjacent	60	1,006
Total Land and Water	2,906	2,849

The San Antonio Metro Area has a total of 2,846 acres of land set aside as park and recreation areas. In addition, 60 surface acres of water either within or adjacent to these parks were reported.

Of the total land acreage, 2,107 acres are developed with facilities, leaving 739 acres available for future development. With 74 percent of the land acreage currently developed, the Area is just above the Statewide Metro average of 71 percent.

PARKS AND ACREAGE BY TYPE OF PARK

	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	13.000	24.000	17.000	24.000	78.000	72.000
Parks Per Thousand	.019	.035	.025	.035	.114	.267
People Per Park	52,636.000	28,511.000	40,251.000	28,511.000	8,773.000	3,754.000
.....						
Land Acres	2,015.000	173.000	523.000	135.000	2,846.000	1,843.000
Acres Per Thousand	2.945	.253	.764	.197	4.159	6.864
People Per Acre	340.000	3,955.000	1,308.000	5,069.000	240.000	146.000

Both the Community and Specialty Park categories have 24 of the total of 78 parks. Seventeen Specialty Parks were inventoried along with 13 District Parks. The acreage figures, however, show that District Parks comprise about 70 percent of the total land acreage, followed by 523 acres in Specialty Parks. The Open Land Parks average about 5½ acres each while the 24 Community Parks average 7 acres each. The dispersion of the four types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the total population of the metro area, .114 parks per 1,000 and 4.159 acres per 1,000 population exist.

Another way to present this data is that 8,773 people share each park while 240 people must share each acre of park land.

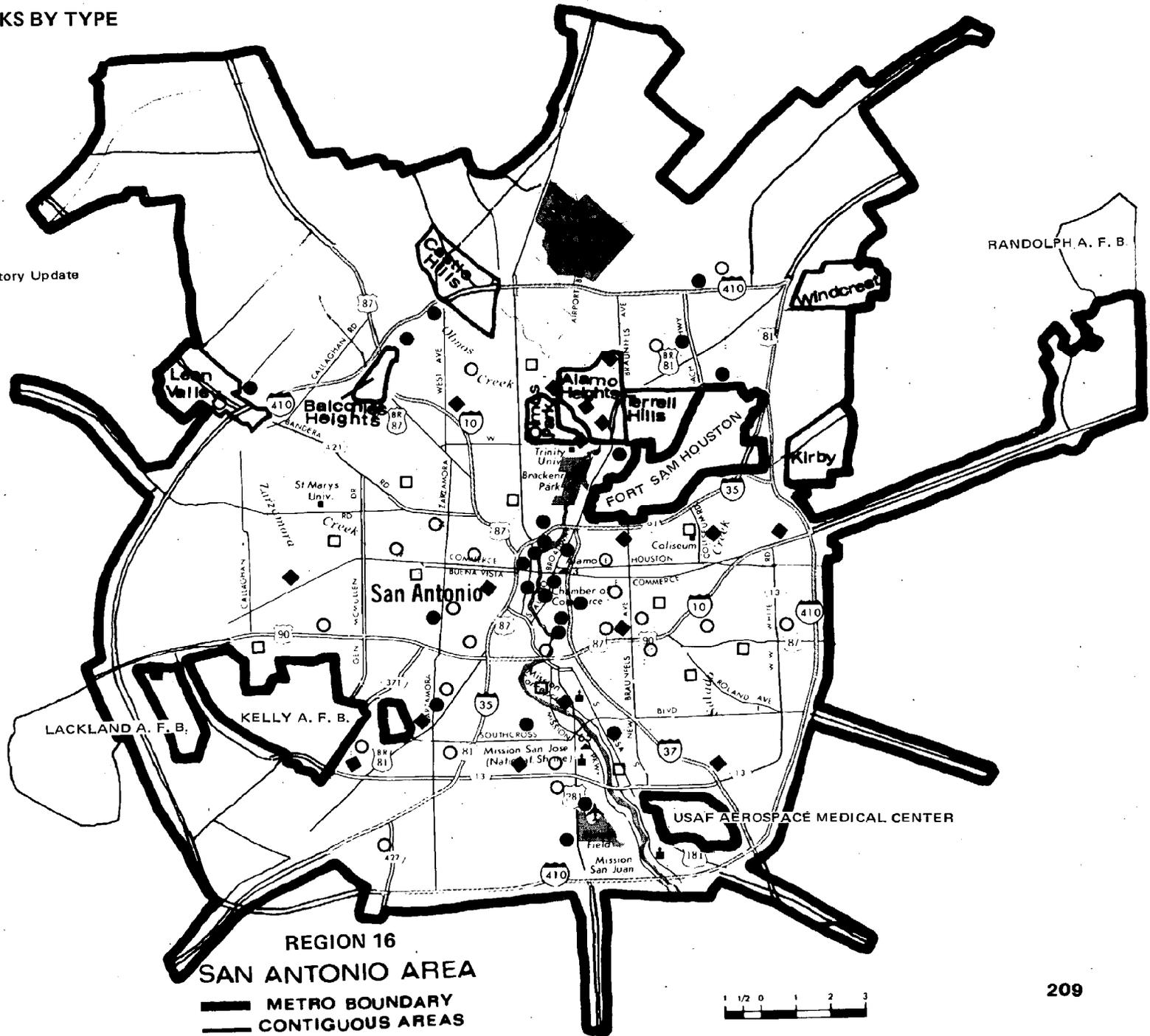
With only .114 parks per 1,000, the San Antonio Metro Area ranks well below the Statewide Metro average. The 4.159 acres per 1,000 also gives the area a figure well below the Statewide Metro average.

DISPERSION OF PARKS BY TYPE

URBAN PARKS

- DISTRICT PARK
- COMMUNITY PARK
- ◆ SPECIALTY PARK
- OPEN-LAND PARK

Source: 1971 Municipal Inventory Update



REGION 16
SAN ANTONIO AREA
 — METRO BOUNDARY
 — CONTIGUOUS AREAS

PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 16 METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	12	22	8	42	16,292	.061	.150
Tennis Courts.....	27	18	6	51	13,416	.074	.142
Basketball Courts.....	5	13	0	18	38,014	.026	.071
Baseball/Softball Fields.....	27	20	4	51	13,416	.074	.186
Football/Soccer Fields.....	11	6	2	19	36,013	.027	.032
Picnicking:							
Parks.....	12	11	0	23	29,750	.033	.124
Tables.....	479	325	0	804	851	1.175	1.230
Playground:							
Parks.....	13	23	3	39	17,545	.057	.170
Acres Developed.....	13	14	1	28	24,438	.040	.258
Swimming:							
Parks.....	7	10	1	18	38,014	.026	.050
Pools (Sq. Yd.).....	6,240	7,340	800	14,380	48	21.023	25.950
Designated Fresh Water (Sq. Yd.)...	290,400	0	0	290,400	2	424.561	52.242
Boating:							
Parks.....	3	0	0	3	228,088	.004	.006
Ramp Lanes - Fresh Water.....	1	0	0	1	684,265	.001	.008
Camping:							
Parks.....	2	0	0	2	342,132	.002	.002
Campsites.....	0	0	0	0	---	---	.121
Fishing:							
Parks.....	4	0	0	4	171,066	.005	.013
Pier/Barge/Marina-Fresh Water (Yd.)	15	0	0	15	45,617	.021	.049
Golfing:							
Courses.....	2	0	2	4	171,066	.005	.005
Holes.....	45	0	38	83	8,244	.121	.100
Trails:							
Parks.....	3	0	1	4	171,066	.005	.006
Nature (Mi.).....	0	0	1	1	684,265	.001	.009
Horseback (Mi.).....	2	0	0	2	342,132	.002	.003
Bicycle (Mi.).....	0	0	0	0	---	---	.007
Hiking (Mi.).....	0	0	0	0	---	---	.006
Total Trails (Mi.).....	2	0	1	3	228,088	.004	.021

PARK AND RECREATION FACILITIES BY TYPE OF PARK

CITY SIZE: METRO

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 16 METRO	STATEWIDE AVERAGE METRO AREAS
Sport Shooting:							
Parks.....	1	0	0	1	684,265	.001	.002
Traps.....	6	0	0	6	114,044	.008	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	18	0	0	18	38,014	.026	.011
Miscellaneous:							
Parks.....	4	9	2	15	45,617	.021	.038
Amphitheatre Seats.....	400	0	0	400	1,710	.583	1.077
Botanical Gardens (Acres).....	4	0	0	4	171,066	.005	.077
Zoos (Acres).....	50	0	0	50	13,685	.073	.051
Community/Recreation Centers.....	8	12	2	22	31,102	.032	.038

Most of the developed park and recreation facilities in the San Antonio Metro Area are in the District and Community Parks. The District Park category contains all of the parks with boating, fishing and sport shooting facilities. Two of the District Parks have camping areas available, however, no specific camping facilities were reported. Amphitheatre seats, the San Antonio Zoo and botanical gardens are also in the District Park category. Eighteen parks have swimming facilities including a designated fresh water swimming area. Eighty-three golf holes and twenty-two community/recreation centers were reported.

Of the 78 parks, 42 have facilities for games and sports, 39 have playgrounds, 23 have picnicking facilities and 18 have swimming facilities. The most common types of games and sports facilities are baseball/softball with 51 fields and tennis with 51 courts, followed by football/soccer with 19 fields and basketball with 18 courts.

Looking at selected facilities in relation to the number of potential users we find the following:

228,088 persons for each mile of trails	13,416 persons for each tennis court
38,014 persons for each basketball court	13,416 persons for each baseball/softball field
36,013 persons for each football/soccer field	8,244 persons for each golf hole
31,102 persons for each community/recreation center	851 persons for each picnic table
24,438 persons for each acre of playground	48 persons for each square yard of swimming pool

The San Antonio Metro Area is above the Statewide Metro average for facility units per 1,000 only for designated fresh water swimming area, golf holes, shooting traps, archery targets and zoo acreage, while falling below the average for tennis courts, basketball courts, baseball/softball fields, football/soccer fields, picnic tables, playground acres, square yards of swimming pool, boat ramp lanes, yards of fishing pier/barge/marina, trail miles, amphitheatre seats, acres of botanical gardens and community/recreation centers. No campsites or shooting targets were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

<u>ACTIVITY-FACILITY</u>	<u>ANNUAL DAYS AVAILABLE</u>	<u>DAYS PER THOUSAND POPULATION</u>	
		<u>REGION 16 METRO</u>	<u>STATEWIDE AVERAGE METRO</u>
Swimming (Pools) - square yards	2,157,000	3,154	3,891
Child's Play - playground acres	773,444	1,131	7,137
Baseball/Softball - fields	704,004	1,029	2,577
Picnicking - tables	1,368,408	2,001	2,093
Football/Soccer - fields	137,257	201	235
Golf - holes	335,901	491	414
Tennis - courts, double	137,394	201	384
Basketball - courts, full	158,310	231	625
Water-Related Activities:			
Boating, Boat Fishing, Skiing FW -, surface acres	25,029	37	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	13,486	20	103
Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	8,464	12	164

The San Antonio Metro Area offers the most opportunity days for swimming (in pools), followed by picnicking, child's play and baseball/softball. A comparison between the opportunity days per thousand population for the San Antonio Metro Area and the Statewide Metro average shows that the San Antonio Metro Area surpasses the statewide average for one of the activity types-- golf. The San Antonio Metro Area is below the Statewide Metro average for all of the other types of facilities.

The third ranking metro area, based on population, San Antonio ranked third in total participation for the year 1970. Estimates for 1970 indicate that residents and non-residents in the area spent over 34.2 million recreation days in pursuit of urban outdoor recreation opportunities available within the metro area.

Resident

Total days of participation in urban outdoor recreation activities by the residents of the San Antonio Metropolitan Area for the 16 activities shown were estimated to be 26.0 million days in 1970. Total participation is expected to increase to 33.3 million days in 1975, and to 41.1 million days in 1980. These projections represent increases of 28.1 percent by 1975 and 58.1 percent by 1980. Participation on a days per household basis is projected to increase from 128.4 days in 1970 to 146.6 days in 1975, and to 162.8 days in 1980--increases of 14.3 and 26.8 percent, respectively, over the 1970 level. Residents of the San Antonio Metropolitan Area are expected to participate at a rate of 5 days per household above the statewide average for the other Texas metropolitan areas in 1970; however, their participation will drop below the average by 15 and 40 days per household by 1975 and 1980, respectively. For the more distant years of 1990 and 2000 both total days of participation and days per household are expected to increase, but will remain below the statewide average for all metropolitan areas.

Projections for specific activities indicate that each of the 16 activities will increase in total days of participation through the years 1975 and 1980. Participation on a days per household basis is expected to increase in 13 activities by 1980, while walking will remain constant and picnicking and football will decline slightly. In 1970 the six most popular activities based on total participation were estimated to be: swimming, driving for pleasure, walking, child's play, picnicking, and sightseeing. By 1975, the six most popular activities will rank as follows: swimming, driving for pleasure, child's play, walking, picnicking, and sightseeing. Total participation in 1980 will produce the following changes in rank: swimming, child's play, driving for pleasure, walking, tennis, and picnicking.

Non-Resident

When considering participation in urban outdoor recreation activities in 1970, a total of 8,151,000 days of participation, according to the projections, was recorded by non-residents in the San Antonio Metropolitan Area. Compared to the 1970 level, total participation is expected to increase 11.4 percent, to 9,081,000 days by 1975, and 22.8 percent, to 10,008,000 days by 1980. This trend of increased participation is expected to continue through the years 1990 and 2000.

The estimates for 1970 indicate that the top six ranked activities, in order of popularity, were sightseeing, swimming, driving for pleasure, picnicking, walking, and child's play, with totals of 5,004,000, 813,000, 757,000, 540,000, 517,000, and 299,000 days, respectively. It is anticipated that all 13 activities will increase in participation, and no changes in the order of popularity are anticipated through the year 2000.

CURRENT AND PROJECTED RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970				1975				1980				1990				2000			
	PART.		REG. 16	STATE-																
	DAYS	RANK	METROS AVERAGE DAYS/HH	METROS AVERAGE DAYS/HH	DAYS	RANK	METROS AVERAGE DAYS/HH	METROS AVERAGE DAYS/HH	DAYS	RANK	METROS AVERAGE DAYS/HH	METROS AVERAGE DAYS/HH	DAYS	RANK	METROS AVERAGE DAYS/HH	METROS AVERAGE DAYS/HH	DAYS	RANK	METROS AVERAGE DAYS/HH	METROS AVERAGE DAYS/HH
Swimming	5,677	1	28.04	27.41	8,317	1	36.65	36.52	11,390	1	45.11	47.17	20,890	1	69.29	75.28	33,300	1	95.93	110.14
Child's Play	2,917	4	14.41	14.08	4,214	3	18.57	17.72	5,798	2	22.97	22.00	10,280	2	34.10	32.20	16,180	2	46.61	43.99
Baseball/Softball	1,349	8	6.66	2.78	1,703	9	7.50	3.19	2,061	8	8.16	3.59	2,965	7	9.83	4.41	3,905	6	11.25	5.22
Picnicking	2,167	5	10.70	5.72	2,372	5	10.45	5.66	2,540	6	10.06	5.66	3,046	6	10.10	5.61	3,484	8	10.04	5.64
Football/Soccer	342	12	1.69	1.43	365	12	1.61	1.42	381	13	1.51	1.41	433	13	1.44	1.39	469	15	1.35	1.38
Golf	550	10	2.72	3.92	780	10	3.44	4.98	1,045	10	4.14	6.16	1,763	10	5.85	8.96	2,625	10	7.56	12.07
Tennis	1,293	9	6.39	6.06	2,052	7	9.04	9.21	2,582	5	10.23	11.49	3,674	5	12.19	16.07	4,969	5	14.31	21.46
Basketball	81	15	.40	1.60	149	14	.66	2.59	230	14	.91	3.57	428	14	1.42	5.52	670	13	1.93	7.53
Walking	3,498	3	17.28	18.21	3,920	4	17.27	23.09	4,362	4	17.28	29.20	5,209	4	17.28	39.89	5,997	4	17.28	50.31
Bicycling	1,572	7	7.77	20.30	1,775	8	7.82	32.77	1,990	9	7.88	45.25	2,413	9	-8.00	68.44	2,820	9	8.12	95.49
Nature Study	60	16	.30	.72	73	16	.32	1.67	88	16	.35	2.64	120	16	.40	4.63	156	16	.45	6.70
Fishing	363	11	1.79	1.80	427	11	1.88	1.88	496	12	1.96	1.97	644	12	2.14	2.13	800	12	2.30	2.30
Boating	178	13	.88	.88	362	13	1.60	1.60	583	11	2.31	2.31	1,128	11	3.74	3.74	1,795	11	5.17	5.17
Skiing	85	14	.42	.42	140	15	.62	.62	207	15	.82	.82	368	15	1.22	1.22	562	14	1.62	1.81
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	1,785	6	8.82	2.25	2,056	6	9.06	2.34	2,313	7	9.16	2.50	2,901	8	9.62	2.70	3,520	7	10.14	3.01
Dr. for Pleas.	4,082	2	20.16	13.38	4,573	2	20.15	13.52	5,033	3	19.94	13.67	6,105	3	20.25	13.86	7,067	3	20.36	14.10
TOTAL	25,999		128.43	120.96	33,278		146.64	158.78	41,099		162.79	199.41	62,367		206.87	286.05	88,319		254.42	386.32

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000	ACTIVITY	1970	1975	1980	1990	2000
Swimming	813	905	998	1,191	1,364	Swimming	6,490	9,222	12,388	22,081	34,664
Child's Play	299	333	367	438	502	Child's Play	3,216	4,547	6,165	10,718	16,682
Baseball/Softball	4	5	5	6	7	Baseball/Softball	1,353	1,708	2,066	2,971	3,912
Picnicking	540	601	663	791	906	Picnicking	2,707	2,973	3,203	3,837	4,390
Football/Soccer	31	35	39	46	53	Football/Soccer	373	400	420	479	522
Golf	52	58	64	77	88	Golf	602	838	1,109	1,840	2,713
Tennis	1	1	1	1	1	Tennis	1,294	2,053	2,583	3,675	4,970
Basketball	1	2	2	2	2	Basketball	82	151	232	430	672
Walking	517	576	634	758	867	Walking	4,015	4,496	4,996	5,967	6,864
Bicycling	3	3	3	4	4	Bicycling	1,575	1,778	1,993	2,417	2,824
Nature Study	48	54	59	71	81	Nature Study	108	127	147	191	237
Fishing	40	44	49	58	67	Fishing	403	471	545	702	867
Boating	41	45	50	60	68	Boating	219	407	633	1,188	1,863
Skiing	*	*	*	*	*	Skiing	85	140	207	368	562
Surfing	---	---	---	---	---	Surfing	---	---	---	---	---
Sightseeing	5,004	5,575	6,144	7,335	8,399	Sightseeing	6,789	7,631	8,457	10,236	11,919
Dr. for Pleas.	757	844	930	1,110	1,271	Dr. for Pleas.	4,839	5,417	5,963	7,215	8,338
TOTAL	8,151	9,081	10,008	11,948	13,680	TOTAL	34,150	42,359	51,107	74,315	101,999

Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the San Antonio Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with the current recreation opportunities^{2/} available in the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to subsections of the metro area characterized by residents having similar incomes and ethnic backgrounds. Particular attention was given to those subsections expected to undergo relatively rapid population growth and physical expansion in the future.

Conclusions reached from analyzing the distribution of recreation opportunities within the metropolitan area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist.

In the discussions that follow, results of the distribution analysis of parks within subsections of the San Antonio Metro Area are presented. Then, estimates of current and future requirements for selected recreation facilities are presented for the metropolitan area, and qualified by conclusions reached from the distribution analysis of recreation facilities within subsections of the San Antonio Metro Area.

PARK DISTRIBUTION ANALYSIS

The accessibility of a park to the people who use it determines to a significant extent the frequency and length of time that recreationists will participate in the activities provided at that park. The distribution of parks among the people of any municipality determines the extent to which parks are accessible to recreationists. In analyzing the distribution and availability of parks to people in the San Antonio Metro, several characteristics were considered: changes in population (or trends in general, 1960 to 1970), areas of the metro which exhibited the strongest growth tendencies, and the dispersion of existing parks among subsections characterized by residents of different incomes and ethnic backgrounds. From these interrelated characteristics certain conclusions have been reached with specific inferences drawn to requirements for additional parks.

Population growth directly affects recreation participation, which affects the amount of resources required. Projections for San Antonio indicate that the 1970 metro population of 684,265 will increase over 75 percent by the year 2000. In 1971 planners indicated that the metro was likely to expand toward the northwest, the northeast, (along Interstate 35), and the east. These patterns are indicated by arrows on the map, titled "Predominant Ethnic Background and Income Subsections."

^{1/} "Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

^{2/} "Current" recreation opportunities refers to computed figures derived from the numbers of publicly-administered facilities by type available within the metro area in 1971.

This same map shows fifteen income/ethnic subsections, as delineated by planners in 1971. A brief analysis of this map is presented beginning with low-income areas.

Low-income households tended to be located in central, western, and some parts of southern San Antonio. The area adjacent to the central business district was occupied mainly by low-income Anglos. Immediately east of this area was a subsection made up largely of low-income Blacks, with a relatively small Mexican-American neighborhood situated along Interstate 10 (near Coliseum Road). A large portion of western and southwestern San Antonio was comprised of predominantly low-income Mexican-Americans, with smaller subsections of low-income Anglos and Mexican-Americans in southeastern San Antonio (near the USAF Aerospace Medical Center).

Almost the entire northern half of the metro, which included the contiguous urban areas of Alamo Heights, Balcones Heights, Castle Hills, Olmos Park, and Terrell Hills, was made up of predominantly middle-income Anglos. Southwestern and south central San Antonio also had large concentrations of middle-income Anglos, as well as middle-income Mexican-Americans. A large middle-income Black subsection was situated on the eastern edge of the metro. The only high-income Anglo area reported was in northeast San Antonio.

The "Dispersion of Parks by Type" map shows the geographic distribution of parks as of 1971. The only subsection which had no parks at all was the low-income Mexican-American neighborhood near the USAF Medical Center in southeast San Antonio. Also, the small low-income Mexican-American area situated along Interstate 10 (near Coliseum Road) in east central San Antonio had two parks located on the fringe of the subsection.

Perhaps even more germane than the general lack of parks in these two small subsections is the fact that large areas of north and northwest San Antonio had no public parks. The contiguous urban areas of Balcones Heights, Castle Hills, Olmos Park, Terrell Hills, Kirby, and Windcrest (most of which were middle-income Anglo areas in the northern portion of the metro) reported no public parks.

With one exception, district parks, the large parks with facilities for at least two major urban activities, were absent from that part of the metro north of Trinity University (near Olmos Park, on the accompanying map). Community and specialty parks appear to have been well distributed, but somewhat infrequent, in view of the heavy concentrations of population in most parts of the metro. The few open land parks tended to be clustered in central San Antonio; most other parts of the metro had few or none.

In addition to achieving an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities in parks is also an important consideration. An analysis of the current and future requirements for selected recreational facilities and the current dispersion of facilities in the San Antonio Metro is presented in the following discussions.

PREDOMINANT ETHNIC BACKGROUND AND INCOME SUBSECTIONS

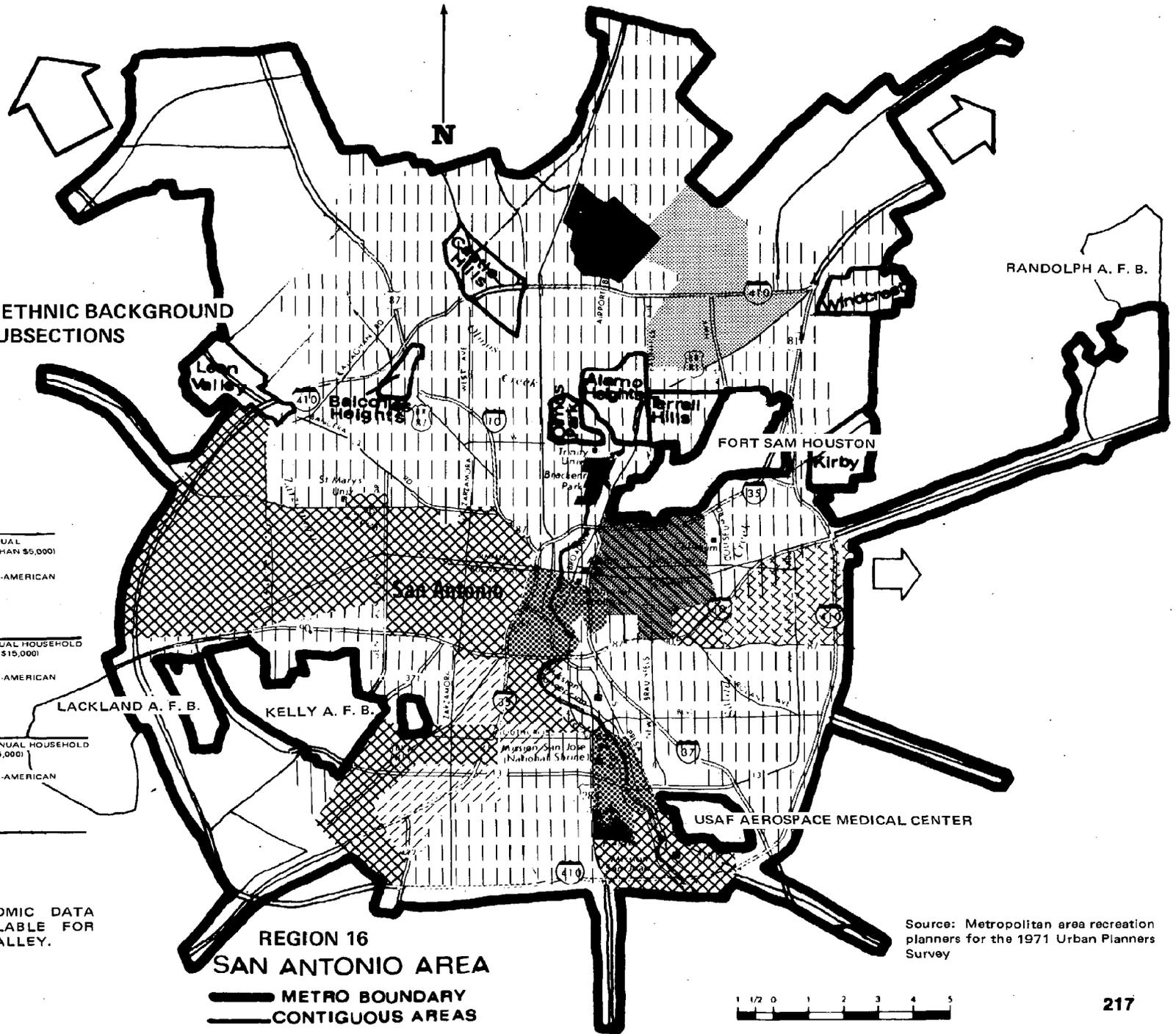
- LOW INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS LESS THAN \$5,000)**
-  PREDOMINANTLY MEXICAN-AMERICAN
 -  PREDOMINANTLY BLACK
 -  PREDOMINANTLY ANGLO
- MID INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME VARIED FROM \$5,000 TO \$15,000)**
-  PREDOMINANTLY MEXICAN-AMERICAN
 -  PREDOMINANTLY BLACK
 -  PREDOMINANTLY ANGLO
- HIGH INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS GREATER THAN \$15,000)**
-  PREDOMINANTLY MEXICAN-AMERICAN
 -  PREDOMINANTLY BLACK
 -  PREDOMINANTLY ANGLO
-  AREAS FOR WHICH ETHNIC BACKGROUND AND INCOME DELINEATIONS WERE NOT MAPPED.

NOTE: SOCIO-ECONOMIC DATA WERE NOT AVAILABLE FOR KIRBY AND LEON VALLEY.

**REGION 16
SAN ANTONIO AREA**

-  METRO BOUNDARY
-  CONTIGUOUS AREAS

Note: Arrows indicate major areas of expected growth.



Source: Metropolitan area recreation planners for the 1971 Urban Planners Survey



FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

Cumulative and incremental requirements for selected recreational facilities, as shown in the following table, were analyzed in this section with emphasis placed on overall metropolitan area facility needs. Then, an evaluation of the dispersion of existing facilities among the predominant income/ethnic subsections and the growth areas of the metro was conducted. When overall metro requirements for a selected facility type were not shown in the calculations, but observable concentrations of facilities left some subsections with a potentially inadequate number of facilities, mention was made of the need to consider the under-supplied subsections more strongly. Usually, special note is made where growth areas appeared to have limited facilities. An example of the methodology used to calculate facility requirements in general was explained in Appendix C, Part I--An Overview of the urban volume.

Resource requirements for recreational facilities are generally referred to by units of the most important feature necessary to allow participation. For example, when a requirement is shown for swimming facilities, most persons would correctly assume that there is a need for additional swimming pools, often not realizing that a bathhouse, cleaning and filtering system, and other ancillary or supporting features are required to make the facility useable. These support features are implied as part of the requirement expressed below when a requirement for the major facility is shown.

Swimming

In 1971 the San Antonio Metro Area had 14,380 square yards of public swimming pools. Each square yard (unit) was estimated to provide 150 days of swimming opportunity per year, which yielded an estimated 2,157,000 opportunity days. Participation days were then compared to opportunity days to determine if there was a surplus or deficit. In 1970 it was estimated that 26,293 square yards of pools were required. In 1975 an additional 17,120 square yards should be required, and an additional 19,840 by 1980, bringing the 1980 cumulative requirement to 63,253 square yards of pools. Estimated incremental requirements of 60,740 square yards in 1990, and 78,854 square yards in 2000 will bring the cumulative requirement for all projection years to 202,847 square yards of swimming pools.

It appears that most of the swimming facilities were concentrated in certain areas of the southern half of the metro. Large areas of the north side composed chiefly of middle-income Anglo households were without public swimming facilities. Of the contiguous urban areas within the San Antonio Metropolitan Area, only three, Leon Valley, Alamo Heights, and Windcrest had swimming facilities, while Castle Hills, Balcones Heights, Olmos Park, Terrell Hills, and Kirby had none. This may indicate that additional swimming pool facilities were needed throughout the entire northern half of the metro, especially since large portions of the northside were expected to expand. In addition, the eastern and western edges of the metropolitan area, composed chiefly of middle-income Blacks and Anglos and low-income Mexican-Americans, and certain portions of the southern half of the metro appeared to be in need of additional swimming facilities.

Child's Play

Twenty-eight acres of public playground existed in 1971 in the San Antonio Metropolitan Area. The standard of 27,623 opportunity days per acre of playground per year multiplied by the twenty-eight acres given a total of 773,000 opportunity days available within the metro area. Comparing this total with projected participation for each year revealed that deficits existed for all years. Incremental requirements for playground acres amounted to 88 acres, 49 acres, and 58 acres for the years 1970, 1975, and 1980, for a cumulative requirement of 195 acres by 1980. Total requirements are expected to amount to 360 acres by 1990 and 576 acres by the year 2000.

Within the central core of the metro area, playground distribution appeared to be adequate; however, need for playgrounds may have existed in the southeastern and southwestern corners of the metro and in most of the entire northern half of the metro area. These areas were made up chiefly of low and middle-income Mexican-Americans and Anglos. In addition to these subsections, the fringe areas completely surrounding the metro appeared to be lacking in playground facilities. Of the eight contiguous urban areas in the San Antonio Metro only one, Alamo Heights, had playground facilities. Consideration should be given to developing a more even dispersion of these facilities.

Baseball/Softball

The existing fifty-one baseball/softball fields provided an estimated 704,000 opportunity days per year, given a standard of 13,804 days per field per year. Comparing the total opportunity days with projected participation for 1970, 1975, 1980, 1990, and 2000 reveals that the cumulative requirements amount to an estimated 47 fields in 1970, 73 fields by 1975, and 99 fields by 1980. The continued growth of participation in this activity showed that approximately another 65 fields would be required by 1990, and an additional 68 fields by 2000 for a cumulative requirement of 232 fields by the year 2000.

Castle Hills, Balcones Heights, Kirby, Olmos Park, Terrell Hills, and Windcrest reported no baseball fields in 1971. In the remainder of the San Antonio Metro, it appeared that an inadequate dispersion of facilities existed in some of the southwestern subsections of the city as well as the northwestern, northern, and northeastern subsections. These subsections were comprised mainly of low and middle-income Mexican-Americans and middle-income Anglos; therefore, it appears that consideration should be given to these areas for future development of baseball fields.

Picnicking

A total of 804 public picnic tables were reported in the San Antonio Metro in 1971. With a standard of 1,702 opportunity days of picnicking per table per year, the existing tables should provide 1,368,000 days annually. A comparison of the opportunity days with participation days indicates requirements for picnic tables for each projection year. For 1970 and 1975 the cumulative requirements for picnic tables amounted to 787 and 943 tables, respectively. It is expected that another 135 tables should be added between 1975 and 1980 for a cumulative total of 1,078 tables by 1980. Cumulative requirements for 1990 and 2000 are projected to increase to 1,451 and 1,776 tables, respectively.

Most areas of the metro appeared to be lacking an adequate supply of picnic tables, although the deficiency appeared to be more serious in some areas, such as the faster-growing northern subsections, inhabited mostly by middle-income Anglos, and certain parts of the southern subsections, inhabited chiefly by low and middle-income Mexican-Americans and Anglos. Also, none of the eight contiguous areas had public picnic tables. As facilities are added, it is important that an adequate distribution be achieved.

Football/Soccer

Metropolitan area residents had nineteen public football/soccer fields available for their use in 1971. With a standard of 7,224 days per field per year, these fields provided about 137,000 days of opportunity annually. In 1970 the addition of thirty-three fields was necessary to meet projected demand. It was estimated that the cumulative requirements for football/soccer will amount to 36 fields by 1975 and 39 fields by 1980. Incremental requirements of eight fields and six fields will bring the cumulative requirements for the years 1990 and 2000 to 47 and 53, respectively.

Subsections of the metro which appeared to have especially serious inadequacies relative to football/soccer fields included those in the northeastern, the northern, the northwestern portions, and certain ones in the southwest portion of the metro. These areas were inhabited mainly by low and middle-income Mexican-Americans and Anglos.

Golf

In 1971 there were four publicly administered golf courses, and they provided a combined total of eighty-three holes. With a facility standard of 4,407 days of opportunity per year per hole, these four courses provided about 336,000 opportunity days of golf annually. A comparison of the estimated opportunity days with projected participation days indicated that sixty-six additional holes of golf were needed in 1970, with another fifty-eight needed by 1975, bringing the cumulative requirement to 124 holes for 1975. Between 1975 and 1980, another 67 holes should be added, bringing the cumulative requirement to 191 holes by 1980. Between 1980 and 1990, another 181 holes should be added and another 215 between 1990 and 2000. This brings the cumulative requirement to 587 holes of golf by the year 2000. Assuming nine holes or eighteen holes per course, this amounts to approximately 65 nine-hole courses, or 32 eighteen-hole courses with an additional nine-hole course, or some other appropriate combination which considers local resources.

All four existing courses reported in 1971 were located in middle-income Anglo neighborhoods. Consequently, in the development of additional publicly administered golf courses, consideration should be given to making the courses as accessible as practical, particularly with respect to the southern and the rapidly expanding northern subsections of the metro area.

Tennis

In 1971 the San Antonio Metro Area had fifty-one publicly administered tennis courts of which four were located in Alamo Heights. Multiplying the standard of 2,694 days per court per year by the total number of courts gives a product of 137,000 opportunity days which were available within the metro area. A comparison of these opportunities with estimated

participation for each projection year revealed a cumulative requirement of 429 additional tennis courts in 1970, 711 tennis courts in 1975, and 908 courts by 1980. The requirement for tennis courts should continue to increase as participation continues to rise. Between 1980 and 1990 an additional 405 courts should be added. By 2000 an additional 481 courts should be built for a cumulative requirement of 1,794 for the thirty-year period.

In 1971, the most pressing requirement for tennis courts appears to have been in the expanding north and east sides of the metropolitan area as well as in some subsections on the south side. In view of the metro areas' rapid growth and large expected requirements for tennis courts, careful consideration should be given to maintaining an adequate distribution of facilities.

Basketball

The urban basketball standard of 8,795 days per basketball court per year multiplied by the eighteen existing courts gives a total of 158,000 opportunity days of basketball which were available in 1971. A comparison of opportunity days to participation days indicated that there should be no immediate requirements for basketball courts. Between 1975 and 1980, eight courts should be added. A total of twenty-three courts should be added between 1980 and 1990 for a cumulative total of thirty-one. In addition to these, twenty-seven more should be added by 2000, bringing the cumulative requirement to fifty-eight courts for the thirty year period.

Of the eight contiguous urban areas, only Alamo Heights had basketball facilities in 1971. When providing additional basketball courts, consideration should be given to maintaining an adequate dispersion of facilities, particularly in the faster growing areas, and areas where no facilities are available.

Trails Activities

In 1971 only one mile of trail was reported in the San Antonio Metro Area. (Although the total actually amounted to three miles, two of these were horseback riding trail miles. Because resource requirements were not computed for urban horseback riding trails and because these two miles in the San Antonio Metro Area were not designated for other types of trail usage, they were excluded from the computation of opportunity days.) The combined trail standard of 8,464 days per combined walking, bicycling, and nature study trail multiplied times one mile of trail thus gives 8,464 opportunity days for the Region 16 metro area. In 1970 it was estimated that a requirement existed for approximately fifty-nine miles of combined walking, bicycling, and nature study trails. (In the table the total is also broken down by individual trail activity type.) For 1975 it was estimated that the requirement amounted to sixty-six miles. Another eight miles should be added between 1975 and 1980 for a 1980 cumulative requirement of seventy-four miles. Additions of fifteen miles by 1990 and fourteen miles by 2000 will bring the cumulative requirements to eighty-nine miles and 103 miles, respectively, if participation levels are to be met.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly administered park and recreation areas. It is likely, however, that as additional trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of additional resources required may be conservative in the long run and should be considered as minimum estimates. In addition to the expectations for increases in participation in trail and related activities at publicly administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local neighborhoods, on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, Skiing

Surface Acres - Freshwater Lakes
(Boating, Boat Fishing, Skiing)

Sixty surface acres of freshwater lakes were located within the San Antonio Metro Area in 1971. Because of the limited freshwater available for skiing, no participation was reported in the Texas Outdoor Recreation Household Demand Survey. Using participation patterns of households recreating in the urban areas, it was estimated that boating would have totaled 219,000 days, boat fishing 85,000 days, and skiing 85,000 days for a total of 389,000 days in 1970, if adequate freshwater lakes had been available. A comparison of estimated participation with the opportunities provided by the surface acres existing in 1971 indicated that incremental resource requirements should expand from an additional 873 acres needed in 1970 to 616 acres in 1975, 740 acres in 1980, 1,796 acres in 1990, and 2,167 acres in the year 2000. This brings the cumulative resource requirement to an additional 6,192 surface acres by the year 2000.

Freshwater Boat Ramps^{1/}

One publicly administered freshwater boat lane was reported for the San Antonio Metro Area in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using freshwater boat ramp facilities to gain access to the water, it was calculated that ten boat ramps were needed in 1970. Projected increases in freshwater boat fishing, skiing, and boating participation are expected to require seven additional freshwater boat ramps in 1975, eight in 1980, nineteen in 1990, and twenty-three in the year 2000, bringing the cumulative

^{1/} In calculating freshwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

resource requirement to sixty-seven ramps in 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, the provision of freshwater surface acres and freshwater boat ramps required should be planned as joint projects, even though, in some cases, this may require the construction of boat ramps prior to the years reflected in the boat ramp resource requirement projections.

Summary of Facilities Requirements

It was found that resource requirements existed in the San Antonio Metro Area for each and every planning year for all types of recreational facilities except basketball courts; and even for this facility, resource requirements appeared by 1980. It was found consistently that a requirement for parks and most types of recreational facilities appeared to exist in much of the northern half of the San Antonio Metro Area, especially in the faster growing areas, which include the west, northwest, and northeast sectors. These areas were populated chiefly by middle-income Anglo households. Certain areas of the south side also seemed to consistently show requirements for parks and facilities. These areas are inhabited mainly by low and middle-income Mexican-Americans and Anglos. It, therefore, appears that consideration should be given to equalizing dispersion in the future development of recreational facilities within these general areas of the metro.

Another point that surfaces repeatedly was the lack of parks and recreational facilities in the contiguous urban areas. With the exception of Alamo Heights, these areas had minimal or no facilities for recreation; and, consequently, must rely on San Antonio's parks and facilities. Moreover, most of them had become completely enveloped by the growth of San Antonio; hence, no further expansion of their boundaries appeared possible.

With regard to water-oriented recreation, San Antonio did have a minimal amount of surface acres of lakes in 1971, but was determined to be inadequate to satisfy a rapidly increasing demand over the next thirty years. Also, the analysis pointed out the critical need for a considerable number of additional boat ramps, if additional water resources can be developed.

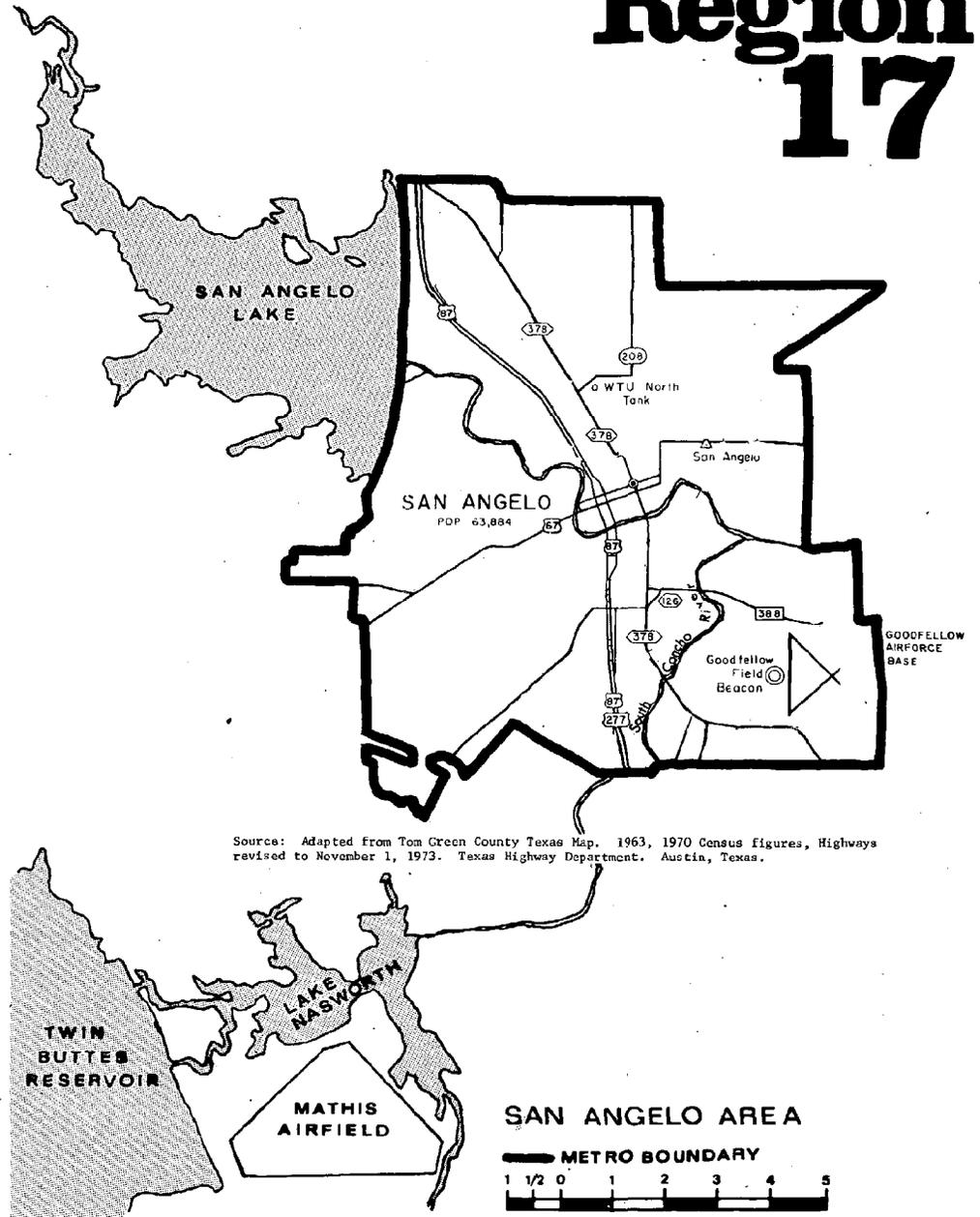
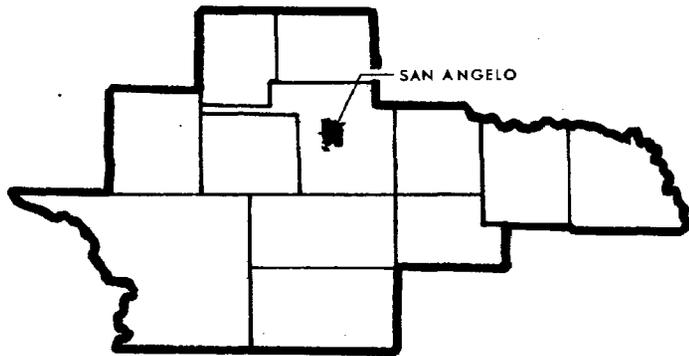
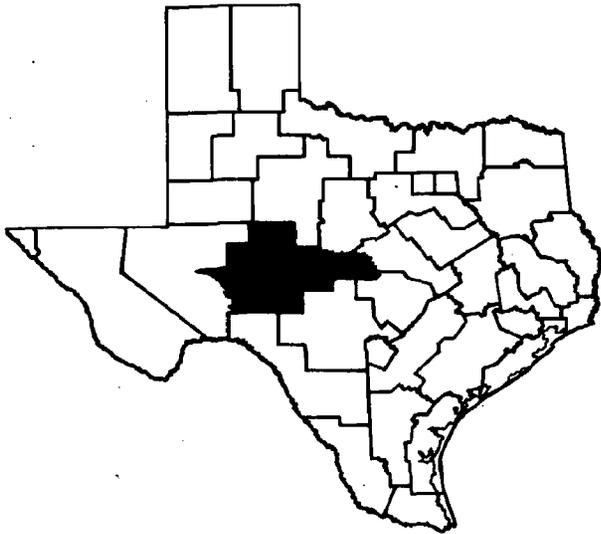
YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	6,101 ^{1/}	2,157	3,944		26,293 square yards ^{2/}	26,293 square yards ^{2/}
	Child's Play (Playgrounds)	3,216	773	2,443		88 acres	88 acres
	Baseball/Softball	1,353	704	649		47 fields	47 fields
	Picnicking	2,707	1,368	1,339		787 tables	787 tables
	Football/Soccer	373	137	236		33 fields	33 fields
	Golf	602	336	266		66 holes	66 holes
	Tennis	1,294	137	1,157		429 courts, dbl.	429 courts, dbl.
	Basketball	82	158		76	0 courts, full	0 courts, full
1970	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	389	25	364		873 surface acres	873 surface acres
	Boating, Boat Fishing, Skiing FW . . .	293	13	280		10 ramps ^{3/}	10 ramps ^{3/}
	Trails Activities:						
	Walking	422 ^{4/}				49 miles	49 miles
	Bicycling	63 ^{4/}				7 miles	7 miles
	Nature Study	22 ^{4/}				3 miles	3 miles
	Combined Walking, Bicycling, Nature Study	507 ^{4/}	8	499		59 miles	59 miles
<hr/>							
	<u>ACTIVITY</u>						
	Swimming (Pools)	8,669 ^{1/}	2,157	6,512		43,413 square yards ^{2/}	17,120 square yards ^{2/}
	Child's Play (Playgrounds)	4,547	773	3,774		137 acres	49 acres
	Baseball/Softball	1,708	704	1,004		73 fields	26 fields
	Picnicking	2,973	1,368	1,605		943 tables	156 tables
	Football/Soccer	400	137	263		36 fields	3 fields
	Golf	838	336	502		124 holes	58 holes
	Tennis	2,053	137	1,916		711 courts, dbl.	282 courts, dbl.
	Basketball	157	158		7	0 courts, full	0 courts, full
1975	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	646	25	621		1,489 surface acres	616 surface acres
	Boating, Boat Fishing, Skiing FW . . .	472	13	459		17 ramps ^{3/}	7 ramps ^{3/}
	Trails Activities:						
	Walking	472 ^{4/}				55 miles	6 miles
	Bicycling	71 ^{4/}				8 miles	1 mile
	Nature Study	26 ^{4/}				3 miles	0 miles
	Combined Walking, Bicycling, Nature Study	569 ^{4/}	8	561		66 miles	7 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION		
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL	
	Swimming (Pools)	11,645 ^{1/}	2,157	9,488	63,253 square yards ^{2/}	19,840 square yards ^{2/}		
	Child's Play (Playgrounds)	6,165	773	5,392	195 acres	58 acres		
	Baseball/Softball	2,066	704	1,362	99 fields	26 fields		
	Picnicking	3,203	1,368	1,835	1,078 tables	135 tables		
	Football/Soccer	420	137	283	39 fields	3 fields		
	Golf	1,109	336	773	191 holes	67 holes		
	Tennis	2,583	137	2,446	908 courts, dbl.	197 courts, dbl.		
	Basketball	232	158	74	8 courts, full	8 courts, full		
	1980 Water-Related Activities:							
	Boating, Boat Fishing, Skiing FW	955	25	930	2,229 surface acres	740 surface acres		
	Boating, Boat Fishing, Skiing FW	686	13	673	25 ramps ^{3/}	8 ramps ^{3/}		
Trails Activities:								
Walking	525 ^{4/}			61 miles	6 miles			
Bicycling	80 ^{4/}			9 miles	1 mile			
Nature Study	30 ^{4/}			4 miles	1 mile			
Combined Walking, Bicycling, Nature Study	635 ^{4/}	8	627	74 miles	8 miles			
<hr/>								
ACTIVITY								
	Swimming (Pools)	20,756 ^{1/}	2,157	18,599	123,993 square yards ^{2/}	60,740 square yards ^{2/}		
	Child's Play (Playgrounds)	10,718	773	9,945	360 acres	165 acres		
	Baseball/Softball	2,971	704	2,267	164 fields	65 fields		
	Picnicking	3,837	1,368	2,469	1,451 tables	373 tables		
	Football/Soccer	479	137	342	47 fields	8 fields		
	Golf	1,840	336	1,504	372 holes	181 holes		
	Tennis	3,675	137	3,538	1,313 courts, dbl.	405 courts, dbl.		
	Basketball	430	158	272	31 courts, full	23 courts, full		
	1990 Water-Related Activities:							
	Boating, Boat Fishing, Skiing FW	1,704	25	1,679	4,025 surface acres	1,796 surface acres		
	Boating, Boat Fishing, Skiing FW	1,205	13	1,192	44 ramps ^{3/}	19 ramps ^{3/}		
Trails Activities:								
Walking	627 ^{4/}			73 miles	12 miles			
Bicycling	97 ^{4/}			11 miles	2 miles			
Nature Study	38 ^{4/}			5 miles	1 mile			
Combined Walking, Bicycling, Nature Study	762 ^{4/}	8	754	89 miles	15 miles			

YEAR	ACTIVITY	TOTAL	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		PARTICIPATION (000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE RESOURCES REQUIRED
	Swimming (Pools)	32,584 ^{1/}	2,157	30,427		202,847 square yards ^{2/}	78,854 square yards ^{2/}
	Child's Play (Playgrounds)	16,682	773	15,909		576 acres	216 acres
	Baseball/Softball	3,912	704	3,208		232 fields	68 fields
	Picnicking	4,390	1,368	3,022		1,776 tables	315 tables
	Football/Soccer	522	137	385		53 fields	6 fields
	Golf	2,713	336	2,377		587 holes	215 holes
	Tennis	4,970	137	4,833		1,794 courts, dbl.	481 courts, dbl.
	Basketball	672	158	514		58 courts, full	27 courts, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	2,608	25	2,583		6,192 surface acres	2,167 surface acres
	Boating, Boat Fishing, Skiing FW . . .	1,829	13	1,816		67 ramps ^{3/}	23 ramps ^{3/}
	Trails Activities:						
	Walking	721 ^{4/}				84 miles	11 miles
	Bicycling	113 ^{4/}				13 miles	2 miles
	Nature Study	48 ^{4/}				6 miles	1 mile
	Combined Walking, Bicycling, Nature Study	882 ^{4/}	8	874		103 miles	14 miles

^{1/} Includes only swimming participation occurring in swimming pools, 94 percent of the total in urban areas.
^{2/} Designated freshwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.
^{3/} Assumes 2.0 lanes per ramp.
^{4/} Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

Region 17



"Over the River," known now as San Angelo, began as a trading post established by Bar Dewitt for Fort Concho. A stage route and two major cattle trails once passed through the town. Today, San Angelo is known as the "Trading Post of the Southwest."

This metropolitan area is the largest raw wool market in the United States, as 40 percent of the nation's sheep and wool and 90 percent of the goats and mohair are produced in its trade area. In keeping with its title of "Wool Capital of the World," San Angelo hosts the Miss Wool of America Pageant annually in June.

Educational facilities include Angelo State University and the world-renowned San Angelo Central High School. The high school's notoriety stems from the campus type plant and adjustable classroom space, a new concept in education at that level.

Goodfellow Air Force Base, a security training installation, is also located here.

Culture is represented by the Angelo State University Entertainment Series, the San Angelo Symphony Orchestra, the Helen King Kendall Memorial Art Gallery, the Annual Art Club Show, and the Angelo State University Youth Symphony.

In March the San Angelo Fat Stock Show and Rodeo is held. There are several interesting facts about the area. San Angelo's metropolitan center, which encompasses entertainment, shopping, medical facilities, and recreation serves an area as large as the State of Ohio. Also, the State Health Department has classified San Angelo as one of the most air pollution-free cities in the state.

POPULATION

1970 Metro Area Population: 63,884

Change 1960-70: +9%

Race Composition

White 94%^{1/}

Negro 5%

Other 1%

Age Composition (years):

13 or less 25%

14 - 20 14%

21 - 44 30%

45 - 64 20%

65 and over 11%

ECONOMY

Agribusiness

Industry

^{1/} Includes persons of Mexican and/or Spanish descent.

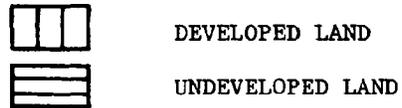
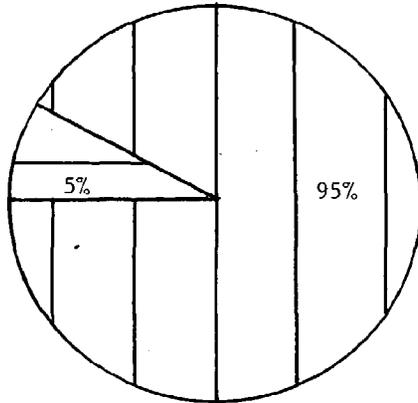
REGION 17

CITY SIZE: METRO

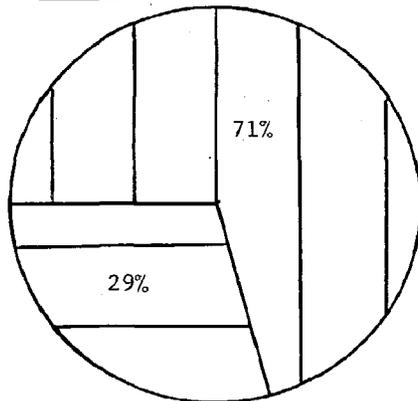
PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

REGION
17
METRO



STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 17 METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	227	1,307
Undeveloped Land	11	536
Total Land	238	1,843
Water Within or Adjacent	64	1,006
Total Land and Water	302	2,849

San Angelo has a total of 238 acres of land set aside as park and recreation areas. In addition, 64 surface acres of water either within or adjacent to these parks were reported.

Of the total land acreage, 227 acres are developed with facilities, leaving 11 acres available for future development. With 95 percent of the land acreage currently developed, San Angelo is well above the Statewide Metro average of 71 percent.

PARKS AND ACREAGE BY TYPE OF PARK

	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	1.000	14.000	8.000	9.000	32.000	72.000
Parks Per Thousand	.016	.219	.125	.141	.501	.267
People Per Park	63,884.000	4,563.000	7,986.000	7,098.000	1,996.000	3,754.000
.....						
Land Acres	29.000	95.000	103.000	11.000	238.000	1,843.000
Acres Per Thousand	.454	1.487	1.612	.172	3.725	6.864
People Per Acre	2,203.000	672.000	620.000	5,808.000	268.000	146.000

Nearly one-half of the 32 parks in San Angelo are Community Parks. Only one District Park was inventoried while the remaining 17 parks are almost evenly divided between Specialty and Open Land Parks. The acreage figures, however, show almost one-half of the total land acres in Specialty Parks, followed closely by the figure for Community Parks. The one District Park occupies 29 acres, while the 9 Open Land Parks total only 11 acres of land. The dispersion of the four types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the population of San Angelo, .501 parks per 1,000 and 3.725 acres per 1,000 population exist.

Another way to present this data is that 1,996 people share each park while 268 people must share each acre of park land.

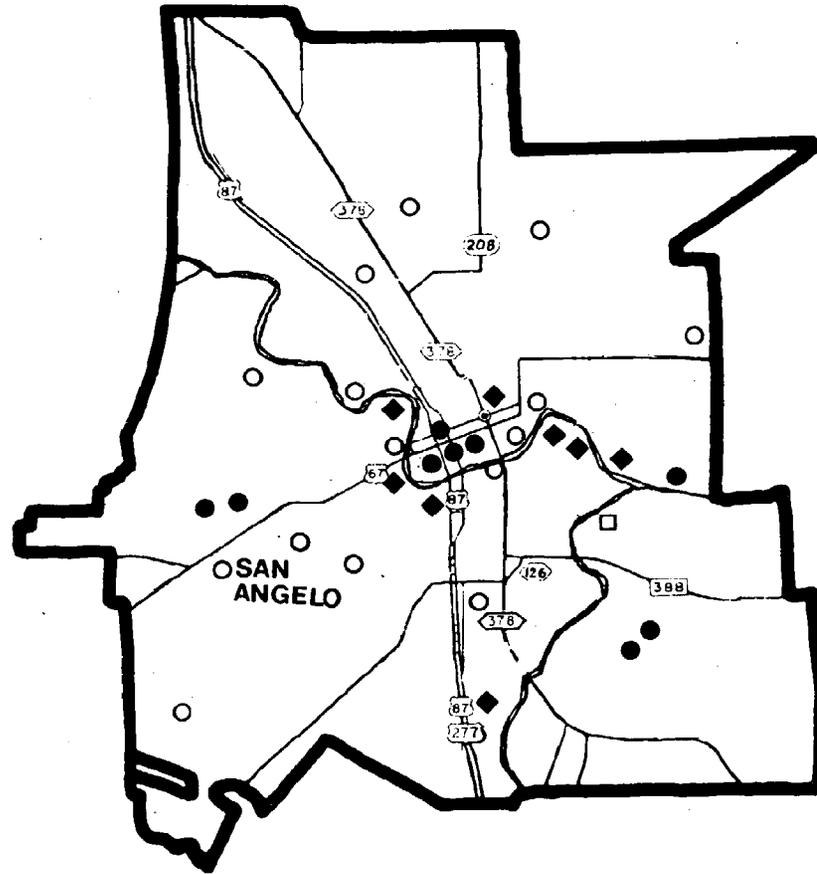
With .501 parks per 1,000, San Angelo has almost double the Statewide Metro average. However, the 3.725 acres per 1,000 gives San Angelo a figure well below the Statewide Metro average for acres per 1,000.

DISPERSION OF PARKS BY TYPE

URBAN PARKS

- DISTRICT PARK
- COMMUNITY PARK
- ◆ SPECIALTY PARK
- OPEN-LAND PARK

Source: 1971 Municipal Inventory Update



REGION 17
SAN ANGELO AREA



PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 17 METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	1	10	2	13	4,914	.203	.150
Tennis Courts.....	1	20	0	21	3,042	.328	.142
Basketball Courts.....	0	0	1	1	63,884	.016	.071
Baseball/Softball Fields.....	2	9	1	12	5,324	.188	.186
Football/Soccer Fields.....	0	0	0	0	---	---	.032
Picnicking:							
Parks.....	1	13	2	16	3,993	.250	.124
Tables.....	4	64	22	90	710	1.406	1.230
Playground:							
Parks.....	1	12	1	14	4,563	.219	.170
Acres Developed.....	1	6	1	8	7,986	.125	.258
Swimming:							
Parks.....	0	2	0	2	31,942	.031	.050
Pools (Sq. Yd.).....	0	1,400	0	1,400	46	21.875	25.950
Designated Fresh Water (Sq. Yd.)...	0	0	0	0	---	---	52.242
Boating:							
Parks.....	1	0	0	1	63,884	.016	.006
Ramp Lanes - Fresh Water.....	1	0	0	1	63,884	.016	.008
Camping:							
Parks.....	0	0	0	0	---	---	.002
Campsites.....	0	0	0	0	---	---	.121
Fishing:							
Parks.....	1	5	7	13	4,914	.203	.013
Pier/Barge/Marina-Fresh Water (Yd.)	0	0	0	0	---	---	.049
Golfing:							
Courses.....	0	0	1	1	63,884	.016	.005
Holes.....	0	0	9	9	7,098	.141	.100
Trails:							
Parks.....	0	0	0	0	---	---	.006
Nature (Mi.).....	0	0	0	0	---	---	.009
Horseback (Mi.).....	0	0	0	0	---	---	.003
Bicycle (Mi.).....	0	0	0	0	---	---	.007
Hiking (Mi.).....	0	0	0	0	---	---	.006
Total Trails (Mi.).....	0	0	0	0	---	---	.021

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 17 METRO	STATEWIDE AVERAGE METRO AREAS
Sport Shooting:							
Parks.....	0	0	0	0	---	---	.002
Traps.....	0	0	0	0	---	---	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	0	0	0	0	---	---	.011
Miscellaneous:							
Parks.....	0	0	3	3	21,297	.047	.038
Amphitheatre Seats.....	0	0	0	0	---	---	1.077
Botanical Gardens (Acres).....	0	0	2	2	31,942	.031	.077
Zoos (Acres).....	0	0	0	0	---	---	.051
Community/Recreation Centers.....	0	0	0	0	---	---	.038

Most of the developed park and recreation facilities in San Angelo are in Community Parks, where all of the swimming facilities exist. The one District Park is the only park with boating facilities, while the only golf course is in a Specialty Park. Two of the Specialty Parks have botanical gardens. Thirteen parks have fishing waters available, principally in the Specialty or Community Park categories, however, none of these parks have fishing piers, barges or marinas.

Of the 32 parks, 16 have facilities for picnicking, 14 have playgrounds, 13 have fishing waters available and 13 have games and sports facilities. The most common types of games and sports facilities are tennis with 21 courts (all but one of these in Community Parks), followed by baseball/softball with 12 fields and basketball with one court.

Looking at selected facilities in relation to the number of potential users we find the following:

- | | |
|--|--|
| 63,884 persons for each basketball court | 3,042 persons for each tennis court |
| 7,986 persons for each acre of playground | 710 persons for each picnic table |
| 7,098 persons for each golf hole | 46 persons for each square yard of swimming pool |
| 5,324 persons for each baseball/softball field | |

San Angelo is above the Statewide Metro average for facility units per 1,000 only for tennis courts, baseball/softball fields, picnic tables, boat ramp lanes and golf holes, while falling below the average for basketball courts, playground acres, square yards of swimming pools and acres of botanical gardens. No football/soccer fields, designated fresh water swimming area, campsites, yards of fishing pier/barge/marina, trail miles, sport shooting facilities, amphitheatre seats, zoo acreage or community/recreation centers were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

<u>ACTIVITY-FACILITY</u>	<u>ANNUAL DAYS AVAILABLE</u>	<u>DAYS PER THOUSAND POPULATION</u>	
		<u>REGION 17 METRO</u>	<u>STATEWIDE AVERAGE METRO</u>
Swimming (Pools) - square yards	210,000	3,281	3,891
Child's Play - playground acres	220,984	3,453	7,137
Baseball/Softball - fields	165,648	2,588	2,577
Picnicking - tables	153,180	2,393	2,093
Football/Soccer - fields	0	0	235
Golf - holes	36,423	569	414
Tennis - courts, double	56,574	884	384
Basketball - courts, full	8,795	137	625
Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	60,487	945	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	13,486	211	103
Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	0	0	164

The San Angelo Metro Area offers the most opportunity days for child's play, followed by swimming (in pools), baseball/softball and picnicking. A comparison between the opportunity days per thousand population for the San Angelo Metro Area and the Statewide Metro average shows that the San Angelo Metro Area surpasses the statewide average for five types of facilities -- baseball/softball fields, picnic tables, golf courses (holes), tennis courts, and freshwater boat ramps. The San Angelo Metro Area is below the Statewide Metro average for swimming (in pools), child's play, basketball and surface acres for freshwater boating, boat fishing and skiing, with no opportunity days available for football/soccer and the trails activities.

The nineteenth ranking metro area, based on population, San Angelo ranked twentieth in total participation for the year 1970. Estimates for 1970 indicate that residents and non-residents in the area spent over 1.7 million recreation days in pursuit of urban outdoor recreation opportunities available within the metro area.

Resident

For the 16 activities shown, total days of participation in urban outdoor recreation activities by the residents of the San Angelo Metropolitan Area was estimated to be 1.5 million days in 1970. Total participation is expected to increase to 2.4 million days in 1975 and to nearly 3.2 million days in 1980. These projections represent increases of 53.1 percent by 1975 and 106.7 percent by 1980. Participation on a days per household basis is projected to increase from 72.3 days in 1970 to 109.3 days in 1975, and to 146.3 days in 1980--increases of 51.3 and 102.5 percent, respectively, over the 1970 level. Residents of the San Angelo Metropolitan Area are expected to participate at a rate of 51, 52, and 56 days per household below the statewide average for the other Texas metropolitan areas in 1970, 1975, and 1980, respectively. For the more distant years of 1990 and 2000, both total days of participation as well as days per household are expected to increase substantially; however, they will remain below the statewide average for all metropolitan areas.

Projections for specific activities indicate that 13 of the 16 activities will increase in total days of participation through the years 1970 and 1980. Football is expected to decrease in total participation, while the activities of tennis and basketball are anticipated to remain relatively constant. Participation on a days per household basis is expected to increase in 15 activities by 1980, while football will decline slightly. In 1970, the six most popular activities based on total participation were: driving for pleasure, child's play, swimming, sightseeing, bicycling, and walking. By 1975, bicycling will replace driving for pleasure as the most popular activity with walking, driving for pleasure, child's play, swimming, and sightseeing ranked two through six, respectively. The six most popular activities in 1980 are as follows: bicycling, walking, child's play, swimming, driving for pleasure, and sightseeing.

Non-Resident

For the urban outdoor recreation activities specified for 1970, participation within the San Angelo Metropolitan Area by non-residents was estimated to total 169,000 days. Compared to the 1970 level, total participation is expected to decrease 1.2 percent (to 167,000 days) by 1975 and 1.8 percent (to 164,000 days) by 1980. Decreases are anticipated for the years 1990 and 2000.

In terms of days of participation for 1970, the most popular non-resident activities, of the specific activities projected, were: boating, with 37,000 days; sightseeing, with 30,000 days; swimming, with 28,000 days; fishing, with 21,000 days; football, with 16,000 days; and driving for pleasure with 13,000 days, respectively. A moderate decrease in participation for all activities is expected through the year 2000. In relative order, the six most popular activities are expected to remain the same.

ACTIVITY	1970				1975				1980				1990				2000			
	REG. 17		STATE-WIDE		REG. 17		STATE-WIDE		REG. 17		STATE-WIDE		REG. 17		STATE-WIDE		REG. 17		STATE-WIDE	
	PART. DAYS	RANK	METROS AVERAGE DAYS/HH	METROS AVERAGE DAYS/HH	PART. DAYS	RANK	METROS AVERAGE DAYS/HH	METROS AVERAGE DAYS/HH	PART. DAYS	RANK	METROS AVERAGE DAYS/HH	METROS AVERAGE DAYS/HH	PART. DAYS	RANK	METROS AVERAGE DAYS/HH	METROS AVERAGE DAYS/HH	PART. DAYS	RANK	METROS AVERAGE DAYS/HH	METROS AVERAGE DAYS/HH
Swimming	197	3	9.25	27.41	269	5	12.49	36.52	345	4	15.87	47.17	509	4	24.50	75.28	740	3	35.35	110.14
Child's Play	217	2	10.19	14.08	292	3	13.56	17.72	366	3	16.83	22.00	523	3	25.18	32.20	740	3	35.35	43.99
Baseball/Softball	71	8	3.33	2.78	85	9	3.95	3.19	98	9	4.51	3.59	118	8	5.68	4.41	144	8	6.88	5.22
Picnicking	111	7	5.21	5.72	113	7	5.25	5.66	115	8	5.29	5.66	111	9	5.34	5.61	113	9	5.40	5.64
Football/Soccer	16	14	.75	1.43	16	15	.74	1.42	16	16	.74	1.41	15	16	.72	1.39	15	16	.72	1.38
Golf	70	9	3.29	3.92	94	8	4.37	4.98	118	7	5.43	6.16	168	7	8.09	8.96	235	6	11.23	12.07
Tennis	21	11	.99	6.06	22	12	1.02	9.21	22	13	1.01	11.49	21	14	1.01	16.07	21	14	1.00	21.46
Basketball	18	13	.85	1.60	18	14	.84	2.59	18	14	.83	3.57	18	15	.87	5.52	18	15	.86	7.53
Walking	128	6	6.01	18.21	319	2	14.81	23.09	513	2	23.59	29.20	855	2	41.16	39.89	1,229	2	58.71	50.31
Bicycling	151	5	7.09	20.30	533	1	24.75	32.77	923	1	42.45	45.25	1,616	1	77.79	68.44	2,368	1	113.12	95.49
Nature Study	7	16	.33	.72	19	13	.88	1.67	31	12	1.43	2.64	51	11	2.46	4.63	74	11	3.53	6.70
Fishing	38	10	1.78	1.80	40	10	1.86	1.88	43	11	1.98	1.97	44	12	2.12	2.13	48	12	2.29	2.30
Boating	19	12	.89	.88	34	11	1.58	1.60	50	10	2.30	2.31	78	10	3.75	3.74	108	10	5.16	5.17
Skiing	9	15	.42	.42	13	16	.60	.62	18	14	.83	.82	25	13	1.20	1.22	34	13	1.62	1.81
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	183	4	8.59	2.25	195	6	9.06	2.34	205	6	9.43	2.50	211	6	10.16	2.70	225	7	10.75	3.01
Dr. for Pleas.	283	1	13.29	13.38	292	3	13.56	13.52	300	5	13.80	13.67	296	5	14.25	13.86	306	5	14.62	14.10
TOTAL	1,539		72.26	120.96	2,354		109.32	158.78	3,181		146.32	199.41	4,659		224.28	286.05	6,418		306.59	386.32

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000	ACTIVITY	1970	1975	1980	1990	2000
Swimming	28	27	27	24	23	Swimming	225	296	372	533	763
Child's Play	1	1	1	1	1	Child's Play	218	293	367	524	741
Baseball/Softball	*	*	*	*	*	Baseball/Softball	71	85	98	118	144
Picnicking	11	11	11	9	9	Picnicking	122	124	126	120	122
Football/Soccer	16	16	16	14	14	Football/Soccer	32	32	32	29	29
Golf	1	1	1	1	1	Golf	71	95	119	169	236
Tennis	*	*	*	*	*	Tennis	21	22	22	21	21
Basketball	*	*	*	*	*	Basketball	18	18	18	18	18
Walking	8	8	8	7	7	Walking	136	327	521	862	1,236
Bicycling	*	*	*	*	*	Bicycling	151	533	923	1,616	2,368
Nature Study	*	*	*	*	*	Nature Study	7	19	31	51	74
Fishing	21	21	20	18	17	Fishing	59	61	63	62	65
Boating	37	36	35	32	30	Boating	56	70	85	110	138
Skiing	3	3	3	3	3	Skiing	12	16	21	28	37
Surfing	---	---	---	---	---	Surfing	---	---	---	---	---
Sightseeing	30	30	29	26	25	Sightseeing	213	225	234	237	250
Dr. for Pleas.	13	13	13	11	11	Dr. for Pleas.	296	305	313	307	317
TOTAL	169	167	164	146	141	TOTAL	1,708	2,521	3,345	4,805	6,559

Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the San Angelo Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with the current recreation opportunities^{2/} available in the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to subsections of the San Angelo Metro, characterized by residents having similar incomes and ethnic backgrounds. Particular attention was given to those subsections expected to undergo relatively rapid population growth and physical expansion in the future.

Conclusions reached from analyzing the distribution of recreation opportunities within the metropolitan area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist.

In the discussions that follow, results of the distribution analysis of parks within subsections of the San Angelo Metro Area are presented. Then, estimates of current and future requirements for selected recreation facilities are presented, and are qualified by conclusions reached from the distribution analysis of recreation facilities within subsections of the San Angelo Metro Area.

PARK DISTRIBUTION ANALYSIS

In analyzing the availability and distribution of parks in the San Angelo Metro Area, several characteristics were considered: changes in population (or trends, in general, 1960 to 1970), areas of the metro which were expected to exhibit relatively major expansion, and the dispersion of existing parks among the income/ethnic subsections of the metro. From these interrelated characteristics general conclusions were reached with respect to future park developments for the metro area.

Population trends affected estimations of future recreation participation. Projections of population growth for San Angelo indicated that the 1970 metro population of 63,884 will decrease very slightly to about 62,801 persons by the year 2000. In addition, information provided by urban recreation planners of the area shows that major directions of future urban expansion are expected to occur in the southwest, northwest, and southeast (as illustrated by arrows of decreasing size on the map, titled "Predominant Ethnic Background and Income Subsections").

For the San Angelo Metropolitan Area, local metro area recreation planners delineated fourteen subsections which are indicated on the map titled "Predominant Ethnic Background and Income Subsections." The delineated subsections characterize the homogeneous residential, or demographic, patterns existing in 1971 by two major socio-economic factors.

^{1/} "Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

^{2/} "Current" recreation opportunities refers to computed figures derived from the numbers of publicly-administered facilities by type available within the metro area in 1971.



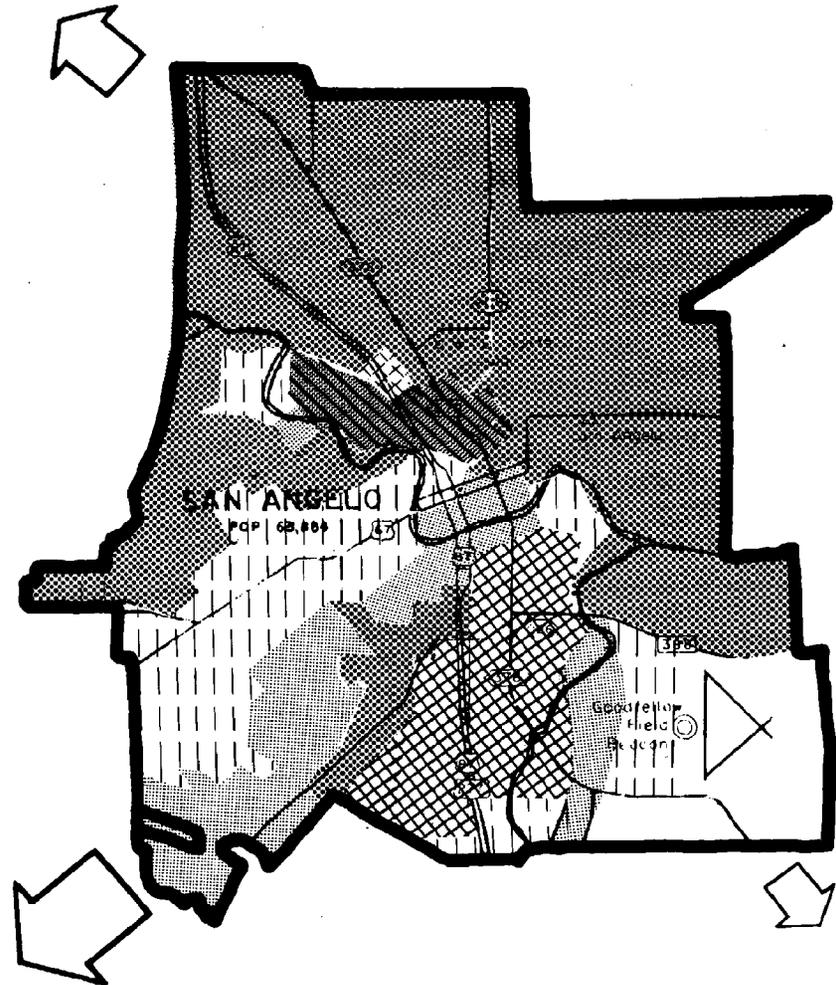
PREDOMINANT ETHNIC BACKGROUND AND INCOME SUBSECTIONS



**REGION 17
SAN ANGELO AREA**



Note: Arrows indicate major areas of expected growth.



Source: Metropolitan area recreation planners for the 1971 Urban Planners Survey

Overall, San Angelo was reported to contain a large percentage of low-income residents, mostly Anglos and Mexican-Americans. There were two subsections composed predominantly of low-income Anglos-- one comprised almost the entire northern half of the metro, and the other much smaller area was indicated to the south of the core area. The only low-income Black subsection in the metro was also located in the northern half of the metro just north of the core area. The relatively large low-income Mexican-American subsection was located to the south of the core area on either side of Highway 87. There were six middle-income subsections, five were predominantly Anglo and one predominantly Black. One very small Anglo subsection was located west of the low-income Black subsection in the northern half of the metro. The largest middle-income Anglo area was located to the southwest of the core area along either side of Highway 67. The three remaining middle-income Anglo subsections were located in the southeastern quadrant of the metro. The very small middle-income Black subsection was located in the northwestern quadrant immediately north of the low-income Black subsection. The four high-income subsections were all predominantly characterized by Anglo residents. The two largest subsections were located along a line to the southwest of the core area toward the major growth area. The smallest was located to the west of the core area in the northern half of the metro, and the remaining subsection was on the western periphery of Goodfellow Air Force Base in southeastern San Angelo.

An analysis of parks dispersion among the subsections was conducted by comparing the "Dispersion of Parks by Type" map with the "Predominant Ethnic Background and Income Subsections" map. Overall, the parks reported in 1971 appeared to be adequately distributed; although, seven subsections had no parks of any type, the low and the middle-income Black subsections, two middle-income Anglo, and three high-income Anglo subsections. Those seven subsections, however, were all within one mile of a park. Community, specialty, and open land parks were the most numerous in the metro area with community parks having the widest dispersion of all types. Specialty and open land parks were concentrated in the central portion of the metro. Areas appearing to need additional parks of all types were generally located in the direction of major growth and in the northeast and southeast. Since open land parks were indicated only in the southern half of the metro, consideration should be given to providing open land parks where the resources are available in the northern half and in the major growth areas of the metro.

In addition to maintaining an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities in parks is also an important consideration. An analysis of the current and future requirements for selected recreational facilities and the current dispersion of facilities in the San Angelo Metro Area is presented in the following discussions.

FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. Then, an analysis of the dispersion of existing facilities among the predominant income/ethnic subsections and the major growth areas of the metro was conducted. Conclusions reached from the facility dispersion analysis were then used to qualify the facility requirement estimates, particularly in those cases where no additional facilities were estimated as being needed within the metropolitan area. Usually, special note is

made where growth areas appeared to have limited facilities. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the Urban Volume. In the discussions that follow, resource requirements for recreational facilities are generally referred to by units of the most important feature necessary to allow participation. For example, when a requirement is shown for swimming pools, features such as a bathhouse, cleaning and filtering system, and other support features are implied when a requirement for the major facility is shown.

Swimming

San Angelo had 1,400 square yards of public swimming pools in 1971. Each square yard (unit) was estimated to provide 150 days of swimming opportunity per year which resulted in an estimated 210,000 opportunity days in 1971. To determine if there was a surplus or deficit of opportunity, estimated participation days and estimated opportunity days were compared. For swimming pools there appeared to be a deficit of 2,000 opportunity days, or thirteen square yards in 1970. By 1975 the metro area was estimated to require an additional 440 square yards of pools. Cumulative 1980 requirements were estimated at 933 square yards. In the years 1990 and 2000, an additional 1,007 and 1,440 square yards, respectively, will be needed for an estimated cumulative requirement of 3,380 square yards by the year 2000. The two parks with swimming facilities were in the metro center. This may indicate that additional facilities were needed in the southeast and north central portions of the metro, with consideration also given to the more rapidly expanding residential sections to the southwest and northwest.

Child's Play

San Angelo in 1971 had eight acres of playground divided among fourteen parks within the metro boundary. Multiplying the eight acres by the playground standard (each acre was calculated to provide 27,623 days of recreation opportunity per unit per year) resulted in an estimated 221,000 opportunity days in 1971. The number of opportunity days was then compared with forecasted participation days, as shown in the San Angelo resource requirements table. Playground area deficits were apparent for all planning periods except 1970. The cumulative requirement for 1975 was three acres above the existing eight in 1971. Requirements will grow incrementally by 5 acres, 11 acres, and 19 acres in the remaining planning horizon years, respectively, to a cumulative requirement of 38 acres by the year 2000. Since the existing playgrounds were relatively well distributed among the subsections, additional playgrounds should be considered for the major growth areas.

Baseball/Softball

With an existing twelve baseball/softball fields providing approximately 166,000 total opportunity days (the facility standard utilized was 13,804 opportunity days provided per field each year), the San Angelo Metropolitan Area appeared to have a sufficient quantity of fields to meet estimated demand through the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to maintaining a balanced distribution relative to growth areas and the various income/ethnic subsections.

Picnicking

There were ninety public picnic tables in San Angelo in 1971. At 1,702 days of opportunity per table per year (standard) the existing tables provided approximately 153,000 opportunity days in 1971. The existing number of tables was expected to provide sufficient opportunities through the year 2000. Analysis of picnicking facilities indicated adequate dispersion among the existing subsections; however, as the metro area grows, provision of additional facilities should be considered for the southwest and northwest areas of the metro.

Football/Soccer

The San Angelo Metro Area reported no public football/soccer fields in 1971. With a standard of 7,224 days per year per field, it was estimated that four fields would have been required to adequately accommodate demand in 1970. No additional fields were estimated to be required until the year 2000 when three more fields will be needed. In the provision of football/soccer fields consideration should be given to a balanced distribution relative to growth areas and income/ethnic subsections.

Golf

The only publicly-administered course in San Angelo provided nine holes for golf in 1971. Using the urban golf standard, each golf hole was calculated to be capable of providing 4,047 days of recreation opportunity annually. Therefore, San Angelo had about 36,000 days of opportunity provided in 1971. A comparison of the expected participation in projection years with available opportunity days showed that the metro needed an additional nine holes (at least one nine-hole course) in 1970 to adequately accommodate demand. Incrementally, additions of 6, 6, 12, and 16 holes would be needed in the years 1975, 1980, 1990, and 2000, respectively, to meet expected increases in golfing participation. As a general rule, golf courses are constructed in multiples of nine holes; therefore, by the year 2000 the San Angelo Metro Area will need slightly over six additional nine-hole courses (49 holes) or three eighteen-hole courses, or some appropriate combination which considers local resources. The one public course was located in central San Angelo; consequently, any additional courses probably should be considered for the fringe areas.

Tennis

The 57,000 opportunity days provided by the twenty-one tennis courts available in 1971 (each court can make available about 2,694 days of opportunity per year) were apparently adequate to accommodate demand in 1970, and were estimated to be adequate through the year 2000. Although dispersion of these facilities could not be discerned from available data, it is important that a balanced distribution be considered relevant to growth areas and income/ethnic subsections.

Basketball

Based on a standard of 8,795 days per year per court, the one public basketball court enumerated in 1971 provided approx-

imately 8,000 opportunity days in 1971. One additional court was estimated to be necessary in order to accommodate demand through the year 2000. Although a dispersion analysis was not possible from available information, a balanced distribution should be considered relative to growth areas and the various income/ethnic subsections.

Trails Activities

There were no trails reported in the San Angelo Metro Area in 1971. Analysis of expected participation for walking, bicycling, and nature study indicated that approximately two miles of combined trails should have been added by 1970. Given the expected growth in participation in the trails activities, incremental additions were projected to be 5 miles in 1975, 5 miles in 1980, 8 miles in 1990, and 8 miles in the year 2000. Overall, a total of twenty-eight miles of combined trails should be provided by the year 2000 to meet expected participation levels.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly-administered park and recreation areas. It is likely, however, that as trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of resources required may be conservative in the long run and should be considered as minimum estimates. In addition to the expectations for increases in participation in trail and related activities at publicly-administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study is taking place in local neighborhoods, on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, Skiing

Surface Acres - Freshwater Lakes
(Boating, Boat Fishing, Skiing)

A total of 145 surface acres of freshwater lakes was located within the San Angelo Metropolitan Area in 1971 not including San Angelo Reservoir which was not within the metro area. Using participation patterns of households recreating in the urban areas it was estimated that boating participation would have totaled 56,000 days, boat fishing 12,000 days, and skiing 12,000 days for a total of 80,000 days in 1970 if adequate freshwater lakes had been available. A comparison of estimated participation with the opportunities provided by the surface acres existing in 1971 indicated that incremental resource requirements were expected to expand from an additional 48 acres needed in 1970, another 45 acres by 1975, 48 acres more by 1980, 82 acres by 1990, and another 86 acres by the year 2000. This brings the cumulative resource requirement to 309 surface acres by the year 2000.

Freshwater Boat Ramps^{1/}

One publicly-administered freshwater boat lane was reported for the San Angelo Metropolitan Area in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using boat ramp facilities to gain access to the water, two additional boat ramps were needed in 1970. Projected increases in freshwater boat fishing, skiing, and boating participation were not expected to require any additional freshwater boat ramps in 1975; however, one would be required by 1980 and one more by the year 2000, bringing the cumulative resource requirement to four ramps in 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, the provision of freshwater surface acres and freshwater boat ramps required should be planned as joint projects, even though in some cases, this may require the construction of boat ramps prior to the years reflected in the boat ramp resource requirement projections.

Summary of Facilities Requirements

In 1971 the San Angelo Metro had at least some public facilities for all designated outdoor recreation activities except football/soccer and trail activities (walking, bicycling, and nature study). Incremental resource requirements were indicated in all planning horizon years for trails, and in 1970 and the year 2000 for football/soccer.

To augment existing facilities, additional square yards of swimming pools, acres for playground facilities, holes of golf, acres of freshwater lakes, and freshwater boat ramps were estimated to be required in all, or in some cases nearly all, planning horizon years. One additional public basketball court also was indicated as necessary for the year 1970. Existing facilities for baseball/softball, picnicking, and tennis were estimated to be sufficient for the metro as a whole through the year 2000.

A dispersion analysis was possible only for a few facility types. Additional swimming facilities probably should be considered for the southeast and the north central portions of the metro, as well as for the rapidly growing southwest and northwest portions of San Angelo. The municipal golf course was located in central San Angelo; consequently, if additional public courses are provided, consideration should be given to the fringe areas. The dispersion of playgrounds and public picnic tables was considered relatively balanced.

In the provision of additional facilities for all types of outdoor recreation activities, consideration should be given to maintaining a balanced distribution relative to growth areas and the various income/ethnic subsections.

^{1/} In calculating freshwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

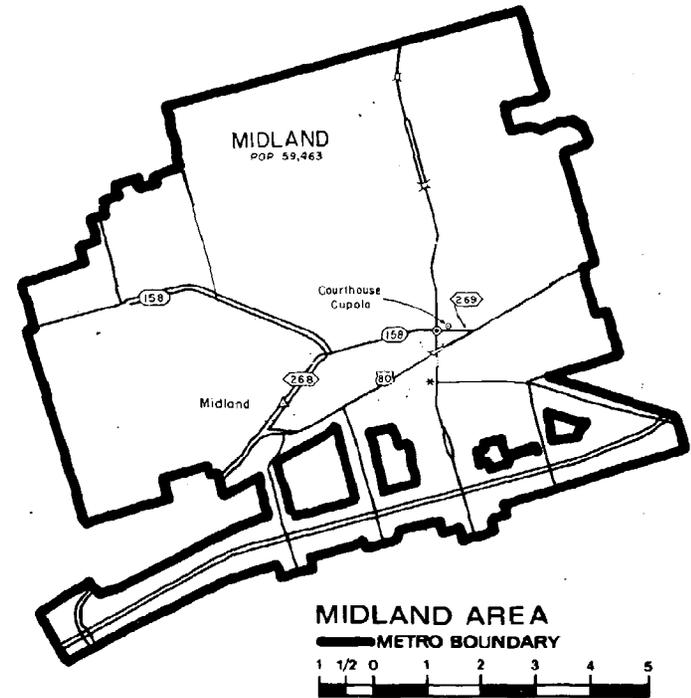
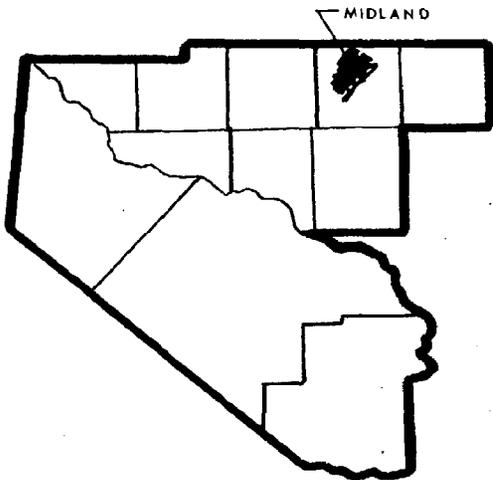
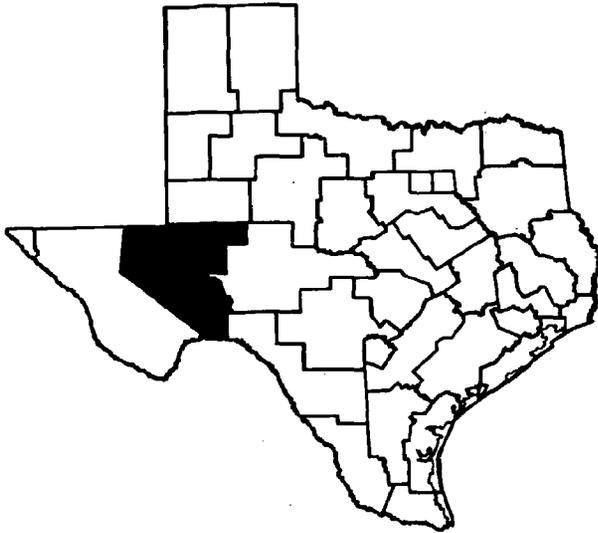
YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION		
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL	
	Swimming (Pools)	212 ^{1/}	210	2		13 square yards ^{2/}	13 square yards ^{2/}	
	Child's Play (Playgrounds)	218	221		3	0 acres	0 acres	
	Baseball/Softball	71	166		95	0 fields	0 fields	
	Picnicking	122	153		31	0 tables	0 tables	
	Football/Soccer	32	0	32		4 fields	4 fields	
	Golf	71	36	35		9 holes	9 holes	
	Tennis	21	57		36	0 courts, dbl.	0 courts, dbl.	
	Basketball	18	9	9		1 court, full	1 court, full	
	1970	Water-Related Activities:						
		Boating, Boat Fishing, Skiing FW . . .	80	60	20		48 surface acres	48 surface acres
		Boating, Boat Fishing, Skiing FW . . .	58	13	45		2 ramps ^{3/}	2 ramps ^{3/}
		Trails Activities:						
		Walking	14 ^{4/}				1 mile	1 mile
		Bicycling	6 ^{4/}				1 mile	1 mile
	Nature Study	1 ^{4/}				<1 mile	<1 mile	
	Combined Walking, Bicycling, Nature Study	21 ^{4/}	0	21		2 miles	2 miles	
<hr/>								
	<u>ACTIVITY</u>							
	Swimming (Pools)	278 ^{1/}	210	68		453 square yards ^{2/}	440 square yards ^{2/}	
	Child's Play (Playgrounds)	293	221	72		3 acres	3 acres	
	Baseball/Softball	85	166		81	0 fields	0 fields	
	Picnicking	124	153		29	0 tables	0 tables	
	Football/Soccer	32	0	32		4 fields	0 fields	
	Golf	95	36	59		15 holes	6 holes	
	Tennis	22	57		35	0 courts, dbl.	0 courts, dbl.	
	Basketball	18	9	9		1 court, full	0 courts, full	
	1975	Water-Related Activities:						
		Boating, Boat Fishing, Skiing FW . . .	99	60	39		93 surface acres	45 surface acres
		Boating, Boat Fishing, Skiing FW . . .	71	13	58		2 ramps ^{3/}	0 ramps ^{3/}
		Trails Activities:						
		Walking	34 ^{4/}				4 miles	3 miles
		Bicycling	21 ^{4/}				3 miles	2 miles
	Nature Study	4 ^{4/}				<1 mile	0 miles	
	Combined Walking, Bicycling, Nature Study	59 ^{4/}	0	59		7 miles	5 miles	

YEAR	ACTIVITY	TOTAL	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		PARTICIPATION	DAYS AVAILABLE	(000'S OF		RESOURCES REQUIRED	
		(000'S OF	(000'S OF	ACTIVITY DAYS)		CUMULATIVE	INCREMENTAL
	ACTIVITY DAYS)	ACTIVITY DAYS)	DEFICIT	SURPLUS			
	Swimming (Pools)	350 ^{1/}	210	140		933 square yards ^{2/}	480 square yards ^{2/}
	Child's Play (Playgrounds)	367	221	146		8 acres	5 acres
	Baseball/Softball	98	166		68	0 fields	0 fields
	Picnicking	126	153		27	0 tables	0 tables
	Football/Soccer	32	0	32		4 fields	0 fields
	Golf	119	36	83		21 holes	6 holes
	Tennis	22	57		35	0 courts, dbl.	0 courts, dbl.
	Basketball	18	9	9		1 court, full	0 courts, full
1980	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	119	60	59		141 surface acres	48 surface acres
	Boating, Boat Fishing, Skiing FW . . .	84	13	71		3 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	55 ^{4/}				7 miles	3 miles
	Bicycling	37 ^{4/}				4 miles	1 mile
	Nature Study	6 ^{4/}				1 mile	1 mile
	Combined Walking, Bicycling, Nature Study	98 ^{4/}	0	98		12 miles	5 miles
	<u>ACTIVITY</u>						
	Swimming (Pools)	501 ^{1/}	210	291		1,940 square yards ^{2/}	1,007 square yards ^{2/}
	Child's Play (Playgrounds)	524	221	303		19 acres	11 acres
	Baseball/Softball	118	166		48	0 fields	0 fields
	Picnicking	120	153		33	0 tables	0 tables
	Football/Soccer	29	0	29		4 fields	0 fields
	Golf	169	36	133		33 holes	12 holes
	Tennis	21	57		36	0 courts, dbl.	0 courts, dbl.
	Basketball	18	9	9		1 court, full	0 courts, full
1990	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	151	60	91		223 surface acres	82 surface acres
	Boating, Boat Fishing, Skiing FW . . .	106	13	93		3 ramps ^{3/}	0 ramps ^{3/}
	Trails Activities:						
	Walking	91 ^{4/}				11 miles	4 miles
	Bicycling	65 ^{4/}				8 miles	4 miles
	Nature Study	10 ^{4/}				1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	166 ^{4/}	0	166		20 miles	8 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	717 ^{1/}	210	507		3,380 square yards ^{2/}	1,440 square yards ^{2/}
	Child's Play (Playgrounds)	741	221	520		38 acres	19 acres
	Baseball/Softball	144	166		22	0 fields	0 fields
	Picnicking	122	153		31	0 tables	0 tables
	Football/Soccer	29	0	29		7 fields	3 fields
	Golf	236	36	200		49 holes	16 holes
	Tennis	21	57		36	0 courts, dbl.	0 courts, dbl.
	Basketball	18	9	9		1 court, full	0 courts, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	189	60	129		309 surface acres	86 surface acres
	Boating, Boat Fishing, Skiing FW . . .	131	13	118		4 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	130 ^{4/}				15 miles	4 miles
	Bicycling	95 ^{4/}				11 miles	3 miles
	Nature Study	15 ^{4/}				2 miles	1 mile
	Combined Walking, Bicycling, Nature Study	240 ^{4/}	0	240		28 miles	8 miles

1/ Includes only swimming participation occurring in swimming pools, 94 percent of the total in urban areas.
 2/ Designated freshwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.
 3/ Assumes 2.0 lanes per ramp.
 4/ Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

Region 18



Source: Adapted from General Highway Map Midland County Texas, 1960, 1970 Census figures, Highways revised to May 1, 1973. Texas State Highway Department Planning Survey Division. Austin, Texas.

Midland, the county seat of Midland County, received its name from its midway location on the railroad between Fort Worth and El Paso. Midland was once a thrifty farming community until the discovery of oil in the Permian Basin. Today, the Midland Metropolitan Area is the site of more than 650 petroleum and related businesses which provide the basis for its economy. It is also the distribution center for one of Texas' principal cattle ranching regions.

The amount of office space in this metropolitan area ranks it high among Texas cities in this category. Wholesaling and banking are two other prime contributors to the area's economy. Midland College, a part of the Permian Junior College System, is located here and the new University of Texas of the Permian Basin will be shared with the Odessa Metropolitan Area. The Midland County Museum and the Museum of the Southwest which include exhibits which relate to the past within the region are also located here.

POPULATION

1970 Metro Area Population: 59,463

Change 1960-70: -5%

Race Composition

White 88%^{1/}

Negro 11%

Other 1%

Age Composition (years):

13 or less 29%

14 - 20 14%

21 - 44 32%

45 - 64 20%

65 and over 5%

ECONOMY

Cattle Distribution

Petrochemical Industry

Petroleum Distribution

Wholesaling

^{1/} Includes persons of Mexican and/or Spanish descent.

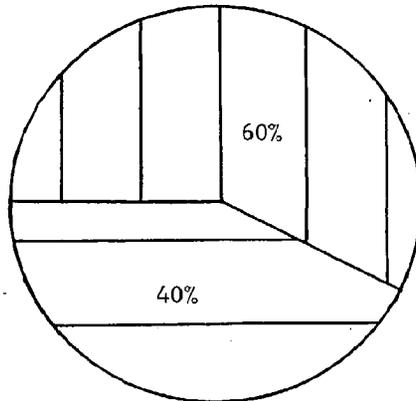
REGION 18 MIDLAND

CITY SIZE: METRO

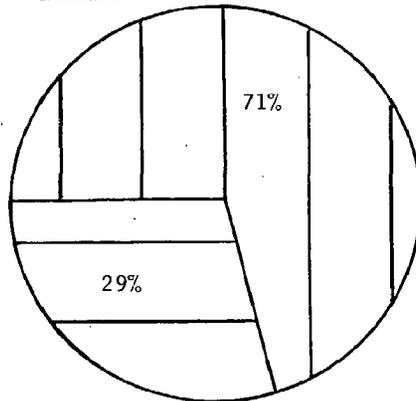
PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

REGION 18
MIDLAND
METRO



STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 18 MIDLAND METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	307	1,307
Undeveloped Land	202	536
Total Land	509	1,843
Water Within or Adjacent	0	1,006
Total Land and Water	509	2,849

Midland has a total of 509 acres of land set aside as park and recreation areas. No surface acres of water either within or adjacent to the parks were reported.

Of the total land acreage, 307 acres are developed with facilities, leaving 202 acres available for future development. With 60 percent of the land acreage currently developed, Midland is below the Statewide Metro average of 71 percent.

PARKS AND ACREAGE BY TYPE OF PARK

	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	1.000	12.000	13.000	3.000	29.000	72.000
Parks Per Thousand	.017	.202	.219	.050	.488	.267
People Per Park	59,463.000	4,955.000	4,574.000	19,821.000	2,050.000	3,754.000
.....						
Land Acres	400.000	42.000	55.000	12.000	509.000	1,843.000
Acres Per Thousand	6.727	.706	.925	.202	8.560	6.864
People Per Acre	149.000	1,416.000	1,081.000	4,955.000	117.000	146.000

Thirteen of the 29 parks in Midland are Specialty Parks, followed by 12 Community Parks. The Open Land Park category has three parks while one District Park was reported. The acreage figures, however, show the District Park to have 400 acres, or 79 percent of the total acreage. The Community, Specialty, and Open Land Parks all average about four acres each. The dispersion of the four types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the population of Midland, .488 parks per 1,000 and 8.560 acres per 1,000 population exist.

Another way to present this data is that 2,050 people share each park while 117 people must share each acre of park land.

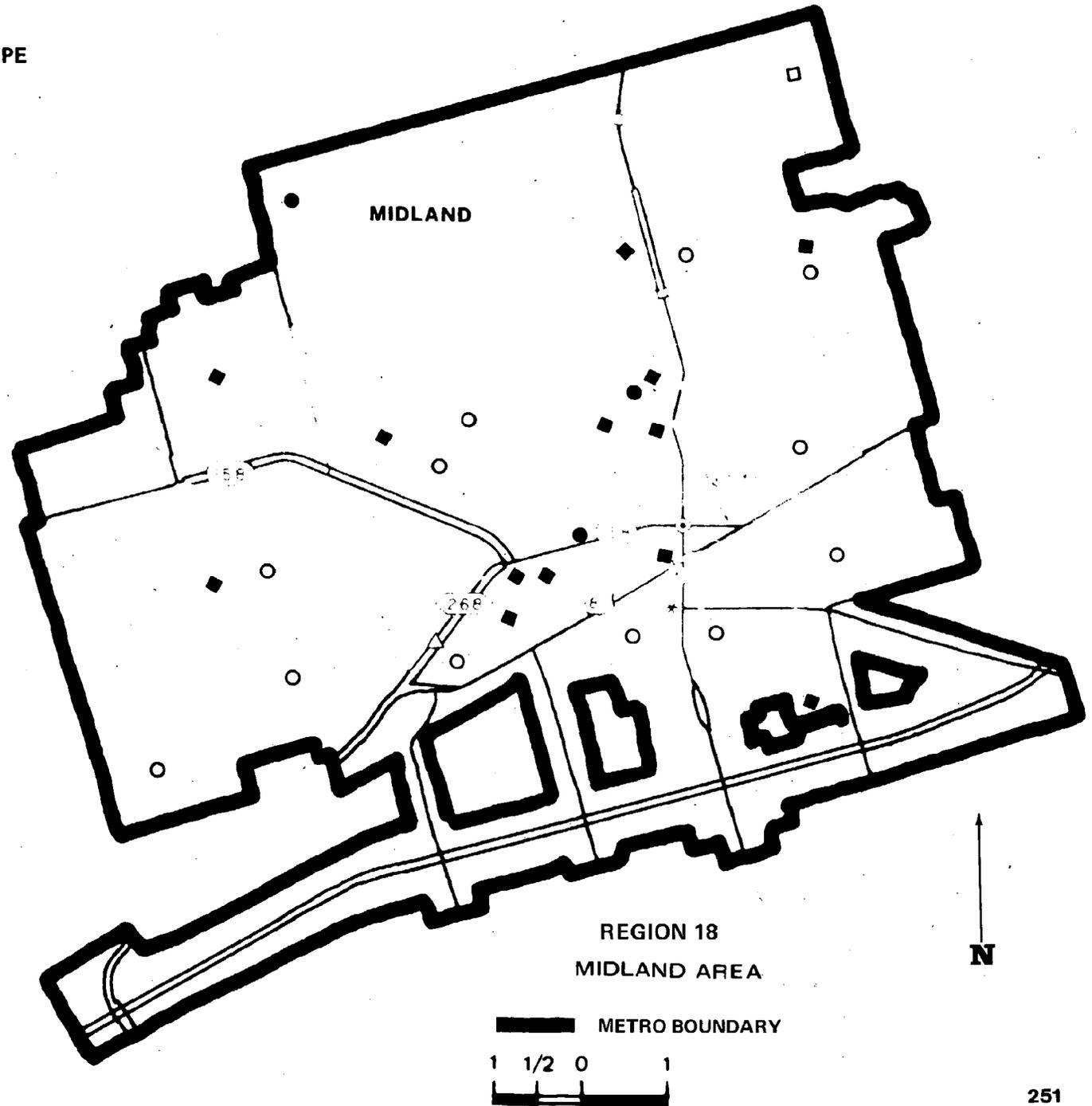
With .488 parks per 1,000, Midland ranks well above the Statewide Metro average. The 8.560 acres per 1,000 also gives Midland a figure well above the Statewide Metro average for acres per 1,000.

DISPERSION OF PARKS BY TYPE

URBAN PARKS

- DISTRICT PARK
- COMMUNITY PARK
- ◆ SPECIALTY PARK
- OPEN-LAND PARK

Source: 1971 Municipal Inventory Update



PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 18 MIDLAND METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	1	11	3	15	3,964	.254	.150
Tennis Courts.....	0	12	4	16	3,716	.271	.142
Basketball Courts.....	0	0	0	0	---	---	.071
Baseball/Softball Fields.....	6	19	4	29	2,050	.491	.186
Football/Soccer Fields.....	0	0	0	0	---	---	.032
Picnicking:							
Parks.....	1	0	0	1	59,463	.016	.124
Tables.....	69	0	0	69	862	1.169	1.230
Playground:							
Parks.....	1	12	8	21	2,831	.351	.170
Acres Developed.....	3	13	14	30	1,982	.508	.258
Swimming:							
Parks.....	1	3	1	5	11,892	.084	.050
Pools (Sq. Yd.).....	660	1,200	150	2,010	30	34.067	25.950
Designated Fresh Water (Sq. Yd.)...	0	0	0	0	---	---	52.242
Boating:							
Parks.....	0	0	0	0	---	---	.006
Ramp Lanes - Fresh Water.....	0	0	0	0	---	---	.008
Camping:							
Parks.....	1	0	0	1	59,463	.016	.002
Campsites.....	3	0	0	3	19,821	.050	.121
Fishing:							
Parks.....	0	0	0	0	---	---	.013
Pier/Barge/Marina-Fresh Water (Yd.)	0	0	0	0	---	---	.049
Golfing:							
Courses.....	1	0	0	1	59,463	.016	.005
Holes.....	18	0	0	18	3,303	.305	.100
Trails:							
Parks.....	0	0	0	0	---	---	.006
Nature (Mi.).....	0	0	0	0	---	---	.009
Horseback (Mi.).....	0	0	0	0	---	---	.003
Bicycle (Mi.).....	0	0	0	0	---	---	.007
Hiking (Mi.).....	0	0	0	0	---	---	.006
Total Trails (Mi.).....	0	0	0	0	---	---	.021

PARK AND RECREATION FACILITIES BY TYPE OF PARK

<u>TYPE OF FACILITY</u>	<u>DISTRICT PARK (UNITS)</u>	<u>COMMUNITY PARK (UNITS)</u>	<u>SPECIALTY PARK (UNITS)</u>	<u>TOTAL UNITS</u>	<u>PEOPLE PER UNIT</u>	<u>UNITS PER THOUSAND</u>	
						<u>REGION 18 MIDLAND METRO</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Sport Shooting:							
Parks.....	0	0	0	0	---	---	.002
Traps.....	0	0	0	0	---	---	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	0	0	0	0	---	---	.011
Miscellaneous:							
Parks.....	0	0	1	1	59,463	.016	.038
Amphitheatre Seats.....	0	0	0	0	---	---	1.077
Botanical Gardens (Acres).....	0	0	0	0	---	---	.077
Zoos (Acres).....	0	0	0	0	---	---	.051
Community/Recreation Centers.....	0	0	1	1	59,463	.016	.038

The park and recreation facilities in Midland are distributed among all three of the park categories. However, the only picnicking, camping and golf facilities are in the one District Park. One community/recreation center was reported and that in a Specialty Park. Five parks have swimming pools totalling 2,010 square yards:

Of the 29 parks, 21 have playgrounds, 15 have games and sports facilities, and 5 have swimming pools. The only types of games and sports facilities are baseball/softball with 29 fields and tennis with 16 courts.

Looking at the facilities in relation to the number of potential users we find the following:

59,463 persons for each community/recreation center	2,050 persons for each baseball/softball field
19,821 persons for each campsite	1,982 persons for each acre of playground
3,716 persons for each tennis court	862 persons for each picnic table
3,303 persons for each golf hole	30 persons for each square yard of swimming pool

Midland is above the Statewide Metro average for facility units per 1,000 only for tennis courts, baseball/softball fields, playground acres, square yards of swimming pools and golf holes, while falling below the average for picnic tables, campsites and community/recreation centers. No basketball courts, football/soccer fields, designated fresh water swimming area, boat ramp lanes, yards of fishing pier/bergo/marina, trail miles, sport shooting facilities, amphitheatre seats, acres of botanical gardens or zoo acreage were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

<u>ACTIVITY-FACILITY</u>	<u>ANNUAL DAYS AVAILABLE</u>	<u>DAYS PER THOUSAND POPULATION</u>	
		<u>REGION 18 MIDLAND METRO</u>	<u>STATEWIDE AVERAGE METRO</u>
Swimming (Pools) - square yards	301,500	5,110	3,891
Child's Play - playground acres	828,690	14,046	7,137
Baseball/Softball - fields	400,316	6,785	2,577
Picnicking - tables	117,438	1,990	2,093
Football/Soccer - fields	0	0	235
Golf - holes	72,846	1,235	414
Tennis - courts, double	43,104	731	384
Basketball - courts, full	0	0	625
 Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	0	0	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	0	0	103
 Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	0	0	164

The Midland Metro Area offers the most opportunity days for child's play, followed by baseball/softball and swimming (in pools). A comparison between the opportunity days per thousand population for the Midland Metro Area and the Statewide Metro average shows that the Midland Metro Area surpasses the statewide average for five of the activity types -- swimming (in pools), child's play, baseball/softball, golf and tennis. The Midland Metro Area is below the Statewide Metro average for picnicking, with no opportunity days available for football/soccer, basketball, surface acres for freshwater boating, boat fishing, and skiing, freshwater boat ramps and the trails activities.

The twentieth ranking metro area based on population, Midland ranked thirteenth in total participation for the year 1970. Estimates for 1970 indicate that residents and non-residents in the area spent over 2.7 million recreation days in pursuit of urban outdoor recreation opportunities available within the metro area.

Resident

Total days of participation in urban outdoor recreation activities by the residents of the Midland Metropolitan Area were estimated to be 2.6 million days in 1970. Total participation is expected to increase to 3.3 million days in 1975 and to 4.1 million days in 1980. These projections represent increases of 29.1 percent by 1975 and 59.5 percent by 1980 over the 1970 participation level. Participation on a days per household basis is projected to increase 39.6 percent by 1975 and 78.5 percent by 1980 over the 1970 level. These percentages, compared to the 1970 level of 107.2 days, represent increases in 1975 to 149.7 days and in 1980 to 191.4 days. Relative to other metropolitan areas, participation on a days per household basis is projected to be below the statewide averages by 16, 12, and 11 days in 1970, 1975, and 1980, respectively. Both the total days of participation and the days per household are expected to increase through the year 2000, but they will remain below the statewide average for all metropolitan areas.

In 1970, the six most popular activities, based on total participation, were estimated to be: swimming, child's play, walking, driving for pleasure, golf, and bicycling. The six most popular activities in 1975 were anticipated to be swimming, bicycling, walking, child's play, driving for pleasure, and golf. These activities are expected to hold their respective rankings through 1980. Of the 16 activities shown, 13 are expected to increase in days of total participation. However, the activities of football and tennis are expected to decrease in participation through the year 2000. Fishing is expected to remain relatively constant through 2000. With respect to participation on a days per household basis, all 16 activities are expected to increase in participation through the year 2000.

Non-Resident

Participation in urban outdoor recreation activities within the Midland Metropolitan Area by non-residents was estimated to total 169,000 days for the activities specified for 1970. Compared to the 1970 level, total participation is expected to remain constant through 1975 and is expected to decrease .6 percent (to 168,000 days) by 1980. The projected years 1990 and 2000 indicate that participation will increase gradually through 2000.

Of the specific activities projected, the most popular activities by non-residents for 1970 were: driving for pleasure, with 122,000 days, sightseeing, with 22,000 days; picnicking, with 11,000 days; child's play, with 5,000 days; and football, with 5,000 days. All activities are expected to remain relatively constant in participation through the year 2000 with driving for pleasure, sightseeing, picnicking, child's play, and football retaining their 1970 ranking of one through five, respectively.

ACTIVITY	1970				1975				1980				1990				2000			
	PART. DAYS	RANK	REG. 18 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 18 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 18 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 18 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 18 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH
Swimming	824	1	34.38	27.41	882	1	39.79	36.52	953	1	44.51	47.17	1,135	2	56.68	75.28	1,296	2	69.74	110.14
Child's Play	452	2	18.86	14.08	484	4	21.84	17.72	536	4	25.04	22.00	644	4	32.16	32.20	749	4	40.31	43.99
Baseball/Softball	56	8	2.34	2.78	60	9	2.71	3.19	64	10	2.99	3.59	74	11	3.70	4.41	83	11	4.47	5.22
Picnicking	84	7	3.50	5.72	84	7	3.79	5.66	87	9	4.06	5.66	95	9	4.74	5.61	102	9	5.49	5.64
Football/Soccer	5	16	.21	1.43	5	16	.23	1.42	5	16	.23	1.41	4	16	.20	1.39	4	16	.22	1.38
Golf	183	5	7.63	3.92	192	6	8.66	4.98	207	6	9.67	6.16	237	6	11.84	8.96	260	6	13.99	12.07
Tennis	26	11	1.08	6.06	25	13	1.13	9.21	25	14	1.17	11.49	24	14	1.20	16.07	23	15	1.24	21.46
Basketball	29	10	1.21	1.60	73	8	3.29	2.59	115	7	5.37	3.57	191	7	9.54	5.52	254	7	13.67	7.53
Walking	352	3	14.69	18.21	520	3	23.46	23.09	690	3	32.23	29.20	998	3	49.84	39.89	1,253	3	67.43	50.31
Bicycling	170	6	7.09	20.30	549	2	24.77	32.77	909	2	42.46	45.25	1,558	1	77.80	68.44	2,102	1	113.12	95.49
Nature Study	20	13	.83	.72	59	10	2.66	1.67	96	8	4.48	2.64	163	8	8.14	4.63	219	8	11.79	6.70
Fishing	43	9	1.79	1.80	42	11	1.90	1.88	42	12	1.96	1.97	43	12	2.15	2.13	43	13	2.31	2.30
Boating	21	12	.88	.88	35	12	1.58	1.60	49	11	2.29	2.31	75	10	3.75	3.74	96	10	5.17	5.17
Skiing	10	15	.42	.42	14	15	.63	.62	18	15	.84	.82	24	14	1.20	1.22	30	14	1.61	1.81
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	15	14	.63	2.25	20	14	.90	2.34	26	13	1.21	2.50	42	13	2.10	2.70	66	12	3.55	3.01
Dr. for Pleas.	280	4	11.68	13.38	274	5	12.36	13.52	276	5	12.89	13.67	283	5	14.13	13.86	281	5	15.12	14.10
TOTAL	2,570		107.22	120.96	3,318		149.70	158.78	4,098		191.40	199.41	5,590		279.17	286.05	6,861		369.23	386.32

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000	ACTIVITY	1970	1975	1980	1990	2000
Swimming	1	1	1	1	1	Swimming	825	883	954	1,136	1,297
Child's Play	5	5	5	5	5	Child's Play	457	489	541	649	754
Baseball/Softball	1	1	1	1	1	Baseball/Softball	57	61	65	75	84
Picnicking	11	11	10	11	11	Picnicking	95	95	97	105	113
Football/Soccer	5	5	5	5	5	Football/Soccer	10	10	10	9	9
Golf	*	*	*	*	*	Golf	183	192	207	237	260
Tennis	*	*	*	*	*	Tennis	26	25	25	24	23
Basketball	*	*	*	*	*	Basketball	29	73	115	191	254
Walking	2	2	2	2	2	Walking	354	522	692	1,000	1,255
Bicycling	*	*	*	*	*	Bicycling	170	549	909	1,558	2,102
Nature Study	*	*	*	*	*	Nature Study	20	59	96	163	219
Fishing	*	*	*	*	*	Fishing	43	42	42	43	43
Boating	*	*	*	*	*	Boating	21	35	49	75	96
Skiing	*	*	*	*	*	Skiing	10	14	18	24	30
Surfing	---	---	---	---	---	Surfing	---	---	---	---	---
Sightseeing	22	22	22	23	23	Sightseeing	37	42	48	65	89
Dr. for Pleas.	122	122	122	123	125	Dr. for Pleas.	402	396	398	406	406
TOTAL	169	169	168	171	173	TOTAL	2,739	3,487	4,266	5,761	7,034

Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements¹ were developed for the Midland Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current¹ and projected recreation participation with the 1971 recreation opportunities² available in the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to subsections of the Midland Metro characterized by residents having similar incomes and ethnic backgrounds. Particular attention was given to those subsections expected to undergo relatively rapid population growth and physical expansion in the future.

Conclusions reached from analyzing the distribution of recreation opportunities within the metropolitan area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist.

In the discussions that follow, results of the distribution analysis of parks within subsections of the Midland Metro Area are presented. Then, estimates of current and future requirements for selected recreation facilities are presented, and are qualified by conclusions reached from the distribution analysis of recreation facilities within subsections of the Midland Metro.

PARK DISTRIBUTION ANALYSIS

In analyzing the availability and distribution of parks in the Midland Metro Area, several characteristics were considered: changes in population (or trends in general, 1960 to 1970), areas of the metro which were expected to exhibit relatively major expansion, and the dispersion of existing parks among the income/ethnic subsections of the metro. From these interrelated characteristics general conclusions were reached with respect to future park developments for the metro area.

Population trends affected estimations of future recreation participation. Projections of population growth for Midland indicated that the 1970 population of 59,463 would fluctuate only slightly through the year 2000. In addition, information provided by urban recreation planners of the area showed that the major direction of future urban expansion was expected to occur in the northwest (illustrated by an arrow on the map, titled "Predominant Ethnic Background and Income Subsections").

- 1/ "Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.
- 2/ "Current" recreation opportunities refers to computed figures derived from the numbers of publicly-administered facilities by type available within the metro area in 1971.

For the Midland Metropolitan Area, local metro area recreation planners delineated six subsections which are indicated on the accompanying map titled "Predominant Ethnic Background and Income Subsections." The delineated subsections characterize the homogeneous residential, or demographic, patterns existing in 1971 by two major socio-economic factors. There were three low-income subsections, one each characterized chiefly by Anglo, Black, and Mexican American residents, all of which were in the southeastern one-third of the metro area. Two of the subsections were predominantly characterized by middle-income residents. One was a predominantly Black subsection located in the northeastern portion of the metro, and the other was predominantly Anglo and located in the southwest. The remaining subsection was a large predominantly high-income Anglo area in the northwestern portion of the metro.

An analysis of parks dispersion among the subsections was conducted by comparing the "Dispersion of Parks by Type" map with the "Predominant Ethnic Background and Income Subsections" map. Overall, Midland appeared to have very good distribution of the existing parks with all six subsections having at least two parks each. There were only three open land parks in the metro. Two of the parks were located in the metro center, and the other was on the northwest edge of the metro. Parks of this type should be considered for the remainder of the metro when resources are available. In general, parks with recreational facilities appear to be most needed in the northwest toward the area of expected major growth and in the south.

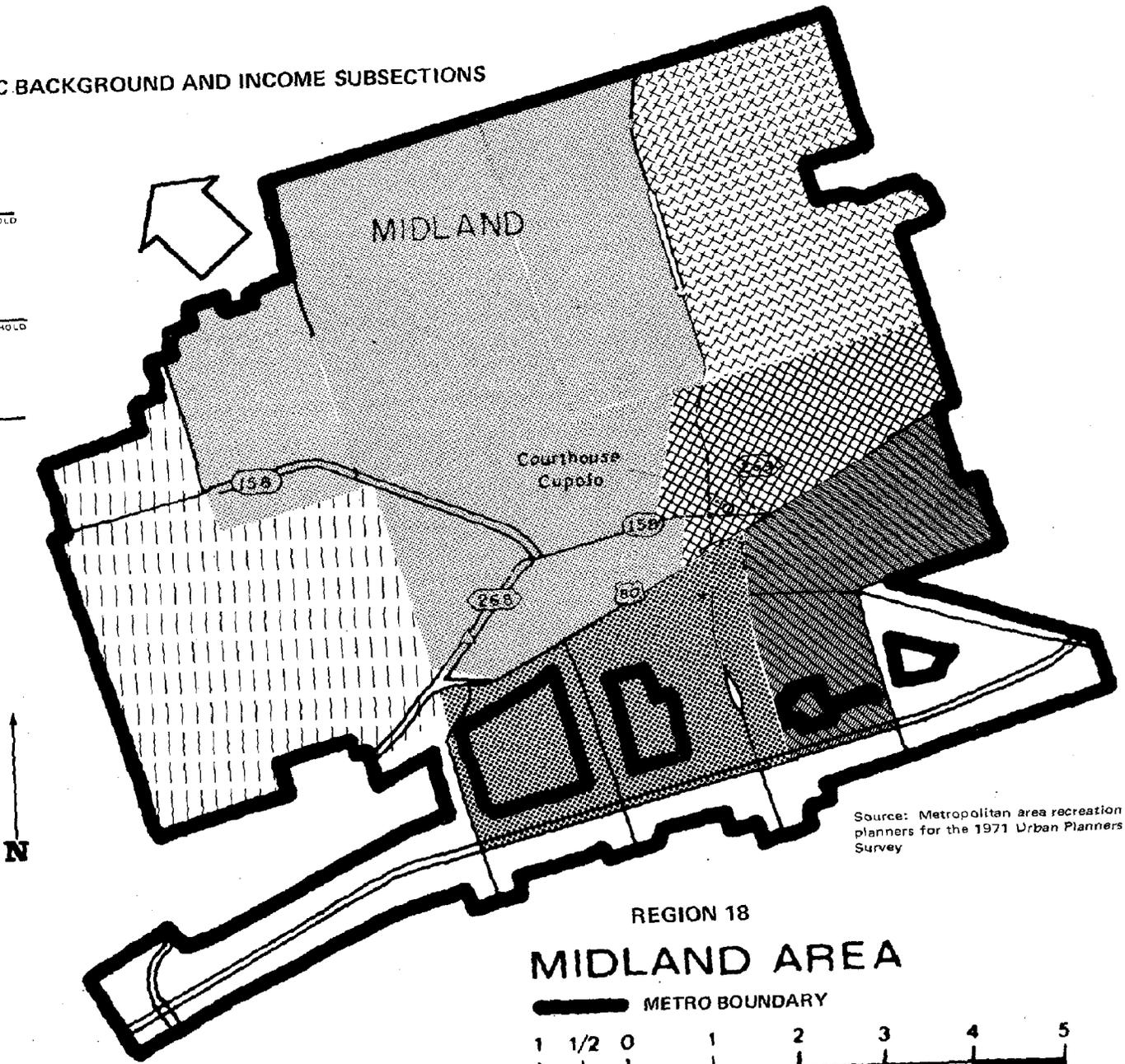
In addition to maintaining an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities in parks is also an important consideration. An analysis of the current and future requirements for selected recreational facilities and the current dispersion of facilities in the Midland Metro is presented in the following discussions.

FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. Then, an analysis of the dispersion of existing facilities among the predominant income/ethnic subsections and the major growth area of the metro was conducted. Conclusions reached from the facility dispersion analysis were then used to qualify the facility requirement estimates, particularly in those cases where no additional facilities were estimated as being needed within the metropolitan area. Usually, special note is made where growth areas appeared to have limited facilities. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the Urban Volume. In the discussions that follow, resource requirements for recreational facilities are generally referred to by units of the most important feature necessary to allow participation. For example, when a requirement is shown for swimming pools, features such as a bathhouse, cleaning and filtering system, and other support features are implied when a requirement for the major facility is shown.

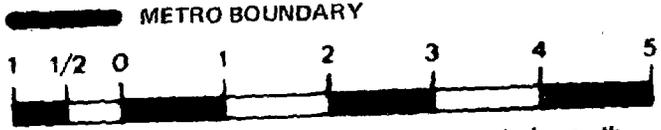
PREDOMINANT ETHNIC BACKGROUND AND INCOME SUBSECTIONS

- LOW INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS LESS THAN \$5,000)**
- PREDOMINANTLY MEXICAN AMERICAN
 - PREDOMINANTLY BLACK
 - PREDOMINANTLY ANGL0
- MID INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME VARIED FROM \$5,000 TO \$15,000)**
- PREDOMINANTLY MEXICAN AMERICAN
 - PREDOMINANTLY BLACK
 - PREDOMINANTLY ANGL0
- HIGH INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS GREATER THAN \$15,000)**
- PREDOMINANTLY MEXICAN AMERICAN
 - PREDOMINANTLY BLACK
 - PREDOMINANTLY ANGL0
- AREAS FOR WHICH ETHNIC BACKGROUND AND INCOME DELINEATIONS WERE NOT MAPPED.**



Source: Metropolitan area recreation planners for the 1971 Urban Planners Survey

REGION 18 MIDLAND AREA



Note: Arrow indicates major areas of expected growth.

Swimming

Midland had 2,010 square yards of public swimming pools in 1971. Each square yard (unit) was estimated to provide 150 days of swimming opportunity per year which yielded an estimated 302,000 opportunity days. To determine if there was a surplus or deficit of opportunity, estimated participation days and estimated opportunity days were compared. For swimming there appeared to be a deficit of 3,160 square yards in 1970, and deficits were shown in each planning year thereafter. By 1975 the metro area was estimated to require an additional 360 square yards of pools and 447 square yards by 1980. Cumulative 1980 requirements were estimated at 3,967 square yards. Incremental requirements of 1,146 square yards and 1,000 square yards were estimated for 1990 and 2000, respectively. Public outdoor swimming pools appeared to be absent in the high-income Anglo subsection in the northern portion of Midland and in the low-income Mexican-American subsection in east central Midland.

Child's Play

Midland in 1971 had thirty acres of playground divided among twenty-one parks within the metro boundary. Multiplying the thirty acres by the playground standard (each acre was calculated to provide 27,623 days of recreation opportunity per unit per year) provided an estimated 829,000 annual opportunity (potential participation) days. Annual opportunity days were then compared with forecasted participation days as shown in the Midland resource requirements table. The existing playground areas appear to be adequate for all planning horizon years. Since the existing playgrounds were relatively well distributed among the subsections, additional playground areas should be similarly dispersed with emphasis placed on the major growth area.

Baseball/Softball

With an existing twenty-nine baseball/softball fields providing approximately 400,000 opportunity days (the facility standard utilized was 13,804 opportunity days provided per field each year), the Midland Metropolitan Area appears to have a sufficient quantity of fields to meet the activity requirements of their baseball/softball recreationists through the year 2000. Although a dispersion analysis was not possible from information available for 1971, consideration should be given to providing a balanced distribution which takes into account the growth area and income/ethnic subsections, when allocating additional facilities.

Picnicking

There were sixty-nine public picnic tables in Midland in 1971. At 1,702 days of opportunity per table per year (standard) the existing tables provided approximately 117,000 days annually. Although the existing number of tables was expected to provide adequate overall opportunity through the year 2000, all of the tables were located in the district park in the northeastern corner of the metro. In the provision of additional facilities, areas other than northeastern Midland should be considered at present as well as in the future.

Football/Soccer

Information provided in 1971 indicates that there were no public football/soccer fields in Midland in 1971. Estimates of the number of participation days suggest that the provision of one field, located so as to maximize access (relative to income/ethnic subsections and the major growth area), should be adequate through the year 2000.

Golf

The district park located in the extreme northeastern corner of the metro provided an 18 hole public golf course in 1971. Using the urban golf standard, each golf hole was calculated to be capable of providing 4,047 days of recreation opportunity annually. Midland golfers, then, should have had about 73,000 days of opportunity provided by this public course. Comparing the estimated participation with the available opportunity days shows that the golfers would have required an additional twenty-seven holes (at least three nine-hole courses) in 1970. Incrementally, additions of 2, 4, 8, and 5 holes would be required in the years 1975, 1980, 1990, and 2000, respectively, to meet expected increases in golfing participation. As a general rule, golf courses are constructed in multiples of nine holes; therefore, it was estimated that by the year 2000, the Midland Metro Area will need five additional nine-hole courses (forty-five holes) or two eighteen-hole courses and a nine-hole course, or some appropriate combination which considers local resources. In view of the location of the existing course, areas of the metro other than northeastern Midland should be considered in the allocation of additional courses.

Tennis

The 43,000 opportunity days provided by the sixteen public tennis courts available in 1971 (each court can make available about 2,694 days of opportunity per year) apparently were adequate to meet facility requirements for Midland through the year 2000. Although a dispersion analysis of these facilities could not be made from available data, it is important that a balanced distribution (relative to income-ethnic subsections and the major growth area) be considered in the allocation of additional facilities.

Basketball

Based on a standard of 8,795 days per year per court, an estimated three courts would have been required in 1970 to adequately accommodate demand. Information indicates that there were no publicly-administered basketball courts available in Midland in 1971. Incremental resource requirements were estimated to be 5 courts in 1975, 5 courts in 1980, 9 courts in 1990, and 7 courts in the year 2000; this brings the cumulative resource requirement to 29 courts by the year 2000. Although a dispersion analysis was not possible, the various income/ethnic subsections and the major growth area should be considered in the allocation of additional basketball facilities.

Trails Activities

In 1971, Midland reported no miles of designated trail, and projected participation for walking, bicycling, and nature study occurring in the park and recreation areas indicates that approximately six miles of combined trails were needed in 1970. Given the expected participation growth in the trails activities, incremental additions were projected to increase by 5 miles in 1975, 4 miles in 1980, 9 miles in 1990, and 7 miles in 2000. Overall, a total of thirty-one miles of combined trails should be added by the year 2000 to meet expected participation levels.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly administered park and recreation areas. It is likely, however, that as trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of resources required may be conservative in the long run and should be considered as minimum estimates. In addition to the expectations for increases in participation in trail and related activities at publicly administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local neighborhoods; on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, SkiingSurface Acres-Freshwater Lakes
(Boating, Boat Fishing, Skiing)

No surface acres of freshwater lakes were reported available for water-related recreation within the Midland Metro Area in 1971. Using participation patterns of the households recreating within the urban areas, it was estimated that a total of 40,000 days of freshwater boating, boat fishing, and skiing participation would have occurred in 1970 if adequate freshwater lakes had been available. Of these 40,000 days, 21,000 were boating participation days, 9,000 were boat fishing days, and 10,000 were skiing days. Projections developed for the water-related activities indicate incremental resource requirements of 96 surface acres in 1970, 43 surface acres in 1975, 43 surface acres in 1980, 77 surface acres in 1990, and 65 surface acres in 2000. This brings the cumulative resource requirement to 324 surface acres by the year 2000.

Freshwater Boat Ramps^{1/}

No publicly-administered freshwater boat lanes were reported for the Midland Metro Area in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using freshwater boat ramp facilities to gain access to the water if ramps were available, it was calculated that one boat ramp was needed in 1970. Projected increases in freshwater boat fishing, skiing, and boating participation are expected to require one additional freshwater boat ramp in 1975, none in 1980, one in 1990, and one in the year 2000, bringing the cumulative resource requirement to four ramps in 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, the provision of freshwater surface acres and freshwater boat ramps required should be planned as joint projects, even though, in some cases, this may require the construction of boat ramps prior to the years reflected in the boat ramp resource requirement projections.

Summary of Facilities Requirements

Information provided in 1971 indicates that there were no public football/soccer fields, basketball courts, designated trails, surface acres of freshwater lakes, or freshwater boat ramps. Resource requirements were indicated for all, or nearly all, planning horizon years for basketball courts, trail facilities, acres of freshwater lakes, and freshwater boat ramps. The provision of one football/soccer field was estimated to be required to adequately accommodate demand through the year 2000. In terms of water-oriented recreation, low annual rainfall rates and very high evaporation rates in many parts of West Texas makes the construction of freshwater lakes difficult.

To augment existing facilities, additional square yards of swimming pool, and additional holes of golf were calculated to be required in each planning horizon year. Existing facilities for child's play, baseball/softball, picnicking, and tennis were estimated to be adequate through the year 2000, for the metro as a whole.

A dispersion analysis was possible only for a few facility types. Public outdoor swimming pools appeared to be absent in the high-income Anglo subsection in the northern portion of the metro and in the low-income Mexican-American subsection in east central Midland. Although the number of public picnic tables was estimated to be adequate for the metro as a whole, all of the facilities were located in the district park in the extreme northeastern part of Midland. This same park also had the only public golf course; consequently, if additional picnicking facilities or golf courses are provided, areas of the metro other than Northeast Midland should be taken into consideration. Playground facilities appeared to be reasonably well distributed in 1971.

^{1/} In calculating freshwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

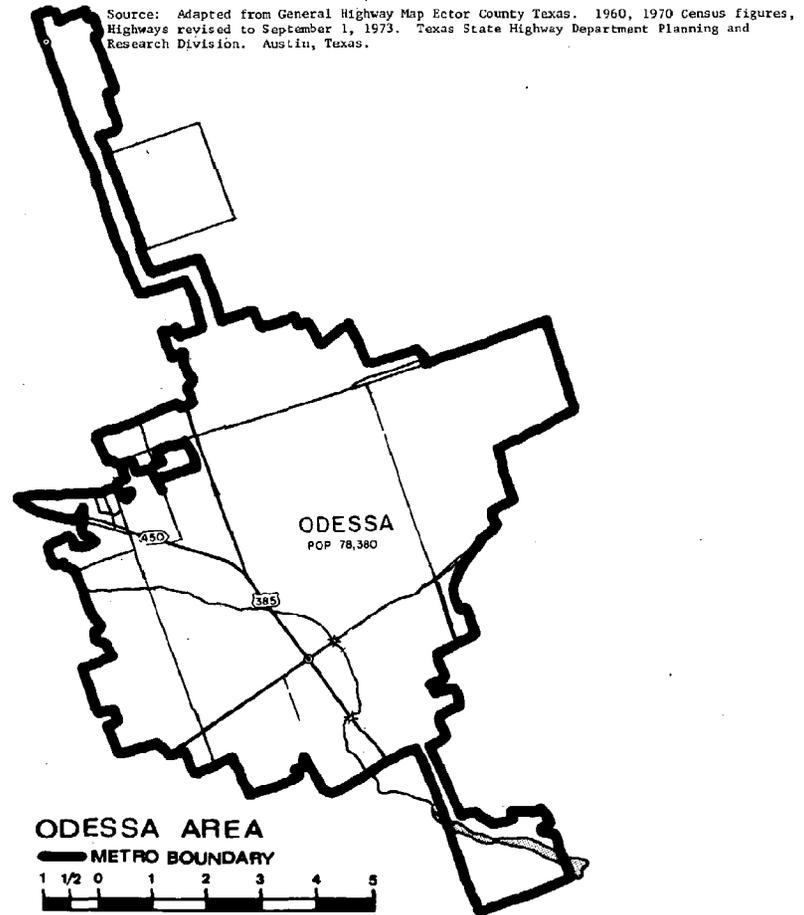
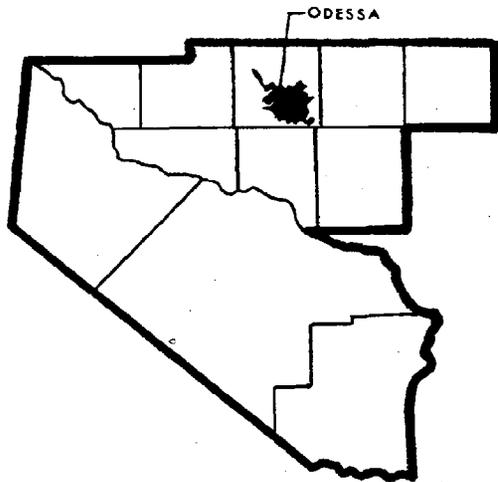
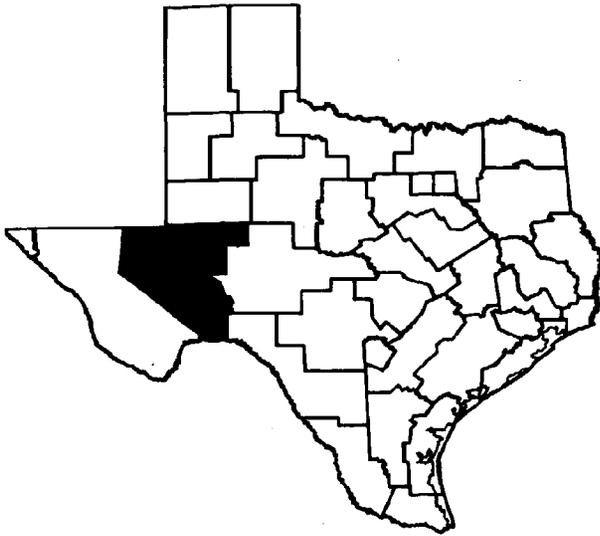
YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	776 ^{1/}	302	474		3,160 square yards ^{2/}	3,160 square yards ^{2/}
	Child's Play (Playgrounds)	457	829		372	0 acres	0 acres
	Baseball/Softball	57	400		343	0 fields	0 fields
	Picnicking	95	117		22	0 tables	0 tables
	Football/Soccer	10	0	10		1 field	1 field
	Golf	183	73	110		27 holes	27 holes
	Tennis	26	43		17	0 courts, dbl.	0 courts, dbl.
	Basketball	29	0	29		3 courts, full	3 courts, full
1970	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	40	0	40		96 surface acres	96 surface acres
	Boating, Boat Fishing, Skiing FW . . .	30	0	30		1 ramp ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	37 ^{4/}				5 miles	5 miles
	Bicycling	7 ^{4/}				1 mile	1 mile
	Nature Study	4 ^{4/}				<1 mile	<1 mile
	Combined Walking, Bicycling, Nature Study	48 ^{4/}	0	48		6 miles	6 miles
	ACTIVITY						
	Swimming (Pools)	830 ^{1/}	302	528		3,520 square yards ^{2/}	360 square yards ^{2/}
	Child's Play (Playgrounds)	489	829		340	0 acres	0 acres
	Baseball/Softball	61	400		339	0 fields	0 fields
	Picnicking	95	117		22	0 tables	0 tables
	Football/Soccer	10	0	10		1 field	0 fields
	Golf	192	73	119		29 holes	2 holes
	Tennis	25	43		18	0 courts, dbl.	0 courts, dbl.
	Basketball	73	0	73		8 courts, full	5 courts, full
1975	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	58	0	58		139 surface acres	43 surface acres
	Boating, Boat Fishing, Skiing FW . . .	43	0	43		2 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	55 ^{4/}				7 miles	2 miles
	Bicycling	22 ^{4/}				3 miles	2 miles
	Nature Study	12 ^{4/}				1 mile	1 mile
	Combined Walking, Bicycling, Nature Study	89 ^{4/}	0	89		11 miles	5 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	897 ^{1/}	302	595		3,967 square yards ^{2/}	447 square yards ^{2/}
	Child's Play (Playgrounds)	541	829		288	0 acres	0 acres
	Baseball/Softball	65	400		335	0 fields	0 fields
	Picnicking	97	117		20	0 tables	0 tables
	Football/Soccer	10	0	10		1 field	0 fields
	Golf	207	73	134		33 holes	4 holes
	Tennis	25	43		18	0 courts, dbl.	0 courts, dbl.
	Basketball	115	0	115		13 courts, full	5 courts, full
1980	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	76	0	76		182 surface acres	43 surface acres
	Boating, Boat Fishing, Skiing FW . . .	55	0	55		2 ramps ^{3/}	0 ramps ^{3/}
	Trails Activities:						
	Walking	73 ^{4/}				9 miles	2 miles
	Bicycling	36 ^{4/}				4 miles	1 mile
	Nature Study	19 ^{4/}				2 miles	1 mile
	Combined Walking, Bicycling, Nature Study	128 ^{4/}	0	128		15 miles	4 miles
<hr/>							
	<u>ACTIVITY</u>						
	Swimming (Pools)	1,068 ^{1/}	302	767		5,113 square yards ^{2/}	1,146 square yards ^{2/}
	Child's Play (Playgrounds)	649	829		180	0 acres	0 acres
	Baseball/Softball	75	400		325	0 fields	0 fields
	Picnicking	106	117		11	0 tables	0 tables
	Football/Soccer	9	0	9		1 field	0 fields
	Golf	237	73	164		41 holes	8 holes
	Tennis	24	43		19	0 courts, dbl.	0 courts, dbl.
	Basketball	191	0	191		22 courts, full	9 courts, full
1990	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	108	0	108		259 surface acres	77 surface acres
	Boating, Boat Fishing, Skiing FW . . .	77	0	77		3 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	105 ^{4/}				13 miles	4 miles
	Bicycling	62 ^{4/}				7 miles	3 miles
	Nature Study	33 ^{4/}				4 miles	2 miles
	Combined Walking, Bicycling, Nature Study	200 ^{4/}	0	200		24 miles	9 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	1,219 ^{1/}	302	917		6,113 square yards ^{2/}	1,000 square yards ^{2/}
	Child's Play (Playgrounds)	754	829		75	0 acres	0 acres
	Baseball/Softball	84	400		316	0 fields	0 fields
	Picnicking	113	117		4	0 tables	0 tables
	Football/Soccer	9	0	9		1 field	0 fields
	Golf	260		187		46 holes	5 holes
	Tennis	23	43		20	0 courts, dbl.	0 courts, dbl.
	Basketball	254	0	254		29 courts, full	7 courts, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	135	0	135		324 surface acres	65 surface acres
	Boating, Boat Fishing, Skiing FW . . .	95	0	95		4 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	132 ^{4/}				16 miles	3 miles
	Bicycling	84 ^{4/}				10 miles	3 miles
	Nature Study	44 ^{4/}				5 miles	1 mile
	Combined Walking, Bicycling, Nature Study	260 ^{4/}	0	260		31 miles	7 miles

1/ Includes only swimming participation occurring in swimming pools, 94 percent of the total in urban areas.
 2/ Designated freshwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.
 3/ Assumes 2.0 lanes per ramp.
 4/ Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

Region 18



Odessa, the county seat of Ector County, was founded in 1881 with the coming of the Texas & Pacific Railway. Legend says that the city got its name from the Russian railroad workers who were working on the line, because of the wide, flat prairies of the local terrain which reminded them of their native Odessa, Russia. This metropolitan area is located in the heart of the vast oil-rich area known as the Permian Basin, a magic oval created by the Permian Sea thousands of years ago. The Odessa Metropolitan Area is the home of the largest inland petrochemical complex in the nation. Its economy is based upon the oil and petrochemical industry.

Odessa College, a part of the Permian Junior College System, is located here and the new University of Texas of the Permian Basin which is scheduled to open in 1973 will be shared with the Midland Metropolitan Area. The Odessa Metropolitan Area is also rich in culture. It is the home of the only Shakespeare Festival in the Southwest, held annually during the summer months. Other noteworthy attractions include the Globe Theater, the Presidential Museum, and the Prairie Dog Park. Annual events here include: (1) the Shrine Circus (January), (2) the West Texas Relays (March), (3) the Rattlesnake Round-up (May), and, (4) the Ice Capades (September).

POPULATION

1970 Metro Area Population: 78,380

Change 1960-70: -2%

Race Composition ^{1/}White 93%^{1/}

Negro 6%

Other 1%

Age Composition (years):

13 or less 29%

14 - 20 14%

21 - 44 33%

45 - 64 19%

65 and over 5%

ECONOMY

Industry

Petrochemical Plants

Petroleum

^{1/} Includes persons of Mexican and/or Spanish descent.

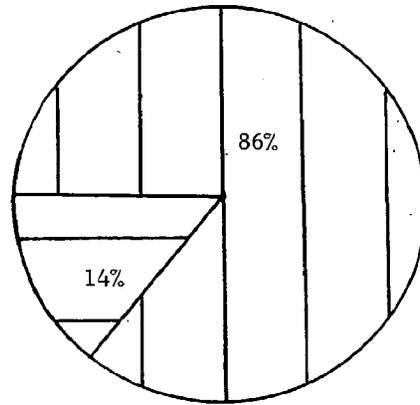
REGION 18 ODESSA

CITY SIZE: METRO

PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

REGION 18
ODESSA
METRO

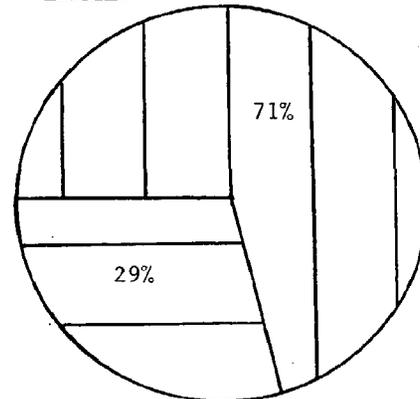


DEVELOPED LAND



UNDEVELOPED LAND

STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 18 ODESSA METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	191	1,307
Undeveloped Land	30	536
Total Land	221	1,843
Water Within or Adjacent	0	1,006
Total Land and Water	221	2,849

Odessa has a total of 221 acres of land set aside as park and recreation areas. No surface acres of water either within or adjacent to the parks were reported.

Of the total land acreage, 191 acres are developed with facilities, leaving 30 acres available for future development. With 86 percent of the land acreage currently developed, Odessa is well above the Statewide Metro average of 71 percent.

PARKS AND ACREAGE BY TYPE OF PARK

	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	3.000	13.000	3.000	4.000	23.000	72.000
Parks Per Thousand	.038	.167	.038	.051	.293	.267
People Per Park	26,127.000	6,029.000	26,127.000	19,595.000	3,408.000	3,754.000
.....						
Land Acres	125.000	87.000	5.000	4.000	221.000	1,843.000
Acres Per Thousand	1.603	1.115	.064	.051	2.820	6.864
People Per Acre	627.000	901.000	15,676.000	19,595.000	355.000	146.000

The 23 parks in Odessa are all under the administration of the county. Thirteen of these parks are Community Parks followed by four Open Land Parks. The District and Specialty Park categories have three parks each. More than one-half of the total acreage is in District Parks. The thirteen Community Parks average about seven acres each while the Specialty and Open Land Parks have a total of 5 and 4 acres, respectively. The dispersion of the four types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the population of Odessa, .293 parks per 1,000 and 2.820 acres per 1,000 population exist.

Another way to present this data is that 3,408 people share each park while 355 people must share each acre of park land.

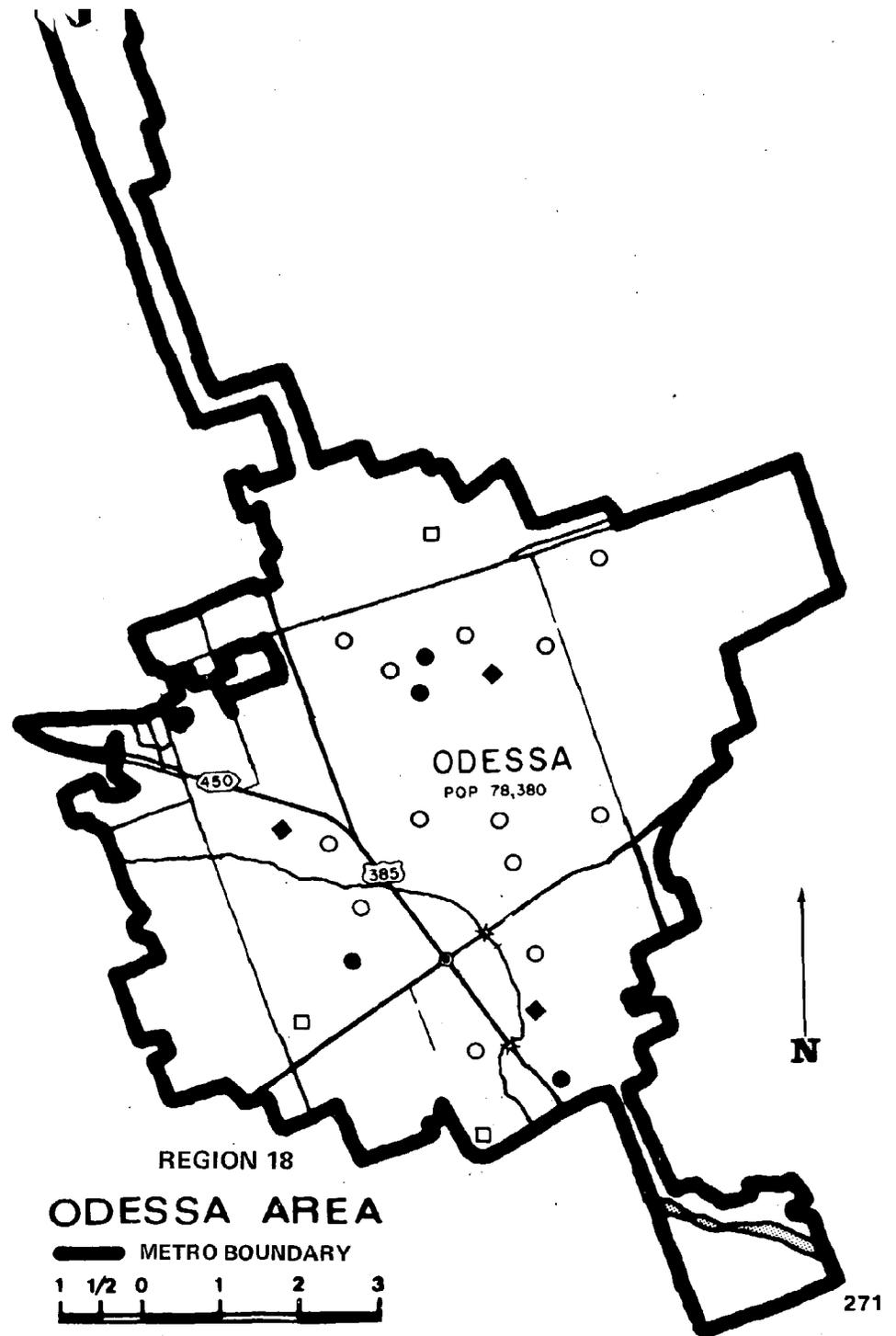
With .293 parks per 1,000, Odessa is just above the Statewide Metro average. However, the 2.820 acres per 1,000 gives Odessa a figure of less than half that of the Statewide Metro average for acres per 1,000.

DISPERSION OF PARKS BY TYPE

URBAN PARKS

- DISTRICT PARK
- COMMUNITY PARK
- ◆ SPECIALTY PARK
- OPEN-LAND PARK

Source: 1971 Municipal Inventory Update



PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 18 ODESSA METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	2	13	0	15	5,225	.192	.150
Tennis Courts.....	4	13	0	17	4,611	.218	.142
Basketball Courts.....	0	0	0	0	---	---	.071
Baseball/Softball Fields.....	6	12	0	18	4,354	.231	.186
Football/Soccer Fields.....	1	3	0	4	19,595	.051	.032
Picnicking:							
Parks.....	3	8	0	11	7,125	1.410	.124
Tables.....	167	31	0	198	396	2.538	1.230
Playground:							
Parks.....	3	13	2	18	4,354	.231	.170
Acres Developed.....	11	7	2	20	3,919	.256	.258
Swimming:							
Parks.....	3	1	0	4	19,595	.051	.050
Pools (Sq. Yd.).....	2,700	555	0	3,255	24	41.730	25.950
Designated Fresh Water (Sq. Yd.)...	0	0	0	0	---	---	52.242
Boating:							
Parks.....	0	0	0	0	---	---	.006
Ramp Lanes - Fresh Water.....	0	0	0	0	---	---	.008
Camping:							
Parks.....	0	1	0	1	78,380	.013	.002
Campsites.....	0	0	0	0	---	---	.121
Fishing:							
Parks.....	0	0	0	0	---	---	.013
Pier/Barge/Marina-Fresh Water (Yd.)	0	0	0	0	---	---	.049
Golfing:							
Courses.....	0	0	0	0	---	---	.005
Holes.....	0	0	0	0	---	---	.100
Trails:							
Parks.....	1	0	0	1	78,380	.013	.006
Nature (Mi.).....	0	0	0	0	---	---	.009
Horseback (Mi.).....	0	0	0	0	---	---	.003
Bicycle (Mi.).....	1.5	0	0	1.5	52,253	.019	.007
Hiking (Mi.).....	1.5	0	0	1.5	52,253	.019	.006
Total Trails (Mi.).....	1.5	0	0	1.5	52,253	.019	.021

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 18 ODESSA METRO	STATEWIDE AVERAGE METRO AREAS
Sport Shooting:							
Parks.....	0	0	0	0	---	---	.002
Traps.....	0	0	0	0	---	---	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	0	0	0	0	---	---	.011
Miscellaneous:							
Parks.....	1	3	1	5	15,676	.064	.038
Amphitheatre Seats.....	500	300	0	800	98	10.256	1.077
Botanical Gardens (Acres).....	0	0	0	0	---	---	.077
Zoos (Acres).....	0	0	0	0	---	---	.051
Community/Recreation Centers.....	1	3	1	5	15,676	.064	.038

Most of the park and recreation facilities in Odessa are in Community or District Parks. The three Specialty Parks have only a community/recreation center and two playgrounds. The District Park category contains trail facilities, while the Community Park category contains a park with camping permitted although no specific camping facilities were reported. A total of 800 amphitheatre seats were reported in Odessa.

Of the 23 parks, 18 have playgrounds, 15 have facilities for games and sports, 11 have picnicking facilities and 4 have swimming pools. The most common types of games and sports facilities are baseball/softball with 18 fields, tennis with 17 courts and football/soccer with 4 fields.

Looking at selected facilities in relation to the number of potential users we find the following:

52,253 persons for each mile of trails	4,354 persons for each baseball/softball field
19,595 persons for each football/soccer field	3,919 persons for each acre of playground
15,676 persons for each community/recreation center	396 persons for each picnic table
4,611 persons for each tennis court	24 persons for each square yard of swimming pool

Odessa is above the Statewide Metro average for facility units per 1,000 for tennis courts, baseball/softball fields, football/soccer fields, picnic tables, square yards of swimming pools, amphitheatre seats, and community/recreation centers. Odessa is below the average for playground acres and trail miles. No basketball courts, designated fresh water swimming area, boat ramp lanes, campsites, yards of fishing pier/barge/marina, golf holes, sport shooting facilities, acres of botanical gardens or zoo acreage were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

<u>ACTIVITY-FACILITY</u>	<u>ANNUAL DAYS AVAILABLE</u>	<u>DAYS PER THOUSAND POPULATION</u>	
		<u>REGION 18 ODESSA METRO</u>	<u>STATEWIDE AVERAGE METRO</u>
Swimming (Pools) - square yards	488,250	6,260	3,891
Child's Play - playground acres	552,460	7,083	7,137
Baseball/Softball - fields	248,472	3,186	2,577
Picnicking - tables	336,996	4,320	2,093
Football/Soccer - fields	28,896	370	235
Golf - holes	0	0	414
Tennis - courts, double	45,798	587	384
Basketball - courts, full	0	0	625
Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	0	0	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	0	0	103
Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	12,696	163	164

The Odessa Metro Area offers the most opportunity days for child's play, followed by swimming (in pools), picnicking, and baseball/softball. A comparison between the opportunity days per thousand population for the Odessa Metro Area and the Statewide Metro average shows that the Odessa Metro Area surpasses the statewide average for five of the activity types -- swimming (in pools), baseball/softball, picnicking, football/soccer, and tennis. The Odessa Metro Area is below the Statewide Metro average for child's play and the trails activities, with no opportunity days available for golf, basketball, surface acres for freshwater boating, boat fishing and skiing and freshwater boat ramps.

The sixteenth ranking metro area, based on population, Odessa ranked twenty-first in total participation for the year 1970. Estimates for 1970 indicate that residents and non-residents in the area spent over 1.7 million recreation days in pursuit of urban outdoor recreation opportunities available within the metro area.

Resident

For the 16 activities shown, total participation in urban outdoor recreation activities by the residents of the Odessa Metropolitan Area is expected to increase, as compared to the 1970 level of nearly 1.6 million days, by 32.3 percent to nearly 2.1 million days by 1975 and by 67.1 percent to 2.6 million days by 1980. Participation on a days per household basis is projected to increase from 86.7 days in 1970 to 122.9 days in 1975, and to 159.7 days in 1980-- increases of 41.8 and 84.3 percent, respectively, over the 1970 level. Residents of the Odessa Metropolitan Area are expected to participate at a rate of 37, 39, and 43 days per household below the statewide average for the other Texas metropolitan areas in 1970, 1975, and 1980, respectively. For the more distant years of 1990 and 2000, both total days of participation and days per household are expected to increase at substantial rates, but will remain below the statewide average for all metropolitan areas.

Projections for specific activities indicate that 14 of the 16 activities will increase in total days of participation through the years 1975 and 1980, the exceptions being football and tennis, which are declining. Participation on a days per household basis is expected to increase in 15 activities by 1980, while participation in football will decrease slightly. In 1970, the six most popular activities, based on total participation, were estimated to be: swimming, driving for pleasure, child's play, walking, bicycling, and golf, respectively. By 1975, the six most popular in order of preference, will be bicycling, walking, swimming, child's play, driving for pleasure, and golf. These six activities are expected to hold their respective rankings through 1980.

Non-Resident

Participation in urban outdoor recreation activities within the Odessa Metropolitan Area by non-residents was estimated to total 110,000 days for the activities specified for 1970. Compared to the 1970 level, total participation is expected to remain at this level through the year 2000.

Of the specific activities projected, the most popular activities by non-residents for 1970 were: sightseeing, with 32,000 days; driving for pleasure, with 25,000 days; football, with 21,000 days; child's play, with 14,000 days; and picnicking, with 9,000 days. Assuming adequate facilities are made available, all activities are expected to remain fairly constant through the year 2000 with no changes from 1970 expected in the order of popularity.

ACTIVITY	1970				1975				1980				1990				2000			
	PART. DAYS	RANK	REG. 18 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 18 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 18 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 18 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 18 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH
Swimming	326	1	17.98	27.41	335	3	19.81	36.52	357	3	21.72	47.17	410	3	26.30	75.28	458	3	31.15	110.14
Child's Play	234	3	12.91	14.08	249	4	14.72	17.72	274	4	16.67	22.00	332	4	21.30	32.20	391	4	26.59	43.99
Baseball/Softball	44	8	2.43	2.78	46	10	2.72	3.19	49	10	2.98	3.59	57	12	3.66	4.41	65	12	4.42	5.22
Picnicking	82	7	4.52	5.72	81	7	4.79	5.66	84	7	5.11	5.66	93	9	5.97	5.61	101	10	6.87	5.64
Football/Soccer	7	16	.39	1.43	6	16	.35	1.42	6	16	.37	1.41	6	16	.38	1.39	5	16	.34	1.38
Golf	87	6	4.80	3.92	90	6	5.32	4.98	98	6	5.95	6.16	113	7	7.25	8.96	127	8	8.64	12.07
Tennis	17	13	.94	6.06	16	14	.95	9.21	15	14	.91	11.49	15	15	.96	16.07	14	15	.95	21.46
Basketball	35	9	1.93	1.60	53	8	3.13	2.59	71	9	4.32	3.57	105	8	6.74	5.52	134	7	9.11	7.53
Walking	215	4	11.86	18.21	350	2	20.69	23.09	484	2	29.45	29.20	733	2	47.02	39.89	950	2	64.61	50.31
Bicycling	166	5	9.16	20.30	453	1	26.78	32.77	731	1	44.47	45.25	1,245	1	79.86	68.44	1,694	1	115.21	95.49
Nature Study	26	12	1.43	.72	51	9	3.02	1.67	75	8	4.56	2.64	120	6	7.70	4.63	159	6	10.81	6.70
Fishing	33	10	1.82	1.80	32	12	1.89	1.88	32	13	1.95	1.97	33	13	2.12	2.13	34	13	2.31	2.30
Boating	16	14	.88	.88	27	13	1.60	1.60	38	12	2.31	2.31	58	11	3.72	3.74	76	11	5.17	5.17
Skiing	8	15	.44	.42	10	15	.59	.62	13	15	.79	.82	19	14	1.22	1.22	24	14	1.63	1.81
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	27	11	1.49	2.25	33	11	1.95	2.34	42	11	2.56	2.50	69	10	4.43	2.70	108	9	7.35	3.01
Dr. for Pleas.	248	2	13.68	13.38	247	5	14.60	13.52	256	5	15.57	13.67	281	5	18.03	13.86	306	5	20.81	14.10
TOTAL	1,571		86.66	120.96	2,079		122.91	158.78	2,625		159.70	199.41	3,689		236.66	286.05	4,646		315.97	386.32

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000	ACTIVITY	1970	1975	1980	1990	2000
Swimming	3	3	3	3	4	Swimming	329	338	360	413	462
Child's Play	14	14	14	14	16	Child's Play	248	263	288	346	407
Baseball/Softball	1	1	1	1	1	Baseball/Softball	45	47	50	58	66
Picnicking	9	9	9	9	10	Picnicking	91	90	93	102	111
Football/Soccer	21	21	21	21	24	Football/Soccer	28	27	27	27	29
Golf	3	3	3	3	3	Golf	90	93	101	116	130
Tennis	*	*	*	*	*	Tennis	17	16	15	15	14
Basketball	*	*	*	*	*	Basketball	35	53	71	105	134
Walking	2	2	2	2	2	Walking	217	352	486	735	952
Bicycling	*	*	*	*	*	Bicycling	166	453	731	1,245	1,694
Nature Study	*	*	*	*	*	Nature Study	26	51	75	120	159
Fishing	*	*	*	*	*	Fishing	33	32	32	33	34
Boating	*	*	*	*	*	Boating	16	27	38	58	76
Skiing	*	*	*	*	*	Skiing	8	10	13	19	24
Surfing	---	---	---	---	---	Surfing	---	---	---	---	---
Sightseeing	32	32	32	32	36	Sightseeing	59	65	74	101	144
Dr. for Pleas.	25	25	25	25	28	Dr. for Pleas.	273	272	281	305	334
TOTAL	110	110	110	110	124	TOTAL	1,681	2,189	2,735	3,799	4,770

Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the Odessa Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with the current recreation opportunities^{2/} available in the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to subsections of the Odessa Metro characterized by residents having similar incomes and ethnic backgrounds. Particular attention was given to those subsections expected to undergo relatively rapid population growth and physical expansion in the future.

Conclusions reached from analyzing the distribution of recreation opportunities within the metropolitan area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist.

In the discussions that follow, results of the distribution analysis of parks within subsections of the Odessa Metro Area are presented. Then, estimates of current and future requirements for selected recreation facilities are presented, and are qualified by conclusions reached from the distribution analysis of recreation facilities within subsections of the Odessa Metro.

PARK DISTRIBUTION ANALYSIS

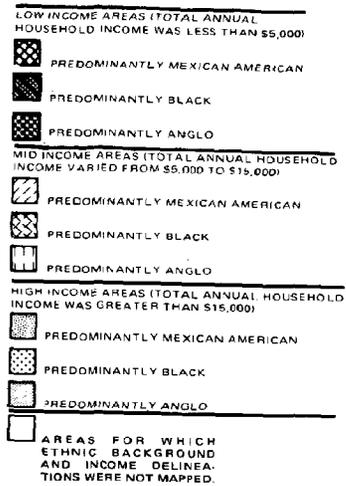
In analyzing the availability and distribution of parks in the Odessa Metro, several characteristics were considered: changes in population (or trends, in general, 1960 to 1970), areas of the metro which were expected to exhibit relatively major expansion, and the dispersion of existing parks among the income/ethnic subsections of the metro. From these interrelated characteristics general conclusions were reached with respect to future park developments for the metro area.

Population trends affected estimations of future recreation participation. Projections of population growth for Odessa indicate that the 1970 metro population of 78,380 will decline slightly for the next several decades. In 1971 planners indicated that the direction of major urban expansion was expected to be toward the northeast (as illustrated by the arrow on the map, titled "Predominant Ethnic Background and Income Subsections").

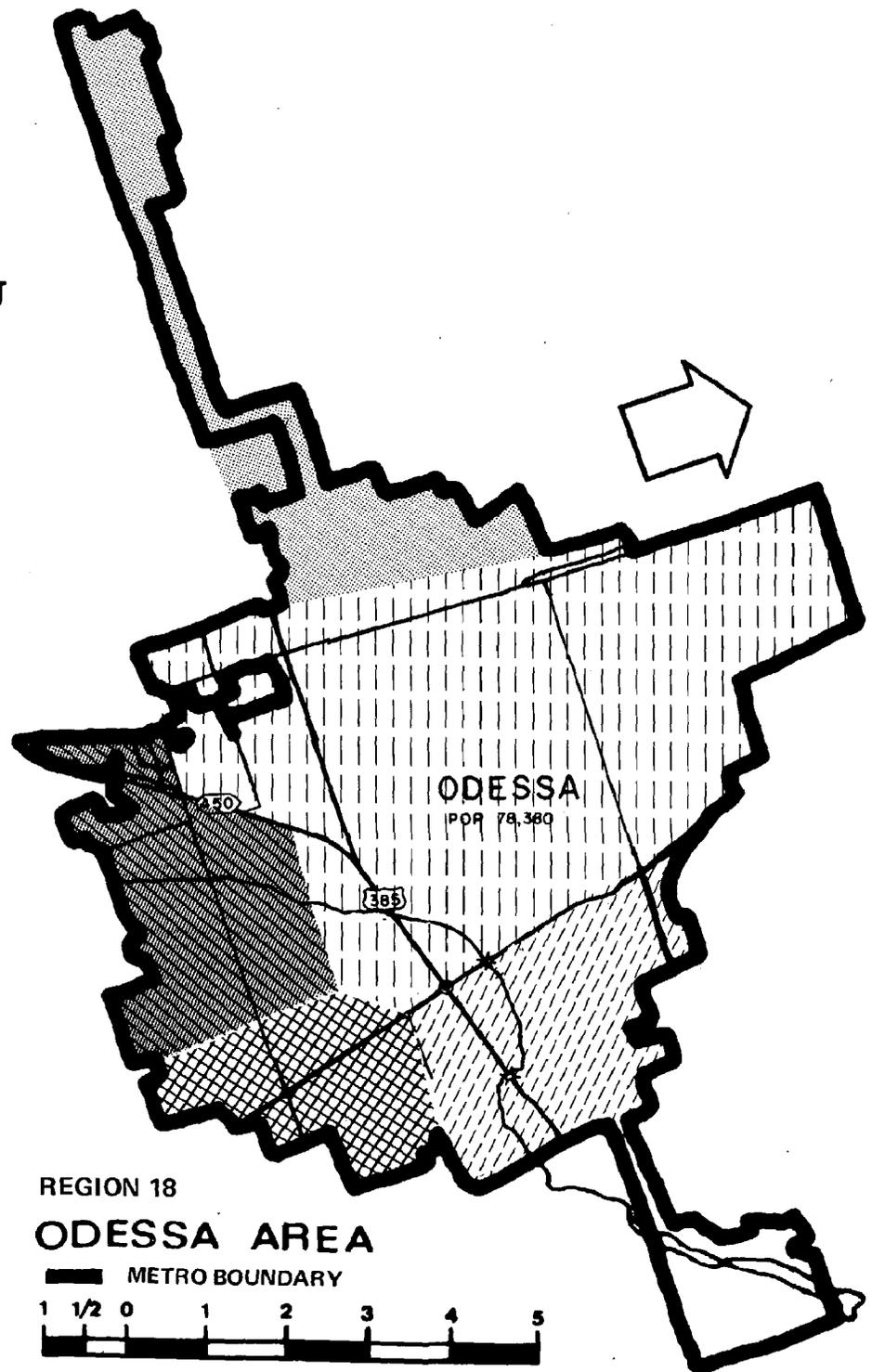
The "Predominant Ethnic Background and Income Subsections" map indicates that there were five income/ethnic subsections, as delineated by planners in 1971. The western one-third was composed of two low-income subsections: a Mexican-American area roughly one mile either side of the main east-west highway, and a Black neighborhood extending several miles south of Highway 450. Most of Odessa, however, was comprised of middle-income residents, with Mexican-

1/ "Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

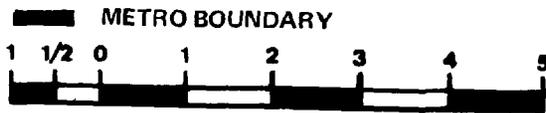
2/ "Current" recreation opportunities refers to computed figures derived from the numbers of publicly administered facilities by type available within the metro area in 1971.



PREDOMINANT ETHNIC BACKGROUND AND INCOME SUBSECTIONS



REGION 18
ODESSA AREA



Source: Metropolitan area recreation planners for the 1971 Urban Planners Survey

Note: Arrow indicates major areas of expected growth.

Americans located primarily south of the main east-west highway, and Anglos located north and northeast of it. The northern fringe of Odessa was composed predominantly of high-income Anglos.

Comparison of the "Dispersion of Parks by Type" map with the "Predominant Income and Ethnic Subsections" map indicates that parks in general appeared to be well dispersed in 1971. All five income/ethnic subsections had at least one public park. The only subsection which may not have had a wide variety of facilities was the low-income Black area in west central Odessa; the only park was a specialty park which, by definition, has facilities for no more than one major urban activity.

District parks were located in three of the subsections, but tended to be situated toward the fringe of the metro; an absence of district parks was evident in central Odessa. Community parks were confined to the two middle-income subsections, while specialty parks were dispersed through three subsections. There was an absence of open land parks in the high-income Anglo area in north Odessa, the low-income Black neighborhood in west central Odessa, and the low-income Mexican-American subsection in southwest Odessa. In the provision of additional parks, consideration should be given to a balanced distribution relative to the growth area and the various income/ethnic subsection.

In addition to maintaining an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities in parks is also an important consideration. An analysis of the current and future requirements for selected recreational facilities and the current dispersion of facilities in Odessa is presented in the following discussions.

FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. Then, an analysis of the dispersion of existing facilities among the predominant income/ethnic background subsections and the major growth areas of the metro was conducted. Conclusions reached from the facility dispersion analysis were then used to qualify the facility requirement estimates, particularly in those cases where no additional facilities were estimated as being needed within the metropolitan area. Usually, special note is made where growth areas appeared to have limited facilities. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the Urban Volume. In the discussions that follow, resource requirements for recreational facilities are generally referred to by units of the most important feature necessary to allow participation. For example, when a requirement is shown for swimming pools, features such as a bathhouse, cleaning and filtering system, and other support features are implied when a requirement for the major facility is shown.

Swimming

A total of 3,255 square yards of public swimming pools in 1971 provided approximately 488,000 opportunity days, on the basis of 150 days per year per square yard of pool. A comparison of opportunity days with the 1970 estimated demand

of 309,000 participation days indicates that the 1971 supply level was adequate at that time, and should continue to be adequate to the year 2000. The distribution of public swimming pools, however, was not altogether balanced in 1971. The low-income Black neighborhood in west central Odessa, and the large middle-income Anglo subsections in central Odessa had no public pools.

Child's Play

With a facility standard of 27,623 days per year per acre of developed playground, the 1971 supply level of twenty acres provided approximately 552,000 opportunity days, which should be adequate through the year 2000. The distribution of playgrounds seemed relatively balanced. All five income/ethnic subsections had at least some playground facilities.

Baseball/Softball

In 1971 there were eighteen baseball/softball fields which, when multiplied by a standard of 13,804 days per year per field, provided about 248,000 days of opportunity. When compared with estimates of demand, the 1971 opportunities level should be adequate through the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections, if additional facilities are provided.

Picnicking

The 198 public picnic tables enumerated in 1971 provided about 337,000 opportunity days, given a facility standard of 1,702 days per year per picnic table. Barring an unexpectedly rapid increase in demand, the 1971 supply level should be adequate through the year 2000. The only subsection which did not have public picnic facilities in 1971 was the low-income Black area in west central Odessa.

Football/Soccer

The Odessa Metropolitan Area reported four public football fields in 1971 which, when multiplied by a conversion standard of 7,224 days per year per field, provided approximately 29,000 days of opportunity. A comparison with estimated demand indicates that the number of participation days was slightly below the number of opportunity days in 1970, and should remain so to the year 2000. Therefore, no additional fields were required. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Golf

The Odessa Metro Area reported no public golf courses in 1971. In 1970, a requirement for twenty-two holes of golf

was calculated from the 90,000 participation days, given a conversion standard of 4,047 days per year per hole of golf. The cumulative resource requirement was calculated to increase from 22 holes in 1970, to 23 holes in 1975, to 25 holes in 1980, to 29 holes in 1990, to 32 holes by the year 2000. This requirement suggests the provision of not more than two eighteen-hole courses, or four nine-hole courses, or some other combination which considers local resources. The lack of public golf courses also suggests that consideration should be given to areas which will provide maximum access to potential users.

Tennis

There were seventeen public tennis courts in the Odessa Metro Area in 1971, and these courts provided a combined total of 46,000 opportunity days, given a facility standard of 2,694 days per year per tennis courts. The resource requirements table indicates that the seventeen courts should be adequate through the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Basketball

The Odessa Metro Area reported no public basketball courts in 1971. With a standard of 8,795 days per year per basketball court, a total of four courts would have been required in 1970 to obviate a deficit of 35,000 opportunity days. Assuming that the 1971 supply level has remained at zero, the cumulative requirement increases from 4 courts in 1970, to 6 courts in 1975, to 8 courts in 1980, to 12 courts in 1990, and to 15 courts by the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Trails Activities

One and one-half miles of trail were reported in 1971 (some of which was multiple use). When multiplied by a standard of 8,464 days per year per mile of trail, these one and one-half miles provided approximately 13,000 opportunity days. This compared to 35,000 participation days, and resulted in a resource requirement of three additional miles in 1970. On the assumption that the 1971 supply level has remained constant, the cumulative resource requirement will increase from 3 additional miles in 1970 to 6 miles in 1975, to 10 miles in 1980, to 16 miles in 1990, and to 22 miles by the year 2000.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly-administered park and recreation areas. It is likely, however, that as additional trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of additional resources required may be conservative in the long run and should be considered as minimum estimates. In addition to the expectations for increases in participation in trail and related activities at publicly-administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study

is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local neighborhoods, on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, Skiing

Surface Acres - Freshwater Lakes
(Boating, Boat Fishing, Skiing)

No surface acres of freshwater lakes were reported available for water-related recreation within the Odessa Metro Area in 1971. Using participation patterns of the households recreating within the urban areas, it was estimated that a total of 31,000 days of freshwater boating, boat fishing, and skiing participation would have occurred in 1970 if adequate freshwater lakes had been available. Of these 31,000 days, 16,000 were boating participation days, 7,000 were boat fishing days, and 8,000 were skiing days. Projections developed for the water-related activities indicate incremental resource requirements of 74 surface acres in 1970, 31 surface acres in 1975, 34 surface acres in 1980, 62 surface acres in 1990, and 56 surface acres in 2000. This brings the cumulative resource requirement to 257 additional surface acres by the year 2000.

Freshwater Boat Ramps^{1/}

No publicly-administered freshwater boat lanes were reported for the Odessa Metro Area in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using freshwater boat ramp facilities to gain access to the water if ramps were available, it was calculated that one boat ramp was needed in 1970. Projected increases in freshwater boat fishing, skiing, and boating participation are expected to require no additional freshwater boat ramps in 1975, one in 1980, none in 1990, and one in the year 2000, bringing the cumulative resource requirement to three ramps in 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, the provision of freshwater surface acres and freshwater boat ramps required should be planned as joint projects, even though, in some cases, this may require the construction of boat ramps prior to the years reflected in the boat ramp resource requirement projections.

^{1/} In calculating freshwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

Summary of Facilities Requirements

In 1971 the most obvious deficiencies were a complete lack of public golf courses, basketball courts, surface acres of freshwater, and freshwater boat ramps. Golf courses and basketball courts should, if practical, be located in areas which provide maximum access for potential users. With regard to water-oriented resources, it is sometimes difficult to provide recreational water bodies in far west Texas due to the low annual rainfall and high evaporation rates. The metro reported a surplus of opportunity days for all other activity facilities except miles of trail, which were estimated to be required in each planning horizon year.

A dispersion analysis was possible only for a few types of facilities. There was a lack of public outdoor swimming facilities in the low-income Black area in west central Odessa, as well as in the large middle-income Anglo subsection in central Odessa. Also, the low-income Black area lacked picnicking facilities. Playgrounds apparently were well dispersed through the metro. In the provision of additional public facilities for all types of outdoor activities, consideration should be given to a balanced distribution relative to growth areas and the various income/ethnic subsections.

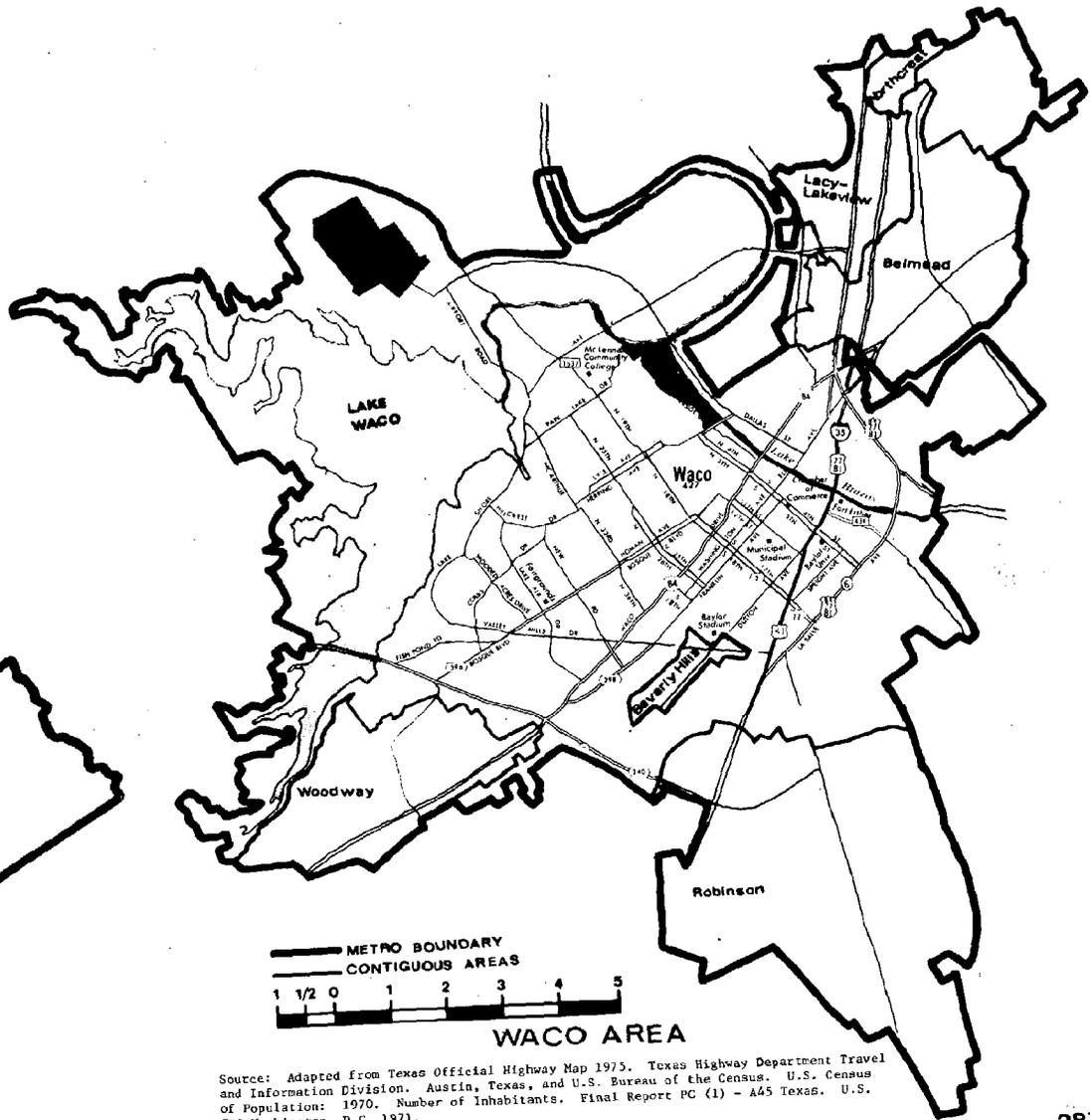
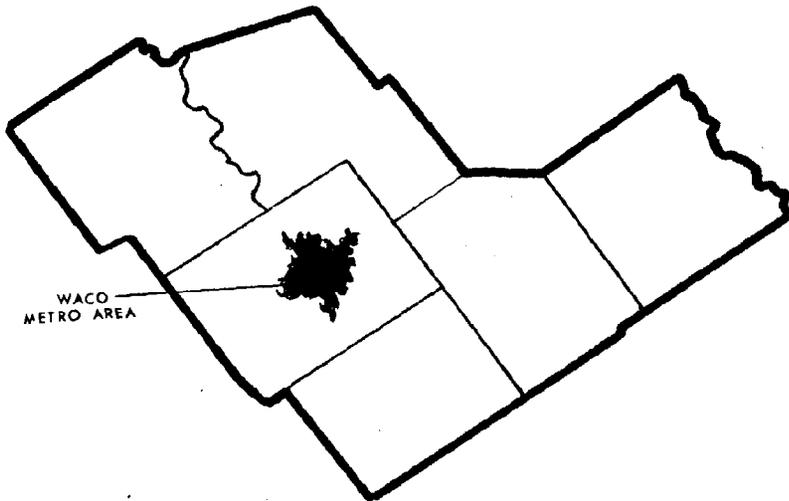
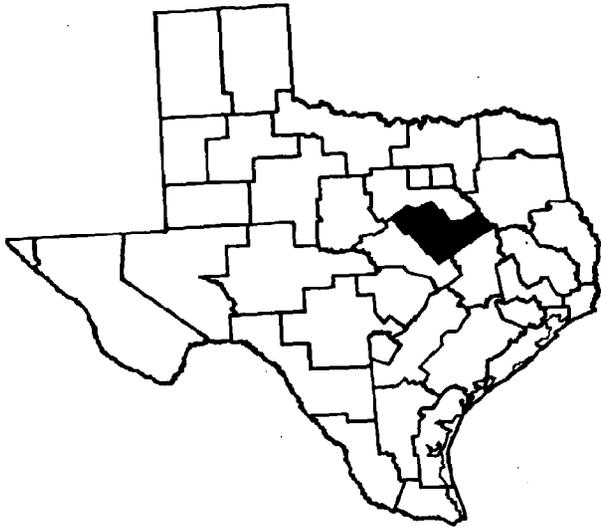
YEAR	ACTIVITY	TOTAL	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		PARTICIPATION (000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE RESOURCES REQUIRED	INCREMENTAL
	Swimming (Pools)	309 ^{1/}	488		179	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	248	552		304	0 acres	0 acres
	Baseball/Softball	45	248		203	0 fields	0 fields
	Picnicking	91	337		246	0 tables	0 tables
	Football/Soccer	28	29		1	0 fields	0 fields
	Golf	90	0	90		22 holes	22 holes
	Tennis	17	46		29	0 courts, dbl.	0 courts, dbl.
	Basketball	35	0	35		4 courts, full	4 courts, full
1970	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	31	0	31		74 surface acres	74 surface acres
	Boating, Boat Fishing, Skiing FW . . .	24	0	24		1 ramp ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	23 ^{4/}				2 miles	2 miles
	Bicycling	7 ^{4/}				1 mile	1 mile
	Nature Study	5 ^{4/}				<1 mile	<1 mile
	Combined Walking, Bicycling, Nature Study	35 ^{4/}	13	22		3 miles	3 miles
<hr/>							
	<u>ACTIVITY</u>						
	Swimming (Pools)	318 ^{1/}	488		170	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	263	552		289	0 acres	0 acres
	Baseball/Softball	47	248		201	0 fields	0 fields
	Picnicking	90	337		247	0 tables	0 tables
	Football/Soccer	27	29		2	0 fields	0 fields
	Golf	93	0	93		23 holes	1 hole
	Tennis	16	46		30	0 courts, dbl.	0 courts, dbl.
	Basketball	53	0	53		6 courts, full	2 courts, full
1975	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	44	0	44		105 surface acres	31 surface acres
	Boating, Boat Fishing, Skiing FW . . .	32	0	32		1 ramp ^{3/}	0 ramps ^{3/}
	Trails Activities:						
	Walking	37 ^{4/}				3 miles	1 mile
	Bicycling	18 ^{4/}				2 miles	1 mile
	Nature Study	10 ^{4/}				1 mile	1 mile
	Combined Walking, Bicycling, Nature Study	65 ^{4/}	13	52		6 miles	3 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION RESOURCES REQUIRED	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE
	Swimming (Pools)	338 ^{1/}	488	150		0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	288	552	264		0 acres	0 acres
	Baseball/Softball	50	248	198		0 fields	0 fields
	Picnicking	93	337	244		0 tables	0 tables
	Football/Soccer	27	29	2		0 fields	0 fields
	Golf	101	0	101		25 holes	2 holes
	Tennis	15	46	31		0 courts, dbl.	0 courts, dbl.
	Basketball	71	0	71		8 courts, full	2 courts, full
1980	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	58	0	58		139 surface acres	34 surface acres
	Boating, Boat Fishing, Skiing FW . . .	42	0	42		2 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	51 ^{4/}				5 miles	2 miles
	Bicycling	29 ^{4/}				3 miles	1 mile
	Nature Study	15 ^{4/}				2 miles	1 mile
	Combined Walking, Bicycling, Nature Study	95 ^{4/}	13	82		10 miles	4 miles
<hr/>							
	<u>ACTIVITY</u>						
	Swimming (Pools)	388 ^{1/}	488	100		0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	346	552	206		0 acres	0 acres
	Baseball/Softball	58	248	190		0 fields	0 fields
	Picnicking	102	337	235		0 tables	0 tables
	Football/Soccer	27	29	2		0 fields	0 fields
	Golf	116	0	116		29 holes	4 holes
	Tennis	15	46	31		0 courts, dbl.	0 courts, dbl.
	Basketball	105	0	105		12 courts, full	4 courts, full
1990	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	84	0	84		201 surface acres	62 surface acres
	Boating, Boat Fishing, Skiing FW . . .	60	0	60		2 ramps ^{3/}	0 ramps ^{3/}
	Trails Activities:						
	Walking	77 ^{4/}				8 miles	3 miles
	Bicycling	50 ^{4/}				5 miles	2 miles
	Nature Study	24 ^{4/}				3 miles	1 mile
	Combined Walking, Bicycling, Nature Study	151 ^{4/}	13	138		16 miles	6 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE
	Swimming (Pools)	434 ^{1/}	488		54	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	407	552		145	0 acres	0 acres
	Baseball/Softball	65	248		182	0 fields	0 fields
	Picnicking	111	337		226	0 tables	0 tables
	Football/Soccer	29	29	0	0	0 fields	0 fields
	Golf	130	0	130		32 holes	3 holes
	Tennis	14	46		32	0 courts, dbl.	0 courts, dbl.
	Basketball	134	0	134		15 courts, full	3 courts, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	107	0	107		257 surface acres	56 surface acres
	Boating, Boat Fishing, Skiing FW . . .	75	0	75		3 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	100 ^{4/}				11 miles	3 miles
	Bicycling	68 ^{4/}				7 miles	2 miles
	Nature Study	32 ^{4/}				4 miles	1 mile
	Combined Walking, Bicycling, Nature Study	200 ^{4/}	13	187		22 miles	6 miles

^{1/} Includes only swimming participation occurring in swimming pools, 94 percent of the total in urban areas.
^{2/} Designated freshwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.
^{3/} Assumes 2.0 lanes per ramp.
^{4/} Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

Region 20



Source: Adapted from Texas Official Highway Map 1975. Texas Highway Department Travel and Information Division. Austin, Texas, and U.S. Bureau of the Census. U.S. Census of Population: 1970. Number of Inhabitants. Final Report PC (1) - A45 Texas. U.S. GPO Washington, D.C. 1971.

The Waco Metropolitan Area consists of the city of Waco and the towns of Bellmead, Beverly Hills, Lacy-Lakeview, Northcrest, Robinson, and Woodway. Nestled in a gentle curve of the Brazos River, Waco is the county seat of McLennan County. It was originally occupied by a village of Waco Indians. The first white men to inhabit the site were Texas Rangers, who established a post known as Fort Fisher for the purpose of guarding the western line of Texas settlements from Comanches and other Indians. Today, this bustling, prosperous metropolitan area has over 180 manufacturing firms and is a major distribution and processing center for the many agricultural products that are raised in the region.

With four hospitals, the Waco Metropolitan Area is one of the leading medical centers in the Southwest. Located here is Baylor University, Baylor University School of Nursing, Paul Quinn College, Texas State Technical Institute, and McLennan Community College. Also located in this metropolitan area is the Homer Garrison Memorial Texas Ranger Museum, which is a replica of Fort Fisher, and two classic Southern homes which have been restored: Fort House and East Terrace. Major annual events include the Brazos River Festival and Pilgrimage (April), Cotton Palace Pageant (April), and the Heart O' Texas Fair (October).

POPULATION

1970 Metro Area Population: 118,166

Change 1960-70: +6%

Race Composition

White 79%^{1/}
 Negro 20%
 Other5%

Age Composition (years):

13 or less 23%
 14 - 20 15%
 21 - 44 27%
 45 - 64 22%
 65 and over 13%

ECONOMY

Aerospace
 Apparel
 Foods
 Rubber Products

^{1/} Includes persons of Mexican and/or Spanish descent.

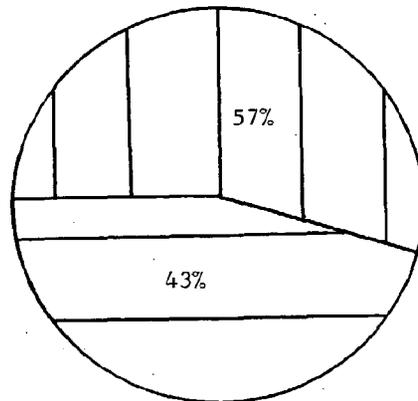
REGION 20

CITY SIZE: METRO

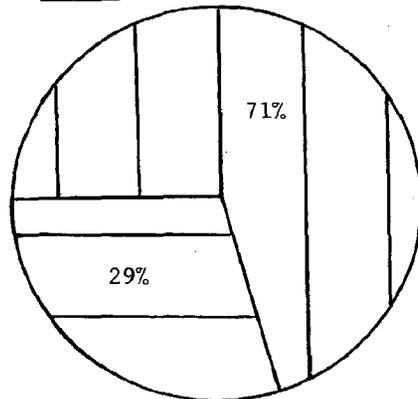
PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

REGION
20
METRO



STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 20 METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	1,145	1,307
Undeveloped Land	854	536
Total Land	1,999	1,843
Water Within or Adjacent	7,347	1,006
Total Land and Water	9,346	2,849

The Waco Metro Area has a total of 1,999 acres of land set aside as park and recreation areas. In addition, 7,347 surface acres of water either within or adjacent to these parks were reported.

Of the total land acreage, 1,145 acres are developed with facilities, leaving 854 acres available for future development. With only 57 percent of the land acreage currently developed, the Waco Area is well below the Statewide Metro average of 71 percent.

PARKS AND ACREAGE BY TYPE OF PARK

	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	3.000	23.000	9.000	9.000	44.000	72.000
Parks Per Thousand	.025	.195	.076	.076	.372	.267
People Per Park	39,389.000	5,138.000	13,130.000	13,130.000	2,686.000	3,754.000
.....						
Land Acres	728.000	414.000	32.000	825.000	1,999.000	1,843.000
Acres Per Thousand	6.161	3.504	.271	6.982	16.917	6.864
People Per Acre	162.000	285.000	3,693.000	143.000	59.000	146.000

More than one-half of the 44 parks in the Waco Metro Area are Community Parks. Nine Specialty Parks were reported along with 9 Open Land Parks and 3 District Parks. Most of the land acreage is in Open Land and District Parks with 825 acres and 728 acres respectively. The 23 Community Parks average about 18 acres each, while the nine Specialty Parks have a total of 32 acres. The dispersion of the four types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the total population of the metro area, .372 parks per 1,000 and 16.917 acres per 1,000 population exist.

Another way to present this data is that 2,686 people share each park while only 59 people share each acre of park land.

With .372 parks per 1,000, the Waco Metro Area ranks well above the Statewide Metro average. The 16.917 acres per 1,000 also gives the area a figure almost three times that of the Statewide Metro average for acres per 1,000.

DISPERSION OF PARKS BY TYPE

URBAN PARKS

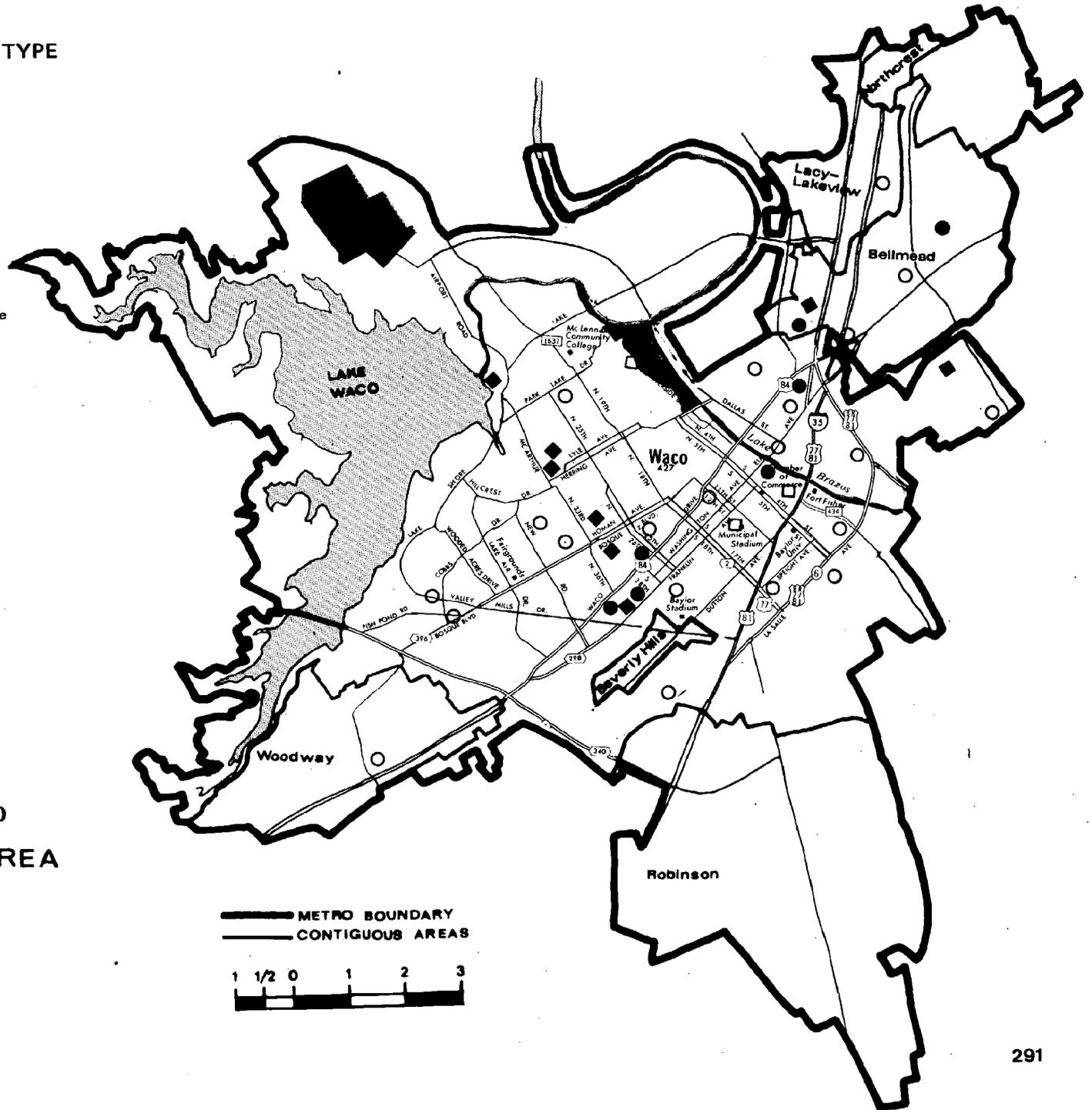
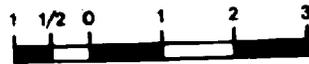
- DISTRICT PARK
- COMMUNITY PARK
- ◆ SPECIALTY PARK
- OPEN-LAND PARK

Source: ,1971 Municipal Inventory Update



REGION 20
WACO AREA

— METRO BOUNDARY
— CONTIGUOUS AREAS



PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 20 METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	3	20	3	26	4,544	.220	.150
Tennis Courts.....	3	34	0	37	3,193	.313	.142
Basketball Courts.....	0	12	0	12	9,847	.101	.071
Baseball/Softball Fields.....	6	22	3	31	3,811	.262	.186
Football/Soccer Fields.....	0	1	0	1	118,166	.008	.032
Picnicking:							
Parks.....	2	18	1	21	5,627	.177	.124
Tables.....	210	57	1	268	440	2.271	1.230
Playground:							
Parks.....	2	15	3	20	5,908	.169	.170
Acres Developed.....	10	26	4	40	2,954	.338	.258
Swimming:							
Parks.....	3	3	0	6	19,694	.050	.050
Pools (Sq. Yd.).....	3,105	2,092	0	5,197	23	44.042	25.950
Designated Fresh Water (Sq. Yd.)...	0	0	0	0	---	---	52.242
Boating:							
Parks.....	1	0	0	1	118,166	.008	.006
Ramp Lanes - Fresh Water.....	0	0	0	0	---	---	.008
Camping:							
Parks.....	2	0	0	2	59,083	.016	.002
Campsites.....	2	0	0	2	59,083	.016	.121
Fishing:							
Parks.....	2	0	0	2	59,083	.016	.013
Pier/Barge/Marina-Fresh Water (Yd.)	0	0	0	0	---	---	.049
Golfing:							
Courses.....	0	0	0	0	---	---	.005
Holes.....	0	0	0	0	---	---	.100
Trails:							
Parks.....	1	0	1	2	59,083	.016	.006
Nature (Mi.).....	1	0	0	1	118,166	.008	.009
Horseback (Mi.).....	6	0	0	6	19,694	.050	.003
Bicycle (Mi.).....	0	0	1	1	118,166	.008	.007
Hiking (Mi.).....	0	0	0	0	---	---	.006
Total Trails (Mi.).....	7	0	1	8	14,770	.067	.021

PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 20 METRO	STATEWIDE AVERAGE METRO AREAS
Sport Shooting:							
Parks.....	1	0	0	1	118,166	.008	.002
Traps.....	0	0	0	0	---	---	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	10	0	0	10	11,816	.084	.011
Miscellaneous:							
Parks.....	2	1	1	4	29,541	.033	.038
Amphitheatre Seats.....	0	0	0	0	---	---	1.077
Botanical Gardens (Acres).....	0	0	2	2	59,083	.016	.077
Zoos (Acres).....	0	0	0	0	---	---	.051
Community/Recreation Centers.....	2	1	0	3	39,388	.025	.038

Most of the park and recreation facilities in the Waco Metro Area are in Community or District Parks. The nine Specialty Parks have facilities only for games and sports (3 baseball/softball fields), picnicking, a bicycle trail, botanical gardens and three playgrounds. The District Park category has a park with water surface available for boating and two parks with fishing waters available, however, no specific boating or fishing facilities were reported. Also in the District Park category are the only facilities for camping and sport shooting. A total of eight miles of trails were reported.

Of the 44 parks, 26 have games and sports facilities, 21 have picnicking facilities, 20 have playgrounds, and 6 have swimming facilities. The most common types of games and sports facilities are tennis with 37 courts, followed by baseball/softball with 31 fields, basketball with 12 courts (all of these courts in Community Parks) and football/soccer with one field.

Looking at selected facilities in relation to the number of potential users we find the following:

118,166 persons for each football/soccer field	3,811 persons for each baseball/softball field
59,083 persons for each campsite	3,193 persons for each tennis court
39,388 persons for each community/recreation center	2,954 persons for each acre of playground
14,770 persons for each mile of trails	440 persons for each picnic table
9,847 persons for each basketball court	23 persons for each square yard of swimming pool

The Waco Metro Area is above the Statewide Metro average for facility units per 1,000 for tennis courts, basketball courts, baseball/softball fields, picnic tables, playground acres, square yards of swimming pools, trail miles and archery targets. The Area is below the average for football/soccer fields, campsites, acres of botanical gardens and community/recreation centers. No designated fresh water swimming area, boat ramp lanes, yards of fishing pier/barge/marina, golf holes, shooting traps, shooting targets, amphitheatre seats or zoo acreage were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

ACTIVITY-FACILITY	ANNUAL DAYS AVAILABLE	DAYS PER THOUSAND POPULATION	
		REGION 20 METRO	STATEWIDE AVERAGE METRO
Swimming (Pools) - square yards	779,550	6,606	3,891
Child's Play - playground acres	1,104,920	9,364	7,137
Baseball/Softball - fields	427,924	3,626	2,577
Picnicking - tables	456,136	3,866	2,093
Football/Soccer - fields	7,224	61	235
Golf - holes	0	0	414
Tennis - courts, double	99,678	845	384
Basketball - courts, full	105,540	894	625
Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	3,064,822	25,973	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	0	0	103
Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	16,928	143	164

The Waco Metro Area offers the most opportunity days for surface acres for freshwater boating, boat fishing and skiing, followed by child's play, swimming (in pools), and picnicking. A comparison between the opportunity days per thousand population for the Waco Metro Area and the Statewide Metro average shows that the Waco Metro Area surpasses the statewide average for seven types of facilities-- swimming pools, children's playgrounds (in acres), baseball/softball fields, picnic tables, tennis courts, basketball courts, and surface acres for freshwater boating, boat fishing and skiing. The Waco Metro Area is below the Statewide Metro average for football/soccer and the trails activities, with no opportunity days available for golf and freshwater boat ramps.

The twelfth ranking metro area, based on population, Waco ranked sixteenth in total participation for the year 1970. Estimates for 1970 indicate that residents and non-residents in the area spent over 2.5 million recreation days in pursuit of urban outdoor recreation opportunities available within the metro area.

Resident

Total days of participation in urban outdoor recreation activities by the residents of the Waco Metropolitan Area were estimated to be 2.3 million days in 1970. Total participation is expected to increase to 3.1 million days in 1975 and to 3.9 million days in 1980. Projections for the years 1975 and 1980 represent increases of 37.3 and 74.1 percent, respectively, over the 1970 participation level. Participation on a days per household basis will increase from 43.0 days in 1970 to 60.4 days in 1975, and to 78.4 days in 1980--increases of 40.3 and 82.1 percent over the 1970 level. Residents of the Waco Metropolitan Area are expected to participate at a rate of 81, 101, and 124 days per household below the statewide average for the other Texas metropolitan areas in 1970, 1975, and 1980, respectively. For the more distant years of 1990 and 2000, participation is expected to continue increasing, but will remain below the statewide average for all other metropolitan areas.

With respect to total days of participation, 14 of the 16 activities listed are projected to increase through the year 2000, while the activities of football and fishing are expected to decrease during that time period. When considering participation on a days per household basis, all 16 of the activities are expected to increase in participation. In 1970 the activities of swimming, driving for pleasure, walking, child's play, bicycling, and golf ranked one through six, respectively, in popularity. The expected order of popularity in 1975 deviates little from the 1970 rankings as the only anticipated change is the exchange in rankings between driving for pleasure and bicycling. By 1980, swimming is projected to be the first ranked activity, bicycling number two and walking in third place. Child's play, driving for pleasure, and basketball are expected to become the fourth, fifth, and sixth ranked activities.

Non-Resident

For the urban outdoor recreation activities specified for 1970, participation within the Waco Metropolitan Area by non-residents was estimated to total 266,000 days. Compared to the 1970 level, total participation is expected to decrease 3.0 percent (to 258,000 days) by 1975 and 7.5 percent (to 246,000 days) by 1980. Similar decreases are anticipated for the years 1990 and 2000.

In terms of days of participation for 1970, the most popular non-resident activities, of the specific activities projected, were: sightseeing, with 154,000 days; picnicking, with 38,000 days; football, with 22,000 days; child's play with 14,000 days; fishing, with 13,000 days; and driving for pleasure, with 9,000 days. Assuming adequate facilities are made available, a moderate decrease in participation for all activities is expected through the year 2000. The same six popular activities of 1970 are expected to retain their rankings through the year 2000.

ACTIVITY	1970				1975				1980				1990				2000			
	PART. DAYS	RANK	REG. 20 AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 20 AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 20 AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 20 AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 20 AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH
Swimming	493	1	9.46	27.41	633	1	12.41	36.52	780	1	15.65	47.17	1,055	2	24.30	75.28	1,399	2	35.27	110.14
Child's Play	275	4	5.27	14.08	360	4	7.06	17.72	449	4	9.01	22.00	604	4	13.91	32.20	794	4	20.02	43.99
Baseball/Softball	36	12	.69	2.78	44	12	.86	3.19	53	12	1.06	3.59	64	11	1.47	4.41	77	10	1.94	5.22
Picnicking	52	10	1.00	5.72	56	11	1.10	5.66	60	11	1.20	5.66	63	12	1.45	5.61	68	12	1.71	5.64
Football/Soccer	19	14	.36	1.43	19	14	.37	1.42	19	14	.38	1.41	17	14	.39	1.39	16	14	.40	1.38
Golf	119	6	2.28	3.92	154	6	3.02	4.98	190	7	3.81	6.16	248	7	5.71	8.96	313	7	7.89	12.07
Tennis	90	8	1.73	6.06	89	9	1.74	9.21	90	10	1.81	11.49	81	10	1.87	16.07	76	11	1.92	21.46
Basketball	80	9	1.53	1.60	143	7	2.80	2.59	203	6	4.07	3.57	287	6	6.61	5.52	363	5	9.15	7.53
Walking	293	3	5.62	18.21	479	3	9.39	23.09	655	3	13.14	29.20	898	3	20.68	39.89	1,119	3	28.21	50.31
Bicycling	274	5	5.26	20.30	528	2	10.35	32.77	769	2	15.43	45.25	1,111	1	25.59	68.44	1,419	1	35.77	95.49
Nature Study	1	16	.02	.72	2	16	.04	1.67	3	16	.05	2.64	4	16	.09	4.63	5	16	.13	6.70
Fishing	94	7	1.80	1.80	96	8	1.88	1.88	98	9	1.97	1.97	93	9	2.14	2.13	91	9	2.29	2.30
Boating	46	11	.88	.88	81	10	1.59	1.60	115	8	2.31	2.31	162	8	3.73	3.74	205	8	5.17	5.17
Skating	22	13	.42	.42	32	13	.63	.62	41	13	.82	.82	53	13	1.22	1.22	64	13	1.61	1.81
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	3	15	.06	2.25	4	15	.08	2.34	5	15	.10	2.50	8	15	.18	2.70	12	15	.30	3.01
Dr. for Pleas.	346	2	6.64	13.38	360	4	7.06	13.52	376	5	7.54	13.67	362	5	8.34	13.86	362	6	9.13	14.10
TOTAL	2,243		43.02	120.96	3,080		60.38	158.78	3,906		78.36	199.41	5,110		117.68	286.05	6,383		160.91	386.32

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000	ACTIVITY	1970	1975	1980	1990	2000
Swimming	8	7	7	6	5	Swimming	501	640	787	1,061	1,404
Child's Play	14	13	13	11	10	Child's Play	289	373	462	615	804
Baseball/Softball	2	2	2	2	2	Baseball/Softball	38	46	55	66	79
Picnicking	38	37	36	30	27	Picnicking	90	93	96	93	95
Football/Soccer	22	21	20	17	15	Football/Soccer	41	40	39	34	31
Golf	1	1	1	1	1	Golf	120	155	191	249	314
Tennis	*	*	*	*	*	Tennis	90	89	90	81	76
Basketball	1	1	1	*	*	Basketball	81	144	204	287	363
Walking	1	1	1	1	1	Walking	294	490	656	899	1,120
Bicycling	*	*	*	*	*	Bicycling	274	528	769	1,111	1,419
Nature Study	*	*	*	*	*	Nature Study	1	2	3	4	5
Fishing	13	13	12	10	9	Fishing	107	109	110	103	100
Boating	2	2	1	1	1	Boating	48	83	116	163	206
Skating	1	1	1	*	*	Skating	23	33	42	53	64
Surfing	---	---	---	---	---	Surfing	---	---	---	---	---
Sightseeing	154	150	143	121	108	Sightseeing	157	154	148	129	120
Dr. for Pleas.	9	9	8	7	6	Dr. for Pleas.	355	369	384	369	368
TOTAL	266	258	246	207	185	TOTAL	2,509	3,338	4,152	5,317	6,568

Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the Waco Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with the current recreation opportunities^{2/} available in the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to subsections of the Waco Metro characterized by residents having similar incomes and ethnic backgrounds. Particular attention was given to those subsections expected to undergo relatively rapid population growth and physical expansion in the future.

Conclusions reached from analyzing the distribution of recreation opportunities within the metropolitan area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist.

In the discussions that follow, results of the distribution analysis of parks within subsections of the Waco Metro Area are presented. Then, estimates of current and future requirements for selected recreation facilities are presented, and are qualified by conclusions reached from the distribution analysis of recreation facilities within subsections of the metro.

PARK DISTRIBUTION ANALYSIS

In analyzing the availability and distribution of parks in the Waco Metro Area, several characteristics were considered: changes in population (or trends, in general, 1960 to 1970), areas of the metro which were expected to exhibit relatively major expansion, and the dispersion of existing parks among the income/ethnic subsections of the metro. From these interrelated characteristics, general conclusions were reached with respect to future park developments for the metro area.

Population trends affected estimations of future recreation participation. Projections for Waco indicate that the 1970 metro population of 118,116 will remain relatively stable through the year 2000. In 1971, metro planners indicated that the area around Lakeview and Bellmead in the northeastern part of the metro, and southwest Waco (in the vicinity of Lake Waco and the contiguous urban area of Woodway), were two areas which could anticipate major urban expansion. These trends are presented graphically on the map, titled "Predominant Ethnic Background and Income Subsections."

This same map shows eleven major income/ethnic subsections, as delineated by metro planners in 1971. Generally, low-income residents were located in the eastern half of the metro. East of Beverly Drive and through all of Robinson was an area of low-income Mexican-Americans. From Beverly Drive west to Waco Drive, much of the population was low-income Black. Low-income Anglos tended to be concentrated in that part of Waco north of the Brazos River, in southwest

^{1/} "Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

^{2/} "Current" recreation opportunities refers to computed figures derived from the numbers of publicly-administered facilities by type available within the metro area in 1971.

PREDOMINANT ETHNIC BACKGROUND AND INCOME SUBSECTIONS

LOW INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS LESS THAN \$5,000)

-  PREDOMINANTLY MEXICAN-AMERICAN
-  PREDOMINANTLY BLACK
-  PREDOMINANTLY ANGLO

MID INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME VARIED FROM \$5,000 TO \$15,000)

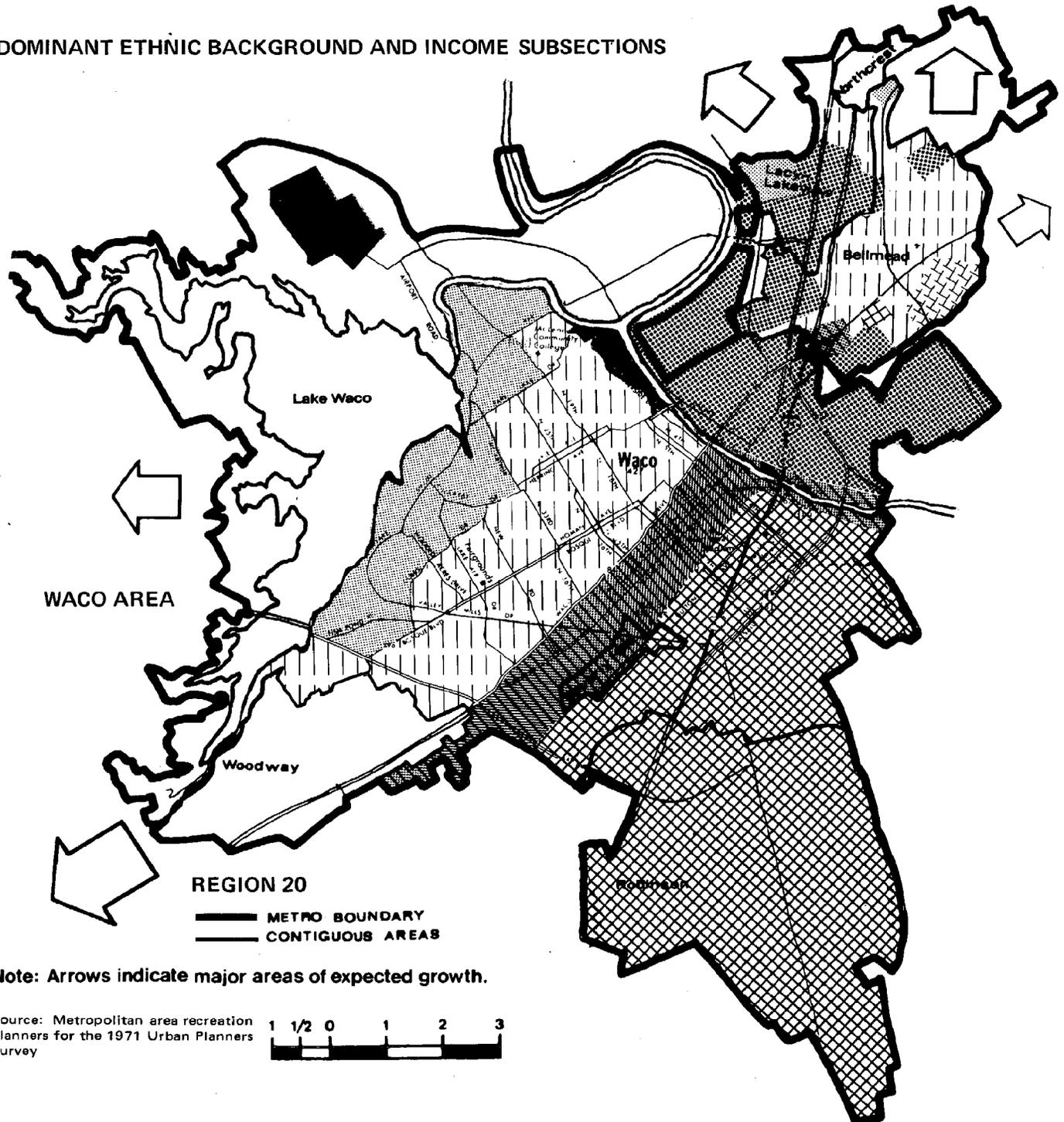
-  PREDOMINANTLY MEXICAN-AMERICAN
-  PREDOMINANTLY BLACK
-  PREDOMINANTLY ANGLO

HIGH INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS GREATER THAN \$15,000)

-  PREDOMINANTLY MEXICAN-AMERICAN
-  PREDOMINANTLY BLACK
-  PREDOMINANTLY ANGLO

 AREAS FOR WHICH ETHNIC BACKGROUND AND INCOME DELINEATIONS WERE NOT MAPPED.

NOTE: SOCIO-ECONOMIC DATA WERE NOT AVAILABLE FOR WOODWAY.



Note: Arrows indicate major areas of expected growth.

Source: Metropolitan area recreation planners for the 1971 Urban Planners Survey



Bellmead, and in most of Lacy-Lakeview.

There were two major areas of middle-income households: central Waco (west of Waco Drive) was comprised of predominantly middle-income Anglos, and Bellmead was comprised of middle-income Anglos and Mexican-Americans. High-income Anglos tended to be concentrated in the western part of Waco (east of Lake Waco). There was also a small high-income Anglo neighborhood in Lacy-Lakeview.

The "Dispersion of Parks by Type" map shows the geographic distribution of parks in the metro, as of 1971. Compared with the "Predominant Ethnic Background and Income Subsections" map, parks in general seemed reasonably well dispersed; however, several of the very small income/ethnic subsections lacked parks of any kind. Three low-income subsections (one Anglo, one Black, and one Mexican-American) in Bellmead had no parks. Also, the middle-income Mexican-American subsection in Bellmead, and the high income Anglo area in Lacy-Lakeview lacked parks. The contiguous urban area of Woodway reported only one park, and Beverly Hills (predominantly low-income Black) had no parks at all. It should be noted also that the high-income Anglo area in west Waco had only two parks.

District parks were absent in that part of the metro north of the Brazos River, and in Waco southwest of 18th Street. Community and specialty parks were reasonably well distributed, but there were no open land parks at all in the large low-income Mexican-American subsection in East Waco, or in the high-income Anglo area of west Waco. Open land parks are important in maintaining a balanced and aesthetically pleasing urban environment.

In addition to maintaining an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities in parks is also an important consideration. An analysis of the current and future requirements for selected recreational facilities and the current dispersion of facilities in the Waco Metro Area is presented in the following discussions.

FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. Then, an analysis of the dispersion of existing facilities among the predominant income/ethnic subsections and the major growth areas of the metro was conducted. Conclusions reached from the facility dispersion analysis were then used to qualify the facility requirement estimates, particularly in those cases where no additional facilities were estimated as being needed within the metropolitan area. Usually, special note is made where growth areas appeared to have limited facilities. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the Urban Volume. In the discussions that follow, resource requirements for recreational facilities are generally referred to by units of the most important feature necessary to allow participation. For example, when a requirement is shown for swimming pools, features such as a bathhouse, cleaning and filtering system, and other support features are implied when a requirement for the major facility is shown.

Swimming

In 1971 the Waco Metropolitan Area reported 5,197 square yards of swimming pools which, when multiplied by a conversion standard of 150 days per year per square yard, provided approximately 780,000 opportunity days. When compared with projections of demand, the 1971 supply level should be adequate until 1990, when a deficit of 217,000 days is predicted. At that time, an additional 1,447 square yards above the 1971 level were estimated to be required. The cumulative resource requirement increases to 3,600 square yards by the year 2000. Although public swimming pools appeared to be adequate for the metro as a whole, the high-density neighborhoods of central Waco, as well as growth areas in the north-east and southwest sections of the metro, should be considered if it becomes practical to provide additional swimming facilities.

Child's Play

There were forty acres of developed playground in 1971, which provided an estimated 1,105,000 opportunity days, on the basis of a standard of 27,623 days per year per acre of developed land. Estimates of demand suggest that this 1971 supply level should be adequate through the year 2000. The distribution of playgrounds in 1971 seemed to be relatively balanced except for the subsections in the north part of the metro which had no park facilities of any kind.

Baseball/Softball

A comparison of opportunity days with participation days for the Waco Metropolitan Area suggests that no additional baseball/softball facilities should be required through the year 2000. In 1971, there were thirty-one fields which, when multiplied by a standard of 13,804 days per year per field, provided in 1971 about 428,000 days of opportunity, considerably more than should be required even in the year 2000. If any additional fields are provided, consideration probably should be given to growth areas, or the subsections in the north part of the metro which lacked park facilities of any kind.

Picnicking

Given a conversion standard of 1,702 days per year per picnic table, a total of 456,000 opportunity days were provided by the 268 public picnic tables enumerated in 1971. This opportunity level when compared with estimates of participation should be sufficient through the year 2000, for the metro as a whole. However, several of the small income/ethnic subsections north of the Brazos River had no picnicking facilities and should be considered.

Football/Soccer

In 1971, there was only one public football field and it provided about 7,000 opportunity days, given a standard of 7,224 days per year per field. With demand estimated at 41,000 participation days, five additional fields were required in 1970 to erase the 34,000 day deficit. The locations of additional football fields should be adequately dispersed

among the major income/ethnic subsections within the metro, and particularly those with high growth rates.

Golf

There were no public golf courses reported for Waco in 1971. Accordingly, a total of thirty holes were required in 1970 to accommodate an estimated demand of 120,000 participation days, given a facility standard of 4,047 days per year per hole of golf. The cumulative resource requirement was predicted to be 38 total holes in 1975, 47 holes (about 3 eighteen-hole courses, or 6 nine-hole, or some other appropriate combination) in 1980, 62 holes in 1990, and 78 holes by the year 2000. Public golf courses should be located so as to maximize accessibility to the various income/ethnic subsections of the metro.

Tennis

A total of thirty-seven public tennis courts provided about 100,000 opportunity days in 1971, given a standard of 2,694 days per year per court. The 1971 opportunities level should be adequate for the metro as a whole through the year 2000, based on a projected decline in the number of participation days. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Basketball

In 1971 the Waco Metropolitan Area reported twelve basketball courts which, when multiplied by a facility standard of 8,795 days per year per court, provided about 106,000 days of opportunity. Although these twelve courts were adequate to meet the estimated demand of 81,000 participation days in 1970, additional courts in subsequent years were required to augment the 1971 supply level. The cumulative resource requirement in 1975 is 4 courts; and this increases to 11 courts over the 1971 supply level by 1980, 21 courts by 1990, and 29 courts in the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Trails Activities

In 1971, there were two miles of trail which, when multiplied by a facility standard of 8,464 days per year per mile of trail, provided about 17,000 days of opportunity. (Although the total actually amounted to eight miles, six of these were horseback riding trail miles. Because resource requirements were not computed for urban horseback riding trails and because these six miles in the Waco Metro Area were not designated for other types of trail usage, they were excluded from the computation of opportunity days.) These 17,000 days of opportunity compared with 42,000 participation days in 1970. Hence, a total of three additional miles were required in 1970 to eliminate an estimated deficit of 25,000 opportunity days. An incremental requirement of 3 more miles in 1975 and 4 additional miles in 1980 result in a total of 10 miles of trail which should be provided by 1980. The cumulative total should reach 14 in 1990 and 19 in the year 2000.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly-administered park and recreation areas. It is likely, however, that as additional trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of additional resources required may be conservative in the long run and should be considered as minimum estimates. In addition to the expectations for increases in participation in trail and related activities at publicly-administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local neighborhoods, on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, Skiing

Surface Acres - Freshwater Lakes
(Boating, Boat Fishing, Skiing)

A total of 7,347 surface acres of freshwater lakes was located within the Waco Metro Area of Region 20 in 1971. Using participation patterns of households recreating in the urban areas, it was estimated that boating totaled 48,000 days, boat fishing 23,000 days, and skiing 23,000 days for a total of 94,000 days in 1970. Comparing estimated participation with the opportunities provided by the surface acres existing in 1971 indicates that existing freshwater lakes will be adequate through the year 2000.

Freshwater Boat Ramps^{1/}

No publicly-administered freshwater boat lanes were reported for the Waco Metro Area in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using freshwater boat ramp facilities to gain access to the water if ramps were available, it was calculated that three boat ramps were needed in 1970. Projected increases in freshwater boat fishing, skiing, and boating participation are expected to require one additional freshwater boat ramp in 1975, one in 1980, one in 1990, and two in the year 2000, bringing the cumulative resource requirement to eight ramps in 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, the provision of freshwater boat ramps required could be constructed on existing freshwater lakes if the lakes are available for water-related activities.

^{1/} In calculating freshwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

Summary of Facilities Requirements

The only designated types of facilities which were not available at all in 1971 were public golf courses and freshwater boat ramps. For both types of facilities, resource requirements were indicated for every planning horizon year. Also, additional miles of trail were required in every planning year to augment the existing two miles (for walking, bicycling, and nature study) enumerated in 1971. Additional basketball courts were required beginning in 1975, and additional swimming facilities were indicated as necessary beginning in 1990. The Waco Metro Area reported only one public football field; five additional fields were estimated to be required to fulfill demand through the year 2000. The number of existing public playgrounds, baseball/softball fields, public picnic tables, tennis courts, and acres for recreational freshwater were estimated to be sufficient through the year 2000.

A dispersion analysis was possible only for a few facility types. Public swimming pools, playgrounds, and picnicking facilities appeared to be reasonably well distributed, except that some of the small low-income subsections in the north part of the metro lacked parks and facilities of any kind. A major criterion in the location of additional facilities for all types of outdoor recreation activities is a geographic distribution which considers growth areas and the various income/ethnic subsections.

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE RESOURCES REQUIRED
	Swimming (Pools)	471 ^{1/}	780		309	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	289	1,105		816	0 acres	0 acres
	Baseball/Softball	38	428		390	0 fields	0 fields
	Picnicking	89	456		367	0 tables	0 tables
	Football/Soccer	41	7	34		5 fields	5 fields
	Golf	120	0	120		30 holes	30 holes
	Tennis	90	100		10	0 courts, dbl.	0 courts, dbl.
	Basketball	81	106		25	0 courts, full	0 courts, full
1970	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW	94	3,065		2,971	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW	72	0	72		3 ramps ^{3/}	3 ramps ^{3/}
	Trails Activities:						
	Walking	31 ^{4/}				2 miles	2 miles
	Bicycling	11 ^{4/}				1 mile	1 mile
	Nature Study	* ^{4/}				<1 mile	<1 mile
	Combined Walking, Bicycling, Nature Study	42 ^{4/}	17	25		3 miles	3 miles
	ACTIVITY						
	Swimming (Pools)	602 ^{1/}	780		178	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	373	1,105		732	0 acres	0 acres
	Baseball/Softball	46	428		382	0 fields	0 fields
	Picnicking	93	456		363	0 tables	0 tables
	Football/Soccer	40	7	33		5 fields	0 fields
	Golf	155	0	155		38 holes	8 holes
	Tennis	89	100		11	0 courts, dbl.	0 courts, dbl.
	Basketball	144	106	38		4 courts, full	4 courts, full
1975	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW	139	3,065		2,926	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW	102	0	102		4 ramps ^{3/}	1 ramp ^{2/}
	Trails Activities:						
	Walking	50 ^{4/}				4 miles	2 miles
	Bicycling	21 ^{4/}				2 miles	1 mile
	Nature Study	* ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	71 ^{4/}	17	54		6 miles	3 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE RESOURCES REQUIRED	INCREMENTAL
	Swimming (Pools)	740 ^{1/}	780		40	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	462	1,105		643	0 acres	0 acres
	Baseball/Softball	55	428		373	0 fields	0 fields
	Picnicking	96	456		360	0 tables	0 tables
	Football/Soccer	39	7	32		5 fields	0 fields
	Golf	191	0	191		47 holes	9 holes
	Tennis	90	100		10	0 courts, dbl.	0 courts, dbl.
	Basketball	204	106	98		11 courts, full	7 courts, full
1980	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	181	3,065		2,884	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	132	0	132		5 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	69 ^{4/}				7 miles	3 miles
	Bicycling	31 ^{4/}				3 miles	1 mile
	Nature Study	1 ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	101 ^{4/}	17	84		10 miles	4 miles
	<u>ACTIVITY</u>						
	Swimming (Pools)	997 ^{1/}	780	217		1,447 square yards ^{2/}	1,447 square yards ^{2/}
	Child's Play (Playgrounds)	615	1,105		490	0 acres	0 acres
	Baseball/Softball	66	428		362	0 fields	0 fields
	Picnicking	93	456		363	0 tables	0 tables
	Football/Soccer	34	7	27		5 fields	0 fields
	Golf	249	0	249		62 holes	15 holes
	Tennis	81	100		19	0 courts, dbl.	0 courts, dbl.
	Basketball	287	106	181		21 courts, full	10 courts, full
1990	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	238	3,065		2,827	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	169	0	169		6 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	94 ^{4/}				10 miles	3 miles
	Bicycling	44 ^{4/}				4 miles	1 mile
	Nature Study	1 ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	139 ^{4/}	17	122		14 miles	4 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	1,320 ^{1/}	780	540		3,600 square yards ^{2/}	2,153 square yards ^{2/}
	Child's Play (Playgrounds)	804	1,105		301	0 acres	0 acres
	Baseball/Softball	79	428		349	0 fields	0 fields
	Picnicking	95	456		361	0 tables	0 tables
	Football/Soccer	31	7	24		5 fields	0 fields
	Golf	314	0	314		78 holes	16 holes
	Tennis	76	100		24	0 courts, dbl.	0 courts, dbl.
	Basketball	363	106	257		29 courts, full	8 courts, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	291	3,065		2,774	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	205	0	205		8 ramps ^{3/}	2 ramps ^{3/}
	Trails Activities:						
	Walking	118 ^{4/}				13 miles	3 miles
	Bicycling	57 ^{4/}				6 miles	2 miles
	Nature Study	1 ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	176 ^{4/}	17	159		19 miles	5 miles

Note: Asterisks indicate that projected annual activity days were less than 500.

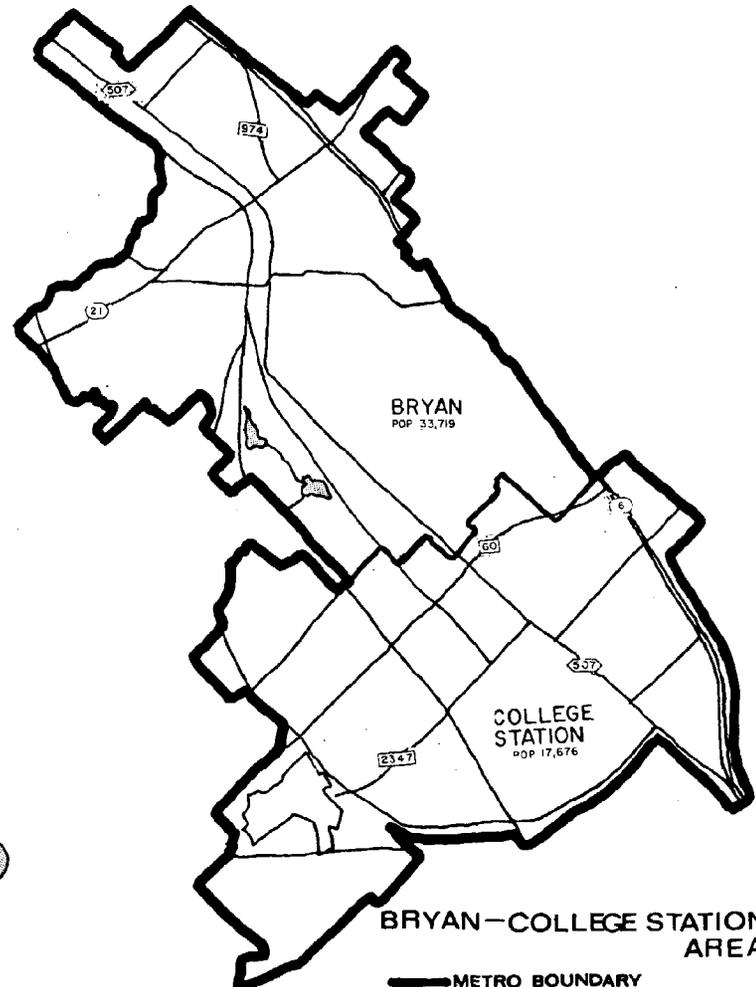
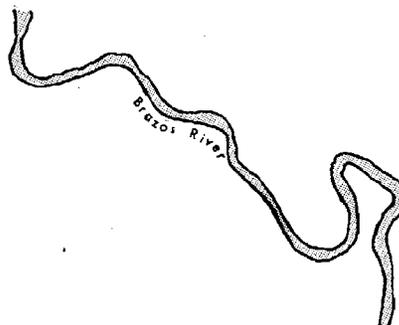
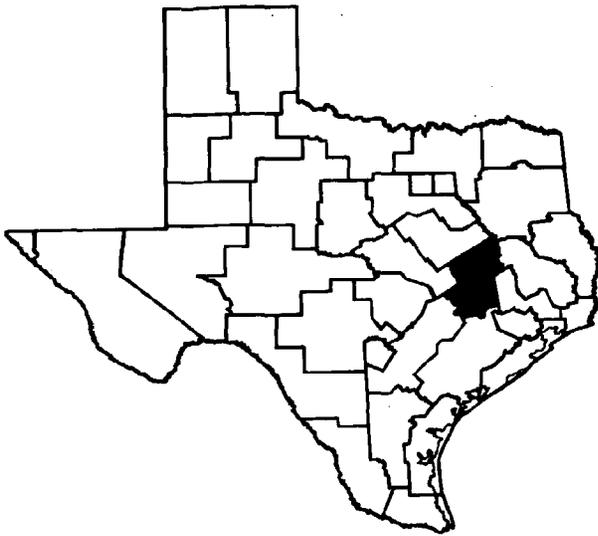
^{1/} Includes only swimming participation occurring in swimming pools, 94 percent of the total in urban areas.

^{2/} Designated freshwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.

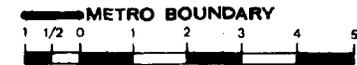
^{3/} Assumes 2.0 lanes per ramp.

^{4/} Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

Region 21



Source: Adapted from General Highway Map Brazos County Texas, 1966, 1970 Census figures, Highways revised to September 1, 1973. Texas State Highway Department Planning and Research Division. Austin, Texas.



REGION 21

REGIONAL DESCRIPTION: BRYAN-COLLEGE STATION METROPOLITAN AREA

Bryan and College Station are located adjacent to one another and form one metropolitan area.

Bryan was chartered in 1855 and is the county seat of Brazos County. The economy has long been based on diversified agriculture and nearby Texas A&M University. Industry in Bryan has been increasing recently with the production of chemicals, furniture, and metal fabrication. Bryan is the home of Allen Academy. The Bryan Civic Auditorium hosts many cultural events throughout the year.

College Station is the home of Texas A&M University. Near College Station is the Texas International Speedway.

POPULATION

1970 Metro Area Population: 51,395
Change 1960-70: +32%

Race Composition

White 83% ^{1/}
Negro 16%
Other 1%

Age Composition (years):

13 or less 25%
14 - 20 19%
21 - 44 35%
45 - 64 14%
65 and over 7%

ECONOMY

Agribusiness
Education

^{1/} Includes persons of Mexican and/or Spanish descent.

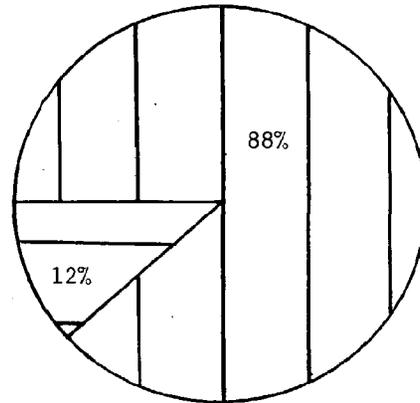
REGION 21

CITY SIZE: METRO

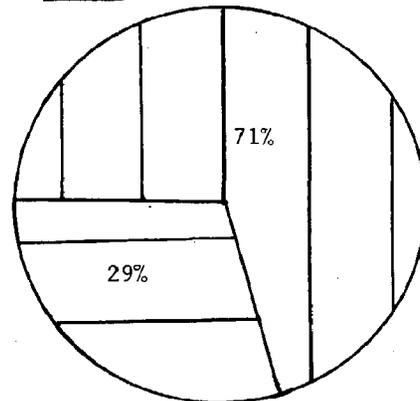
PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

REGION
21
METRO



STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 21 METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	306	1,307
Undeveloped Land	42	536
Total Land	348	1,843
Water Within or Adjacent	48	1,006
Total Land and Water	396	2,849

Bryan and College Station have a total of 348 acres of land set aside as park and recreation areas. In addition, 48 surface acres of water either within or adjacent to these parks were reported.

Of the total land acreage, 306 acres are developed with facilities, leaving 42 acres available for development in the future. With 88 percent of the land acreage currently developed, Bryan and College Station are well above the Statewide Metro average of 71 percent.

PARKS AND ACREAGE BY TYPE OF PARK

	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	1.000	14.000	7.000	7.000	29.000	72.000
Parks Per Thousand	.019	.272	.136	.136	.564	.267
People Per Park	51,395.000	3,671.000	7,342.000	7,342.000	1,772.000	3,754.000
.....						
Land Acres	21.000	133.000	162.000	32.000	348.000	1,843.000
Acres Per Thousand	.409	2.588	3.152	.623	6.771	6.864
People Per Acre	2,447.000	386.000	317.000	1,606.000	148.000	146.000

Almost one-half of the 29 parks in Bryan and College Station are Community Parks. Seven parks each in the Specialty and Open Land Park categories were reported along with one District Park. The acreage figures show that 46 percent of the total acreage is in the seven Specialty Parks, followed by the 133 acres in Community Parks. The seven Open Land Parks average about 4½ acres each, while the one District Park consists of 21 acres. The dispersion of the four types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the total population of Bryan and College Station, .564 parks per 1,000 and 6.771 acres per 1,000 population exist.

Another way to present this data is that 1,772 people share each park while 148 people must share each acre of park land.

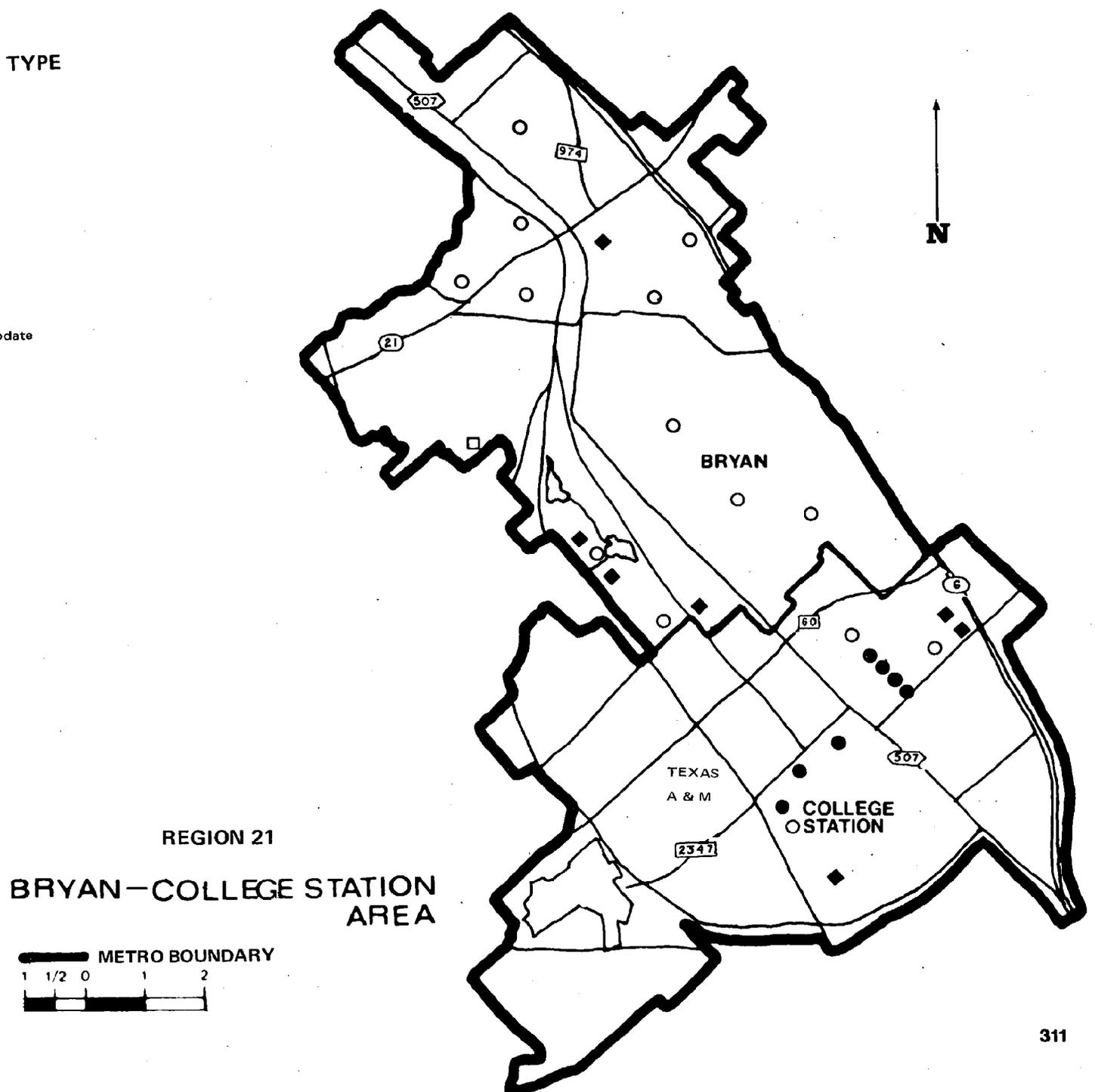
With .564 parks per 1,000, Bryan and College Station have more than double the Statewide Metro Average. However, the 6.771 acres per 1,000 gives the area a figure just below the Statewide Metro average for acres per 1,000.

DISPERSION OF PARKS BY TYPE

URBAN PARKS

- DISTRICT PARK
- COMMUNITY PARK
- ◆ SPECIALTY PARK
- OPEN-LAND PARK

Source: 1971 Municipal Inventory Update



PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 21 METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	1	11	3	15	3,426	.294	.150
Tennis Courts.....	0	7	0	7	7,342	.137	.142
Basketball Courts.....	1	9	0	10	5,139	.196	.071
Baseball/Softball Fields.....	0	11	4	15	3,426	.294	.186
Football/Soccer Fields.....	0	1	0	1	51,395	.019	.032
Picnicking:							
Parks.....	1	12	2	15	3,426	.294	.124
Tables.....	5	91	2	98	524	1.921	1.230
Playground:							
Parks.....	1	11	0	12	4,282	.235	.170
Acres Developed.....	2	21	0	23	2,234	.450	.258
Swimming:							
Parks.....	1	4	0	5	10,279	.098	.050
Pools (Sq. Yd.).....	0	1,200	0	1,200	43	23.529	25.950
Designated Fresh Water (Sq. Yd.)...	400	1,200	0	1,600	32	31.372	52.242
Boating:							
Parks.....	0	0	1	1	51,395	.019	.006
Ramp Lanes - Fresh Water.....	0	0	0	0	---	---	.008
Camping:							
Parks.....	0	0	0	0	---	---	.002
Campsites.....	0	0	0	0	---	---	.121
Fishing:							
Parks.....	0	0	1	1	51,395	.019	.013
Pier/Barge/Marina-Fresh Water (Yd.)	0	0	7	7	7,342	.137	.049
Golfing:							
Courses.....	0	0	1	1	51,395	.019	.005
Holes.....	0	0	18	18	2,855	.352	.100
Trails:							
Parks.....	0	1	0	1	51,395	.019	.006
Nature (Mi.).....	0	.5	0	.5	102,790	.009	.009
Horseback (Mi.).....	0	0	0	0	---	---	.003
Bicycle (Mi.).....	0	.5	0	.5	102,790	.009	.007
Hiking (Mi.).....	0	0	0	0	---	---	.006
Total Trails (Mi.).....	0	1	0	1	51,395	.019	.021

PARK AND RECREATION FACILITIES BY TYPE OF PARK

CITY SIZE: METRO

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 21 METRO	STATEWIDE AVERAGE METRO AREAS
Sport Shooting:							
Parks.....	0	0	0	0	---	---	.002
Traps.....	0	0	0	0	---	---	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	0	0	0	0	---	---	.011
Miscellaneous:							
Parks.....	0	1	0	1	51,395	.019	.038
Amphitheatre Seats.....	0	0	0	0	---	---	1.077
Botanical Gardens (Acres).....	0	0	0	0	---	---	.077
Zoos (Acres).....	0	0	0	0	---	---	.051
Community/Recreation Centers.....	0	1	0	1	51,395	.019	.038

Most of the park and recreation facilities in Bryan and College Station are in Community Parks where all four of the swimming pools are located. Two designated fresh water swimming areas were also reported, one in a District Park and one in a Community Park. The Community Park category also has the only trail facilities and the one community/recreation center. All of the fishing and golf facilities are in Specialty Parks. In addition, one Specialty Park has water for boating although no specific boating facilities were reported.

Of the 29 parks, 15 have facilities for games and sports, 15 have picnicking facilities, 12 have playgrounds and 5 have swimming facilities. The most common types of games and sports facilities are baseball/softball with 15 fields, followed by basketball with 10 courts, tennis with 7 courts and football/soccer with one field.

Looking at selected facilities in relation to the number of potential users we find the following:

51,395 persons for each football/soccer field	3,426 persons for each baseball/softball field
51,395 persons for each mile of trails	2,855 persons for each golf hole
51,395 persons for each community/recreation center	2,234 persons for each acre of playground
7,342 persons for each tennis court	524 persons for each picnic table
5,139 persons for each basketball court	43 persons for each square yard of swimming pool

Bryan and College Station are above the Statewide Metro average for facility units per 1,000 for basketball courts, baseball/softball fields, picnic tables, playground acres, yards of fishing pier/barge/marina and golf holes. Bryan and College Station are below the average for tennis courts, football/soccer fields, square yards of swimming pools, designated fresh water swimming area, trail miles and community/recreation centers. No boat ramp lanes, campsites, sport shooting facilities, amphitheatre seats, acres of botanical gardens or zoo acreage were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

ACTIVITY-FACILITY	ANNUAL DAYS AVAILABLE	DAYS PER THOUSAND POPULATION	
		REGION 21 METRO	STATEWIDE AVERAGE METRO
Swimming (Pools) - square yards	180,000	3,529	3,891
Child's Play - playground acres	635,329	12,457	7,139
Baseball/Softball - fields	207,060	4,060	2,577
Picnicking - tables	166,796	3,271	2,093
Football/Soccer - fields	7,224	142	235
Golf - holes	72,846	1,428	414
Tennis - courts, double	18,858	370	384
Basketball - courts, full	87,950	1,725	625
Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	20,023	393	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	0	0	103
Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	8,464	166	164

The Bryan-College Station Metro Area offers the most opportunity days for child's play, followed by baseball/softball, swimming (in pools) and picnicking. A comparison between the opportunity days per thousand population for the Bryan-College Station Metro Area and the Statewide Metro average shows that the Bryan-College Station Metro Area surpasses the statewide average for six of the activity types -- child's play, baseball/softball, picnicking, golf, basketball, and the trails activities. The Bryan-College Station Metro Area is below the Statewide Metro average for swimming (in pools), football/soccer, tennis and surface acres for freshwater boating, boat fishing and skiing, with no opportunity days available for freshwater boat ramps.

The twenty-fourth ranking metro area, based on population, Bryan-College Station also ranked twenty-fourth in total participation for the year 1970. Estimates for 1970 indicate that participation by residents as well as non-residents in the area spent over 859,000 recreation days in pursuit of the various forms of urban outdoor recreation opportunities available within the metro area.

Resident

Total days of participation in urban outdoor recreation activities by the residents of the Bryan-College Station Metropolitan Area, for the 16 activities shown were estimated to be 759,000 days in 1970. Total participation is expected to increase to one million days in 1975 and to 1.3 million days in 1980. These represent increases of 32.1 percent by 1975 and 71.5 percent by 1980. On a days per household basis, participation is projected to increase from 45.6 days in 1970 to 54.3 days in 1975, and to 64.0 days in 1980--increases of 19.1 and 40.3 percent, respectively, over the 1970 level. The residents of the Bryan-College Station Metropolitan Area are expected to participate at a rate of 78, 107, and 139 days per household below the statewide average for the other Texas metropolitan areas in 1970, 1975, and 1980, respectively. For the more distant years of 1990 and 2000, both total days of participation and days per household are expected to increase, but will remain below the statewide average for all metropolitan areas.

Projections for specific activities indicate that each of the 16 activities will increase in total days of participation through the year 2000. On a days per household basis, participation is expected to increase in all activities by 2000. Based on total days of participation, the six most popular activities in 1970 were: driving for pleasure, swimming, walking, child's play, picnicking, and baseball, in that order. It is anticipated that the six top-ranking activities in 1975 will be as follows: swimming, driving for pleasure, child's play, walking, golf, and baseball. Projected participation reveals that these six activities will retain their popularity through 1980.

Non-Resident

Participation in urban outdoor recreation activities within the Bryan-College Station Metropolitan Area by non-residents was estimated to total 100,000 days for the activities specified for 1970. Compared to the 1970 level, total participation is expected to remain constant through 1975, and increase 2.0 percent (to 102,000 days) by 1980. Similar increases are anticipated through the years 1990 and 2000.

Of the specific activities projected, the most popular activities by non-residents for 1970 were: football, with 38,000 days; sightseeing, with 32,000 days; swimming, with 9,000 days; walking, with 5,000 days; and picnicking, with 4,000 days. Assuming adequate facilities are made available, participation in all non-resident activities are expected to increase at a moderate rate through the year 2000, with football, sightseeing, swimming, walking, and picnicking retaining their relative ranking, one through five, respectively.

CURRENT AND PROJECTED RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970				1975				1980				1990				2000			
	PART. DAYS	RANK	REG. 21 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 21 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 21 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 21 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 21 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH
Swimming	152	2	9.14	27.41	218	1	11.80	36.52	308	1	15.13	47.17	555	1	23.20	75.28	932	1	33.09	110.14
Child's Play	97	4	5.83	14.08	139	3	7.53	17.72	192	3	9.43	22.00	336	2	14.05	32.20	560	2	19.88	43.99
Baseball/Softball	36	6	2.16	2.78	48	6	2.60	3.19	62	6	3.05	3.59	96	7	4.01	4.41	144	9	5.11	5.22
Picnicking	42	5	2.53	5.72	47	7	2.54	5.66	52	8	2.56	5.66	63	10	2.63	5.61	75	10	2.66	5.64
Football/Soccer	16	9	.96	1.43	17	12	.92	1.42	19	12	.93	1.41	22	13	.92	1.39	25	13	.89	1.38
Golf	35	7	2.10	3.92	52	5	2.82	4.98	74	5	3.64	6.16	135	5	5.64	8.96	231	4	8.20	12.07
Tennis	14	11	.84	6.06	16	13	.87	9.21	17	13	.84	11.49	20	14	.84	16.07	24	14	.85	21.46
Basketball	7	13	.42	1.60	8	15	.43	2.59	9	16	.44	3.57	11	16	.46	5.52	13	16	.46	7.53
Walking	117	3	7.03	18.21	130	4	7.04	23.09	143	4	7.03	29.20	168	4	7.02	39.89	198	5	13.00	50.31
Bicycling	6	15	.36	20.30	22	11	1.19	32.77	41	10	2.01	45.25	89	8	3.72	68.44	152	7	5.40	95.49
Nature Study	8	12	.48	.72	28	10	1.52	1.67	53	7	2.60	2.64	114	6	4.77	4.63	195	6	6.92	6.70
Fishing	30	8	1.80	1.80	35	8	1.90	1.88	40	11	1.97	1.97	51	11	2.13	2.13	65	11	2.31	2.30
Boating	15	10	.90	.88	30	9	1.62	1.60	47	9	2.31	2.31	89	8	3.72	3.74	146	8	5.18	5.17
Skiing	7	13	.42	.42	11	14	.60	.62	17	13	.84	.82	29	12	1.21	1.22	46	12	1.63	1.81
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	6	15	.36	2.25	8	15	.43	2.34	10	15	.49	2.50	14	15	.59	2.70	21	15	.75	3.01
Dr. for Pleas.	171	1	10.28	13.38	194	2	10.50	13.52	218	2	10.71	13.67	265	3	11.08	13.86	319	3	11.33	14.10
TOTAL	759		45.61	120.96	1,003		54.31	158.78	1,302		63.98	199.41	2,057		85.99	286.05	3,146		104.79	386.32

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000	ACTIVITY	1970	1975	1980	1990	2000
Swimming	9	9	9	9	10	Swimming	161	227	317	564	942
Child's Play	2	2	2	2	2	Child's Play	99	141	194	338	562
Baseball/Softball	*	*	*	*	*	Baseball/Softball	36	48	62	96	144
Picnicking	4	4	4	4	5	Picnicking	46	51	56	67	80
Football/Soccer	38	38	39	40	41	Football/Soccer	54	55	58	62	66
Golf	3	3	3	3	4	Golf	38	55	77	138	235
Tennis	*	*	*	*	*	Tennis	14	16	17	20	24
Basketball	2	2	2	2	2	Basketball	9	10	11	13	15
Walking	5	5	5	5	6	Walking	122	135	148	173	204
Bicycling	*	*	*	*	*	Bicycling	6	22	41	89	152
Nature Study	*	*	*	*	*	Nature Study	8	28	53	114	195
Fishing	2	2	2	3	3	Fishing	32	37	42	54	68
Boating	*	*	*	*	*	Boating	15	30	47	89	146
Skiing	*	*	*	*	*	Skiing	7	11	17	29	46
Surfing	---	---	---	---	---	Surfing	---	---	---	---	---
Sightseeing	32	32	33	33	34	Sightseeing	38	40	43	47	55
Dr. for Pleas.	3	3	3	3	3	Dr. for Pleas.	174	197	221	268	322
TOTAL	100	100	102	104	110	TOTAL	859	1,103	1,404	2,161	3,256

Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the Bryan-College Station Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with the current recreation opportunities^{2/} available in the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to subsections of the metro characterized by residents having similar incomes and ethnic backgrounds. Particular attention was given to those subsections expected to undergo relatively rapid population growth and physical expansion in the future.

Conclusions reached from analyzing the distribution of recreation opportunities within the metropolitan area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist.

In the discussions that follow, results of the distribution analysis of parks within subsections of the Bryan-College Station Metro are presented. Then, estimates of current and future requirements for selected recreation facilities are presented, and are qualified by conclusions reached from the distribution analysis of recreation facilities within subsections of the Bryan-College Station Metro.

PARK DISTRIBUTION ANALYSIS

In analyzing the availability and distribution of parks in the Bryan-College Station Metro, several characteristics were considered: changes in population (or trends in general, 1960 to 1970), areas of the metro which were expected to exhibit relatively major expansion, and the dispersion of existing parks among the income/ethnic subsections of the metro. From these interrelated characteristics general conclusions were reached with respect to future park developments for the metro area.

Population trends affected estimations of future recreation participation. Projections of population growth for Bryan-College Station indicated that the 1970 metro population of 51,395 would increase to about 87,025 persons by the year 2000. In addition, information provided by urban recreation planners of the area shows that future urban expansion was expected to occur in the north, east, and southeast, as illustrated by arrows on the map titled "Predominant Ethnic Background and Income Subsections."

For the Bryan-College Station Metropolitan Area, local metro area recreation planners delineated fourteen subsections which are indicated on the accompanying map titled "Predominant Ethnic Background and Income Subsections." The delineated subsections characterize the homogeneous residential, or demographic, patterns existing in 1971 by two major socio-economic factors. Seven of the subsections were chiefly low income areas, five were predominantly middle-income, and

^{1/} "Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

^{2/} "Current" recreation opportunities refers to computed figures derived from the numbers of publicly administered facilities by type available within the metro area in 1971.

LOW INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS LESS THAN \$5,000)

-  PREDOMINANTLY MEXICAN AMERICAN
-  PREDOMINANTLY BLACK
-  PREDOMINANTLY ANGLO
-  PREDOMINANTLY BLACK AND ANGLO
-  PREDOMINANTLY MEXICAN AMERICAN AND BLACK

MID INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME VARIED FROM \$5,000 TO \$15,000)

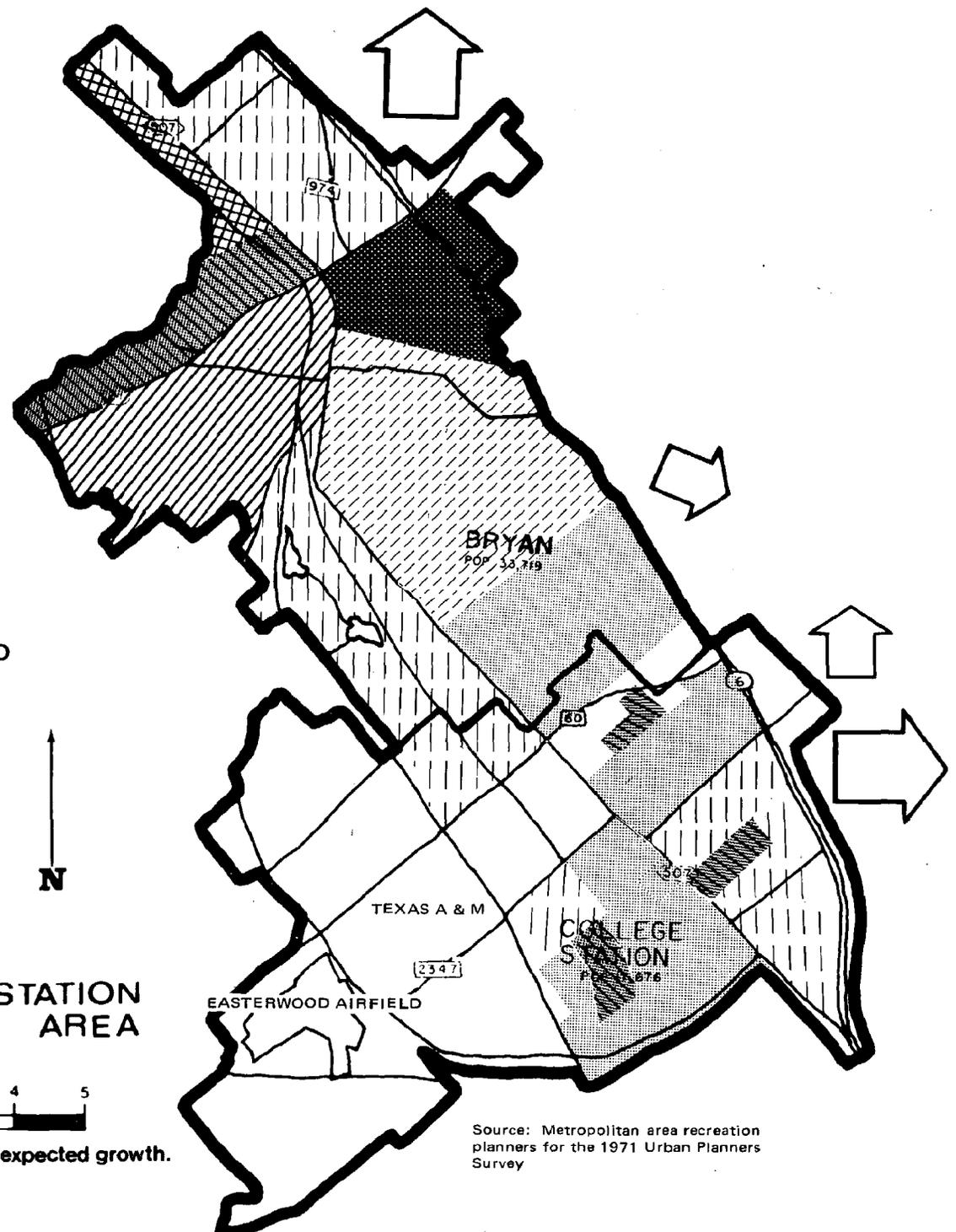
-  PREDOMINANTLY MEXICAN AMERICAN
-  PREDOMINANTLY BLACK
-  PREDOMINANTLY ANGLO

HIGH INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS GREATER THAN \$15,000)

-  PREDOMINANTLY MEXICAN AMERICAN
-  PREDOMINANTLY BLACK
-  PREDOMINANTLY ANGLO

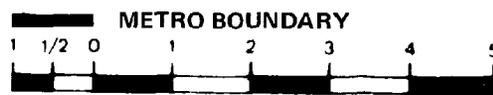
 AREAS FOR WHICH ETHNIC BACKGROUND AND INCOME DELINEATIONS WERE NOT MAPPED.

PREDOMINANT ETHNIC BACKGROUND AND INCOME SUBSECTIONS



REGION 21

BRYAN—COLLEGE STATION AREA



Note: Arrows indicate major areas of expected growth.

Source: Metropolitan area recreation planners for the 1971 Urban Planners Survey

and two were predominantly high-income. Four of the low-income subsections were located in Bryan. One of these was located in the far southwest along the south side of Highway 507, a subsection predominantly characterized by low-income Mexican-American residents. Immediately south (and along the north side of Highway 21) was a subsection of low-income Blacks. A combined neighborhood of low-income Blacks and Mexican-Americans was indicated on the south side of Highway 21, and northeast of that subsection (i.e., northeast of Highway 507) was a combined subsection of low-income Anglos and Blacks. The remainder of Bryan was characterized chiefly by two middle-income Anglo subsections in the far north and in the south extending into College Station and a subsection of middle-income Mexican-American residents east of the Bryan central business district. There was one high-income Anglo subsection in Bryan located northeast of Highway 507 and north of Highway 60. College Station was composed of three small low-income Black subsections, two small middle-income Anglo subsections, and one rather large high-income Anglo subsection around which the smaller subsections were located. Most of the residents of College Station lived to the east and northeast of Texas A&M University.

An analysis of parks dispersion among the subsections was conducted by comparing the "Dispersion of Parks by Type" map and the "Predominant Ethnic Background and Income Subsections" map. In general, the distribution of parks appeared to be fairly adequate. However, three subsections in the metro area had no parks of any type. One, the low-income Mexican-American subsection in the northwest, was located in Bryan. The other two, a small low-income Black area and an adjacent larger middle-income Anglo area, were located in the far eastern portion of College Station in the area expected to grow most rapidly. Community and specialty parks were the most widely distributed types of parks. There was only one district park and it was located in Bryan. Parks with facilities appeared to be needed in the southeastern growth area and the most western subsection of Bryan, and the southeastern half of College Station. All open land parks were located in College Station, most of them in the predominantly high-income Anglo subsection. Open land parks may need consideration, where resources are available, for the entire Bryan area when future developments are planned.

In addition to maintaining an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities is also an important consideration. An analysis of the current and future requirements for selected recreational facilities and the current dispersion of facilities in Bryan-College Station is presented in the following discussions.

FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. Then, an analysis of the dispersion of existing facilities among the predominant income/ethnic subsections and the major growth areas of the metro was conducted. Conclusions reached from the facility dispersion analysis were then used to qualify the facility requirement estimates, particularly in those cases where no additional facilities were estimated as being needed within the metropolitan area. Usually, special note is made where growth areas appeared to have limited facilities. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the Urban Volume. In the discussions that follow, resource requirements for recreational facilities are generally referred to by units of the most important feature

necessary to allow participation. For example, when a requirement is shown for swimming pools, features such as bath-house, cleaning and filtering system, and other support features are implied when a requirement for the major facility is shown.

Swimming

The Bryan-College Station Metro had 1,200 square yards of public swimming pools in 1971. Each square yard (unit) was estimated to provide 150 days of swimming opportunity per year, which yielded an estimated 180,000 opportunity days for the metro area. To determine if there was a surplus or deficit of opportunity, estimated participation days were compared with estimated opportunity days. For swimming there appeared to be a surplus of opportunity in 1970, but deficits were shown in each planning year thereafter. By 1975, the metro area was estimated to require an additional 220 square yards of pools. Cumulative 1980 requirements were estimated at 787 square yards. An additional 1,546 and 2,367 square yards were calculated to be needed in 1990, and 2000 respectively. Dispersion analysis indicates that additional facilities were needed in the College Station portion of the metro. Special considerations should also be given to the more expanding residential sections of the metro.

Child's Play

Bryan-College Station in 1971 had twenty-three acres of playgrounds divided among twelve parks within the metro boundary. Multiplying the twenty-three acre units by the playground standard (each acre was calculated to provide 27,623 days of recreation opportunity per unit per year) resulted in an estimated 635,000 annual opportunity (potential participation) days. Annual opportunity days were then compared with the forecasted demands, as shown in the Bryan-College Station resource requirements table. Existing playgrounds were estimated to be adequate through the year 2000. Since the existing playgrounds were relatively well distributed among the subsections, further addition of playgrounds should be similarly dispersed, with emphasis placed on the major growth areas.

Baseball/Softball

With an existing fifteen baseball/softball fields providing approximately 207,000 total opportunity days (the facility standard utilized was 13,804 opportunity days per field per year), the Bryan-College Station Metropolitan Area appeared to have a sufficient quantity of fields to meet the activity requirements through the year 2000. Although a dispersion analysis was not possible, it should be emphasized that if additional fields are provided, consideration should be given to areas presently without fields and to the growth areas.

Picnicking

There were ninety-eight public picnic tables in Bryan-College Station in 1971. At 1,702 days of opportunity per table per year (standard) the existing tables provided approximately 167,000 days annually. The 1971 supply level was expected to provide adequate overall opportunity through the year 2000. The distribution analysis of picnicking facilities

indicated good dispersion among the existing subsections, except in southern College Station. As the metro area grows, provision of additional tables should also be considered for the expanding subsections.

Football/Soccer

With a conversion standard of 7,224 days per year per field, the one public football/soccer field enumerated in 1971 provided approximately 7,000 opportunity days (rounded). A comparison of existing opportunity days with estimates of participation suggests that seven additional fields would have been required in 1970. The cumulative resource requirements have been estimated to increase from 7 fields in 1970 to 8 fields in 1990. These eight fields should be adequate to accommodate estimated demand through the year 2000. Although a dispersion analysis was not possible from available information, the provision of additional fields should consider growth areas and the various income/ethnic subsections to insure a balanced distribution.

Golf

There was one publicly-administered course in Bryan which provided eighteen holes for golf in 1971. Using the urban golf standard, each golf hole was calculated to be capable of providing 4,047 days of recreation opportunity annually. The Bryan-College Station Metro, therefore, had about 73,000 days of opportunity provided annually by this public course. Comparing expected participation in projection years with the available opportunity days shows an incremental requirement of 1 hole in 1980, and additions of 15 and 24 holes in the years 1990 and 2000, respectively. As a general rule, golf courses are constructed in multiples of nine holes; therefore, by the year 2000 the Bryan-College Station Metro Area will need slightly over four additional nine-hole courses (forty holes) or two eighteen-hole courses, or some other appropriate combination which considers local resources. Since the existing course appeared to be located centrally between Bryan and College Station, future additions may be needed at the northwest and southeast extremities of the metro area.

Tennis

The 19,000 opportunity days provided by the seven tennis courts available in 1971 (each court can make available about 2,694 days of opportunity per year) appeared to be adequate to meet facility requirements of the Bryan-College Station Metro through the year 1990. Two additional courts will be needed by the year 2000. Although dispersion of these facilities could not be discerned from available data, it is important that an adequate distribution be considered in current and future planning efforts.

Basketball

Based on a conversion standard of 8,795 days per year per field, the 1971 supply of ten courts provided approximately 88,000 opportunity days. By comparing available opportunity days with estimates of participation for each projection year as expressed in the Bryan-College Station recreation resource requirement table, it is apparent that the ten courts available in 1971 should be sufficient through the year 2000. Dispersion analysis of basketball facilities could not be accomplished with available data, but adequate distribution is an important consideration.

Trails Activities

Analyzing and comparing expected participation for walking, bicycling, and nature study occurring in the park and recreation areas with opportunity days provided by the current supply of trails in the Bryan-College Station Metropolitan Area indicates that approximately one mile of combined trails should have been added to the existing one mile of trail in 1970. Given the expected growth in trails activities participation, incremental additions were projected for 1 mile in 1975, 2 miles in 1990, and 5 miles in the year 2000. Overall, a total of nine miles of combined trails should be added to the existing one mile by the year 2000 to meet expected participation levels.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly administered park and recreation areas. It is likely, however, that as additional trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of additional resources required may be conservative in the long run and should be considered as minimum estimates. In addition to the expectations for increases in participation in trail and related activities at publicly administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local neighborhoods, on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, SkiingSurface Acres - Freshwater Lakes
(Boating, Boat Fishing, Skiing)

A total of forty-eight surface acres of freshwater lakes was located within the Bryan-College Station Metro Area in 1971. Because of the limited freshwater lakes available for boating and skiing, no participation was reported in the Texas Outdoor Recreation Household Demand Survey. Using participation patterns of households recreating in the urban areas, it was estimated that boating would have totaled 15,000 days, boat fishing 7,000 days, and skiing 7,000 days for a total of 29,000 days in 1970 if adequate freshwater lakes had been available. Comparing estimated participation with the opportunities provided by the surface acres existing in 1971 indicates that incremental resource requirements are expected to expand from an additional 22 acres needed in 1970, to 48 acres in 1975, 57 acres in 1980, 134 acres in 1990, and 185 acres in the year 2000. This brings the cumulative resource requirement to an additional 446 surface acres by the year 2000.

Freshwater Boat Ramps^{1/}

No publicly-administered freshwater boat lanes were reported for the Bryan-College Station Metro Area in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using freshwater boat ramp facilities to gain access to the water if ramps were available, it was calculated that one boat ramp was needed in 1970. Projected increases in freshwater boat fishing, skiing, and boating participation are expected to require no additional freshwater boat ramps in 1975, one in 1980, one in 1990, and two in the year 2000, bringing the cumulative resource requirement to five ramps in 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, the provision of freshwater surface acres and freshwater boat ramps required should be planned as joint projects, even though, in some cases, this may require the construction of boat ramps prior to the years reflected in the boat ramp resource requirement projections.

Summary of Facilities Requirements

In 1971, the Bryan-College Station Metro reported at least some facilities for all designated types except freshwater boat ramps. Resource requirements for boat ramps were indicated for 1970, 1980, 1990, and the year 2000.

To augment existing facilities, resource requirements were indicated in nearly all of the planning horizon years for for public swimming pools, designated trail facilities, and surface acres of freshwater lakes. Additional football/soccer fields were estimated to be required in 1970 and 1990; additional holes of golf in 1980, 1990, and 2000; and additional tennis courts beginning in the year 2000. Existing facilities for child's play, baseball/softball, picnicking, and basketball were estimated to be adequate to accommodate demand for the metro as a whole, through the year 2000.

A dispersion analysis was possible only for a few facility types. Swimming facilities apparently were needed in College Station, particularly in the rapidly expanding areas on the east side of College Station. Playground facilities were well dispersed through the metro. The southern portion of College Station had few picnic tables. The existing public golf course was located centrally between Bryan and College Station; consequently, any additional courses should be considered perhaps for the northern portion of Bryan and the southern and eastern portions of College Station. In the provision of additional facilities for all types of public outdoor recreation activities, consideration should be given to the growth areas and the various income/ethnic subsections.

^{1/} In calculating freshwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	151 ^{1/}	180		29	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	99	635		536	0 acres	0 acres
	Baseball/Softball	36	207		171	0 fields	0 fields
	Picnicking	46	167		121	0 tables	0 tables
	Football/Soccer	54	7	47		7 fields	7 fields
	Golf	38	73		35	0 holes	0 holes
	Tennis	14	19		5	0 courts, dbl.	0 courts, dbl.
	Basketball	9	88		79	0 courts, full	0 courts, full
1970	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	29	20	9		22 surface acres	22 surface acres
	Boating, Boat Fishing, Skiing FW . . .	23	0	23		1 ramp ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	13 ^{4/}				1 mile	1 mile
	Bicycling	* ^{4/}				<1 mile	<1 mile
	Nature Study	2 ^{4/}				<1 mile	<1 mile
	Combined Walking, Bicycling, Nature Study	15 ^{4/}	8	7		1 mile	1 mile
	ACTIVITY						
	Swimming (Pools)	213 ^{1/}	180	33		220 square yards ^{2/}	220 square yards ^{2/}
	Child's Play (Playgrounds)	141	635		494	0 acres	0 acres
	Baseball/Softball	48	207		159	0 fields	0 fields
	Picnicking	51	167		116	0 tables	0 tables
	Football/Soccer	55	7	48		7 fields	0 fields
	Golf	55	73		18	0 holes	0 holes
	Tennis	16	19		3	0 courts, dbl.	0 courts, dbl.
	Basketball	10	88		78	0 courts, full	0 courts, full
1975	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	49	20	29		70 surface acres	48 surface acres
	Boating, Boat Fishing, Skiing FW . . .	36	0	36		1 ramp ^{3/}	0 ramps ^{3/}
	Trails Activities:						
	Walking	14 ^{4/}				1 mile	0 miles
	Bicycling	1 ^{4/}				<1 mile	0 miles
	Nature Study	6 ^{4/}				1 mile	1 mile
	Combined Walking, Bicycling, Nature Study	21 ^{4/}	8	13		2 miles	1 mile

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	298 ^{1/}	180	118		787 square yards ^{2/}	567 square yards ^{2/}
	Child's Play (Playgrounds)	194	635		441	0 acres	0 acres
	Baseball/Softball.	62	207		145	0 fields	0 fields
	Picnicking	56	167		111	0 tables	0 tables
	Football/Soccer.	58	7	51		7 fields	0 fields
	Golf	77	73	4		1 hole	1 hole
	Tennis	17	19		2	0 courts, dbl.	0 courts, dbl.
	Basketball	11	88		77	0 courts, full	0 courts, full
1980	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	73	20	53		127 surface acres	57 surface acres
	Boating, Boat Fishing, Skiing FW . . .	53	0	53		2 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking.	16 ^{4/}				1 mile	0 miles
	Bicycling.	2 ^{4/}				<1 mile	0 miles
	Nature Study	11 ^{4/}				1 mile	0 miles
	Combined Walking, Bicycling, Nature Study.	29 ^{4/}	8	21		2 miles	0 miles
	<u>ACTIVITY</u>						
	Swimming (Pools)	530 ^{1/}	180	350		2,333 square yards ^{2/}	1,546 square yards ^{2/}
	Child's Play (Playgrounds)	338	635		297	0 acres	0 acres
	Baseball/Softball.	96	207		111	0 fields	0 fields
	Picnicking	67	167		100	0 tables	0 tables
	Football/Soccer.	62	7	55		8 fields	1 field
	Golf	138	73	65		16 holes	15 holes
	Tennis	20	19	1		<1 court, dbl.	<1 court, dbl.
	Basketball	13	88		75	0 courts, full	0 courts, full
1990	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	129	20	109		261 surface acres	134 surface acres
	Boating, Boat Fishing, Skiing FW . . .	92	0	92		3 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking.	18 ^{4/}				2 miles	1 mile
	Bicycling.	4 ^{4/}				<1 mile	0 miles
	Nature Study	23 ^{4/}				2 miles	1 mile
	Combined Walking, Bicycling, Nature Study.	45 ^{4/}	8	37		4 miles	2 miles

YEAR	ACTIVITY	TOTAL	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		PARTICIPATION (000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE
	Swimming (Pools)	885 ^{1/}	180	705		4,700 square yards ^{2/}	2,367 square yards ^{2/}
	Child's Play (Playgrounds)	562	635		73	0 acres	0 acres
	Baseball/Softball	144	207		63	0 fields	0 fields
	Picnicking	80	167		87	0 tables	0 tables
	Football/Soccer	66	7	59		8 fields	0 fields
	Golf	235	73	162		40 holes	24 holes
	Tennis	24	19	5		2 courts, dbl.	2 courts, dbl.
	Basketball	15	88		73	0 courts, full	0 courts, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	206	20	186		446 surface acres	185 surface acres
	Boating, Boat Fishing, Skiing FW . . .	145	0	145		5 ramps ^{3/}	2 ramps ^{3/}
	Trails Activities:						
	Walking	39 ^{4/}				4 miles	2 miles
	Bicycling	6 ^{4/}				1 mile	1 mile
	Nature Study	39 ^{4/}				4 miles	2 miles
	Combined Walking, Bicycling, Nature Study	84 ^{4/}	8	76		9 miles	5 miles

Note: Asterisks indicate that projected annual activity days were less than 500.
^{1/} Includes only swimming participation occurring in swimming pools, 94 percent of the total in urban areas.
^{2/} Designated freshwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.
^{3/} Assumes 2.0 lanes per ramp.
^{4/} Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

The Austin Metropolitan Area consists of the city of Austin and the towns of Rollingwood, Sunset Valley, and Westlake Hills. Austin, the county seat of Travis County, was named for Stephen F. Austin, the "Father of Texas," and was selected as the site of the Capitol of Texas in 1839. The headquarters of most State agencies are located there as well as numerous Federal agency offices. This metropolitan area is the home of many industries which produce such diverse products as electronic equipment, furniture, plastics, metals, and boats. It is also the site of many public and private research firms. The Austin branch of the University of Texas contributes significantly to the economy and culture of the area. Other colleges include Austin Presbyterian Theological Seminary, Central Texas College, Concordia Lutheran College, Episcopal Theological Seminary of the Southwest, Huston-Tillotson College and St. Edwards' University. The Governor's Mansion, French Legation, O. Henry Home, LBJ Library, Elizabeth Ney Museum, and Texas Memorial Museum are only a few of the many sites of cultural and historical interest in this metropolitan area. Located just to the east of the Austin Metropolitan Area is Bergstrom Air Force Base. Annual events in the area include the Austin Aqua Festival (August), Central Texas Boat & Travel Show (January), Austin Livestock Show and Rodeo (March), and the Texas Relays (April).

POPULATION

1970 Metro Area Population: 254,368

Change 1960-70: +35%

Race Composition

White 87% ^{1/}

Negro 12%

Other 1%

Age Composition (years):

13 or less 25%

14 - 20 16%

21 - 44 36%

45 - 64 16%

65 and over 7%

ECONOMY

Education

Government

Manufacturing

Tourism

^{1/} Includes persons of Mexican and/or Spanish descent.

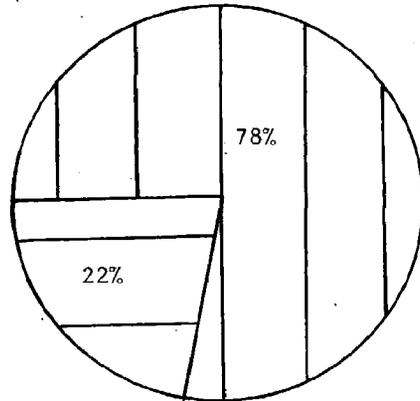
REGION 23

CITY SIZE: METRO

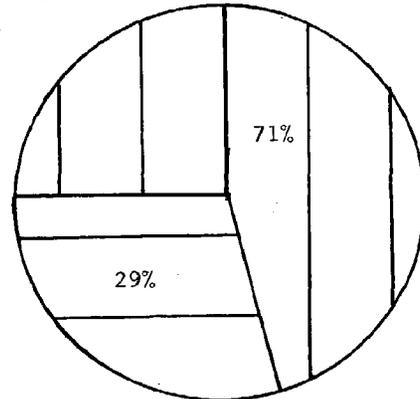
PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

REGION
23
METRO



STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 23 METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	1,433	1,307
Undeveloped Land	402	536
Total Land	1,835	1,843
Water Within or Adjacent	525	1,006
Total Land and Water	2,360	2,849

The Austin Metro Area has a total of 1,835 acres of land set aside as park and recreation areas. In addition, 525 surface acres of water either within or adjacent to these parks were reported.

Of the total land acreage, 1,433 acres are developed with facilities, leaving 402 acres available for future development. With 78 percent of the land acreage currently developed, the Area is above the Statewide Metro average of 71 percent.

PARKS AND ACREAGE BY TYPE OF PARK

	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	7.000	42.000	15.000	5.000	69.000	72.000
Parks Per Thousand	.028	.165	.059	.020	.271	.267
People Per Park	36,338.000	6,056.000	16,958.000	50,874.000	3,686.000	3,754.000
.....						
Land Acres	688.000	251.000	497.000	399.000	1,835.000	1,843.000
Acres Per Thousand	2.705	.987	1.954	1.569	7.214	6.864
People Per Acre	370.000	1,013.000	512.000	638.000	139.000	146.000

Almost two-thirds of the 69 parks in the Austin Metro Area are Community Parks. Fifteen Specialty Parks were reported, while the remaining twelve parks are divided almost evenly between the District and Open Land Park categories. The acreage figures show that 688 acres, or 37 percent of the total land acreage, are in District Parks, followed by Specialty Parks with 497 acres. The five Open Land Parks average about 80 acres each, while the 42 Community Parks average about 6 acres each. The dispersion of the four types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the total population of the Metro Area, .271 parks per 1,000 and 7.214 acres per 1,000 population exist.

Another way to present this data is that 3,686 people share each park while 139 people must share each acre of park land.

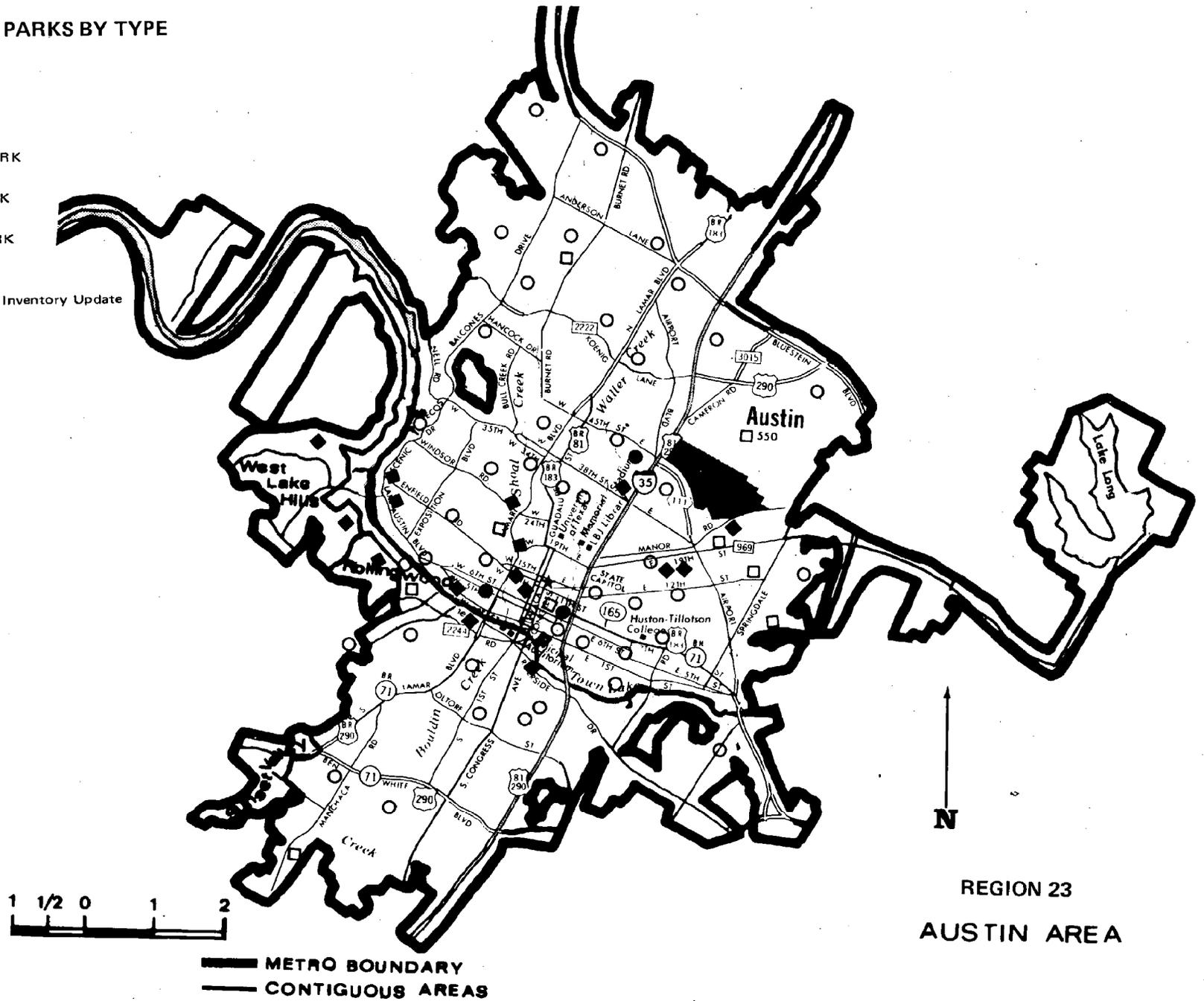
With .271 parks per 1,000, the Austin Metro Area ranks just slightly above the Statewide Metro average. The 7.214 acres per 1,000 also gives the area a figure just above the Statewide Metro average for acres per 1,000.

DISPERSION OF PARKS BY TYPE

URBAN PARKS

- DISTRICT PARK
- COMMUNITY PARK
- ◆ SPECIALTY PARK
- OPEN-LAND PARK

Source: 1971 Municipal Inventory Update



REGION 23
AUSTIN AREA

PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 23 METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	7	38	6	51	4,988	.201	.150
Tennis Courts.....	4	28	14	46	5,530	.181	.142
Basketball Courts.....	2	15	0	17	14,963	.067	.071
Baseball/Softball Fields.....	11	44	6	61	4,170	.240	.186
Football/Soccer Fields.....	2	0	1	3	84,789	.012	.032
Picnicking:							
Parks.....	7	19	0	26	9,783	.102	.124
Tables.....	392	160	0	552	461	2.173	1.230
Playground:							
Parks.....	7	42	0	49	5,191	.193	.170
Acres Developed.....	25	50	0	75	3,392	.295	.258
Swimming:							
Parks.....	7	20	0	27	9,421	.106	.050
Pools (Sq. Yd.).....	15,278	8,309	0	23,587	11	92.862	25.950
Designated Fresh Water (Sq. Yd.)...	0	0	0	0	---	---	52.242
Boating:							
Parks.....	1	0	2	3	84,789	.012	.006
Ramp Lanes - Fresh Water.....	0	0	2	2	127,184	.008	.008
Camping:							
Parks.....	0	0	0	0	---	---	.002
Campsites.....	0	0	0	0	---	---	.121
Fishing:							
Parks.....	3	1	3	7	36,338	.028	.013
Pier/Barge/Marina-Fresh Water (Yd.)	0	0	0	0	---	---	.049
Golfing:							
Courses.....	0	0	3	3	84,789	.012	.005
Holes.....	0	0	45	45	5,653	.177	.100
Trails:							
Parks.....	3	1	2	6	42,395	.024	.006
Nature (Mi.).....	5.5	2	.5	8	31,796	.031	.009
Horseback (Mi.).....	0	0	0	0	---	---	.003
Bicycle (Mi.).....	5.5	2	0	7.5	33,916	.030	.007
Hiking (Mi.).....	5.5	2	.5	8	31,796	.031	.006
Total Trails (Mi.).....	5.5	2	.5	8	31,796	.031	.021

PARK AND RECREATION FACILITIES BY TYPE OF PARK

CITY SIZE: METRO

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 23 METRO	STATEWIDE AVERAGE METRO AREAS
Sport Shooting:							
Parks.....	0	0	0	0	---	---	.002
Traps.....	0	0	0	0	---	---	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	0	0	0	0	---	---	.011
Miscellaneous:							
Parks.....	1	3	2	6	42,395	.024	.038
Amphitheatre Seats.....	0	0	0	0	---	---	1.077
Botanical Gardens (Acres).....	25	0	0	25	10,175	.098	.077
Zoos (Acres).....	0	0	0	0	---	---	.051
Community/Recreation Centers.....	1	2	2	5	50,874	.020	.038

The majority of the park and recreation facilities in the Austin Metro Area are in the 42 Community Parks. All three of the golf courses are in Specialty Parks, while one of the District Parks has a botanical garden. Twenty-seven parks, principally in the Community Park category, have swimming pools totaling 23,587 square yards of area. About 65 percent of this total area, however, is in the 7 District Parks. Water surface for fishing is available at seven parks, although no specific fishing facilities were reported. A total of eight miles of trails and 5 community/recreation centers were inventoried.

Of the 69 parks, 51 have facilities for games and sports, 49 have playgrounds, 27 have swimming pools and 26 have picnicking facilities. The most common types of games and sports facilities are baseball/softball with 61 fields, followed by tennis with 46 courts, basketball with 17 courts and football/soccer with 3 fields.

Looking at selected facilities in relation to the number of potential users we find the following:

- | | |
|---|--|
| 84,789 persons for each football/soccer field | 5,530 persons for each tennis court |
| 50,874 persons for each community/recreation center | 4,170 persons for each baseball/softball field |
| 31,796 persons for each mile of trails | 3,392 persons for each acre of playground |
| 14,963 persons for each basketball court | 461 persons for each picnic table |
| 5,653 persons for each golf hole | 11 persons for each square yard of swimming pool |

The Austin Metro Area is above the Statewide Metro average for facility units per 1,000 for tennis courts, baseball/softball fields, picnic tables, playground acres, square yards of swimming pools, golf holes, trail miles, and acres of botanical gardens. The area is below the average for basketball courts, football/soccer fields, boat ramp lanes, and community/recreation centers. No designated fresh water swimming area, campsites, yards of fishing pier/berge/marina, sport shooting facilities, amphitheatre seats or zoo acreage were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

<u>ACTIVITY-FACILITY</u>	ANNUAL DAYS AVAILABLE	<u>DAYS PER THOUSAND POPULATION</u>	
		REGION 23 METRO	STATEWIDE AVERAGE METRO
Swimming (Pools) - square yards	3,538,050	13,929	3,891
Child's Play - playground acres	2,071,725	8,156	7,137
Baseball/Softball - fields	842,044	3,315	2,577
Picnicking - tables	939,504	3,699	2,093
Football/Soccer - fields	21,672	85	235
Golf - holes	182,115	717	414
Tennis - courts, double	123,924	488	384
Basketball - courts, full	149,515	589	625
 Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	1,512,179	5,953	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	26,972	106	103
 Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	67,712	267	164

The Austin Metro Area offers the most opportunity days for swimming (in pools), followed by child's play, surface acres for freshwater boating, boat fishing and skiing, and picnicking. A comparison between the opportunity days per thousand population for the Austin Metro Area and the Statewide Metro average shows that the Austin Metro Area surpasses the statewide average for nine types of facilities -- swimming pools, children's playgrounds (in acres), baseball/softball fields, picnic tables, golf courses (holes), tennis courts, surface acres for freshwater boating, boat fishing and skiing, freshwater boat ramps, and the miles of trails for the trails activities. The Austin Metro Area is below the Statewide Metro average for football/soccer and basketball.

The sixth ranking metro area, based on population, Austin ranked ninth in total participation for the year 1970. Estimates for 1970 indicate that residents and non-residents in the area spent over 7.3 million recreation days in pursuit of urban outdoor recreation opportunities available within the metro area.

Resident

Total days of participation in urban outdoor recreation activities by the residents of the Austin Metropolitan Area were estimated to be 5.9 million days in 1970. Total participation is expected to increase to 9.6 million days in 1975 and to 14.2 million days in 1980. The projections for the years 1975 and 1980 represent increases of 62.1 and 141.1 percent, respectively, over the 1970 participation level. Participation on a days per household basis will increase from 70.0 days in 1970 to 100.2 days in 1975, and to 133.4 days in 1980--increases of 43.2 and 90.5 percent over the 1970 level. Residents of the Austin Metropolitan Area are expected to participate at a rate of 54, 61, and 69 days per household below the statewide average for the other Texas metropolitan areas in 1970, 1975, and 1980, respectively. For the more distant years of 1990 and 2000, participation is expected to continue increasing, but will remain below the statewide average for all other metropolitan areas.

All activities, are projected to increase in total days of participation through the year 2000. With respect to participation on a days per household basis, two activities, picnicking and sightseeing, are expected to decrease in participation. Nature study is expected to remain relatively constant through 2000. The remaining 16 activities will increase in participation. Taking into consideration individual activities, swimming, bicycling, child's play, driving for pleasure, walking, and basketball ranked one through six, respectively, in total participation days in 1970. However, the order of popularity is anticipated to change in 1975, with bicycling ranking first followed by swimming, child's play, basketball, walking, and driving for pleasure. In 1980 bicycling is expected to be the most popular activity, with swimming second, child's play third, basketball fourth, walking fifth, and driving for pleasure sixth.

Non-Resident

When considering participation in urban outdoor recreation activities in 1970, a total of 1,376,000 days of participation, according to the estimates, was recorded by non-residents in the Austin Metropolitan Area. Compared to the 1970 level, total participation is expected to increase 12.4 percent to 1,547,000 days by 1975 and 16.9 percent to 1,609,000 days by 1980. This trend of increased participation is expected to continue through the years 1990 and 2000.

The estimates for 1970 indicate that the top six ranked activities, in order of popularity, were sightseeing, swimming, football, driving for pleasure, basketball, and picnicking, with totals of 479,000; 279,000; 136,000; 106,000; 89,000; and 76,000 days, respectively. It is anticipated that all 16 activities will increase in participation through the year 2000, and the top six ranked activities will retain their respective rankings from 1970.

CURRENT AND PROJECTED RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970				1975				1980				1990				2000			
	PART. DAYS	RANK	REG. 23 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 23 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 23 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 23 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 23 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH
Swimming	1,200	1	14.15	27.41	1,872	2	19.61	36.52	2,738	2	25.66	47.17	5,652	2	42.89	75.28	11,180	2	68.60	110.14
Child's Play	737	3	8.69	14.08	1,093	3	11.45	17.72	1,551	3	14.54	22.00	2,904	3	22.04	32.20	5,127	3	31.46	43.99
Baseball/Softball	136	12	1.60	2.78	163	12	1.71	3.19	205	12	1.92	3.59	304	11	2.31	4.41	428	11	2.63	5.22
Picnicking	347	7	4.09	5.72	377	7	3.95	5.66	419	8	3.93	5.66	508	9	3.85	5.61	616	10	3.78	5.64
Football/Soccer	58	14	.68	1.43	67	14	.70	1.42	76	15	.71	1.41	95	15	.72	1.39	121	15	.74	1.38
Golf	228	10	2.69	3.92	338	8	3.54	4.98	488	7	4.57	6.16	917	6	6.96	8.96	1,587	6	9.74	12.07
Tennis	241	9	2.84	6.06	319	9	3.34	9.21	409	9	3.83	11.49	636	8	4.83	16.07	998	8	6.12	21.46
Basketball	467	6	5.51	1.60	888	4	9.30	2.59	1,398	4	13.10	3.57	2,729	4	20.71	5.52	4,613	4	28.31	7.53
Walking	473	5	5.58	18.21	691	5	7.24	23.09	949	5	8.90	29.20	1,610	5	12.22	39.89	2,532	5	15.54	50.31
Bicycling	913	2	10.77	20.30	2,556	1	26.78	32.77	4,565	1	42.79	45.25	9,857	1	74.79	68.44	17,406	1	106.81	95.49
Nature Study	38	15	.45	.72	43	16	.45	1.67	48	16	.45	2.64	60	16	.46	4.63	74	16	.45	6.70
Fishing	152	11	1.79	1.80	179	10	1.88	1.88	210	11	1.97	1.97	281	12	2.13	2.13	376	12	2.31	2.30
Boating	75	13	.88	.88	152	13	1.59	1.60	246	10	2.31	2.31	493	10	3.74	3.74	843	9	5.17	5.17
Skating	36	16	.42	.42	59	15	.62	.62	87	14	.82	.82	161	14	1.22	1.22	264	13	1.62	1.81
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	256	8	3.02	2.25	179	10	1.88	2.34	177	13	1.66	2.50	167	13	1.27	2.70	150	14	.92	3.01
Dr. for Pleas.	547	4	6.45	13.38	592	6	6.20	13.52	666	6	6.24	13.67	844	7	6.40	13.86	1,069	7	6.56	14.10
TOTAL	5,904		70.01	120.96	9,568		100.24	158.78	14,232		133.40	199.41	27,218		206.54	286.05	47,384		290.76	386.32

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000	ACTIVITY	1970	1975	1980	1990	2000
Swimming	279	313	326	376	432	Swimming	1,479	2,185	3,064	6,028	11,612
Child's Play	22	25	26	30	34	Child's Play	759	1,118	1,577	2,934	5,161
Baseball/Softball	9	10	11	12	14	Baseball/Softball	145	173	216	316	442
Picnicking	76	85	89	102	118	Picnicking	423	462	508	610	734
Football/Soccer	136	153	160	184	211	Football/Soccer	194	220	236	279	332
Golf	11	13	13	15	18	Golf	239	351	501	932	1,605
Tennis	*	*	*	*	*	Tennis	241	319	409	636	998
Basketball	89	100	104	120	138	Basketball	556	988	1,502	2,849	4,751
Walking	33	37	38	43	50	Walking	506	728	987	1,653	2,582
Bicycling	*	*	*	*	*	Bicycling	913	2,556	4,565	9,857	17,406
Nature Study	*	*	*	*	*	Nature Study	38	43	48	60	74
Fishing	15	17	17	20	23	Fishing	167	196	227	301	399
Boating	68	77	80	92	106	Boating	143	229	326	585	949
Skating	53	60	62	71	82	Skating	89	119	149	232	346
Surfing	---	---	---	---	---	Surfing	---	---	---	---	---
Sightseeing	479	538	560	646	742	Sightseeing	735	717	737	813	892
Dr. for Pleas.	106	119	123	142	164	Dr. for Pleas.	653	711	789	986	1,233
TOTAL	1,376	1,547	1,609	1,853	2,132	TOTAL	7,280	11,115	15,841	29,071	49,516

Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the Austin Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with the current recreation opportunities^{2/} available in the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to subsections of the Austin Metro characterized by residents having similar incomes and ethnic backgrounds. Particular attention was given to those subsections expected to undergo relatively rapid population growth and physical expansion in the future.

Conclusions reached from analyzing the distribution of recreation opportunities within the metropolitan area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist.

In the discussions that follow, results of the distribution analysis of parks within subsections of the Austin Metro Area are presented. Then, estimates of current and future requirements for selected recreation facilities are presented, and are qualified by conclusions reached from the distribution analysis of recreation facilities within subsections of the metro.

PARK DISTRIBUTION ANALYSIS

In analyzing the availability and distribution of parks in the Austin Metro, several characteristics were considered: changes in population (or trends in general, 1960 to 1970), areas of the metro which were expected to exhibit relatively major expansion, and the dispersion of existing parks among the income/ethnic subsections of the metro. From these interrelated characteristics general conclusions were reached with respect to future park developments for the metro area. Population trends affected estimations of future recreation participation. Projections of population growth for Austin indicated that the 1970 metro population of 254,368 would increase to about 398,464 persons by the year 2000. In addition, information provided by urban recreation planners of the area shows that major directions of future urban expansion were expected to occur in the east, southeast, south-southwest, north, and northwest portions of the metro (as illustrated by arrows of decreasing size on the map, titled "Predominant Ethnic Background and Income Subsections).

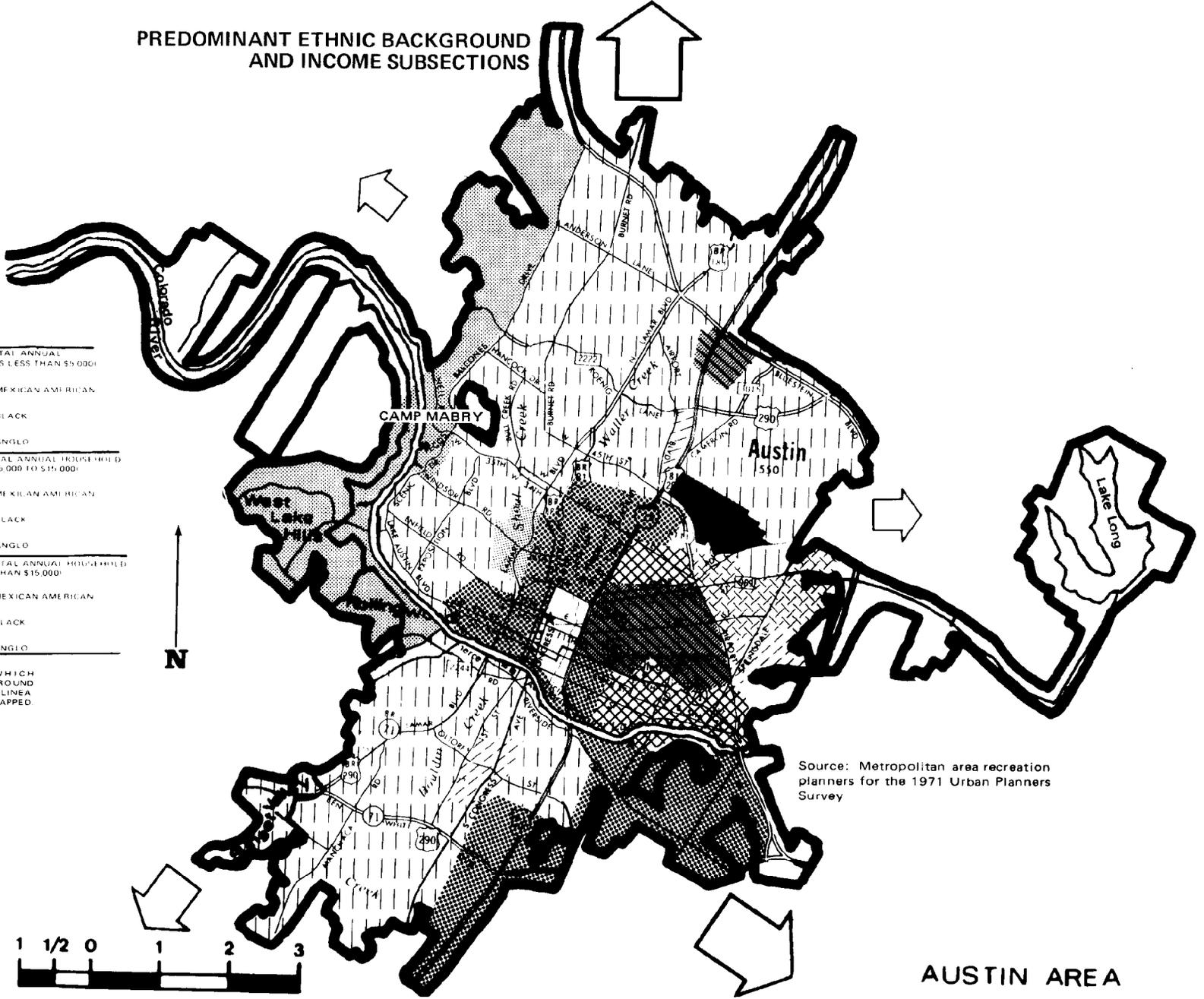
For the Austin Metropolitan Area, local metro area recreation planners delineated seventeen subsections which are indicated on the accompanying map titled "Predominant Ethnic Background and Income Subsections". The delineated subsections characterize the homogeneous residential, or demographic, patterns existing in 1971 by two major socio-economic factors - income and ethnic background. In general, there were eight low-income subsections (3 predominantly

^{1/}"Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

^{2/}"Current" recreation opportunities refers to computed figures derived from the numbers of publicly-administered facilities by type available within the metro area in 1971.

PREDOMINANT ETHNIC BACKGROUND AND INCOME SUBSECTIONS

- LOW INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS LESS THAN \$5,000)**
-  PREDOMINANTLY MEXICAN AMERICAN
 -  PREDOMINANTLY BLACK
 -  PREDOMINANTLY ANGLO
- MID INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME VARIED FROM \$5,000 TO \$15,000)**
-  PREDOMINANTLY MEXICAN AMERICAN
 -  PREDOMINANTLY BLACK
 -  PREDOMINANTLY ANGLO
- HIGH INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS GREATER THAN \$15,000)**
-  PREDOMINANTLY MEXICAN AMERICAN
 -  PREDOMINANTLY BLACK
 -  PREDOMINANTLY ANGLO
-  AREAS FOR WHICH ETHNIC BACKGROUND AND INCOME DELINEATIONS WERE NOT MAPPED



Source: Metropolitan area recreation planners for the 1971 Urban Planners Survey

**AUSTIN AREA
REGION 23**

Note: Arrows indicate major areas of expected growth.

Anglo, 2 predominantly Black, and 3 predominantly Mexican-American), six were middle-income subsections (2 Anglo, 1 Black, 3 Mexican-American), and three high-income subsections (all Anglo).

Low-income residents were mainly concentrates around the central core area and in the southeastern quadrant on both sides of the Colorado River. The majority of the metro north, west, and southwest of the State Capitol was predominantly middle and high-income Anglo. The two middle-income Anglo subsections comprise most of the north half and southwestern quadrant of the metro. The middle-income Black subsection was located in far east Austin south of East 19th Street (renamed: Martin Luther King Boulevard). The three small middle-income Mexican-American subsections were located, one in the general vicinity of the intersection of Oltorf and South Congress Avenue, one south of Koenig Lane between Airport Boulevard and Interstate Highway 35, and one in east Austin east of Springdale Road and south of the middle-income Black subsection. Two large high-income Anglo subsections were located on either side of the Colorado River in West Lake Hills and Rollingwood south of the River and northwest of Balcones Drive north of the River. The remaining small high-income subsection was in the general vicinity of North Lamar and Windsor Road.

An analysis of parks dispersion among the subsections was conducted by comparing the "Dispersion of Parks by Type" map and the "Predominant Ethnic Background and Income Subsections" map. Overall, the Austin Metropolitan Area indicated good distribution for parks with recreational facilities and a fair distribution but an apparent inadequate number of open land parks. A relatively small subsection composed of low-income Mexican-Americans located north-east of the central business district toward the municipal airport had no parks in 1971. That subsection, however, was surrounded by parks of all types which were within one mile. Parks with recreational facilities should be considered mainly in the more rapidly expanding areas and open land parks may be needed throughout the metro area where resources are available.

In addition to maintaining an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities in parks is also an important consideration. An analysis of the current and future requirements for selected recreational facilities and the current dispersion of facilities in the Austin Metro is presented in the following discussions.

FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. Then, an analysis of the dispersion of existing facilities among the predominant income/ethnic subsections and the major growth areas of the metro was conducted. Conclusions reached from the facility dispersion analysis were then used to qualify the facility requirement estimates, particularly in those cases where no additional facilities were estimated as being needed within the metropolitan area. Usually, special note is made where growth areas appeared to have limited facilities. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the Urban Volume. In the discussions that follow, resource requirements for recreational facilities are generally referred to by units of the

most important feature necessary to allow participation. For example, when a requirement is shown for swimming pools, features such as a bathhouse, cleaning and filtering system, and other support features are implied when a requirement for the major facility is shown.

Swimming

The Austin Metro had 23,587 square yards of public swimming pools in 1971. Each square yard (unit) was estimated to provide 150 days of swimming opportunity per year which resulted in an estimated 3,538,000 opportunity days. To determine if there was a surplus or deficit of opportunity, estimated participation days and estimated opportunity days were compared. For swimming there appeared to be adequate opportunity through 1980. By 1990 the metro area was estimated to require an additional 14,187 square yards of pools. Cumulative requirements were estimated at 49,180 square yards for the year 2000. Swimming facilities appeared to be adequately dispersed throughout the metro in 1971. In the provision of additional outdoor swimming facilities, consideration should be given to a balanced distribution relative to growth areas and the various income/ethnic subsections.

Child's Play

The Austin Metro in 1971 had a total of seventy-five acres of playground dispersed through forty-nine parks within the metro boundary. Multiplying the seventy-five acre units by the playground standard (each acre was calculated to provide 27,623 days of recreation opportunity per unit per year), resulted in an estimated 2,072,000 annual opportunity (potential participation) days. Annual opportunity days were then compared with the forecasted demands, as shown in the Austin resource requirements table. Playground area deficits were apparent for the planning periods, beginning in 1990. The cumulative requirement for 1990 was 31 acres with an additional 81 acres needed for 2000, bringing the cumulative requirement to 112 acres. Since the existing playgrounds were relatively well distributed among the subsections in 1971, additional playgrounds should generally be considered for growth areas in the future.

Baseball/Softball

With an existing sixty-one baseball/softball fields providing approximately 842,000 total opportunity days (the facility standard utilized was 13,804 opportunity days provided per field each year), the Austin Metropolitan Area appeared to have a sufficient quantity of fields to meet estimated demand through the year 2000. Although a dispersion analysis was not possible from the available data, in the provision of any additional fields consideration should be given to a balanced distribution relative to growth areas and the various income/ethnic subsections.

Picnicking

There were 552 public picnic tables in the Austin Metro in 1971. At 1,702 days of opportunity per table per year (standard) the existing tables provided approximately 940,000 days annually. The existing number of tables was expected to provide adequate overall opportunity through the year 2000. The distribution analysis of picnicking

facilities indicated good dispersion among the existing subsections. In providing additional tables, consideration should be given to the major growth areas.

Football/Soccer

Each of the three football/soccer fields in the Austin Metro Area provided about 7,224 days of opportunity annually. In total this amounted to approximately 22,000 opportunity days in 1971. An additional 24 fields were needed for 1970 with additions of 3, 3, 6, and 7 fields needed in the years 1975, 1980, 1990, and 2000, respectively. Dispersion analysis could not be performed from available data; however, adequate dispersion with attention given to growth areas should be considered in any future expansions of facilities.

Golf

The three publicly-administered courses in Austin provided forty-five holes of golf in 1971. Using the urban golf standard, each golf hole was calculated to be capable of providing 4,047 days of recreation opportunity annually. In total, this amounted to about 182,000 days of opportunity in 1971. Comparing expected participation for the projection years with the available opportunity days shows that the metro would have required an additional fourteen holes (the equivalent of approximately one eighteen-hole course) in 1970. Incrementally, additions of 28, 37, 106, and 167 holes would be needed in the years 1975, 1980, 1990, and 2000, respectively, to meet expected increases in golfing participation. As a general rule, golf courses are constructed in multiples of nine holes; therefore, by the year 2000 it was estimated that the Austin Metro Area will need slightly over thirty-nine additional nine-hole courses (352 holes), or nineteen eighteen-hole courses and one nine-hole course, or some appropriate combination which considers local resources. Additional courses should be developed with attention to needs in the north and south portions of the metro.

Tennis

The 124,000 opportunity days provided by the forty-six public tennis courts available in 1971 (each court can make available about 2,694 days of opportunity per year) result in an estimated forty-three courts being required in 1970. An additional 29 courts will be needed in 1975 with 34, 84, and 134 courts needed for the years 1980, 1990, and 2000, respectively. Dispersion analysis indicates that additional facilities should be considered for the northern portion of the metro with attention given to growth areas.

Basketball

According to the urban basketball standard, each of the seventeen basketball courts in the Austin Metro Area should provide approximately 8,795 days of opportunity per year, for a total of about 150,000 opportunity days in 1970. By comparing available opportunity days with estimated participation days in each projection year as expressed in the Austin recreation resource requirement table, it is apparent that 46 additional courts were required for 1970, with

49, 59, 153, and 216 additional courts needed for the years 1975, 1980, 1990, and 2000, respectively. Dispersion analysis of basketball facilities could not be accomplished with available data, but balanced distribution relative to growth areas and the various income/ethnic subsections should be an important consideration in the provision of additional basketball courts.

Trails Activities

Analyzing and comparing expected participation for walking, bicycling, and nature study occurring in the park and recreation areas with opportunity days provided by the current supply of trails in the Austin Metropolitan Area indicates that approximately four miles of combined trails should have been added to the existing eight miles of trail by 1970. (Some of these eight miles were multiple use.) Given the expected participation growth in the trails activities, incremental additions were projected for 10 miles in 1975, 13 miles in 1980, 33 miles in 1990, and 48 miles in the year 2000. Overall, a total of 108 miles of combined trails should be added to the existing eight miles by the year 2000 to meet expected participation levels.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly-administered park and recreation areas. It is likely, however, that as additional trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of additional resources required may be conservative in the long run and should be considered as minimum estimates. In addition to the expectations for increases in participation in trail and related activities at publicly-administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local neighborhoods, on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, Skiing

Surface Acres - Freshwater Lakes (Boating, Boat Fishing, Skiing)

A total of 3,625 surface acres of freshwater lakes was located within the Austin Metropolitan Area of Region 23 in 1971. Using participation patterns of households recreating in the urban areas, it was estimated that boating would have totaled 143,000 days, boat fishing 35,000 days, and skiing 89,000 days for a total of 267,000 days in 1970. Comparing estimated participation with the opportunities provided by the surface acres existing in 1971 indicates that existing freshwater lakes will be adequate through the year 2000 if these lakes are available for water-related activities.

Freshwater Boat Ramps^{1/}

Two publicly-administered freshwater boat lanes were reported for the Austin Metro Area in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using freshwater boat ramp facilities to gain access to the water if sufficient ramps were available, it was calculated that six additional boat ramps were needed in 1970. Projected increases in freshwater boat fishing, skiing, and boating participation are expected to require four additional freshwater boat ramps in 1975, three in 1980, nine in 1990, and thirteen in the year 2000, bringing the cumulative resource requirement to thirty-five ramps in 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, the provision of freshwater boat ramps required could be constructed on existing freshwater lakes if the lakes are available for water-related activities.

Summary of Facilities Requirements

Although the Austin Metro had at least some facilities for all designated types, resource requirements were indicated in each planning horizon year for football fields, golf courses, tennis courts, basketball courts, designated trails, and freshwater boat ramps. Also, additional facilities for swimming and child's play were indicated, beginning in 1990. Existing facilities for baseball/softball, picnicking, and acres of freshwater lakes were estimated to be adequate to accommodate demand for the metro as a whole, through the year 2000.

A dispersion analysis was possible only for a few facility types. A reasonably good distribution was apparent for swimming pools, playgrounds, and picnic tables. Additional golf courses were needed in most areas of the metro, but were needed especially in extreme northern and extreme southern Austin. In the provision of additional facilities for all types of outdoor recreation activities, consideration should be given to an equitable distribution relative to growth areas and the various income/ethnic subsections.

^{1/} In calculating freshwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	1,390 ^{1/}	3,538		2,148	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	759	2,072		1,313	0 acres	0 acres
	Baseball/Softball	145	842		697	0 fields	0 fields
	Picnicking	423	940		517	0 tables	0 tables
	Football/Soccer	194	22	172		24 fields	24 fields
	Golf	239	182	57		14 holes	14 holes
	Tennis	241	124	117		43 courts, dbl.	43 courts, dbl.
	Basketball	556	150	406		46 courts, full	46 courts, full
1970	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	267	1,512		1,245	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	198	27	171		6 ramps ^{3/}	6 ramps ^{3/}
	Trails Activities:						
	Walking	53 ^{4/}				2 miles	2 miles
	Bicycling	37 ^{4/}				2 miles	2 miles
	Nature Study	8 ^{4/}				<1 mile	<1 mile
	Combined Walking, Bicycling, Nature Study	98 ^{4/}	68	30		4 miles	4 miles
<hr/>							
	<u>ACTIVITY</u>						
	Swimming (Pools)	2,054 ^{1/}	3,538		1,484	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	1,118	2,072		954	0 acres	0 acres
	Baseball/Softball	173	842		669	0 fields	0 fields
	Picnicking	462	940		478	0 tables	0 tables
	Football/Soccer	220	22	198		27 fields	3 fields
	Golf	351	182	169		42 holes	28 holes
	Tennis	319	124	195		72 courts, dbl.	29 courts, dbl.
	Basketball	988	150	838		95 courts, full	49 courts, full
1975	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	389	1,512		1,123	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	284	27	257		10 ramps ^{3/}	4 ramps ^{3/}
	Trails Activities:						
	Walking	76 ^{4/}				5 miles	3 miles
	Bicycling	102 ^{4/}				8 miles	6 miles
	Nature Study	9 ^{4/}				1 mile	1 mile
	Combined Walking, Bicycling, Nature Study	187 ^{4/}	68	119		14 miles	10 miles

YEAR	ACTIVITY	TOTAL	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		PARTICIPATION (000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS) DEFICIT	(000'S OF ACTIVITY DAYS) SURPLUS	RESOURCES REQUIRED	
						CUMULATIVE	INCREMENTAL
	Swimming (Pools)	2,880 ^{1/}	3,538		658	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	1,577	2,072		495	0 acres	0 acres
	Baseball/Softball	216	842		626	0 fields	0 fields
	Picnicking	508	940		432	0 tables	0 tables
	Football/Soccer	236	22	214		30 fields	3 fields
	Golf	501	182	319		79 holes	37 holes
	Tennis	409	124	285		106 courts, dbl.	34 courts, dbl.
	Basketball	1,502	150	1,352		154 courts, full	59 courts, full
1980	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW	523	1,512		989	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW	378	27	351		13 ramps ^{3/}	3 ramps ^{3/}
	Trails Activities:						
	Walking	104 ^{4/}				9 miles	4 miles
	Bicycling	183 ^{4/}				17 miles	9 miles
	Nature Study	10 ^{4/}				1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	297 ^{4/}	68	229		27 miles	13 miles
	Swimming (Pools)	5,666 ^{1/}	3,538	2,128		14,187 square yards ^{2/}	14,187 square yards ^{2/}
	Child's Play (Playgrounds)	2,934	2,072	862		31 acres	31 acres
	Baseball/Softball	316	842		526	0 fields	0 fields
	Picnicking	610	940		330	0 tables	0 tables
	Football/Soccer	279	22	257		36 fields	6 fields
	Golf	932	182	750		185 holes	106 holes
	Tennis	636	124	512		190 courts, dbl.	84 courts, dbl.
	Basketball	2,849	150	2,699		307 courts, full	153 courts, full
1990	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW	881	1,512		631	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW	626	27	599		22 ramps ^{3/}	9 ramps ^{3/}
	Trails Activities:						
	Walking	174 ^{4/}				18 miles	9 miles
	Bicycling	394 ^{4/}				41 miles	24 miles
	Nature Study	12 ^{4/}				1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	580 ^{4/}	68	512		60 miles	33 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE
	Swimming (Pools)	10,915 ^{1/}	3,538	7,377		49,180 square yards ^{2/}	34,993 square yards ^{2/}
	Child's Play (Playgrounds)	5,161	2,072	3,089		112 acres	81 acres
	Baseball/Softball	442	842		400	0 fields	0 fields
	Picnicking	734	940		206	0 tables	0 tables
	Football/Soccer	332	22	310		43 fields	7 fields
	Golf	1,605	182	1,423		352 holes	167 holes
	Tennis	998	124	874		324 courts, dbl.	134 courts, dbl.
	Basketball	4,751	150	4,601		523 courts, full	216 courts, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	1,379	1,512		133	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	973	27	946		35 ramps ^{3/}	13 ramps ^{3/}
	Trails Activities:						
	Walking	271 ^{4/}				30 miles	12 miles
	Bicycling	696 ^{4/}				76 miles	35 miles
	Nature Study	15 ^{4/}				2 miles	1 mile
	Combined Walking, Bicycling, Nature Study	982 ^{4/}	0	280		108 miles	48 miles

1/ Includes only swimming participation occurring in swimming pools, 94 percent of the total in urban areas.
 2/ Designated freshwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.
 3/ Assumes 2.0 lanes per ramp.
 4/ Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

The Houston Metropolitan Area is comprised of Houston, Pasadena, Bellaire, West University Place, Deer Park, South Houston, Galena Park, Jacinto City, La Porte, Nassau Bay, Bunker Hill Village, Hunters Creek Village, Seabrook, Highlands, Hedwig Village, Spring Valley, Piney Point Village and Lomax Village.

The Houston Metropolitan Area's beginning as a riverboat landing to Buffalo Bayou in 1836 gave little hint of the area's future growth. The metropolitan area is now the largest in Texas, is the nation's third largest seaport, and is the home of the National Aeronautics and Space Administration's (NASA) Manned Spacecraft Center.

Places of interest are many. The Aline McAshan Botanical Hall and Arboretum promotes the study of conservation and field botany for children, and the study of plant-animal relationships for adults. Allen's Landing Park and Old Market Square are part of the general area that became an early center of commerce and industry. It then fell into disrepair until recently when many of the old buildings were restored and devoted to dining and entertainment. The Astrodome is a \$100 million entertainment complex that includes the Astrodome, or the Harris County Domed Stadium as it is officially called; Astrohall, one of the world's largest exhibition centers; and Astroworld, a theme park with rides, shows, and attractions for the entire family. An 18-story building would fit inside the Astrodome, the world's largest air-conditioned area. This stadium can accommodate almost any type of entertainment or sporting event. The Manned Spacecraft Center, where the astronauts train for the man-in-space effort of the National Aeronautics and Space Administration, holds the Lunar Receiving Laboratory to which the men return for quarantine and debriefing following moon flights. The Visitor Orientation Center has displays of interest to the public. The Museum of Fine Arts houses the metropolitan area's finest collection of art objects, paintings, and sculpture. A special Junior Gallery features changing exhibits of appeal to youngsters. The Weatherby Arms Museum features weapons from the Dark Ages to the present, armored wax figures, mounted knights, and a torture chamber.

The 50-mile long Houston Ship Channel connects the Port of Houston to the Gulf of Mexico. The World Trade Center Building is the hub of the metro's international commerce and the location of many foreign consuls.

Sam Houston Historical Park is a project of the Harris County Heritage Society and features restored historic buildings depicting life in early Houston.

1/ Due to lack of information for some suburbs in the metropolitan area, data for the entire county was used from the 1970 census.

2/ Includes persons of Mexican and/or Spanish descent.

POPULATION

1970 Metro Area Population: 1,437,972

Change 1960-70: +33%

Race Composition 1/

White 79% 2/

Negro 20%

Other 1%

Age Composition (years): 1/

13 or less 29%

14 - 20 13%

21 - 44 34%

45 - 64 18%

65 and over 6%

ECONOMY

Agribusiness

Banking

Distribution

Manufacturing

Petroleum

REGION 25 - Continued

The Texas Medical Center is an immense complex of hospitals, medical schools, and research institutions. Units operating at the center include Hermann Hospital, Baylor University College of Medicine, Methodist Hospital, Shriners' Hospital for Crippled Children, Texas Children's Hospital, St. Luke's Episcopal Hospital, Ben Taub General Hospital, the University of Texas at Houston composed of M. D. Anderson Hospital and Tumor Institute, the Dental Branch including the Dental Science Institute, and the School of Public Health and Graduate School of Bio-Medical Sciences among many other institutions.

The metropolitan area is the home of the Houston Oilers, a major league football team, and the Astros, a major league baseball team. The Oilers, the Astros, and the University of Houston play their home games in the Astrodome.

Educational facilities in the Houston Metropolitan Area are varied. Houston Baptist College is a coeducational Southern Baptist institution. Rice University, one of the nation's great privately endowed institutions, is located in Houston. The Sacred Heart Dominican College is a Catholic college for women, coeducational in some departments. The South Texas College of Law and South Texas Junior College are a privately operated law school and junior college, both maintained in conjunction with the Houston YMCA. Texas Southern University, now part of the State educational system, was formerly operated with private funds as Houston College for Negroes. The University of Houston is one of the largest in the State educational system. The University of Saint Thomas is a coeducational Catholic institution.

Annual events in the Houston Metropolitan Area reflect both its past and present. These include the International Boat, Sport, and Travel Show (January), the U. S. Indoor Motorcycle Championships, held in the Astrodome (February), the Houston Livestock Show and Rodeo (February), the National Outdoor and Sportsman Show (March), the Fine Arts Fair (April), Texas Independence Day Observance and Review of the Texas Navy (April), the International Festival and Sidewalk Art Show (October), the International Automobile Show (November-December), the Astro-Bluebonnet Bowl sports events (December), and the Christmas Candlelight Tours (December).

Portuguese bullfights are held in the Sam Houston Coliseum, and the Ringling Brothers-Barnum and Bailey Circus is held in the Astrohalls.

Bellaire is the "Biggest City in Houston," and various annual events held are the world famous Pin Oak Charity Horse Show (June), the Bellaire Coin Show, the Bellaire Women's Club "Antique Fair" (October), and the Bellaire Day Flea Market and Arts and Crafts Show (July).

Pasadena is a young city, as it was practically a strawberry patch well into the 1930's, with most of its development occurring in the past 25 years. In less than 20 years, its population quadrupled, making it one of the most rapidly expanding communities in Texas.

South Houston was saved from economic ruin after the devastation of the 1915 hurricane by the opening of the Texas Fireworks Company. Ten years later, Christy Brothers Five-Ring Circus, second only to Ringling Brothers Circus,

REGION 25 - Continued

moved here. These "industries" later left, but by this time the town had reclaimed itself. South Houston maintains a small-town atmosphere within the bustling confines of the City of Houston.

Bunker Hill Village, Hedwig Village, Hunters Creek Village, Piney Point Village, Spring Valley, and West University Place, communities on Houston's west side, have all shared in the area's rapid development and growth.

Deer Park, Galena Park, Jacinto City, La Porte, and Lomax Village are suburban communities on Houston's east side.

Nassau Bay and Seabrook are communities which developed around the NASA complex. Many residents of these towns work at the Manned Spacecraft Center.

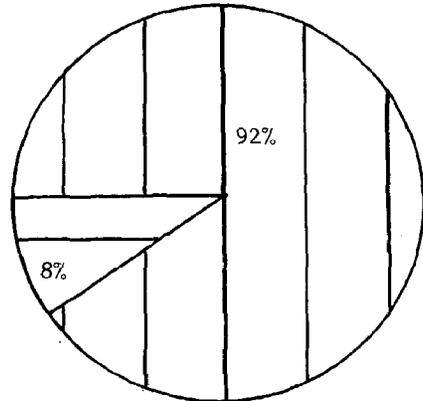
REGION 25

CITY SIZE: METRO

PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

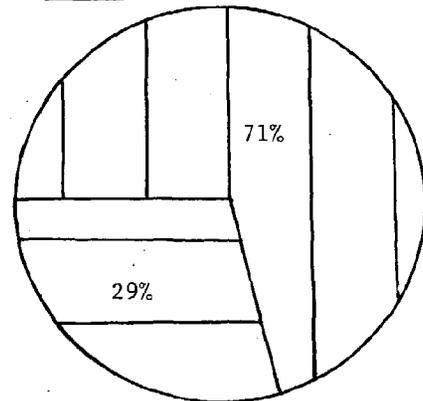
REGION
25
METRO



DEVELOPED LAND

UNDEVELOPED LAND

STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 25 METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	4,603	1,307
Undeveloped Land	387	536
Total Land	4,990	1,843
Water Within or Adjacent	518	1,006
Total Land and Water	5,508	2,849

The Houston Area has a total of 4,990 acres of land set aside as park and recreation areas. In addition, 518 surface acres of water either within or adjacent to these parks were reported.

Of the total land acreage, 4,603 acres are developed with facilities, leaving 387 acres available for future development. With 92 percent of the land acreage currently developed, the Area is well above the Statewide Metro average of 71 percent.

PARKS AND ACREAGE BY TYPE OF PARK

	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	30.000	219.000	13.000	23.000	285.000	72.000
Parks Per Thousand	.020	.152	.009	.016	.198	.267
People Per Park	47,932.000	6,566.000	110,613.000	62,521.000	5,046.000	3,754.000
.....						
Land Acres	328.000	4,591.000	27.000	44.000	4,990.000	1,843.000
Acres Per Thousand	.228	3.193	.019	.031	3.470	6.864
People Per Acre	4,384.000	313.000	53,258.000	32,681.000	288.000	146.000

Over three-fourths of the total of 285 parks in the Houston Metro Area are Community Parks. Of the remaining 66 parks, 30 are District, 23 are Open Land and 13 are Specialty Parks. The acreage figures show that all but 399 acres of the 4,990 total land acres are in Community Parks. The District Parks total 328 acres, while the Open Land Parks consist of 44 acres. The 13 Specialty Parks average only two acres each. The dispersion of the four types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the total population in the Houston Metro Area, .198 parks per 1,000 and 3.470 acres per 1,000 population exist.

Another way to present this data is that 5,046 people share each park while 288 people must share each acre of park land.

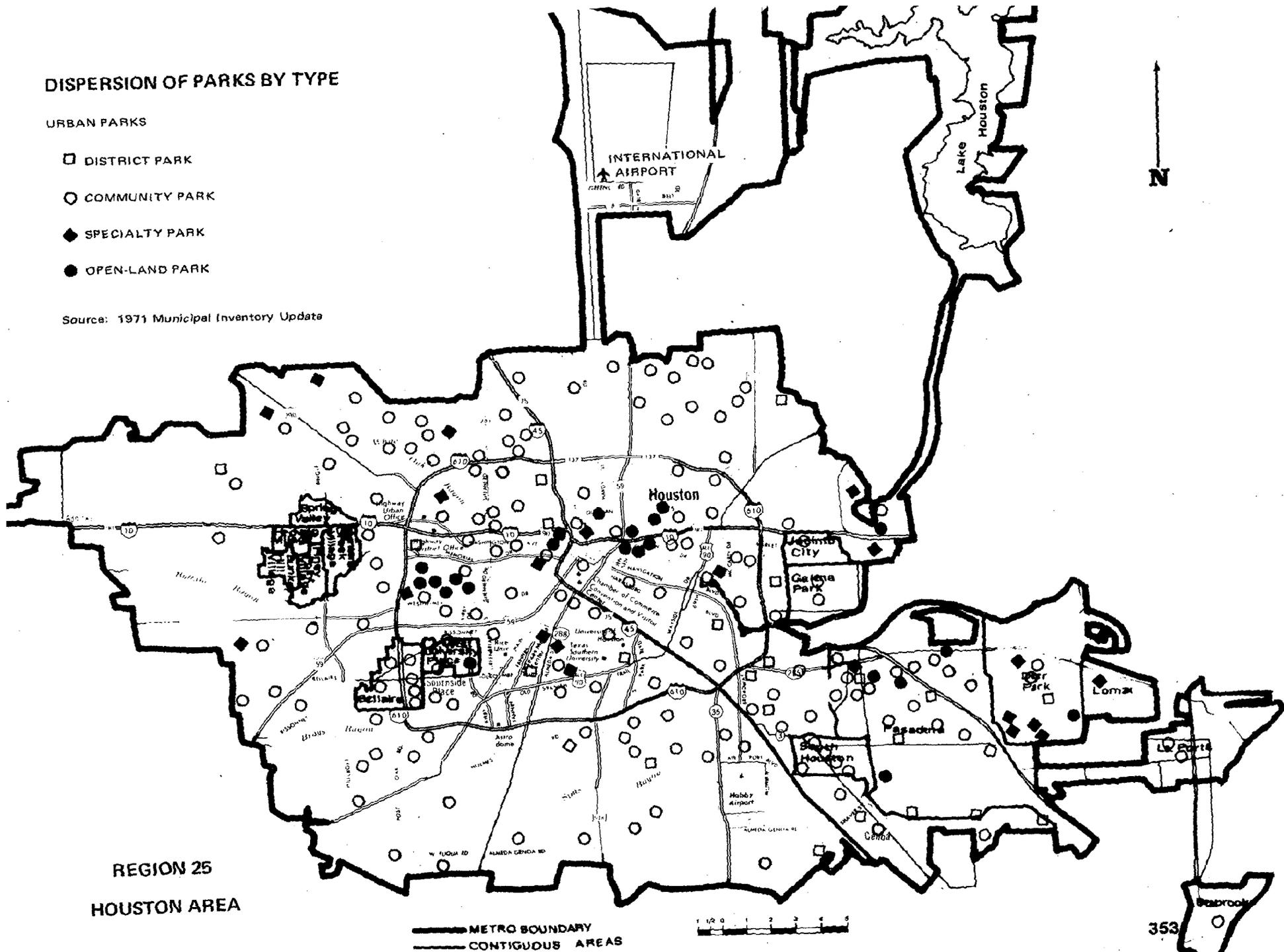
With .198 parks per 1,000, the Houston Metro Area ranks well below the Statewide Metro average. The 3.470 acres per 1,000 gives the area a figure about half that of the Statewide Metro average for acres per 1,000.

DISPERSION OF PARKS BY TYPE

URBAN PARKS

- DISTRICT PARK
- COMMUNITY PARK
- ◆ SPECIALTY PARK
- OPEN-LAND PARK

Source: 1971 Municipal Inventory Update



REGION 25
HOUSTON AREA

— METRO BOUNDARY
— CONTIGUOUS AREAS

PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 25 METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	15	150	3	168	8,559	.117	.150
Tennis Courts.....	58	79	0	137	10,496	.095	.142
Basketball Courts.....	7	113	0	120	11,983	.083	.071
Baseball/Softball Fields.....	64	215	4	283	5,081	.197	.186
Football/Soccer Fields.....	11	29	0	40	35,949	.027	.032
Picnicking:							
Parks.....	18	105	0	123	11,691	.085	.124
Tables.....	703	535	0	1,238	1,162	.861	1.230
Playground:							
Parks.....	22	176	8	206	6,980	.143	.170
Acres Developed.....	49	240	6	295	4,874	.205	.258
Swimming:							
Parks.....	10	42	0	52	27,653	.036	.050
Pools (Sq. Yd.).....	4,293	10,492	0	14,785	97	10.281	25.950
Designated Fresh Water (Sq. Yd.)..	55	0	0	55	26,145	.038	52.242
Designated Salt Water (Sq. Yd.)...	0	0	0	0	---	---	---
Boating:							
Parks.....	2	0	0	2	718,986	.001	.006
Ramp Lanes - Fresh Water.....	0	0	0	0	---	---	.008
Ramp Lanes - Salt Water.....	1	0	0	1	1,437,972	.001	---
Camping:							
Parks.....	1	0	0	1	1,437,972	.001	.002
Campsites.....	0	0	0	0	---	---	.121
Fishing:							
Parks.....	2	2	0	4	359,493	.002	.013
Pier/Barge/Marina-Fresh Water(Yd.)	0	25	0	25	57,519	.017	.049
Pier/Barge/Marina-Salt Water(Yd.)..	20	0	0	20	71,899	.014	---
Golfing:							
Courses.....	4	0	0	4	359,493	.002	.005
Holes.....	72	0	0	72	19,972	.050	.100
Trails:							
Parks.....	5	0	0	5	287,594	.003	.006
Nature (Mi.).....	4	0	0	4	359,493	.002	.009
Horseback (Mi.).....	8	0	0	8	179,747	.005	.003
Bicycle (Mi.).....	15	0	0	15	95,865	.010	.007
Hiking (Mi.).....	16	0	0	16	89,873	.011	.006
Total Trails (Mi.).....	27	0	0	27	53,258	.018	.021

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 25	STATEWIDE AVERAGE
						METRO	METRO AREAS
Sport Shooting:							
Parks.....	5	1	0	6	239,662	.004	.002
Traps.....	0	0	0	0	---	---	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	40	0	0	40	35,949	.027	.011
Miscellaneous:							
Parks.....	13	42	10	65	22,123	.045	.038
Amphitheatre Seats.....	1,750	0	0	1,750	822	1.216	1.077
Botanical Gardens (Acres).....	200	0	0	200	7,190	.139	.077
Zoos (Acres).....	43	0	3	46	31,260	.031	.051
Community/Recreation Centers.....	11	41	13	65	22,123	.045	.038

Almost all of the park and recreation facilities in the Houston Metro Area are in Community and District Parks. The Specialty Parks have facilities only for baseball/softball, playgrounds, community/recreation centers and zoo acreage. The District Parks have the only boating, golfing, and trails facilities. One of the District Parks is the only park with camping permitted although no specific camping facilities were reported. A total of 52 parks were reported with swimming facilities, including designated fresh water swimming area in the District Park category. No salt water swimming facilities were reported, however salt water boating and fishing facilities were inventoried.

Of the 285 parks, 206 have playgrounds, 168 have games and sports facilities, 123 have picnicking facilities and 52 have swimming facilities. The most common types of games and sports facilities are baseball/softball with 283 fields, followed by tennis with 137 courts, basketball with 120 courts and football/soccer with 40 fields.

Looking at selected facilities in relation to the number of potential users we find the following:

- | | |
|---|--|
| 53,258 persons for each mile of trails | 10,496 persons for each tennis court |
| 35,949 persons for each football/soccer field | 5,081 persons for each baseball/soft field |
| 22,123 persons for each community/recreation center | 4,874 persons for each acre of playground |
| 19,972 persons for each golf hole | 1,162 persons for each picnic table |
| 11,983 persons for each basketball court | 97 persons for each square yard of swimming pool |

The Metro Houston Area is above the Statewide Metro average for facility units per 1,000 only for basketball courts, baseball/softball fields, archery targets, amphitheatre seats, acres of botanical gardens and community/recreation centers, while falling below the average for tennis courts, football/soccer fields, picnic tables, playground acres, square yards of swimming pools, designated freshwater swimming area, yards of fishing pier/barge/marina-freshwater, golf holes, trail miles, and zoo acreage. No boat ramp lanes-freshwater, campsites, shooting traps or shooting targets were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

<u>ACTIVITY-FACILITY</u>	ANNUAL DAYS AVAILABLE	<u>DAYS PER THOUSAND POPULATION</u>	
		REGION 25 METRO	STATEWIDE AVERAGE METRO
Swimming (Pools) - square yards	2,217,750	1,542	3,891
Child's Play - playground acres	8,148,785	5,667	7,137
Baseball/Softball - fields	3,906,532	2,717	2,577
Picnicking - tables	2,107,076	1,465	2,093
Football/Soccer - fields	288,960	201	235
Golf - holes	291,384	203	414
Tennis - courts, double	369,078	257	384
Basketball - courts, full	1,055,400	734	625
Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	5,113,459	3,556	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	0	0	103
Boating, Boat Fishing, Skiing SW - boat ramps	10,986	8	33
Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	228,528	159	164

The Houston Metro Area offers the most annual opportunity days for child's play, followed by surface acres for freshwater boating, boat fishing and skiing, baseball/softball, swimming (in pools), and picnicking. A comparison between opportunity days per thousand population for the Houston Metro Area and the Statewide Metro average shows that Houston surpasses the statewide average for three types of facilities -- basketball courts, baseball/softball fields, and surface acres for freshwater boating, boat fishing and skiing. The Houston Metro Area is below the Statewide Metro average for tennis, football/soccer, child's play, swimming (in pools), golf, picnicking, and the trails activities, with no opportunity days shown for boat ramps.

The first ranking metro area, Houston was found to be the number two metropolitan area in total participation during 1970. Estimates for 1970 indicate that residents and non-residents in the area spent over 62.2 million recreation days in pursuit of urban outdoor recreation opportunities available within the metro area.

Resident

For the 19 activities shown, total participation in urban outdoor recreation activities by the residents of the Houston Metropolitan Area is expected to increase, as compared to the 1970 level of 59.5 million days, by 60.8 percent to 95.6 million by 1975 and by 139.7 percent to 142.5 million days by 1980. Participation on a days per household basis is projected to increase from 130.3 days in 1970 to 176.4 days in 1975 and to 227.1 days in 1980-- increases of 35.4 and 74.3 percent, respectively, over the 1970 level. Residents of the Houston Metropolitan Area are expected to participate at a rate of 4, 12, and 22 days per household above the statewide average for the other Texas metropolitan areas in 1970, 1975, and 1980, respectively. For the more distant years of 1990 and 2000, both total days of participation and days per household are expected to increase at substantial rates and will remain above the statewide average for all metropolitan areas.

Projections for specific activities indicate that each of the 19 activities will increase in total days of participation through the years 1975 and 1980. Participation on a days per household basis is expected to increase in 15 activities by 2000 while football will remain constant. The activities of saltwater fishing, saltwater skiing, and saltwater boating are expected to remain constant through the year 2000. In 1970 the six most popular activities, based on total participation, were estimated to be: swimming, bicycling, walking, child's play, driving for pleasure, and tennis, respectively. In 1975, it is anticipated that the following ranking will occur in the six most popular activities: bicycling, swimming, walking, tennis, child's play, and driving for pleasure. In 1980 bicycling will continue to be the first ranked activity, swimming number two, and walking will be third. Tennis, child's play, and driving for pleasure are expected to remain the fourth, fifth, and sixth ranked activities.

Non-Resident

Participation in urban outdoor recreation activities within the Houston Metropolitan Area by non-residents was estimated to total 2,734,000 days for the activities specified for 1970. Compared to the 1970 level, total participation is expected to increase 18.8 percent (to 3,249,000 days) by 1975, and 37.8 percent (to 3,767,000 days) by 1980. Similar increases are anticipated through the years 1990 and 2000.

Of the specified activities analyzed, the most popular activities by non-residents for 1970 were: sightseeing, with 1,220,000 days; baseball, with 343,000 days; picnicking, with 289,000 days, driving for pleasure, with 212,000 days; swimming, with 186,000 days; and football, with 152,000 days. Assuming adequate facilities are made available, participation in all activities are expected to increase at a significant rate through the year 2000; however, they will retain the same relative ranking as exhibited in 1970.

CURRENT AND PROJECTED RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

CITY SIZE: METROS

ACTIVITY	1970				1975				1980				1990				2000			
	PART. DAYS	RANK	REG. 25 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 25 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 25 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 25 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 25 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH
Swimming	14,000	1	30.67	27.41	20,980	2	38.70	36.52	29,970	2	47.75	47.17	55,210	2	69.11	75.28	92,290	2	95.14	110.14
Child's Play	6,097	4	13.36	14.08	8,609	5	15.88	17.72	11,850	5	18.88	22.00	20,440	5	25.59	32.20	32,250	5	33.24	43.99
Baseball/Softball	1,098	9	2.41	2.78	1,456	10	2.69	3.19	1,869	11	2.98	3.59	2,842	12	3.56	4.41	4,012	12	4.14	5.22
Picnicking	1,861	7	4.08	5.72	2,228	8	4.11	5.66	2,610	10	4.16	5.66	3,387	10	4.24	5.61	4,183	11	4.31	5.64
Football/Soccer	614	11	1.35	1.43	729	14	1.34	1.42	843	14	1.34	1.41	1,069	14	1.34	1.39	1,292	15	1.33	1.38
Golf	1,796	8	3.93	3.92	2,558	7	4.72	4.98	3,496	7	5.57	6.16	5,948	9	7.45	8.96	9,242	9	9.53	12.07
Tennis	5,234	6	11.47	6.06	9,744	4	17.97	9.21	13,770	4	21.94	11.49	22,650	4	28.35	16.07	34,880	4	35.96	21.46
Basketball	469	13	1.03	1.60	1,440	11	2.66	2.59	2,691	9	4.29	3.57	6,029	8	7.55	5.52	10,484	8	10.81	7.53
Walking	7,520	3	16.47	18.21	11,991	3	22.12	23.09	20,917	3	33.32	29.20	40,083	3	50.17	39.89	65,018	3	67.02	50.31
Bicycling	11,762	2	25.77	20.30	23,549	1	43.44	32.77	38,362	1	61.12	45.25	77,064	1	96.46	68.44	127,870	1	131.81	95.49
Nature Study	582	12	1.27	.72	1,680	9	3.10	1.67	3,091	8	4.92	2.64	6,850	7	8.57	4.63	11,858	7	12.22	6.70
Fishing																				
Freshwater	819	10	1.79	1.80	1,019	12	1.88	1.88	1,233	13	1.96	1.97	1,706	13	2.14	2.13	2,236	13	2.30	2.30
Saltwater	269	17	.59	1.81	320	18	.59	1.79	370	18	.59	1.78	471	18	.59	1.77	572	18	.59	1.78
Boating																				
Freshwater	402	14	.88	.88	865	13	1.60	1.60	1,450	12	2.31	2.31	2,988	11	3.74	3.74	5,015	10	5.17	5.17
Saltwater	383	15	.84	.84	455	16	.84	.84	527	16	.84	.84	671	17	.84	.84	815	17	.84	.84
Skiing																				
Freshwater	191	18	.42	.42	336	17	.62	.62	514	17	.82	.82	974	15	1.22	1.22	1,571	14	1.62	1.81
Saltwater	20	19	.04	.05	23	19	.04	.04	27	19	.04	.04	34	19	.04	.04	42	19	.04	.04
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	373	16	.82	2.25	466	15	.86	2.34	569	15	.91	2.50	785	16	.98	2.70	1,012	16	1.04	3.01
Dr. for Pleas.	5,981	5	13.10	13.38	7,170	6	13.23	13.52	8,390	6	13.37	13.67	10,848	6	13.58	13.86	13,369	6	13.78	14.10
TOTAL	59,471		130.29	123.66	95,618		176.39	161.45	142,549		227.11	202.07	260,049		325.52	288.70	418,011		430.89	388.98

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000	ACTIVITY	1970	1975	1980	1990	2000
Swimming	186	221	256	340	409	Swimming	14,186	21,201	30,226	55,550	92,699
Child's Play	45	53	62	82	99	Child's Play	6,142	8,662	11,912	20,522	32,349
Baseball/Softball	343	407	472	628	755	Baseball/Softball	1,441	1,863	2,341	3,470	4,767
Picnicking	289	344	398	529	637	Picnicking	2,150	2,572	3,008	3,916	4,820
Football/Soccer	152	181	210	279	335	Football/Soccer	766	910	1,053	1,348	1,627
Golf	26	30	35	47	56	Golf	1,822	2,588	3,531	5,995	9,298
Tennis	7	8	9	12	15	Tennis	5,241	9,752	13,779	22,662	34,895
Basketball	10	12	14	19	23	Basketball	479	1,452	2,705	6,048	10,507
Walking	56	66	77	102	122	Walking	7,576	12,057	20,994	40,185	65,140
Bicycling	*	*	*	*	*	Bicycling	11,762	23,549	38,362	77,064	127,870
Nature Study	3	3	4	5	6	Nature Study	585	1,683	3,095	6,855	11,864
Fishing						Fishing					
Freshwater	23	27	32	42	50	Freshwater	842	1,046	1,265	1,748	2,286
Saltwater	92	109	126	168	202	Saltwater	361	429	496	639	774
Boating						Boating					
Freshwater	8	10	12	15	19	Freshwater	410	875	1,462	3,003	5,034
Saltwater	62	74	86	114	137	Saltwater	445	529	613	785	952
Skiing						Skiing					
Freshwater	*	*	*	*	*	Freshwater	191	336	514	974	1,571
Saltwater	*	*	*	*	*	Saltwater	20	23	27	34	42
Surfing	---	---	---	---	---	Surfing	---	---	---	---	---
Sightseeing	1,220	1,451	1,681	2,234	2,688	Sightseeing	1,593	1,917	2,250	3,019	3,700
Dr. for Pleas.	212	253	293	389	468	Dr. for Pleas.	6,193	7,423	8,683	11,237	13,837
TOTAL	2,734	3,249	3,767	5,005	6,021	TOTAL	62,205	98,867	146,316	265,054	424,032

358 Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the Houston Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with the current recreation opportunities^{2/} available in the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to subsections of the Houston Metro characterized by residents having similar incomes and ethnic backgrounds. Particular attention was given to those subsections expected to undergo relatively rapid population growth and physical expansion in the future.

Conclusions reached from analyzing the distribution of recreation opportunities within the metropolitan area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist.

In the discussions that follow, results of the distribution analysis of parks within subsections of the Houston Metro Area are presented. Then, estimates of current and future requirements for selected recreation facilities are presented, and are qualified by conclusions reached from the distribution analysis of recreation facilities within subsections of the Houston Metro.

PARK DISTRIBUTION ANALYSIS

In analyzing the availability and distribution of parks in the Houston Metro Area, several characteristics were considered: changes in population (or trends in general, 1960 to 1970), areas of the metro which were expected to exhibit relatively major expansion, and the dispersion of existing parks among the income/ethnic subsections of the metro. From these interrelated characteristics general conclusions were reached with respect to future park developments for the metro area.

Population trends affected estimations of future recreation participation. Projections of population growth for the metro indicate that the 1970 metro population of 1,437,972 will increase to nearly 3,000,000 by the year 2000. The Houston Metropolitan Area is one of the fastest growing areas in the United States, increasing at a rate which exceeds 60,000 persons per year. Information furnished by planners in 1971 indicates that directions of major urban expansion were the northwest, southwest, and north (as illustrated by arrows on the map, titled "Predominant Ethnic Background and Income Subsections"). Although this map indicates that much of the area south of the Intercontinental Airport was non-urban, urban expansion in the past few years has, in fact, already encompassed much of this area.

^{1/} "Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

^{2/} "Current" recreation opportunities refers to computed figures derived from the numbers of publicly-administered facilities by type available within the metro area in 1971.

Many ethnic and income combinations were represented within the metro boundary of the nation's fifth largest city. The "Predominant Ethnic Background and Income Subsections" map indicates approximately thirty major subsections, as delineated by planners in 1971. A very brief analysis of this map is presented, beginning with low-income subsections.

Generally, low-income neighborhoods were located in the north, northeast, and near south portions of Houston, and scattered through the southeastern contiguous urban areas. The main concentrations of low-income Mexican-Americans were found immediately east of Houston's central business district, in Jacinto City and in Galena Park. Two main areas of low-income Blacks were in the northeast quadrant, and in the south central portion of Houston. Low-income Anglos were not concentrated in any large area but were scattered through some of the southeastern contiguous urban areas, such as Pasadena, Deer Park, and LaPorte.

Middle-income subsections comprised the majority of the metro. Middle-income Anglos were concentrated in southwestern, southeastern, northern, and northeastern Houston, and in all of the southeastern contiguous urban areas, including Lomax which was virtually all middle-income Anglo. Middle-income Blacks were concentrated primarily in south central and northeastern Houston, and in parts of Bellaire, West University Place, and South Houston.

The main concentration of high-income Anglo neighborhoods was in northwest Houston, and in the contiguous urban areas of Spring Valley, Hedwig Village, Bunker Hill Village, Piney Point Village, and Hunters Creek Village. Scattered high-income subsections also were located in Bellaire, South Houston, Pasadena, and Deer Park.

The "Dispersion of Parks By Type" map shows the geographic distribution of parks in the Houston Metro in 1971. Compared with the "Predominant Ethnic Background and Income Subsection" map, parks in general appeared to be reasonably well distributed. However, there were nine small income-ethnic subsections which had no parks of any kind. Three contiguous urban areas in the northwestern part of the metro (Spring Valley, Bunker Hill Village, and Piney Point Village), all of which were high-income Anglo, had no public parks in 1971. Also, a high-income Anglo subsection on the western extremity of LaPorte did not have a public park. The only middle-income subsection which lacked a park was a Black neighborhood in southwestern Houston, south of Interstate 610. The other four subsections which lacked a public park of any type were low-income areas: an Anglo neighborhood in the far northern portion of Pasadena, an Anglo area in LaPorte, a Mexican-American neighborhood just east of Lomax, and a Black subsection in the northern part of LaPorte. This analysis would seem to suggest that the contiguous urban area of LaPorte, in the extreme southeastern part of the metro, might be an area where additional parks should be considered.

District parks, the large developed parks containing facilities for at least two major activities, tended to be clustered in that portion of the metro south of Interstate 10 and east of Highway 288. There seemed to be a general absence of district parks in west central Houston, in northwest Houston, and in north Houston, all of which were areas of rapid urban expansion. There were no specialty parks in that part of the metro south of Interstate 610, east of Highway 59, and west of Interstate 45. Open land parks were very highly clustered in central Houston, for example, immediately west and northeast of the central business district. Open land parks generally were absent in south and southwest Houston, in the far west, and in the area north of Highway 90. When resources permit, considera-

LOW INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS LESS THAN \$5,000)

-  **PREDOMINANTLY MEXICAN AMERICAN**
-  **PREDOMINANTLY BLACK**
-  **PREDOMINANTLY ANGLO**

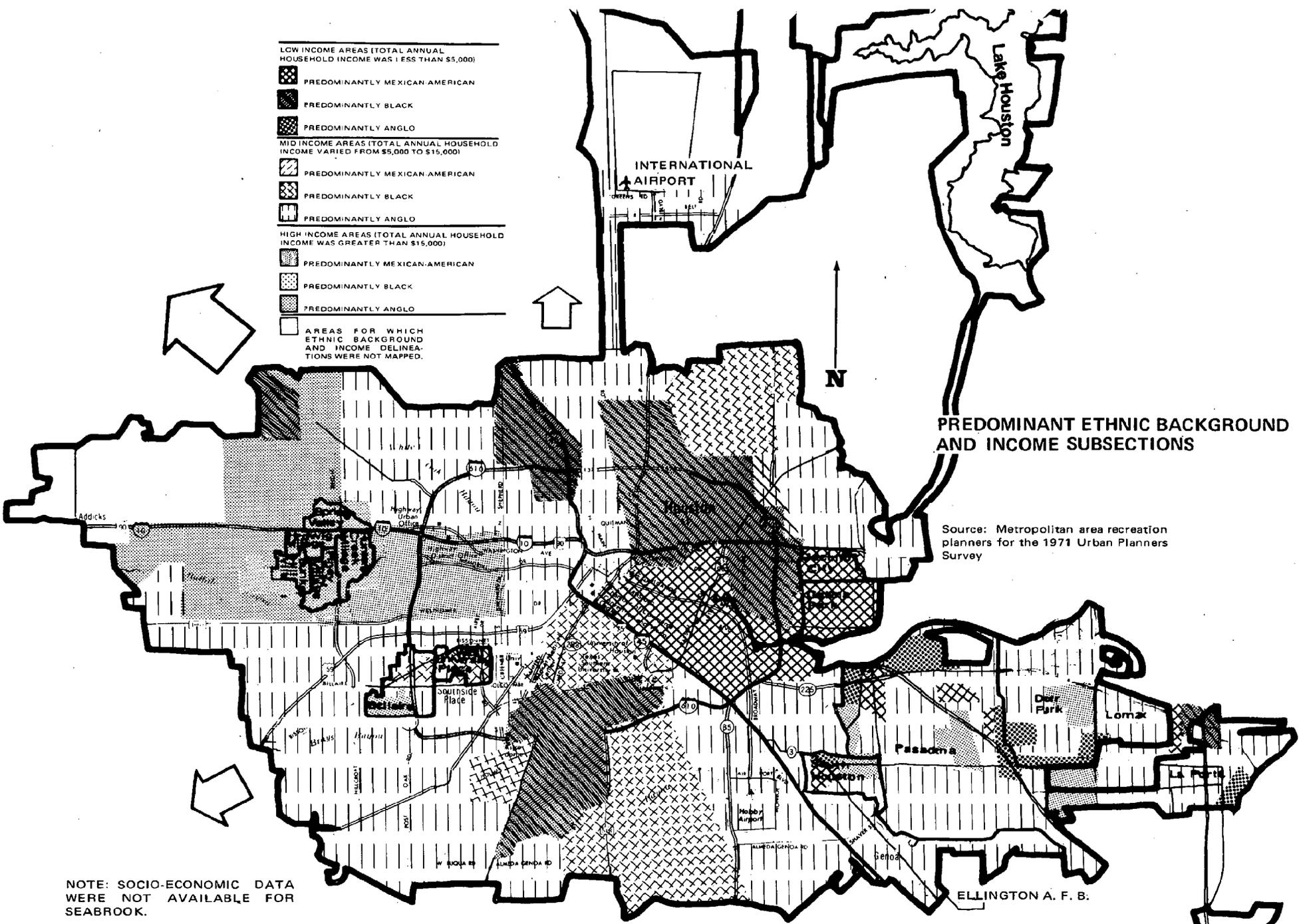
MID INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME VARIED FROM \$5,000 TO \$15,000)

-  **PREDOMINANTLY MEXICAN AMERICAN**
-  **PREDOMINANTLY BLACK**
-  **PREDOMINANTLY ANGLO**

HIGH INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS GREATER THAN \$15,000)

-  **PREDOMINANTLY MEXICAN AMERICAN**
-  **PREDOMINANTLY BLACK**
-  **PREDOMINANTLY ANGLO**

 **AREAS FOR WHICH ETHNIC BACKGROUND AND INCOME DELINEATIONS WERE NOT MAPPED.**



PREDOMINANT ETHNIC BACKGROUND AND INCOME SUBSECTIONS

Source: Metropolitan area recreation planners for the 1971 Urban Planners Survey

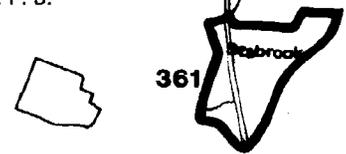
NOTE: SOCIO-ECONOMIC DATA WERE NOT AVAILABLE FOR SEABROOK.

HOUSTON AREA

 **METRO BOUNDARY**
 **CONTIGUOUS AREAS**

REGION 25

Note: Arrows indicate major areas of expected growth.



tion probably should be given to the acquisition of open land parks, an important factor in maintaining a pleasant and well-balanced urban environment.

In addition to maintaining an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities in parks is also an important consideration. An analysis of the current and future requirements for selected recreational facilities and the current dispersion of facilities in the Houston Metro is presented in the following discussions.

FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. Then, an analysis of the dispersion of existing facilities among the predominant income/ethnic subsections and the major growth areas of the metro was conducted. Conclusions reached from the facility dispersion analysis were then used to qualify the facility requirement estimates, particularly in those cases where no additional facilities were estimated as being needed within the metropolitan area. Usually, special note is made where growth areas appeared to have limited facilities. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the urban volume. In the discussions that follow, resource requirements for recreational facilities are generally referred to by units of the most important feature necessary to allow participation. For example, when a requirement is shown for swimming pools, features such as a bathhouse, cleaning and filtering system, and other support features are implied when a requirement for the major facility is shown.

Swimming

Houston Metro planners reported a total of 14,785 square yards of public swimming pools in 1971. Given a conversion standard of 150 days per year per square yard, there were 2,218,000 opportunity days available. When this is compared with the 9,998,000 participation days in 1970, a deficit of 7,780,000 days results, which translates into a requirement of 51,867 square yards for 1970. Assuming the 1971 opportunities level has remained unchanged, the cumulative resource requirement has been estimated to increase to 84,827 square yards in 1975, and is predicted to rise to 127,233 square yards by 1980, to 246,227 square yards by 1990, and to 420,773 square yards by the year 2000. The lack of adequate public facilities for swimming was so severe in 1971 that nearly all areas of the metro seemed to have an inadequate supply.

Child's Play

There were 295 developed acres devoted to playground activities in 1971. With a facility standard of 27,623 days per year per acre, a total of 8,149,000 opportunity days was provided. Although this opportunity level was adequate to meet estimated participation in 1970, without additional facilities a deficit was predicted for 1975 of about

513,000 opportunity days. This generated a requirement of nineteen acres of additional developed playground facilities. Cumulative resource requirements were expected to increase to 136 additional acres by 1980, 448 acres by 1990, and 876 acres by the year 2000. Dispersion of playground facilities in 1971 appeared to be well balanced; additional facilities probably should be considered in areas expecting further expansion.

Baseball/Softball

The 283 fields which provided 3,907,000 opportunity days in 1971 should be adequate until the year 2000, when 62 fields are required. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Picnicking

In 1971, the 123 parks provided a combined total of 1,238 public picnic tables which when multiplied by a conversion standard of 1,702 days per year per table, provided approximately 2,107,000 opportunity days. A comparison of opportunity days with estimated participation days suggested a requirement of 25 additional tables in 1970, and this increases to 273 picnic tables over the 1971 level for 1975. Resource requirements have been calculated to increase to 529 picnic tables by 1980, to 1,063 tables by 1990, and to 1,594 tables by the year 2000. Analysis of facility dispersion indicates that the north, northwest, southwest, and other growth areas will probably require additional public picnicking facilities.

Football/Soccer

With a facility standard of 7,224 days per year per field, the forty fields enumerated in 1971 provided about 289,000 opportunity days, well below the estimated demand of 766,000 days. Resource requirements have been calculated to increase from 66 fields in 1970 to 86 fields in 1975, to 106 fields in 1980, to 147 fields in 1990, and to 185 fields by the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Golf

The four municipal golf courses provided an estimated 291,000 opportunity days in 1971. With a facility standard of 4,047 days per year per hole, this opportunity level was well below the estimated demand of 1,822,000 days in 1970. Resource requirement of 378 additional golf holes was estimated for 1970. A total of 568 additional holes (the equivalent of approximately thirty-two eighteen-hole courses) was required by 1975, and this requirement was expected to increase to 801 holes (approximately forty-four eighteen-hole courses) by 1980, to 1,409 holes (approximately seventy-eight eighteen-hole courses) in 1990, and to 2,226 holes (approximately 124 eighteen-hole courses) by the year 2000. Nearly all income/ethnic subsections lacked publicly-administered golf courses in 1971.

Tennis

There appeared to be a serious need for tennis facilities in 1970. There were only 137 publicly-administered courts in the entire metro. With a conversion standard of 2,694 days per year per court, these 137 courts provided a combined total of only 369,000 opportunity days, considerably below the estimated 5,241,000 days of demand. A total of 1,808 additional tennis courts were needed in 1970, and this resource requirement was estimated to have risen to 3,483 courts by 1975. By 1980, 4,978 courts over the 1971 level will be required in order to accommodate anticipated demand. Cumulative requirements have been calculated to increase to 8,275 courts in 1990 and to 12,816 courts by the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Basketball

The 120 basketball courts enumerated in 1971 provided approximately 1,055,000 opportunity days. While this was adequate in 1970, a deficit of 397,000 opportunity days was anticipated for 1975 if no additional facilities have been provided. Resource requirements indicated that, with a facility standard of 8,795 days per year per court, forty-five courts in addition to the 1971 supply were needed to accommodate an increase in demand by 1975. Cumulative requirements have been calculated to increase to 188 courts by 1980, to 568 courts by 1990, and to over 1,000 additional courts by the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Trails Activities

An analysis of the accompanying table shows that the 1970 estimated demand for trail facilities (relative to the activities of nature study, bicycling, and walking) greatly exceeded availability in 1971. In 1971, twenty-seven miles of trail, some of which were multiple use, provided about 229,000 days of opportunity, given a conversion standard of 8,464 days per year per mile of trail. Assuming that the 1971 opportunities level had remained unchanged, an additional 136 miles were needed in 1970 and 274 miles by 1975; this cumulative requirement expands to 489 miles by 1980, 998 miles in 1990, and 1,667 miles by the year 2000.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly-administered park and recreation areas. It is likely, however, that as additional trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of additional resources required may be conservation in the long run and should be considered as minimum estimates. In addition the expectations for increases in participation in trail and related activities at publicly-administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local neighborhoods, on city streets, and on available open lands within the area. This

phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, Skiing

Surface Acres - Freshwater Lakes
(Boating, Boat Fishing, Skiing)

A total of 12,258 surface acres of freshwater lakes was located within the Houston Metro Area in 1971. It should be noted, however, that a majority of the reported freshwater acreage was provided by Lake Houston, located approximately twelve and a half miles from the main metropolitan area and may not be considered immediately accessible to the urban users who reside within the core of the metro. Therefore, the large supply of freshwater reported may not be representative of the actual resources available to the entire Houston populace. Using participation patterns of households recreating in the urban areas, it was estimated that boating totaled 410,000 days, boat fishing 178,000 days, and skiing 191,999 days for a total of 779,000 days in 1970. Comparing estimated participation with the opportunities provided by the surface acres existing in 1971 indicates that no additional surface acres will be needed until the year 2000, when 4,732 surface acres will be required.

Freshwater Boat Ramps^{1/}

No publicly-administered freshwater boat lanes were reported for the Houston Metro Area in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using freshwater boat ramp facilities to gain access to the water if ramps had been available, it was calculated that twenty-two boat ramps were needed in 1970. Projected increases in freshwater boat fishing, skiing, and boating participation are expected to require seventeen additional freshwater boat ramps in 1975, twenty-one in 1980, fifty-four in 1990, and seventy in the year 2000, bringing the cumulative resource requirement to 184 ramps in the year 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, the provision of freshwater boat ramps required could be constructed on existing freshwater lakes if the lakes are available for water-related activities.

^{1/} In calculating freshwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

Saltwater Boat Ramps^{1/}

In terms of saltwater resources, Seabrook and LaPorte were the only areas within the metro having access to coastal waters in 1970. One publicly-administered saltwater boat lane providing access to and from the saltwater resources was reported within the metro in 1971. By estimating the 1970 total saltwater boat fishing, skiing, and boating participation which would have occurred using saltwater boat ramp facilities to gain access to the saltwater areas if ramps had been available, it was calculated that nine ramps were needed in 1970. Expected increases in saltwater boat fishing, skiing, and boating participation are projected to require incremental saltwater boat ramp additions of two in 1975, two in 1980, four in 1990, and three in the year 2000, bringing the cumulative requirement to an additional twenty ramps in 2000.

Summary of Facilities Requirements

In 1971 the only type of facility which was not available was publicly administered freshwater boat ramps, which indicates that ramps should be provided as soon as is practical. However, in 1971 an inadequate quantity of facilities existed for all designated activities except child's play; baseball/softball; basketball; and surface acres for freshwater boating, fishing, and skiing. (It should be noted that the apparent surplus in surface acres of freshwater is a function of the inclusion of Lake Houston, which may not be conveniently located for a large segment of residents in the Houston Metro.) In view of a rapidly increasing population and a per household participation level which continues to accelerate, the metro area will require very substantial increases in opportunities for nearly all activities, in a wide range of locations, if opportunities are to adequately accommodate predicted participation.

^{1/} In calculating saltwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	9,998 ^{1/}	2,218	7,780		51,867 square yards ^{2/}	51,867 square yards ^{2/}
	Child's Play (Playgrounds)	6,142	8,149		2,007	0 acres	0 acres
	Baseball/Softball	1,441	3,907		2,466	0 fields	0 fields
	Picnicking	2,150	2,107	43		25 tables	25 tables
	Football/Soccer	766	289	477		66 fields	66 fields
	Golf	1,822	291	1,531		378 holes	378 holes
	Tennis	5,241	369	4,872		1,808 courts, dbl.	1,808 courts, dbl.
	Basketball	479	1,055		576	0 courts, full	0 courts, full
1970	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	779	5,113		4,334	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	592	0	592		22 ramps ^{3/}	22 ramps ^{3/}
	Boating, Boat Fishing, Skiing SW . . .	213	11	202		9 ramps ^{3/}	9 ramps ^{3/}
	Trails Activities:						
	Walking	795 ^{4/}				78 miles	78 miles
	Bicycling	470 ^{4/}				46 miles	46 miles
	Nature Study	118 ^{4/}				12 miles	12 miles
	Combined Walking, Bicycling, Nature Study	1,383 ^{4/}	229	1,154		136 miles	136 miles
	ACTIVITY						
	Swimming (Pools)	14,942 ^{1/}	2,218	12,724		84,827 square yards ^{2/}	32,960 square yards ^{2/}
	Child's Play (Playgrounds)	8,662	8,149	513		19 acres	19 acres
	Baseball/Softball	1,863	3,907		2,044	0 fields	0 fields
	Picnicking	2,572	2,107	465		273 tables	248 tables
	Football/Soccer	910	289	621		86 fields	20 fields
	Golf	2,588	291	2,297		568 holes	190 holes
	Tennis	9,752	369	9,383		3,483 courts, dbl.	1,675 courts, dbl.
	Basketball	1,452	1,055	397		45 courts, full	45 courts, full
1975	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	1,432	5,113		3,681	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	1,049	0	1,049		39 ramps ^{3/}	17 ramps ^{3/}
	Boating, Boat Fishing, Skiing SW . . .	252	11	241		11 ramps ^{3/}	2 ramps ^{3/}
	Trails Activities:						
	Walking	1,266 ^{4/}				136 miles	58 miles
	Bicycling	942 ^{4/}				101 miles	55 miles
	Nature Study	338 ^{4/}				37 miles	25 miles
	Combined Walking, Bicycling, Nature Study	2,546 ^{4/}	229	2,317		274 miles	138 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS	UNITS OF RECREATION		
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	RESOURCES REQUIRED
						CUMULATIVE	INCREMENTAL
	Swimming (Pools)	21,303 ^{1/}	2,218	19,085		127,233 square yards ^{2/}	42,406 square yards ^{2/}
	Child's Play (Playgrounds)	11,912	8,149	3,763		136 acres	117 acres
	Baseball/Softball	2,341	3,907		1,566	0 fields	0 fields
	Picnicking	3,008	2,107	901		529 tables	256 tables
	Football/Soccer	1,053	289	764		106 fields	20 fields
	Golf	3,531	291	3,240		801 holes	233 holes
	Tennis	13,779	369	13,410		4,978 courts, dbl.	1,495 courts, dbl.
	Basketball	2,705	1,055	1,650		188 courts, full	143 courts, full
1980	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	2,243	5,113		2,870	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	1,616	0	1,616		60 ramps ^{3/}	21 ramps ^{3/}
	Boating, Boat Fishing, Skiing SW . . .	293	11	282		13 ramps ^{3/}	2 ramps ^{3/}
	Trails Activities:						
	Walking	2,204 ^{4/}				247 miles	111 miles
	Bicycling	1,534 ^{4/}				172 miles	71 miles
	Nature Study	622 ^{4/}				70 miles	33 miles
	Combined Walking, Bicycling, Nature Study	4,360 ^{4/}	229	4,131		489 miles	215 miles
	Swimming (Pools)	39,152 ^{1/}	2,218	36,934		246,227 square yards ^{2/}	118,994 square yards ^{2/}
	Child's Play (Playgrounds)	20,522	8,149	12,373		448 acres	312 acres
	Baseball/Softball	3,470	3,907		437	0 fields	0 fields
	Picnicking	3,916	2,107	1,809		1,063 tables	534 tables
	Football/Soccer	1,348	289	1,059		147 fields	41 fields
	Golf	5,995	291	5,704		1,409 holes	608 holes
	Tennis	22,662	369	22,293		8,275 courts, dbl.	3,297 courts, dbl.
	Basketball	6,048	1,055	4,993		568 courts, full	380 courts, full
1990	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	4,346	5,113		767	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	3,076	0	3,076		114 ramps ^{3/}	54 ramps ^{3/}
	Boating, Boat Fishing, Skiing SW . . .	375	11	364		17 ramps ^{3/}	4 ramps ^{3/}
	Trails Activities:						
	Walking	4,219 ^{4/}				485 miles	238 miles
	Bicycling	3,083 ^{4/}				355 miles	183 miles
	Nature Study	1,378 ^{4/}				158 miles	88 miles
	Combined Walking, Bicycling, Nature Study	8,680 ^{4/}	229	8,451		998 miles	509 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	65,334 ^{1/}	2,218	63,116		420,773 square yards ^{2/}	174,546 square yards ^{2/}
	Child's Play (Playgrounds)	32,349	8,149	24,200		876 acres	428 acres
	Baseball/Softball	4,767	3,907	860		62 fields	62 fields
	Picnicking	4,820	2,107	2,713		1,594 tables	531 tables
	Football/Soccer	1,627	289	1,338		185 fields	38 fields
	Golf	9,298	291	9,007		2,226 holes	817 holes
	Tennis	34,895	369	34,526		12,816 courts, dbl.	4,541 courts, dbl.
	Basketball	10,567	1,055	9,452		1,075 courts, full	507 courts, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	7,087	5,113	1,974		4,732 surface acres	4,732 surface acres
	Boating, Boat Fishing, Skiing FW . . .	4,974	0	4,974		184 ramps ^{3/}	70 ramps ^{3/}
	Boating, Boat Fishing, Skiing SW . . .	455	11	444		20 ramps ^{3/}	3 ramps ^{3/}
	Trails Activities:						
	Walking	6,840 ^{4/}				795 miles	310 miles
	Bicycling	5,115 ^{4/}				595 miles	240 miles
	Nature Study	2,385 ^{4/}				277 miles	119 miles
	Combined Walking, Bicycling, Nature Study	14,340 ^{4/}	229	14,111		1,667 miles	669 miles

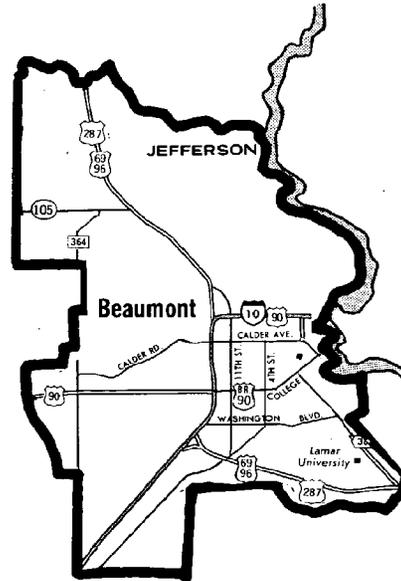
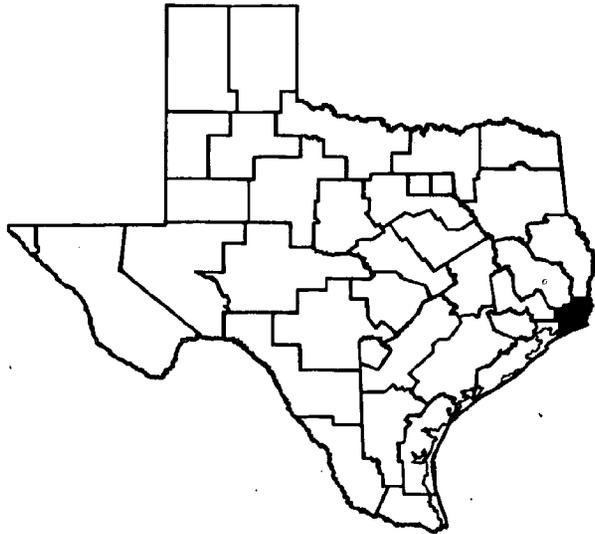
^{1/} Includes only swimming participation occurring in swimming pools, 70.48 percent of the total in urban areas on the Gulf Coast.

^{2/} Designated freshwater and saltwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.

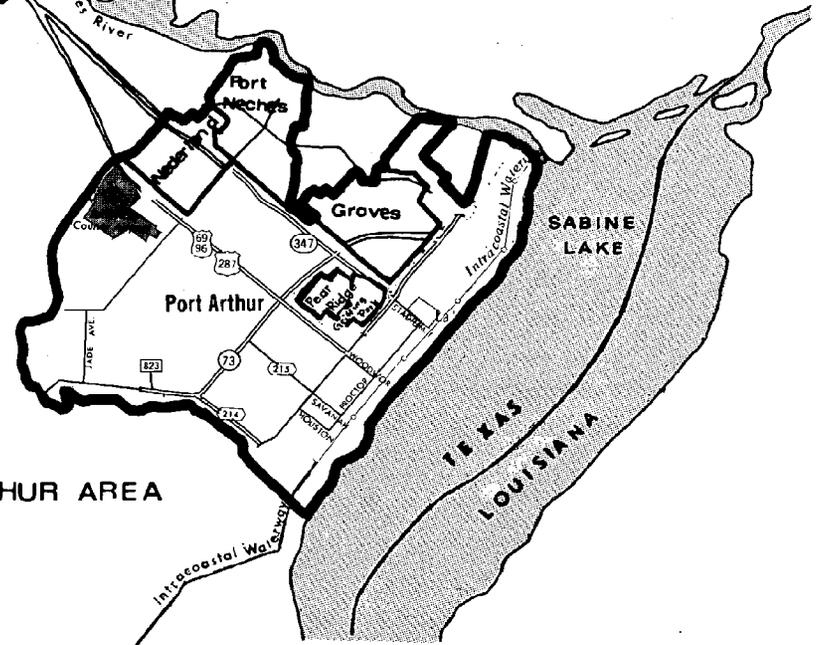
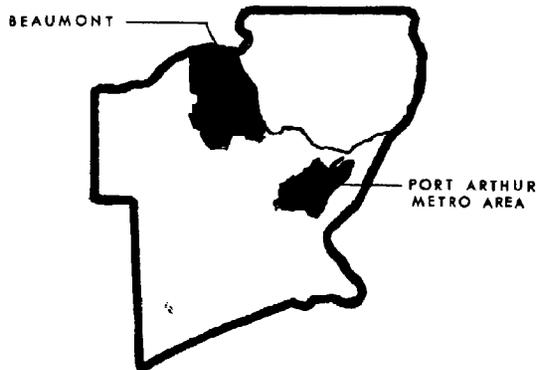
^{3/} Assumes 2.0 lanes per ramp.

^{4/} Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

Region 27



Source: Adapted from Texas Official Highway Map 1975. Texas Highway Department Travel and Information Division. Austin, Texas, and U.S. Bureau of the Census. U.S. Census of Population: 1970. Number of Inhabitants. Final Report PC (1) - A45 Texas. U.S. GPO Washington, D.C. 1971.



BEAUMONT-PORT ARTHUR AREA



The Region 27 metropolitan area is composed of the cities and towns of Beaumont, Port Arthur, Groves, Nederland, Port Neches, Pear Ridge, Lakeview, and Griffing Park.

Beaumont, the county seat of Jefferson County, began as a settlement where early French and Spanish trappers and explorers established a trading post in the early 1800's. Today, this metropolitan area is an industrial giant with oil refineries and petrochemical plants. Beaumont is the site of a thriving deep water port and a center for the processing and distribution of agricultural products from surrounding areas. Annual events in Beaumont are the Neches River Festival (April), the Spindletop Charity Horse Show (April), and the South Texas State Fair (October). Another popular attraction in the city is the Lucas Gusher Monument, the site of the first gusher, which gave birth to the oil industry in the region in 1901. Beaumont is the home of Lamar University.

Port Arthur, located on Sabine Lake, was established in 1840. Port Arthur claims distinction with its quote, "We Oil the World," because nearly a million barrels of crude oil are refined here each day. Port Arthur is the site of a major deep water port with principal port commodities being petroleum, coke, lumber, grain, hoop steel, scrap iron, asphalt, wax, and paints. Other industries in Port Arthur include commercial fishing and shipbuilding. The Port Arthur Spring Flower Show (March and April), the Annual Festival of Barber Shop Harmony (April), and the CavOilcade (October) are annual events in Port Arthur. The city is the home of Port Arthur College.

Griffing Park, Groves, Lakeview, and Pear Ridge are principal cities and towns of Jefferson County, one of the State's most populous counties.

Nederland was once the center of an area whose economy was based on rice farming and dairying. Today, the economy of Nederland is dominated by oil refineries and chemical plants. A popular attraction in Nederland is the Windmill Museum. The Jefferson County Sheriff's Posse Rodeo is held each July.

Port Neches has experienced continual growth in the past partially due to its location on the Neches River, which provides deep water transportation. It is the location of some large oil company plants and the world's largest synthetic rubber plant.

1/ Due to lack of information for some suburbs in the metropolitan area, data for the entire county was from the 1970 census.

2/ Includes persons of Mexican and/or Spanish descent.

POPULATION

1970 Metro Area Population: 228,440

Change 1960-70: -2%

Race Composition 1/

White 74% 2/

Negro 25%

Other5%

Age Composition (years): 1/

13 or less 27%

14 - 20 14%

21 - 44 29%

45 - 64 22%

65 and over 8%

ECONOMY

Chemicals

Petrochemicals

Petroleum

Rice Milling

Shipping

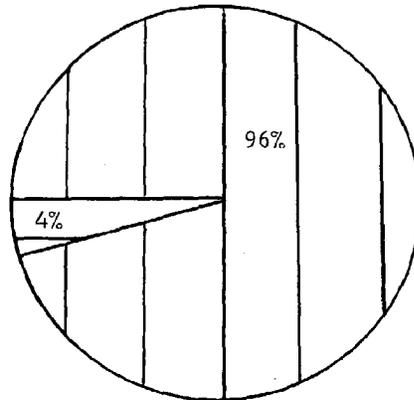
REGION 27

CITY SIZE: METRO

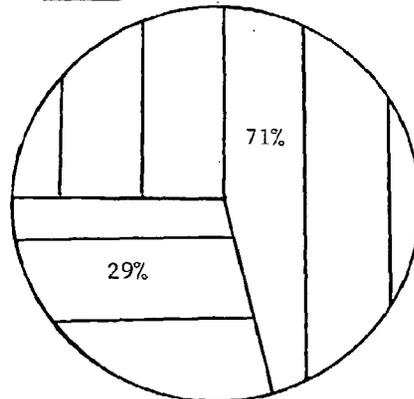
PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

REGION
27
METRO



STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 27 METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	1,234	1,307
Undeveloped Land	52	536
Total Land	1,286	1,843
Water Within or Adjacent	0	1,006
Total Land and Water	1,286	2,849

The Beaumont-Port Arthur Area has a total of 1,286 acres of land set aside as park and recreation areas. No surface acres of water either within or adjacent to the parks were reported.

Of the total land acreage, 1,234 acres are developed with facilities, leaving 52 acres available for future development. With 96 percent of the land acreage currently developed, the Area is well above the Statewide Metro average of 71 percent.

PARKS AND ACREAGE BY TYPE OF PARK

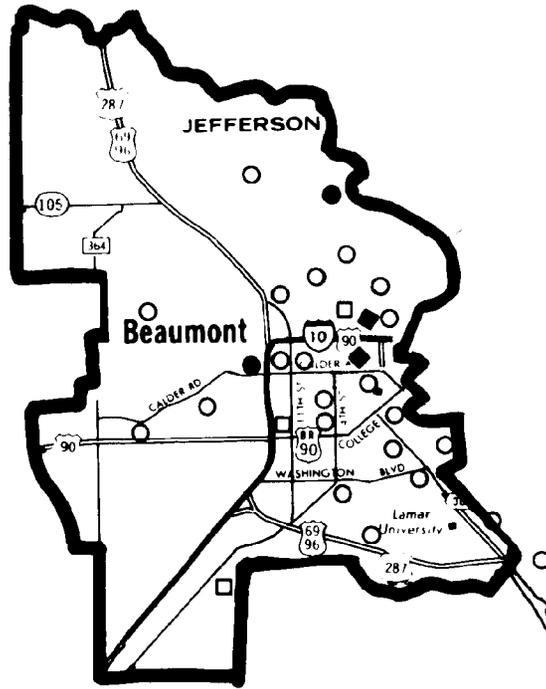
	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	7.000	38.000	11.000	5.000	61.000	72.000
Parks Per Thousand	.031	.166	.048	.022	.267	.267
People Per Park	32,629.000	6,011.000	20,764.000	45,680.000	3,744.000	3,754.000
.....						
Land Acres	906.000	226.000	107.000	47.000	1,286.000	1,843.000
Acres Per Thousand	3.967	.989	.468	.206	5.630	6.864
People Per Acre	252.000	1,011.000	2,135.000	4,860.000	178.000	146.000

Of the total of 61 parks, 38 are Community Parks. Eleven Specialty Parks along with 7 District and 5 Open Land Parks were reported. However, the District Parks with 906 acres, have over seventy percent of the total land acreage. The 38 Community Parks average about six acres each, while the Specialty and Open Land Parks total 107 and 47 acres respectively. The dispersion of the four types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the total population of the Beaumont Metro Area, .267 parks per 1,000 and 5.630 acres per 1,000 population exist.

Another way to present this data is that 3,744 people share each park while 178 people must share each acre of park land.

With .267 parks per 1,000, the Beaumont Metro Area matches the Statewide Metro average. The 5.630 acres per 1,000 gives the area a figure below the Statewide Metro average for acres per 1,000.



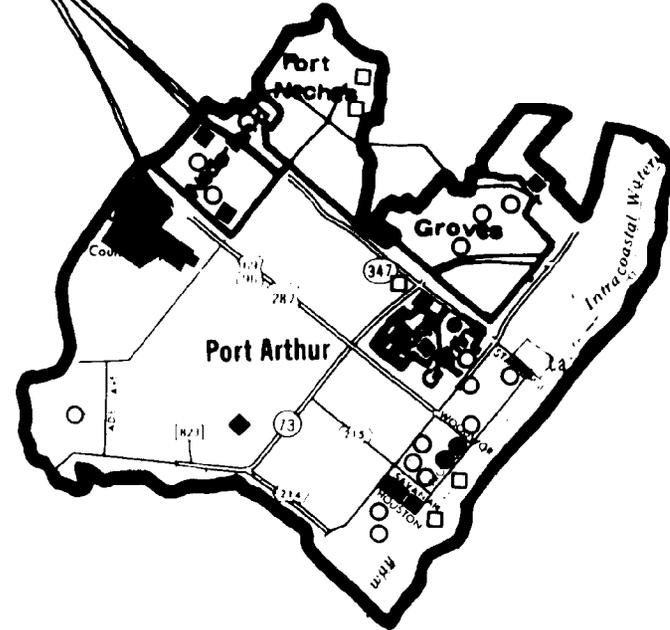
DISPERSION OF PARKS BY TYPE

URBAN PARKS

- DISTRICT PARK
- COMMUNITY PARK
- ◆ SPECIALTY PARK
- OPEN-LAND PARK

REGION 27

BEAUMONT-PORT ARTHUR AREA



Source: 1971 Municipal Inventory Update

PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 27 METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	6	31	3	40	5,710	.175	.150
Tennis Courts.....	6	21	5	32	7,137	.140	.142
Basketball Courts.....	1	19	0	20	11,420	.087	.071
Baseball/Softball Fields.....	19	33	3	55	4,152	.241	.186
Football/Soccer Fields.....	4	1	0	5	45,680	.021	.032
Picnicking:							
Parks.....	6	31	0	37	6,172	.162	.124
Tables.....	127	143	0	270	845	1.184	1.230
Playground:							
Parks.....	6	38	8	52	4,392	.228	.170
Acres Developed.....	22	73	9	104	2,196	.456	.258
Swimming:							
Parks.....	1	6	0	7	32,628	.030	.050
Pools (Sq. Yd.).....	460	5,080	0	5,540	41	24.298	25.950
Designated Fresh Water (Sq. Yd.)..	0	0	0	0	---	---	52.242
Designated Salt Water (Sq. Yd.)...	0	0	0	0	---	---	---
Boating:							
Parks.....	1	0	0	1	228,400	.004	.006
Ramp Lanes - Fresh Water.....	2	0	0	2	114,200	.008	.008
Ramp Lanes - Salt Water.....	0	0	0	0	---	---	---
Camping:							
Parks.....	1	0	0	1	228,400	.004	.002
Campsites.....	94	0	0	94	2,429	.412	.121
Fishing:							
Parks.....	0	0	0	0	---	---	.013
Pier/Barge/Marina-Fresh Water(Yd.)	0	0	0	0	---	---	.049
Pier/Barge/Marina-Salt Water(Yd.)..	0	0	0	0	---	---	---
Golfing:							
Courses.....	2	0	0	2	114,200	.008	.005
Holes.....	36	0	0	36	6,344	.157	.100
Trails:							
Parks.....	1	0	0	1	228,400	.004	.006
Nature (Mi.).....	4	0	0	4	57,100	.017	.009
Horseback (Mi.).....	4	0	0	4	57,100	.017	.003
Bicycle (Mi.).....	0	0	0	0	---	---	.007
Hiking (Mi.).....	4	0	0	4	57,100	.017	.006
Total Trails (Mi.).....	12	0	0	12	19,033	.052	.021

PARK AND RECREATION FACILITIES BY TYPE OF PARK

CITY SIZE: METRO

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 27 METRO	STATEWIDE AVERAGE METRO AREAS
Sport Shooting:							
Parks.....	0	0	0	0	---	---	.002
Traps.....	0	0	0	0	---	---	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	0	0	0	0	---	---	.011
Miscellaneous:							
Parks.....	2	2	1	5	45,680	.021	.038
Amphitheatre Seats.....	0	0	0	0	---	---	1.077
Botanical Gardens (Acres).....	0	0	5	5	45,680	.021	.077
Zoos (Acres).....	0	0	0	0	---	---	.051
Community/Recreation Centers.....	2	2	1	5	45,680	.021	.038

Most of the park and recreation facilities in the Beaumont Area are in District and Community Parks. The Specialty Parks have only games and sports facilities and playgrounds, in addition to a botanical garden and a community/recreation center. The only boating, camping, golfing, and trail facilities are in the District Park category. A total of seven parks were reported with swimming facilities, all but one of these a Community Park. A total of five community/recreational centers were inventoried. No salt water swimming, boating, or fishing facilities were reported.

Of the 61 parks, 52 have playgrounds, 40 have games and sports facilities, 37 have picnicking facilities and 7 have swimming pools. The most common types of games and sports facilities are baseball/softball with 55 fields, followed by tennis with 32 courts, basketball with 20 courts and football/soccer with 5 fields.

Looking at selected facilities in relation to the number of potential users we find the following:

45,680 persons for each football/soccer field	4,152 persons for each baseball/softball field
45,680 persons for each community/recreation center	2,429 persons for each campsite
19,033 persons for each mile of trails	2,196 persons for each acre of playground
11,420 persons for each basketball court	845 persons for each picnic table
7,137 persons for each tennis court	41 persons for each square yard of swimming pool
6,344 persons for each golf hole	

The Beaumont Metro Area is above the Statewide Metro average for facility units per 1,000 for basketball courts, baseball/softball fields, playground acres, campsites, golf holes and trail miles. The Area is equal to the average for boat ramp lanes-fresh water, while falling below the average for tennis courts, football/soccer fields, picnic tables, square yards of swimming pools, acres of botanical gardens and community/recreation centers. No designated fresh water swimming area, yards of fishing pier/barge/marina, sport shooting facilities, amphitheatre seats or zoo acreage were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

ACTIVITY-FACILITY	ANNUAL DAYS AVAILABLE	DAYS PER THOUSAND POPULATION	
		REGION 27 METRO	STATEWIDE AVERAGE METRO
Swimming (Pools) - square yards	831,000	3,645	3,891
Child's Play - playground acres	2,872,792	12,600	7,137
Baseball/Softball - fields	759,220	3,330	2,577
Picnicking - tables	459,540	2,016	2,093
Football/Soccer - fields	36,120	158	235
Golf - holes	145,692	639	414
Tennis - courts, double	86,208	378	384
Basketball - courts, full	175,900	771	625
Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	0	0	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	26,972	118	103
Boating, Boat Fishing, Skiing SW - boat ramps	0	0	33
Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	67,712	297	164

The Beaumont Metro Area offers the most opportunity days for child's play, followed by swimming (in pools), baseball/softball and picnicking. A comparison between the opportunity days per thousand population for the Beaumont Metro Area and the Statewide Metro average shows that the Beaumont Metro Area surpasses the statewide average for six types of facilities -- children's playgrounds (in acres), baseball/softball fields, golf courses (holes), basketball courts, freshwater boat ramps and the miles of trails for the trails activities. The Beaumont Metro Area is below the Statewide Metro average for swimming (in pools), picnicking, football/soccer, and tennis, with no opportunity days available for surface acres for freshwater boating, boat fishing and skiing, and saltwater boat ramps.

The seventh ranking metro area, based on population, Beaumont also ranked seventh in total participation for the year 1970. Estimates for 1970 indicate that residents and non-residents in the area spent over 9.8 million recreation days in pursuit of urban outdoor recreation opportunities available within the metro area.

Resident

Total days of participation in urban outdoor recreation activities by residents of the Beaumont Metropolitan Area were estimated to be 9.6 million days in 1970. Total participation is projected to increase 13.6 million days in 1975 and to 18.2 million days in 1980. These projections represent increases of 41.4 percent by 1975 and 89.4 percent by 1980. Participation on a days per household basis is projected to increase from 129.2 days in 1970 to 171.4 days in 1975, and to 216.0 days in 1980--increases of 32.7 and 67.2 percent, respectively, over the 1970 level. Residents of the Beaumont Metropolitan Area are expected to participate at a rate of .2 days per household below the statewide average for the other Texas metropolitan areas in 1970, four days higher than the statewide average in 1975, and eleven days above the average in 1980.

All activities, except nature study, are projected to increase in total days of participation through the year 2000. However, when considering participation on a days per household basis, only 14 of the 19 activities are expected to increase while football, fishing, boating, skiing, and nature study will remain relatively constant. In 1970 the activities ranking one through six, respectively, in total days of participation were estimated to be: walking, swimming, bicycling, child's play, driving for pleasure, and picnicking. The top six activities for 1975 are expected to be: walking, bicycling, swimming, driving for pleasure, child's play, and saltwater fishing. In 1980 the most popular activities are anticipated to be: bicycling, walking, swimming, child's play, driving for pleasure, and saltwater fishing.

Non-Resident

For the urban outdoor recreation activities specified for 1970, participation within the Beaumont Metropolitan Area by non-residents was estimated to total 230,000 days. Compared to the 1970 level, total participation is expected to increase 5.2 percent (to 242,000 days) by 1975 and 10.4 percent (to 254,000 days) by 1980. Similar increases are anticipated for the years 1990 and 2000.

In terms of days of participation for 1970, the most popular non-resident activities, of the specific activities estimated were: sightseeing, with 82,000 days; driving for pleasure, with 30,000 days; picnicking, with 27,000 days; swimming, with 26,000 days; saltwater fishing, with 24,000 days; and saltwater boating, with 13,000 days. Assuming adequate facilities are made available, a moderate increase in participation for all activities is expected through the year 2000, with the activities holding their 1970 ranking in terms of popularity.

CURRENT AND PROJECTED RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970				1975				1980				1990				2000			
	PART. DAYS	RANK	REG. 27 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 27 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 27 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 27 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 27 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH
Swimming	1,949	2	26.20	27.41	2,876	2	36.27	36.52	4,070	3	48.30	47.17	7,102	2	78.24	75.28	11,840	1	117.45	110.14
Child's Play	1,163	4	15.63	14.08	1,611	4	20.32	17.72	2,151	4	25.53	22.00	3,447	4	37.97	32.20	5,382	4	53.39	43.99
Baseball/Softball	198	8	2.66	2.78	250	8	3.15	3.19	308	8	3.66	3.59	426	8	4.69	4.41	578	8	5.73	5.22
Picnicking	520	6	6.99	5.72	567	6	7.15	5.66	612	6	7.26	5.66	683	7	7.52	5.61	785	7	7.79	5.64
Football/Soccer	44	14	.59	1.43	46	15	.58	1.42	49	15	.58	1.41	53	15	.58	1.39	59	16	.57	1.38
Golf	282	7	3.79	3.92	396	7	4.99	4.98	535	7	6.35	6.16	861	6	9.49	8.96	1,319	6	13.08	12.07
Tennis	194	9	2.61	6.06	248	9	3.13	9.21	294	9	3.49	11.49	366	9	4.03	16.07	481	10	4.77	21.46
Basketball	21	16	.28	1.60	27	16	.34	2.59	34	16	.40	3.57	48	16	.53	5.52	65	15	.65	7.53
Walking	2,414	1	32.45	18.21	3,270	1	41.24	23.09	4,215	1	50.03	29.20	6,137	3	67.61	39.89	8,588	3	85.19	50.31
Bicycling	1,481	3	19.91	20.30	2,753	3	34.72	32.77	4,173	2	49.53	45.25	7,186	1	79.17	68.44	10,968	2	108.80	95.49
Nature Study	2	19	.03	.72	2	19	.03	1.67	2	19	.02	2.64	2	19	.02	4.63	2	19	.02	6.70
Fishing																				
Freshwater	134	11	1.80	1.80	149	11	1.88	1.88	166	12	1.97	1.97	194	12	2.14	2.13	232	12	2.30	2.30
Saltwater	5	17	.07	1.81	5	17	.06	1.79	5	17	.06	1.78	6	17	.07	1.77	6	17	.06	1.78
Boating																				
Freshwater	65	12	.87	.88	126	12	1.59	1.60	195	11	2.31	2.31	339	10	3.73	3.74	521	9	5.17	5.17
Saltwater	62	13	.83	.84	67	13	.85	.84	71	13	.84	.84	76	14	.84	.84	85	14	.84	.84
Skiing																				
Freshwater	31	15	.42	.42	49	14	.62	.62	69	14	.82	.82	111	13	1.22	1.22	163	13	1.62	1.81
Saltwater	3	18	.04	.05	3	18	.04	.04	4	18	.04	.04	4	18	.04	.04	4	18	.04	.04
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	158	10	2.12	2.25	184	10	2.32	2.34	209	10	2.48	2.50	255	11	2.81	2.70	311	11	3.08	3.01
Dr. for Pleas.	883	5	11.87	13.38	961	5	12.12	13.52	1,036	5	12.30	13.67	1,163	5	12.81	13.86	1,331	5	13.20	14.10
TOTAL	9,609		129.16	123.66	13,590		171.40	161.45	18,198		215.97	202.07	28,459		313.51	288.70	42,720		423.75	388.98

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000
Swimming	26	27	28	30	33
Child's Play	*	*	*	*	*
Baseball/Softball	2	2	2	3	3
Picnicking	27	28	29	31	34
Football/Soccer	12	12	13	14	15
Golf	*	*	*	*	*
Tennis	*	*	*	*	*
Basketball	*	*	*	*	*
Walking	3	3	4	4	4
Bicycling	2	2	2	2	2
Nature Study	*	*	*	*	*
Fishing					
Freshwater	7	8	8	9	9
Saltwater	24	25	26	28	30
Boating					
Freshwater	2	2	2	2	2
Saltwater	13	14	14	15	17
Skiing					
Freshwater	*	*	*	*	*
Saltwater	*	*	*	*	*
Surfing	---	---	---	---	---
Sightseeing	82	87	92	97	106
Dr. for Pleas.	30	32	34	36	39
TOTAL	230	242	254	271	294

ACTIVITY	1970	1975	1980	1990	2000
Swimming	1,975	2,903	4,098	7,132	11,873
Child's Play	1,163	1,611	2,151	3,447	5,382
Baseball/Softball	200	252	310	429	581
Picnicking	547	595	641	714	819
Football/Soccer	56	58	62	67	74
Golf	282	396	535	861	1,319
Tennis	194	248	294	366	481
Basketball	21	27	34	48	65
Walking	2,417	3,273	4,219	6,141	8,592
Bicycling	1,483	2,755	4,175	7,188	10,970
Nature Study	2	2	2	2	2
Fishing					
Freshwater	141	157	174	203	241
Saltwater	29	30	31	34	36
Boating					
Freshwater	67	128	197	341	523
Saltwater	75	81	85	91	102
Skiing					
Freshwater	31	49	69	111	163
Saltwater	3	3	4	4	4
Surfing	---	---	---	---	---
Sightseeing	240	271	301	352	417
Dr. for Pleas.	913	993	1,070	1,199	1,370
TOTAL	9,839	13,832	18,452	28,730	43,014

Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the Beaumont-Port Arthur Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with the current recreation opportunities^{2/} available within the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to various subsections of the metro area, particularly with regard to income/ethnic subsections, if the information were available. Attention also was given to those areas expected to undergo relatively rapid population growth and physical expansion in the future.

Conclusions reached from analyzing the distribution of recreation opportunities within the metropolitan area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist.

In the discussions that follow, results of the distribution analysis of parks within subsections of the metro are presented. Then, estimates of current and future requirements for selected recreation facilities are presented, and are qualified by conclusions reached from the distribution analysis of recreation facilities within subsections of the Beaumont-Port Arthur Metro Area.

PARK DISTRIBUTION ANALYSIS

In analyzing the availability and distribution of parks in the Beaumont-Port Arthur Metro Area, several characteristics were considered: changes in population (or trends in general, 1960 to 1970), areas of the metro which were expected to exhibit relatively major expansion, and the dispersion of existing parks among the income/ethnic subsections of the metro. From these interrelated characteristics, general conclusions were reached with respect to future park development for the metro area.

Population trends affected estimations of future recreation participation. Projections for the Beaumont-Port Arthur Metro indicate that the 1970 metro population of 228,400 is likely to increase to over 309,000 by the year 2000. As in the case of so many metro areas, the core areas, Beaumont and Port Arthur, registered declines during the 1960's, while the contiguous urban areas such as Nederland, Port Neches, and Groves showed increases. This trend may continue into the future. The "Predominant Ethnic Background and Income Subsections" map indicates that Port Arthur was expected to expand toward the north. Comparable information for other municipalities in the metro was not available.

^{1/} "Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

^{2/} "Current" recreation opportunities refers to computed figures derived from the numbers of publicly administered facilities by type available within the metro area in 1971.

The "Predominant Ethnic Background and Income Subsections" map shows six subsections in Beaumont, as delineated by local recreation planners in 1971. Comparable information for the other urban areas was not available. Low-income Anglos were concentrated in central Beaumont, particularly north of Highway 90, and in south central Beaumont, west of Lamar University. Middle-income Blacks made up a large part of northern Beaumont, while middle-income Anglos occupied most other areas, except for the west central area which was mainly high-income Anglo.

The "Dispersion of Parks By Type" map shows the geographic distribution of parks, as of 1971. All of the municipalities in the metro had at least two parks (except for Lakeview which reported having one), and parks seemed to be reasonably well dispersed in those parts of the metro which had large population concentrations. One possible exception in Port Arthur was the populated area east of Jade Avenue. A comparison of the "Dispersion of Parks By Type" map with the "Predominant Ethnic Background and Income Subsections" map indicates that all six income/ethnic subsections in Beaumont had at least two municipal parks. On the other hand, the northwest portion of Beaumont on either side of Highway 287 (a middle-income Anglo area) seemed relatively distant from a park, in comparison to other parts of Beaumont.

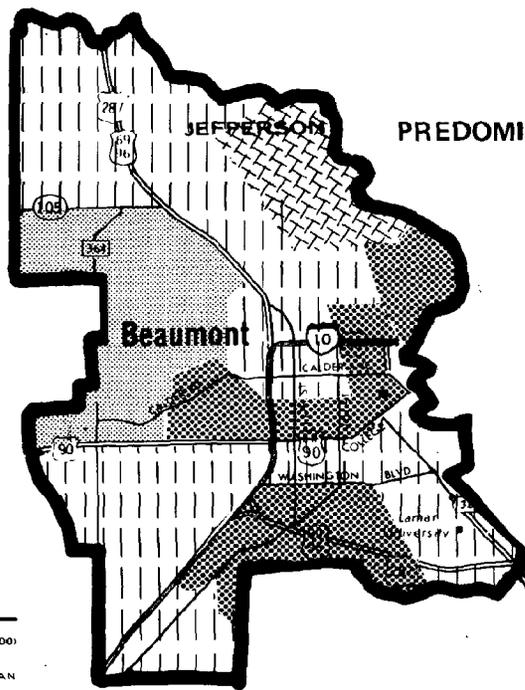
District parks, the large parks with facilities for at least two major urban activities, were unavailable in Groves, Nederland, Griffing Park, and Lakeview, as well as the southeast quarter and northwest half of Beaumont. Community and specialty parks appear to have been reasonably well distributed. Open land parks tended to be infrequent in the metro as a whole, and were absent in Lakeview, Groves, Nederland, Port Neches, and that part of Beaumont south of Highway 90 (occupied mainly by middle and low-income Anglos).

In addition to maintaining an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities in parks is also an important consideration. An analysis of the current and future requirements for selected recreational facilities and the current dispersion of facilities in the Beaumont-Port Arthur Metro is presented in the following discussions.

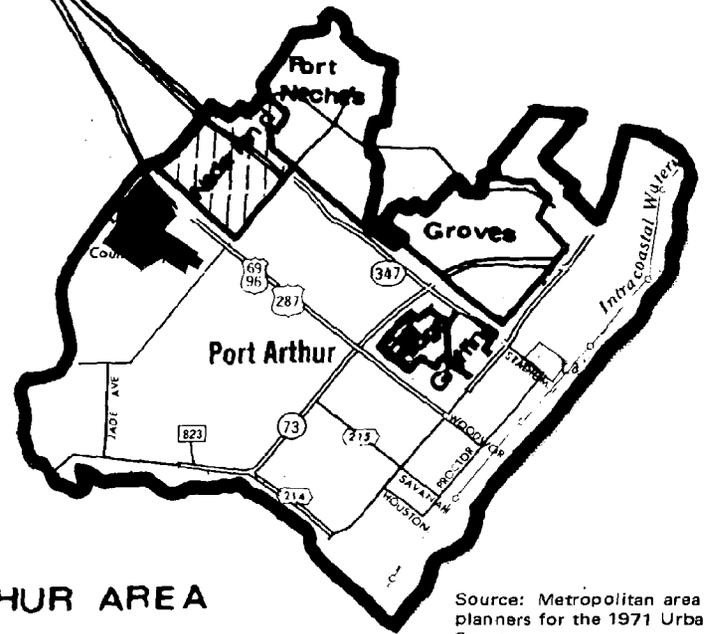
FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. Then, an analysis of the dispersion of existing facilities among the predominant income/ethnic background subsections and the major growth areas of the metro was conducted. Conclusions reached from the facility dispersion analysis were then used to qualify the facility requirement estimates, particularly in those cases where no additional facilities were estimated as being needed within the metropolitan area. Usually, special note is made where growth areas appeared to have limited facilities. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the Urban Volume. In the discussions that follow, resource requirements for recreational facilities are generally referred to by units of the most important feature necessary to allow participation. For example, when a requirement is shown for swimming pools, features such as a bathhouse, cleaning and filtering system, and other support features are implied when a requirement for the major facility is shown.

PREDOMINANT ETHNIC BACKGROUND AND INCOME SUBSECTIONS



- LOW INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS LESS THAN \$5,000)**
- PREDOMINANTLY MEXICAN AMERICAN
 - PREDOMINANTLY BLACK
 - PREDOMINANTLY ANGLO
- MID INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME VARIED FROM \$5,000 TO \$15,000)**
- PREDOMINANTLY MEXICAN AMERICAN
 - PREDOMINANTLY BLACK
 - PREDOMINANTLY ANGLO
- HIGH INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS GREATER THAN \$15,000)**
- PREDOMINANTLY MEXICAN AMERICAN
 - PREDOMINANTLY BLACK
 - PREDOMINANTLY ANGLO
- AREAS FOR WHICH ETHNIC BACKGROUND AND INCOME DELINEATIONS WERE NOT MAPPED.



**REGION 27
BEAUMONT-PORT ARTHUR AREA**



Note: Arrow indicates major areas of expected growth.

Source: Metropolitan area recreation planners for the 1971 Urban Planners Survey

NOTE: SOCIO-ECONOMIC DATA WERE NOT AVAILABLE FOR PORT ARTHUR, PORT NECHES, GROVES, PEAR RIDGE, AND GRIFFING PARK.

Swimming

In 1971 the Beaumont-Port Arthur Metropolitan Area reported 5,540 square yards of swimming area which, when multiplied by the conversion standard of 150 days per year per square yard, provided 831,000 opportunity days. Demand in 1970 for swimming was estimated to be approximately 1,392,000 participation days. The result was a deficit which could be eliminated by adding 3,740 square yards over the 1971 level. Resource requirements for swimming will grow to 8,100 square yards in 1975, 13,713 square yards by 1980, to 27,973 square yards by 1990, and to 50,247 square yards by the year 2000. In 1971, public swimming pools tended to be infrequent in most areas of the metro, and were unavailable in Nederland, all but the western edge of Port Arthur, and that part of Beaumont west of Interstate 10.

Child's Play

A total of 104 acres dispersed through fifty-two parks was reported in 1971. A comparison of projected participation levels with the 1971 supply level indicates that the 2,873,000 opportunity days should be sufficient until about 1990 when an additional 21 acres will be needed. By the year 2000, an additional 91 acres will be needed in addition to the existing 104 acres. Since most developed parks had playground facilities, the distribution of playgrounds approximated the distribution of parks. The only parts of the metro which appear to have been relatively distant from playground facilities were northwest Beaumont along Highway 287, and the extreme western part of Port Arthur (immediately east of Jude Avenue).

Baseball/Softball

The Beaumont-Port Arthur Metro reported fifty-five baseball fields in 1971 which, when multiplied by the conversion standard of 13,804 days per year per field, provided about 759,000 opportunity days. This should be sufficient to meet estimated demand through the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections, if additional facilities are provided.

Picnicking

With a conversion standard of 1,702 days per year per picnic table, a total of 460,000 opportunity days was provided by the 270 public picnic tables reported in 1971. When compared with estimated demand for 1970, a total of fifty-one tables was required to eliminate a deficit of 87,000 opportunity days. By 1975, fifty-eight tables will be needed in addition to the 270 provided in 1971. The cumulative resource requirement is expected to continue to increase to 106 tables by 1980, to 149 tables by 1990, and to 211 tables by the year 2000. With respect to the dispersion of public picnicking facilities, tables were absent in virtually all parts of Port Arthur except near the lakeshore, the northwest part of Beaumont, and in the contiguous urban area of Lakeview. These areas presently without picnicking opportunities should be considered as additional tables are planned and developed in the future.

Football/Soccer

The five football/soccer fields provided in 1971 provided approximately 36,000 opportunity days, given a facility standard of 7,224 days per year per field. When compared with estimated participation in 1970, a deficit of 20,000 opportunity days resulted; and this generated a requirement for three fields. Cumulative resource requirements can be expected to increase very slowly to a total of four fields by the year 1980, and by the year 2000, a cumulative requirement of five fields will be necessary to meet projected demand. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Golf

A total of 146,000 opportunity days was provided by the 36 holes available in the two municipal golf courses reported in 1971, given a facility standard of 4,047 days per year per golf hole. A comparison of the 1971 supply level with the 1970 demand for this activity suggests that thirty-four additional holes should have been provided to satisfy an estimated deficit of 136,000 opportunity days. Cumulative resource requirements were calculated to increase from 34 holes in 1970 to 62 holes in 1975, to 96 holes in 1980, to 177 holes in 1990, and to a total addition of 290 holes by the year 2000. The one municipal golf course in Beaumont was located at the extreme southern edge of Beaumont, and the course in Port Arthur was situated in the western part near the lakeshore. Future consideration with respect to golf course development probably should be given to the central, north, and west portions of Beaumont; the central, east, and north parts of Port Arthur, and the contiguous urban areas of Groves, Nederland, and Port Neches.

Tennis

The thirty-two tennis courts provided about 86,000 opportunity days in 1971 which, when compared to an estimate of participation, resulted in a deficit of over 100,000 opportunity days, therefore, an addition of forty courts was needed in 1970. This deficit is expected to increase to a level which will require sixty courts to be provided by 1975. With the expected increases in tennis participation, the cumulative resource requirement is expected to increase to 77 courts by 1980, to 104 courts in 1990, and to a total of 147 additional courts by the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Basketball

The twenty public courts reported in 1971 provided 176,000 opportunity days which exceeded the 21,000 days of demand, given a conversion standard of 8,795 days per year per court. Barring an unexpectedly rapid increase in demand, the 1971 supply level is expected to be adequate to accommodate basketball demand through the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections, if additional facilities are provided.

Trails Activities

In 1971 there were eight miles of trail which, when multiplied by a conversion standard of 8,464 days per year per mile of trail, provided 68,000 opportunity days. This compared to a 1970 level of 313,000 participation days, and resulted in a need for twenty-nine additional miles to erase the estimated deficit of 245,000 days. (Although the total supply actually amounted to twelve miles, four of these were horseback riding trail miles. Because resource requirements were not computed for urban horseback riding trails and because these four miles in the Beaumont-Port Arthur Metro Area were not designated for other types of trail usage, they were excluded from the computation of opportunity days.) The cumulative resource requirement increases to 46 miles of trail by 1975, 64 miles by 1980, 102 miles by 1990, and 150 miles by the year 2000.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly administered park and recreation areas. It is likely, however, that as additional trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of additional resources required may be conservative in the long run and should be considered as minimum estimates. In addition to the expectations for increases in participation in trail and related activities at publicly administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local neighborhoods, on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, Skiing

Surface Acres - Freshwater Lakes
(Boating, Boat Fishing, Skiing)

No surface acres of freshwater lakes were reported available for water-related recreation within the Beaumont-Port Arthur Metro Area in 1971. Using participation patterns of the households recreating within the urban areas, it was estimated that a total of 128,000 days of freshwater boating, boat fishing, and skiing participation would have occurred in 1970 if adequate freshwater lakes had been available. Of these 128,000 days, 67,000 were boating participation days, 30,000 were boat fishing days, and 31,000 were skiing days. Projections developed for the water-related activities indicate incremental resource requirements of 307 surface acres in 1970, 196 surface acres in 1975, 223 surface acres in 1980, 461 surface acres in 1990, and 580 surface acres in 2000. This brings the cumulative resource requirement to 1,767 surface acres by the year 2000.

Freshwater Boat Ramps^{1/}

Two publicly-administered freshwater boat lanes were reported for the Beaumont-Port Arthur Metro Area of Region 27 in 1971. Recognizing that no freshwater lakes were available in the metro area of Region 27 in 1971, these two boat lanes were probably located on streams with the metro. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using freshwater boat ramp facilities to gain access to the water if sufficient ramps were available, it was calculated that two additional boat ramps were needed in 1970. Projected increases in freshwater boat fishing, skiing, and boating participation are expected to require three additional freshwater boat ramps in 1975, two in 1980, five in 1990, and six in the year 2000, bringing the cumulative resource requirement to eighteen ramps in 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, the provision of freshwater surface acres and freshwater boat ramps required should be planned as joint projects, even though, in some cases, this may require the construction of boat ramps prior to the years reflected in the boat ramp resource requirement projections.

Saltwater Boat Ramps^{1/}

In terms of saltwater resources, Port Arthur and Gorges were the only areas within the Beaumont-Port Arthur Metro Area having access to coastal waters in 1970. However, no publicly-administered saltwater boat lanes providing access to and from the saltwater resources were reported within the metro in 1971. By estimating the 1970 total saltwater boat fishing, skiing, and boating participation which would have occurred using saltwater boat ramp facilities to gain access to the saltwater areas if ramps had been available, it was calculated that one ramp was needed in 1970. Expected increases in saltwater boat fishing, skiing, and boating participation are projected to require the incremental addition of one saltwater boat ramp in 1975, which should provide sufficient saltwater boat ramps through the year 2000. The cumulative requirement through the year 2000 will be two additional ramps.

Summary of Facilities Requirements

In 1971, the only types of outdoor recreation facilities which were not available within the Beaumont-Port Arthur Metro Area were surface acres of freshwater lakes and saltwater boat ramps. Acres of freshwater were estimated to be required in every planning horizon year, while the additional saltwater boat ramps (one in 1970 and one in 1975) should be adequate to accommodate demand through the year 2000. Although the metro reported two freshwater boat lanes (evidently located on rivers) in 1971, additional lanes were indicated for each planning year if freshwater lakes are developed within the metro area.

^{1/} In calculating freshwater and saltwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Parks and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

To augment existing facilities; resource requirements were indicated in each planning year for swimming pools, picnic tables, holes of golf, tennis courts, and miles of trail. Three additional football/soccer fields were estimated to be required in 1970 after which only minimal requirements were indicated. Playgrounds were estimated to be adequate until 1990 when additional acres will be needed, while the number of baseball/softball fields and basketball courts was considered sufficient through the year 2000.

A dispersion analysis was possible only for a few facility types. Public swimming pools were infrequent in most parts of the metro, and were unavailable in Nederland, western parts of Beaumont, and all of Port Arthur except the western edge near the lakeshore. Public picnicking facilities were absent in all parts of Port Arthur except near the lakeshore, in the northwest fringe of Beaumont (a predominantly middle-income Angle area), and in Lakeview. Playgrounds were well dispersed except for an apparent lack in northwest Beaumont and the extreme western portion of Port Arthur (east of Jude Avenue on the map). In locating additional public golf courses, consideration should be given to central, north, and west parts of Beaumont; central, east, and north parts of Port Arthur; and the contiguous urban areas of Groves, Nederland, and Port Neches.

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	1,392 ^{1/}	831	561		3,740 square yards ^{2/}	3,740 square yards ^{2/}
	Child's Play (Playgrounds)	1,163	2,873		1,710	0 acres	0 acres
	Baseball/Softball	200	759		559	0 fields	0 fields
	Picnicking	547	460	87		51 tables	51 tables
	Football/Soccer	56	36	20		3 fields	3 fields
	Golf	282	146	136		34 holes	34 holes
	Tennis	194	86	108		40 courts, dbl.	40 courts, dbl.
	Basketball	21	176		155	0 courts, full	0 courts, full
1970	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	128	0	128		307 surface acres	307 surface acres
	Boating, Boat Fishing, Skiing FW . . .	97	27	60		2 ramps ^{3/}	2 ramps ^{3/}
	Boating, Boat Fishing, Skiing SW . . .	31	0	31		1 ramp ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	254 ^{4/}				24 miles	24 miles
	Bicycling	59 ^{4/}				5 miles	5 miles
	Nature Study	* ^{4/}				<1 mile	<1 mile
	Combined Walking, Bicycling, Nature Study	313 ^{4/}	68	245		29 miles	29 miles
	<u>ACTIVITY</u>						
	Swimming (Pools)	2,046 ^{1/}	831	1,215		8,100 square yards ^{2/}	4,360 square yards ^{2/}
	Child's Play (Playgrounds)	1,611	2,873		1,262	0 acres	0 acres
	Baseball/Softball	252	759		507	0 fields	0 fields
	Picnicking	595	460	135		58 tables	7 tables
	Football/Soccer	58	36	22		3 fields	0 fields
	Golf	396	146	250		62 holes	28 holes
	Tennis	248	86	162		60 courts, dbl.	20 courts, dbl.
	Basketball	27	176		149	0 courts, full	0 courts, full
1975	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	210	0	210		503 surface acres	196 surface acres
	Boating, Boat Fishing, Skiing FW . . .	154	27	127		3 ramps ^{3/}	3 ramps ^{3/}
	Boating, Boat Fishing, Skiing SW . . .	33	0	33		2 ramps ^{2/}	1 ramp ^{2/}
	Trails Activities:						
	Walking	344 ^{4/}				35 miles	11 miles
	Bicycling	110 ^{4/}				11 miles	6 miles
	Nature Study	* ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	454 ^{4/}	68	386		46 miles	17 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS) DEFICIT	(000'S OF ACTIVITY DAYS) SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	2,888 ^{1/}	831	2,057		13,713 square yards ^{2/}	5,613 square yards ^{2/}
	Child's Play (Playgrounds)	2,151	2,873		722	0 acres	0 acres
	Baseball/Softball	310	759		449	0 fields	0 fields
	Picnicking	641	460	181		106 tables	48 tables
	Football/Soccer	62	36	26		4 fields	1 field
	Golf	535	146	389		96 holes	34 holes
	Tennis	294	86	208		77 courts, dbl.	17 courts, dbl.
	Basketball	34	176		142	0 courts, full	0 courts, full
1980	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW	303	0	303		726 surface acres	223 surface acres
	Boating, Boat Fishing, Skiing FW	219	27	192		7 ramps ^{3/}	2 ramps ^{3/}
	Boating, Boat Fishing, Skiing SW	35	0	35		2 ramps ^{3/}	0 ramps ^{3/}
	Trails Activities:						
	Walking	443 ^{4/}				46 miles	11 miles
	Bicycling	167 ^{4/}				18 miles	7 miles
	Nature Study	* ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	610 ^{4/}	68	542		64 miles	18 miles
	<hr/>						
	Swimming (Pools)	5,027 ^{1/}	831	4,196		27,973 square yards ^{2/}	14,260 square yards ^{2/}
	Child's Play (Playgrounds)	3,447	2,873	574		21 acres	21 acres
	Baseball/Softball	429	759		330	0 fields	0 fields
	Picnicking	714	460	254		149 tables	43 tables
	Football/Soccer	67	36	31		4 fields	0 fields
	Golf	861	146	715		177 holes	81 holes
	Tennis	366	86	280		104 courts, dbl.	27 courts, dbl.
	Basketball	48	176		128	0 courts, full	0 courts, full
1990	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW	495	0	495		1,187 surface acres	461 surface acres
	Boating, Boat Fishing, Skiing FW	351	27	324		12 ramps ^{3/}	5 ramps ^{3/}
	Boating, Boat Fishing, Skiing SW	38	0	38		2 ramps ^{3/}	0 ramps ^{3/}
	Trails Activities:						
	Walking	645 ^{4/}				71 miles	25 miles
	Bicycling	288 ^{4/}				31 miles	13 miles
	Nature Study	* ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	933 ^{4/}	68	865		102 miles	38 miles

YEAR	ACTIVITY	TOTAL	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		PARTICIPATION (000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS) DEFICIT	(000'S OF ACTIVITY DAYS) SURPLUS	RESOURCES REQUIRED	
						CUMULATIVE	INCREMENTAL
	Swimming (Pools)	8,368 ^{1/}	831	7,537		50,247 square yards ^{2/}	22,274 square yards ^{2/}
	Child's Play (Playgrounds)	5,382	2,873	2,509		91 acres	70 acres
	Baseball/Softball	581	759		178	0 fields	0 fields
	Picnicking	819	460	359		211 tables	62 tables
	Football/Soccer	74	36	38		5 fields	1 field
	Golf	1,319	146	1,173		290 holes	113 holes
	Tennis	481	86	395		147 courts, dbl.	43 courts, dbl.
	Basketball	65	176		111	0 courts, full	0 courts, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	737	0	737		1,767 surface acres	580 surface acres
	Boating, Boat Fishing, Skiing FW . . .	518	27	491		18 ramps ^{3/}	6 ramps ^{3/}
	Boating, Boat Fishing, Skiing SW . . .	41	0	41		2 ramps ^{3/}	0 ramps ^{3/}
	Trails Activities:						
	Walking	902 ^{4/}				101 miles	30 miles
	Bicycling	439 ^{4/}				49 miles	18 miles
	Nature Study	* ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	1,341 ^{4/}	68	1,273		150 miles	48 miles

Note: Asterisks indicate that projected annual activity days were less than 500.

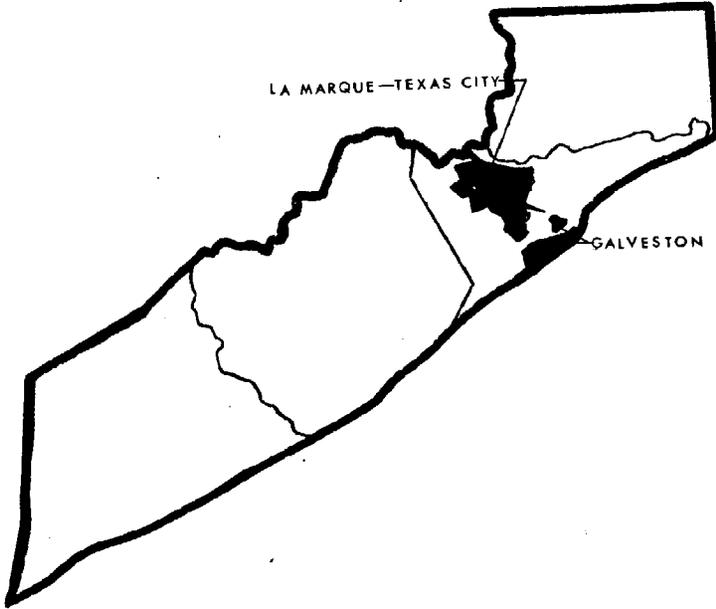
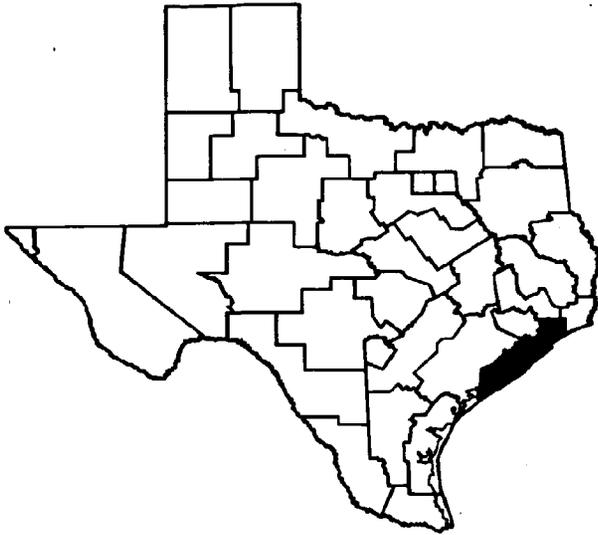
^{1/} Includes only swimming participation occurring in swimming pools, 70.48 percent of the total in urban areas on the Gulf Coast.

^{2/} Designated freshwater and saltwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.

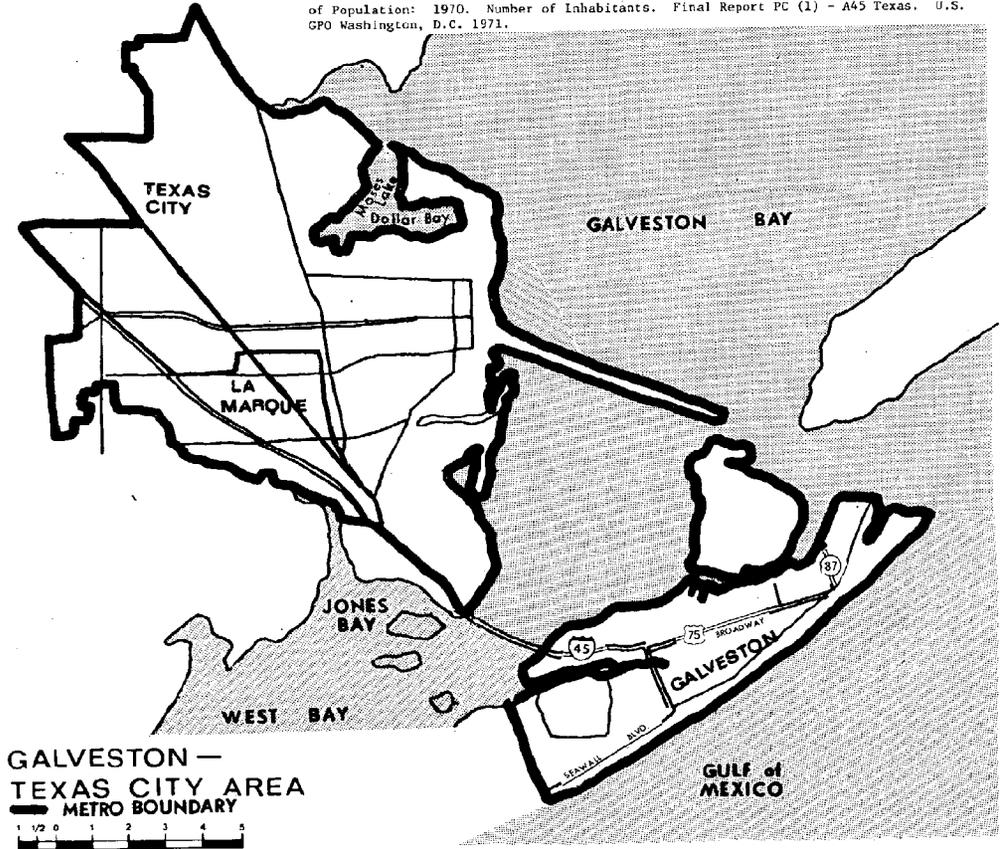
^{3/} Assumes 2.0 lanes per ramp.

^{4/} Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

Region 28



Source: Adapted from Texas Official Highway Map 1975. Texas Highway Department Travel and Information Division. Austin, Texas, and U.S. Bureau of the Census. U.S. Census of Population: 1970. Number of Inhabitants. Final Report PC (1) - A45 Texas. U.S. GPO Washington, D.C. 1971.



The metropolitan area of Region 28 consists of the cities of Galveston, Texas City, and La Marque.

Galveston, the county seat of Galveston County, is located on Galveston Island. The Galveston Metropolitan Area is the home of many industries such as shipping, oil refining, shipbuilding, grain elevators, and chemical plants. The Port of Galveston serves as a base of operations for the commercial fishing and shrimp industry. Galveston is rich in history, with many historic homes and buildings still standing. Galveston College, the Texas Maritime Academy of Texas A&M University, and the University of Texas Medical Branch are located in Galveston. Annual events in Galveston are the Annual Shrimp Festival and Blessing of the Fleet (April) and Aqua Speed Week (May).

In Texas City are many major industrial and port facilities. Industries include tin smelter, oil refineries, metal fabrication, and chemical plants. Another dominant portion of the economy comes from the shipping of grain, cotton, sulphur, petroleum and chemical products from the port at Texas City. Texas City is the home of the College of the Mainland. A major annual event in Texas City is the Tackle Time Festival (June and July).

La Marque, just outside Texas City, serves as a commuting center for employees of Houston, Galveston, and Texas City.

POPULATION

1970 Metro Area Population: 116,848

Change 1960-70: +3%

Race Composition

White 74% ^{1/}

Negro 25%

Other 1%

Age Composition (years):

13 or less 26%

14 - 20 13%

21 - 44 30%

45 - 64 22%

65 and over 9%

ECONOMY

Medical Education

Petrochemicals

Shipping

Tourism

^{1/} Includes persons of Mexican and/or Spanish descent.

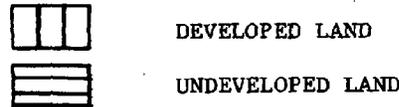
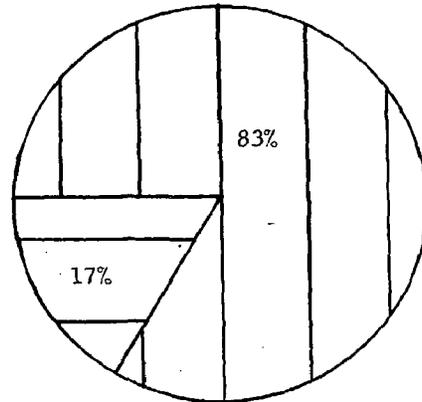
REGION 28

CITY SIZE: METRO

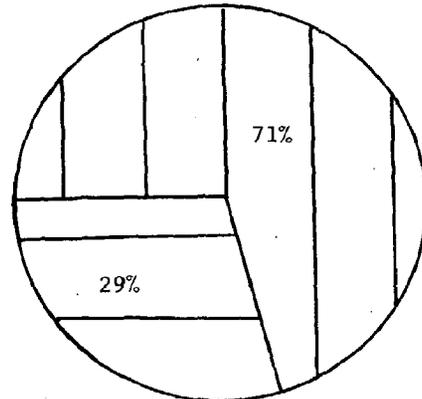
PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

REGION
28
METRO



STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 28 METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	474	1,307
Undeveloped Land	100	536
Total Land	574	1,843
Water Within or Adjacent	2	1,006
Total Land and Water	576	2,849

The Galveston Metro Area has a total of 574 acres of land set aside as park and recreation areas. In addition, two surface acres of water either within or adjacent to these parks were reported.

Of the total land acreage, 474 acres are developed with facilities, leaving 100 acres available for future development. With 83 percent of the land acreage currently developed, the Area is well above the Statewide Metro average of 71 percent.

PARKS AND ACREAGE BY TYPE OF PARK

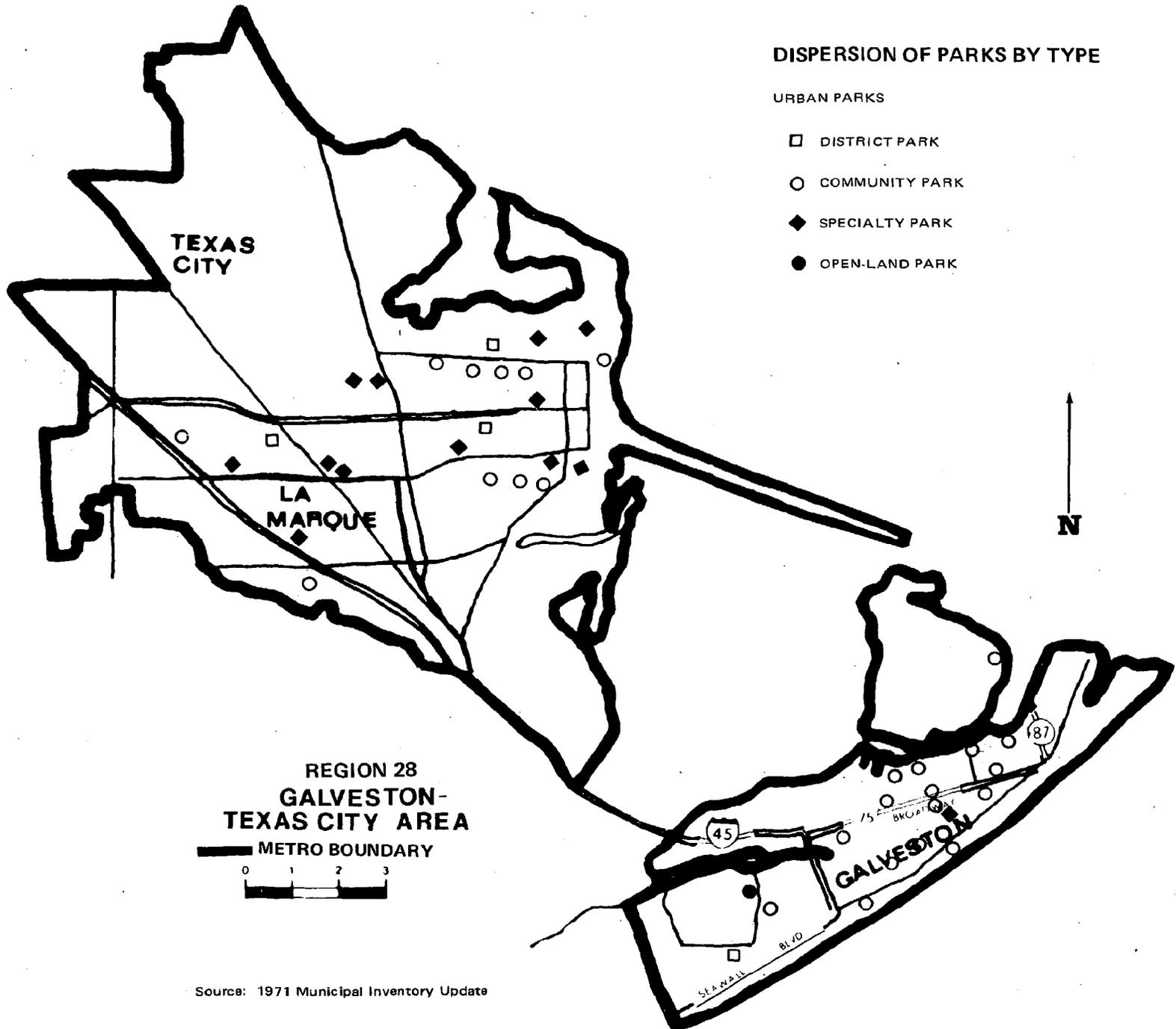
	<u>BISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	5.000	26.000	13.000	1.000	45.000	72.000
Parks Per Thousand	.043	.223	..111	.009	.385	.267
People Per Park	23,370.000	4,494.000	8,988.000	116,848.000	2,597.000	3,754.000
.....						
Land Acres	212.000	297.000	20.000	45.000	574.000	1,843.000
Acres Per Thousand	1.814	2.542	.171	.385	4.912	6.864
People Per Acre	551.000	393.000	5,842.000	•2,597.000	204.000	146.000

Twenty-six of the 45 parks in the Galveston Metro Area are Community Parks. Thirteen Specialty Parks were reported along with 5 District and only one Open Land Park. The acreage figures show that a little more than one-half of the total land acreage is in Community Parks, followed by 212 acres in the 5 District Parks. The one Open Land Park consists of 45 acres while the 13 Specialty Parks have a total of only 20 acres. The dispersion of the four types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the total population of the Galveston Metro Area, .385 parks per 1,000 and 4.912 acres per 1,000 population exist.

Another way to present this data is that 2,597 people share each park while 204 people must share each acre of park land.

With .385 parks per 1,000, the Metro Area ranks well above the Statewide Metro average. However, the 4,912 acres per 1,000 gives the area a figure well below the Statewide Metro average for acres per 1,000.



PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 28 METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	5	25	3	33	3,540	.282	.150
Tennis Courts.....	5	14	0	19	6,149	.162	.142
Basketball Courts.....	2	37	1	40	2,921	.341	.071
Baseball/Softball Fields.....	15	14	1	30	3,894	.256	.186
Football/Soccer Fields.....	1	1	0	2	58,242	.017	.032
Picnicking:							
Parks.....	5	19	0	24	4,868	.205	.124
Tables.....	39	75	0	114	1,024	.974	1.230
Playground:							
Parks.....	5	25	9	39	2,996	.333	.170
Acres Developed.....	11	37	4	52	2,247	.444	.258
Swimming:							
Parks.....	2	2	0	4	29,212	.034	.050
Pools (Sq. Yd.).....	1,008	377	0	1,385	84	11.837	25.950
Designated Fresh Water (Sq. Yd.)..	7,000	0	0	7,000	17	59.829	52.242
Designated Salt Water (Sq. Yd.)...	0	0	0	0	---	---	---
Boating:							
Parks.....	0	2	0	2	58,242	.017	.006
Ramp Lanes - Fresh Water.....	0	0	0	0	---	---	.008
Ramp Lanes - Salt Water.....	0	5	0	5	23,370	.042	---
Camping:							
Parks.....	0	0	0	0	---	---	.002
Campsites.....	0	0	0	0	---	---	.121
Fishing:							
Parks.....	0	2	0	2	58,242	.017	.013
Pier/Barge/Marina-Fresh Water(Yd.)	0	0	0	0	---	---	.049
Pier/Barge/Marina-Salt Water(Yd.)..	0	4	0	4	29,212	.034	---
Golfing:							
Courses.....	0	0	0	0	---	---	.005
Holes.....	0	0	0	0	---	---	.100
Trails:							
Parks.....	0	0	0	0	---	---	.006
Nature (Mi.).....	0	0	0	0	---	---	.009
Horseback (Mi.).....	0	0	0	0	---	---	.003
Bicycle (Mi.).....	0	0	0	0	---	---	.007
Hiking (Mi.).....	0	0	0	0	---	---	.006
Total Trails (Mi.).....	0	0	0	0	---	---	.021

PARK AND RECREATION FACILITIES BY TYPE OF PARK

CITY SIZE: METRO

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 28 METRO	STATEWIDE AVERAGE METRO AREAS
Sport Shooting:							
Parks.....	0	0	0	0	---	---	.002
Traps.....	0	0	0	0	---	---	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	0	0	0	0	---	---	.011
Miscellaneous:							
Parks.....	2	3	1	6	19,474	.051	.038
Amphitheatre Seats.....	0	0	0	0	---	---	1.077
Botanical Gardens (Acres).....	0	0	0	0	---	---	.077
Zoos (Acres).....	0	0	0	0	---	---	.051
Community/Recreation Centers.....	2	3	1	6	19,474	.051	.038

Most of the park and recreation facilities in the Galveston Metro Area are in Community and District Parks. The 13 Specialty Parks have only games and sports facilities, playgrounds and a community/recreation center. Designated fresh water swimming area was reported in the District Park category, however, a total of only four parks were inventoried with swimming facilities. No salt water swimming facilities were reported. The Community Park category has parks with boating and fishing facilities, all of these salt water. A total of 6 community/recreation centers were reported.

Of the 45 parks, 39 have playgrounds, 33 have facilities for games and sports, 24 have picnicking facilities and 4 have swimming facilities. The most common types of games and sports facilities are basketball with 40 courts, followed by baseball/softball with 30 fields, tennis with 19 courts and football/soccer with 2 fields.

Looking at selected facilities in relation to the number of potential users we find the following:

- 58,242 persons for each football/soccer field
- 19,474 persons for each community/recreation center
- 6,149 persons for each tennis court
- 3,894 persons for each baseball/softball field
- 2,921 persons for each basketball court
- 2,247 persons for each acre of playground
- 1,024 persons for each picnic table
- 84 persons for each square yard of swimming pool

The Galveston Metro Area is above the Statewide Metro average for facility units per 1,000 for tennis courts, basketball courts, baseball/softball fields, playground acres, designated fresh water swimming area and community/recreation centers. The Area is below the average for football/soccer fields, picnic tables and square yards of swimming pools. No boat ramp lanes-fresh water, campsites, yards of fishing pier/barge/marina-fresh water, golf holes, trail miles, sport shooting facilities, amphitheatre seats, acres of botanical gardens or zoo acreage were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

<u>ACTIVITY-FACILITY</u>	<u>ANNUAL DAYS AVAILABLE</u>	<u>DAYS PER THOUSAND POPULATION</u>	
		<u>REGION 28 METRO</u>	<u>STATEWIDE AVERAGE METRO</u>
Swimming (Pools) - square yards	200,750	1,776	3,891
Child's Play - playground acres	1,436,396	12,277	7,137
Baseball/Softball - fields	414,120	3,539	2,577
Picnicking - tables	194,028	1,658	2,093
Football/Soccer - fields	14,448	123	235
Golf - holes	0	0	414
Tennis - courts, double	51,186	437	384
Basketball - courts, full	351,800	3,007	625
 Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	834	7	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	0	0	103
Boating, Boat Fishing, Skiing SW - boat ramps	54,930	469	33
 Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	0	0	164

The Galveston Metro Area offers the most opportunity days for child's play, followed by baseball/softball, basketball, and swimming (in pools). A comparison between the opportunity days per thousand population for the Galveston Metro Area and the Statewide Metro average shows that the Galveston Metro Area surpasses the statewide average for five types of facilities-- children's playgrounds (in acres), baseball/softball fields, tennis courts, basketball courts, and saltwater boat ramps. The Galveston Metro Area is below the Statewide Metro average for swimming (in pools), picnicking, football/soccer and surface acres for freshwater boating, boat fishing and skiing, with no opportunity days available for golf, freshwater boat ramps and the trails activities.

The seventeenth ranking metro area, based on population, Galveston ranked sixth in total participation for the year 1970. Estimates for 1970 indicate that residents and non-residents in the area spent over 10.0 million recreation days in pursuit of urban outdoor recreation opportunities available within the metro area.

Resident

Total days of participation in urban outdoor recreation activities by the residents of the Galveston Metropolitan Area for the 20 activities shown were estimated to be 4.4 million days in 1970. Total participation is expected to increase to 5.8 million days in 1975 and to 7.1 million days in 1980. These projections represent increases of 31.9 percent by 1975 and 62.9 percent by 1980. Participation on a days per household basis is projected to increase from 114.5 days in 1970 to 149.2 days in 1975, and to 184.5 days in 1980--increases of 30.3 and 61.1 percent, respectively, over the 1970 level. Residents of the Galveston Metropolitan Area are expected to participate at a rate of 17, 24, and 32 days per household below the statewide average for the other Texas metropolitan areas in 1970, 1975, and 1980, respectively. For the more distant years of 1990 and 2000, both total days of participation and days per household are expected to increase, but days per household will remain below the statewide average for all metropolitan areas.

Projections for specific activities indicate that 14 activities will increase in total days of participation through the years of 1975 and 1980, while tennis, football, picnicking, saltwater boating and skiing, and driving for pleasure will decrease slightly. In 1970 the six most popular activities, based on total participation, were estimated to be: walking, swimming, driving for pleasure, bicycling, saltwater fishing, and child's play, respectively. In 1975 walking will remain the first ranked activity with bicycling ranked second and swimming third. Driving for pleasure, child's play, and saltwater fishing are expected to become fourth, fifth, and sixth ranked activities by 1975. In 1980 the top-ranked activities will be bicycling, walking, swimming, child's play, driving for pleasure, and saltwater fishing.

Non-Resident

Participation in urban outdoor recreation activities within the Galveston Metropolitan Area by non-residents was estimated to total 5,668,000 days for the activities specified for 1970. Compared to the 1970 level, total participation is expected to increase 9.0 percent (to 6,180,000 days) by 1975, and 18.1 percent (to 6,693,000 days) by 1980. Similar increases are anticipated through the years 1990 and 2000.

Of the specified activities selected, the most popular activities by non-residents for 1970 were: swimming, with 2,256,000 days; saltwater fishing, with 1,002,000 days; picnicking, with 1,033,000 days; sightseeing, with 478,000 days; saltwater boating, with 329,000 days; and surfing, with 256,000 days. Assuming adequate facilities are made available, all activities are expected to increase at a moderate rate through the year 2000, with swimming, saltwater fishing, picnicking, sightseeing, saltwater boating, and surfing retaining their ranking one through six, respectively.

ACTIVITY	1970				1975				1980				1990				2000			
	PART. DAYS	RANK	REG. 28 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 28 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 28 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 28 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 28 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH
Swimming	518	2	13.57	27.41	665	3	17.21	36.52	818	3	21.19	47.17	1,117	3	30.33	75.28	1,371	3	40.90	110.14
Child's Play	378	6	9.90	14.08	473	5	12.24	17.72	572	4	14.81	22.00	767	4	20.83	32.20	937	4	27.95	43.99
Baseball/Softball	62	14	1.62	2.78	73	12	1.89	3.19	84	13	2.18	3.59	101	13	2.74	4.41	113	13	3.37	5.22
Picnicking	240	7	6.29	5.72	247	8	6.39	5.66	251	8	6.50	5.66	248	10	6.73	5.61	233	11	6.95	5.64
Football/Soccer	44	15	1.15	1.43	45	16	1.16	1.42	44	16	1.14	1.41	42	17	1.14	1.39	37	17	1.10	1.38
Golf	100	10	2.62	3.92	127	11	3.29	4.98	155	11	4.01	6.16	212	11	5.76	8.96	262	10	7.82	12.07
Tennis	65	13	1.70	6.06	69	14	1.79	9.21	69	15	1.79	11.49	65	15	1.76	16.07	59	15	1.76	21.46
Basketball	30	18	.79	1.60	33	17	.85	2.59	36	17	.93	3.57	39	18	1.06	5.52	40	18	1.19	7.53
Walking	918	1	24.04	18.21	1,182	1	30.58	23.09	1,434	2	37.14	29.20	1,851	2	50.26	39.89	2,125	2	63.40	50.31
Bicycling	461	4	12.07	20.30	1,002	2	25.93	32.77	1,536	1	39.78	45.25	2,486	1	67.50	68.44	3,191	1	95.20	95.49
Nature Study	83	11	2.17	.72	154	10	3.98	1.67	255	10	5.83	2.64	349	8	9.48	4.63	440	8	13.13	6.70
Fishing																				
Freshwater	69	12	1.81	1.80	73	12	1.89	1.88	76	14	1.97	1.97	79	14	2.15	2.13	77	14	2.30	2.30
Saltwater	423	5	11.08	1.81	444	6	11.49	1.79	460	6	11.91	1.78	470	7	12.76	1.77	456	7	13.60	1.78
Boating																				
Freshwater	34	16	.89	.88	62	15	1.60	1.60	89	12	2.31	2.31	138	12	3.75	3.74	173	12	5.16	5.17
Saltwater	32	17	.84	.84	32	18	.83	.84	32	18	.83	.84	31	19	.84	.84	28	19	.84	.84
Skiing																				
Freshwater	16	19	.42	.42	24	19	.62	.62	32	18	.83	.82	45	16	1.22	1.22	54	16	1.61	1.81
Saltwater	2	20	.05	.05	2	20	.05	.04	2	20	.05	.04	2	20	.05	.04	1	20	.03	.04
Surfing	207	8	5.42	5.42	330	7	8.54	8.54	450	7	11.65	11.65	659	5	17.89	17.89	809	5	24.13	24.13
Sightseeing	186	9	4.87	2.25	214	9	5.54	2.34	241	9	6.24	2.50	288	9	7.82	2.70	319	9	9.52	3.01
Dr. for Pleas.	505	3	13.22	13.38	516	4	13.35	13.52	516	5	13.36	13.67	498	6	13.52	13.86	459	6	13.69	14.10
TOTAL	4,373		114.52	129.08	5,767		149.22	169.99	7,122		184.45	213.72	9,487		257.59	306.59	11,184		333.65	413.11

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000	ACTIVITY	1970	1975	1980	1990	2000
Swimming	2,256	2,460	2,664	3,053	3,474	Swimming	2,774	3,125	3,482	4,170	4,845
Child's Play	35	38	41	47	53	Child's Play	413	511	613	814	990
Baseball/Softball	*	*	*	*	*	Baseball/Softball	62	73	84	101	113
Picnicking	1,033	1,126	1,220	1,398	1,591	Picnicking	1,273	1,373	1,471	1,646	1,824
Football/Soccer	14	16	17	20	22	Football/Soccer	58	61	61	62	59
Golf	45	49	53	61	69	Golf	145	176	208	273	331
Tennis	*	*	*	*	*	Tennis	65	69	69	65	59
Basketball	*	*	*	*	*	Basketball	30	33	36	39	40
Walking	102	111	120	138	157	Walking	1,020	1,293	1,554	1,989	2,282
Bicycling	*	*	*	*	*	Bicycling	461	1,002	1,536	2,486	3,191
Nature Study	8	9	10	11	13	Nature Study	91	163	235	360	453
Fishing						Fishing					
Freshwater	*	*	*	*	*	Freshwater	69	73	76	79	77
Saltwater	1,002	1,092	1,183	1,356	1,543	Saltwater	1,425	1,536	1,643	1,826	1,999
Boating						Boating					
Freshwater	*	*	*	*	*	Freshwater	34	62	89	138	173
Saltwater	329	359	389	445	507	Saltwater	361	391	421	476	535
Skiing						Skiing					
Freshwater	1	1	1	2	2	Freshwater	17	25	33	47	56
Saltwater	44	48	52	60	68	Saltwater	46	50	54	62	69
Surfing	256	279	302	347	394	Surfing	463	609	752	1,006	1,203
Sightseeing	478	521	564	647	736	Sightseeing	664	735	805	935	1,055
Dr. for Pleas.	65	71	77	88	101	Dr. for Pleas.	570	587	593	586	560
TOTAL	5,668	6,180	6,693	7,673	8,730	TOTAL	10,041	11,947	13,815	17,160	19,914

400 Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the Galveston-Texas City Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with current recreation opportunities^{2/} available in the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to various areas within the metro. Conclusions reached from analyzing the distribution of recreation opportunities within the metropolitan area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist.

The availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were not analyzed with respect to subsections of the metro characterized by residents having similar incomes and ethnic backgrounds because the socio-economic data was not available. Income/ethnic background subsections were analyzed with respect to the distribution of parks and recreation facilities within these parks for other metros, or parts of metro areas, of the State for which this type information was available.

The accessibility of parks to urban residents significantly affects the frequency of park use. Further, recreationists from different income groups and ethnic backgrounds often have distinguishably different recreation patterns and preferences. Both of these factors are important and should be considered in developing additional recreation opportunities in the Galveston-Texas City Metro Area.

In the discussions that follow, results of the distribution analysis of parks within the Galveston-Texas City Metro are presented. Then, estimates of current and future requirements for selected recreation facilities are presented, and are qualified by conclusions reached from the distribution analysis of recreation facilities within the metro area.

PARK DISTRIBUTION ANALYSIS

In analyzing the availability and distribution of parks in the Galveston-Texas City Metro, consideration was given to changes in population (or trends, in general 1960 to 1970).

The population of the metro area in Region 28 was recorded as 116,118 in 1970. Although this represents a small increase over the 1960 census of 113,209, all of the growth occurred in Texas City and La Marque. During the 1960's Galveston recorded an eight percent decrease in population. Projections of growth indicate that the 1970 metro population should remain stable until 1980, after which a steady decline is predicted. Although an analysis regarding rapid urban growth areas in the metro was not possible because of a lack of data, consideration should be given to this factor when developing additional parks.

^{1/} "Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

^{2/} "Current" recreation opportunities refers to computed figures derived from the numbers of publicly-administered facilities by type available within the metro area in 1971.

The "Dispersion of Parks by Type" map shows the geographic distribution of parks, as of 1971. All three municipalities reported having at least two parks. In general, parks appear to have been well dispersed in 1971; one possible exception was that, in comparison to the built-up areas of Texas City and Galveston, the built-up area of La Marque had minimal resources. District parks appear to have been concentrated in Texas City; La Marque had none. Each of the three municipalities reported having at least one community and specialty park. Open land parks, however, were infrequent for the metro as a whole, and were absent in Texas City and La Marque. Recreational open land is important in maintaining a balanced and aesthetically pleasing urban environment.

FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. Then, an analysis of the dispersion of existing facilities was conducted. Conclusions reached from the facility dispersion analysis were then used to qualify the facility requirement estimates, particularly in those cases where no additional facilities were estimated as being required. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the Urban Volume. In the discussions that follow, resource requirements for recreational facilities are generally referred to by units of the most important feature necessary to allow participation. For example, when a requirement is shown for swimming pools, features such as a bathhouse, cleaning and filtering system, and other support features are implied when a requirement for the major facility is shown.

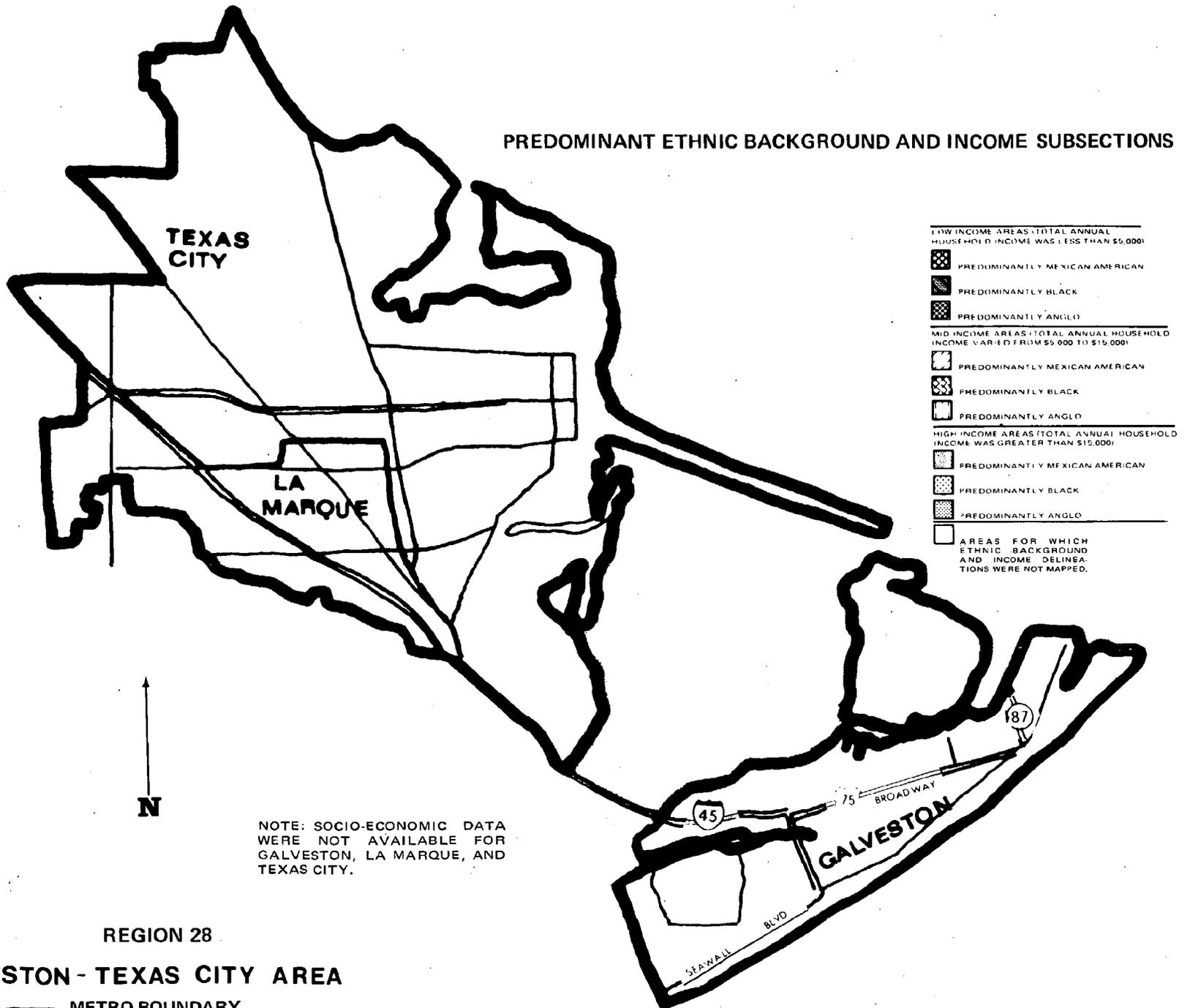
Swimming

In 1971 there were 1,385 square yards of public swimming pool provided in the Galveston-Texas City Metropolitan Area. With a facility standard of 150 days per year per square yard of pool, a total of 208,000 swimming opportunity days were available. This was well below the estimated demand of almost two million participation days. This deficit of 1,747,000 days generated a requirement for 11,647 additional square yards in 1970. Further analysis indicates that the cumulative resource requirement will increase to 13,300 square yards in 1975, to 14,973 square yards by 1980, 18,207 square yards by 1990, and to a total of 21,380 square yards above the existing supply by the year 2000. Neither of the two urban parks in La Marque had public swimming facilities, and Galveston also reported having no facilities, except for the facilities in the community park on Pelican Island. In the allocation of additional swimming facilities, consideration should be given to these areas, as well as providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Child's Play

Given a conversion standard of 27,623 days per year per acre of playground, the 1971 supply of fifty-two acres provided about 1,436,000 opportunity days. With the participation level below this total, the fifty-two acres should be adequate through the year 2000. Since most of the urban parks had at least some playground facilities, the distribution

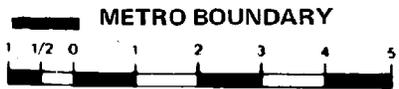
PREDOMINANT ETHNIC BACKGROUND AND INCOME SUBSECTIONS



NOTE: SOCIO-ECONOMIC DATA WERE NOT AVAILABLE FOR GALVESTON, LA MARQUE, AND TEXAS CITY.

REGION 28

GALVESTON - TEXAS CITY AREA



of playgrounds approximated the distribution of parks. Except for the built-up area of La Marque, other populated parts of the metro appear to have had reasonable access to playground facilities in 1971.

Baseball/Softball

The thirty fields in 1971 provided about 414,000 opportunity days, given a facility standard of 13,804 days per year per field. Analysis of this activity suggests that the 1971 supply level should be adequate through the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections if additional facilities are provided.

Picnicking

Given a standard of 1,702 days per year per picnic table, the 114 public tables in 1971 provided 194,000 opportunity days, which was well below estimated demand of 1,273,000 participation days. In addition to the 1971 supply level, 634 picnic tables were needed in 1970. Cumulative resource requirements were estimated to increase to 693 tables by 1975, to 750 tables by 1980, to 853 tables by 1990, and to a total of 958 tables in addition to the existing 114 by the year 2000. The number of parks which had picnicking facilities was fewer than the number of parks which had playgrounds, especially in Texas City. Accordingly, consideration should be given to Texas City and the built-up area of La Marque, as well as growth areas and the various income/ethnic subsections in the allocation of additional picnicking facilities.

Football/Soccer

The Galveston-Texas City Metropolitan Area reported two football/soccer fields which were open to the public in 1971. With a facility standard of 7,224 days per year per field, a total of 14,000 opportunity days were provided. In 1970, six additional fields were needed to satisfy a deficit of 44,000 days. In view of the relatively slow increase projected in demand, the construction of one football field by 1980 will probably suffice through the year 2000. This addition would bring the cumulative resource requirement to seven fields by the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Golf

A total of thirty-six holes of golf were required in 1970 to erase a deficit of 145,000 days caused by the lack of any municipal golf courses in the Galveston-Texas City Metropolitan Area. The cumulative requirement was expected to increase to 43 holes in 1975, to 51 holes in 1980, to 67 holes in 1990, and to 82 holes by the year 2000. By 2000, the equivalent of four additional eighteen-hole courses and one nine-hole course will be required. In the allocation of public golf courses, consideration should be given to a balanced distribution relative to growth areas and the various income/ethnic subsections within the metro area.

Tennis

In 1971, there were nineteen public tennis courts in the metro area. These courts provided a combined total of about 51,000 opportunity days, which was slightly below the estimated demand of 65,000 participation days. Five additional courts were needed in 1970. If these five courts were provided, an incremental increase of two more courts by 1975 should be adequate to accommodate projected demand through the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Basketball

The forty basketball courts in 1971 provided approximately 352,000 opportunity days, which exceeded the estimated 30,000 participation days. Consequently, the 1971 supply level was expected to be adequate to meet anticipated demand through the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections if additional facilities are provided.

Trails Activities

There were no designated trails in the metro area of Region 28 in 1971. Demand was calculated to be approximately 143,000 days in 1970, which translates into a deficit of 143,000 days. Consequently, seventeen miles of trail were needed in 1970, given a facility standard of 8,464 days per year per mile of trail. If no additional miles are developed, the cumulative requirement increases to 25 miles in 1975, to 32 miles in 1980, to 45 miles in 1990, and to 54 miles required by the year 2000.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly-administered park and recreation areas. It is likely, however, that as trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of resources required may be conservative in the long run and should be considered as minimum estimates. In addition to the expectations for increases in participation in trail and related activities at publicly-administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local neighborhoods, on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, SkiingSurface Acres - Freshwater Lakes
(Boating, Boat Fishing, Skiing)

Two surface acres of freshwater lakes were located within the Galveston Metro Area of Region 28 in 1971. Using participation patterns of households recreating in the urban areas, it was estimated that boating would have totaled 34,000 days, boat fishing 15,000 days, and skiing 17,000 days for a total of 66,000 days in 1970 if adequate freshwater lakes had been available. Comparing estimated participation with the opportunities provided by the surface acres existing in 1971 indicates that incremental resource requirements are expected to expand from an additional 156 acres needed in 1970 to 86 acres in 1975, 86 acres in 1980, 154 acres in 1990, and 103 acres in the year 2000. This brings the cumulative resource requirement to an additional 585 surface acres by the year 2000.

Freshwater Boat Ramps^{1/}

No publicly-administered freshwater boat lanes were reported for the metro of Region 28 in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using freshwater boat ramp facilities to gain access to the water if ramps were available, it was calculated that two boat ramps were needed in 1970. Projected increases in freshwater boat fishing, skiing, and boating participation are expected to require one additional freshwater boat ramp in 1975, one in 1980, one in 1990, and one in the year 2000, bringing the cumulative resource requirement to six ramps in 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, the provision of freshwater surface acres and freshwater boat ramps required should be planned as joint projects, even though, in some cases, this may require the construction of boat ramps prior to the years reflected in the boat ramp resource requirement projections.

Saltwater Boat Ramps^{1/}

In terms of saltwater resources, Galveston, La Marque, and Texas City each had access to coastal waters in 1971. Five publicly-administered saltwater boat lanes providing access to and from the saltwater resources were reported within the metro area in 1971. By estimating the 1970 total saltwater boat fishing, skiing, and boating participation which would have occurred using saltwater boat ramp facilities to gain access to the saltwater areas if sufficient ramps had been available, it was calculated that fifteen saltwater access boat ramps were needed in 1970. Expected increases in saltwater boat fishing, skiing, and boating participation are projected to require incremental saltwater boat ramp additions of two in 1975, one in 1980, two in 1990, and three in the year 2000, bringing the cumulative requirement to an additional twenty-three ramps required by 2000.

^{1/} In calculating freshwater and saltwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

Summary of Facilities Requirements

In 1971 there were three types of public outdoor recreation facilities which were not available within the metro boundaries: holes of golf, miles of trail, and freshwater boat ramps. Resource requirements were indicated for every planning horizon year for each of these three types of facilities. Also, the metro reported only two acres of freshwater lakes available in 1971, and large increases in opportunities were estimated to be necessary for each planning horizon year. Analysis also indicates that additional saltwater boat ramps were needed in each planning year to supplement the five reported in 1971.

To augment existing facilities, additional public swimming pools and picnic tables were estimated to be required for each planning horizon year. Substantial additions were estimated to be required for football fields and tennis courts in 1970, with only nominal increases necessary in subsequent years. The number of playground acres, baseball/softball fields, and basketball courts was estimated to be sufficient through the year 2000.

A dispersion analysis was possible only for a few facility types. Galveston reported having only one public swimming pool, and it was located in the extreme northeastern part of Galveston. La Marque reported having no swimming facilities in its two urban parks. Playground areas were relatively infrequent in the built-up area of La Marque, and picnicking facilities were relatively infrequent in both Texas City and La Marque. In the allocation of additional facilities for all types of outdoor recreation activities, consideration should be given to a balanced distribution relative to growth areas and the various income/ethnic subsections.

YEAR	ACTIVITY	TOTAL	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION		
		PARTICIPATION (000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	1,955 ^{1/}	208	1,747			11,647 square yards ^{2/}	11,647 square yards ^{2/}
	Child's Play (Playgrounds)	413	1,436		1,023		0 acres	0 acres
	Baseball/Softball	62	414		352		0 fields	0 fields
	Picnicking	1,273	194	1,079			634 tables	634 tables
	Football/Soccer	58	14	.44			6 fields	6 fields
	Golf	145	0	145			36 holes	36 holes
	Tennis	65	51	14			5 courts, dbl.	5 courts, dbl.
	Basketball	30	352			322	0 courts, full	0 courts, full
1970	Water-Related Activities:							
	Boating, Boat Fishing, Skiing FW . . .	66	1	65			156 surface acres	156 surface acres
	Boating, Boat Fishing, Skiing FW . . .	50	0	50			2 ramps ^{3/}	2 ramps ^{3/}
	Boating, Boat Fishing, Skiing SW . . .	385	55	330			15 ramps ^{3/}	15 ramps ^{3/}
	Trails Activities:							
	Walking	107 ^{4/}					13 miles	13 miles
	Bicycling	18 ^{4/}					2 miles	2 miles
	Nature Study	18 ^{4/}					2 miles	2 miles
	Combined Walking, Bicycling, Nature Study	143 ^{4/}	0	143			17 miles	17 miles
	<u>ACTIVITY</u>							
	Swimming (Pools)	2,203 ^{1/}	208	1,995			13,300 square yards ^{2/}	1,653 square yards ^{2/}
	Child's Play (Playgrounds)	511	1,436		925		0 acres	0 acres
	Baseball/Softball	73	414		341		0 fields	0 fields
	Picnicking	1,373	194	1,179			693 tables	59 tables
	Football/Soccer	61	14	47			6 fields	0 fields
	Golf	176	0	176			43 holes	7 holes
	Tennis	69	51	18			7 courts, dbl.	2 courts, dbl.
	Basketball	33	352			319	0 courts, full	0 courts, full
1975	Water-Related Activities:							
	Boating, Boat Fishing, Skiing FW . . .	102	1	101			242 surface acres	86 surface acres
	Boating, Boat Fishing, Skiing FW . . .	76	0	76			3 ramps ^{3/}	1 ramp ^{3/}
	Boating, Boat Fishing, Skiing SW . . .	416	55	372			17 ramps ^{3/}	2 ramps ^{3/}
	Trails Activities:							
	Walking	136 ^{4/}					16 miles	3 miles
	Bicycling	40 ^{4/}					5 miles	3 miles
	Nature Study	33 ^{4/}					4 miles	2 miles
	Combined Walking, Bicycling, Nature Study	209 ^{4/}	0	209			25 miles	8 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE RESOURCES REQUIRED
	Swimming (Pools)	2,454 ^{1/}	208	2,246		14,973 square yards ^{2/}	1,673 square yards ^{2/}
	Child's Play (Playgrounds)	613	1,436		823	0 acres	0 acres
	Baseball/Softball	84	414		330	0 fields	0 fields
	Picnicking	1,471	194	1,277		750 tables	57 tables
	Football/Soccer	61	14	47		7 fields	1 field
	Golf	208	0	208		51 holes	8 holes
	Tennis	69	51	18		7 courts, dbl.	0 courts, dbl.
	Basketball	36	352		316	0 courts, full	0 courts, full
1980	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	138	1	137		328 surface acres	86 surface acres
	Boating, Boat Fishing, Skiing FW . . .	100	0	100		4 ramps ^{3/}	1 ramp ^{3/}
	Boating, Boat Fishing, Skiing SW . . .	447	55	392		18 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	163 ^{4/}				19 miles	3 miles
	Bicycling	61 ^{4/}				7 miles	2 miles
	Nature Study	47 ^{4/}				6 miles	2 miles
	Combined Walking, Bicycling, Nature Study	271 ^{4/}	0	271		32 miles	7 miles
	ACTIVITY						
	Swimming (Pools)	2,939 ^{1/}	208	2,731		18,207 square yards ^{2/}	3,234 square yards ^{2/}
	Child's Play (Playgrounds)	814	1,436		622	0 acres	0 acres
	Baseball/Softball	101	414		313	0 fields	0 fields
	Picnicking	1,646	194	1,452		853 tables	103 tables
	Football/Soccer	62	14	48		7 fields	0 fields
	Golf	273	0	273		67 holes	16 holes
	Tennis	65	51	14		7 courts, dbl.	0 courts, dbl.
	Basketball	39	352		313	0 courts, full	0 courts, full
1990	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	202	1	201		482 surface acres	154 surface acres
	Boating, Boat Fishing, Skiing FW . . .	143	0	143		5 ramps ^{3/}	1 ramp ^{3/}
	Boating, Boat Fishing, Skiing SW . . .	501	55	446		2 ramps ^{3/}	2 ramps ^{3/}
	Trails Activities:						
	Walking	209 ^{4/}				25 miles	6 miles
	Bicycling	99 ^{4/}				11 miles	4 miles
	Nature Study	72 ^{4/}				9 miles	3 miles
	Combined Walking, Bicycling, Nature Study	380 ^{4/}	0	380		45 miles	13 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	3,415 ^{1/}	208	3,207		21,380 square yards ^{2/}	3,173 square yards ^{2/}
	Child's Play (Playgrounds)	990	1,436		446	0 acres	0 acres
	Baseball/Softball	113	414		301	0 fields	0 fields
	Picnicking	1,824	194	1,630		958 tables	105 tables
	Football/Soccer	59	14	45		7 fields	0 fields
	Golf	331	0	331		82 holes	15 holes
	Tennis	59	51	8		7 courts, dbl.	0 courts, dbl.
	Basketball	39	352		313	0 courts, full	0 courts, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	245	1	244		585 surface acres	103 surface acres
	Boating, Boat Fishing, Skiing FW . . .	172	0	172		6 ramps ^{3/}	1 ramp ^{3/}
	Boating, Boat Fishing, Skiing SW . . .	554	55	499		23 ramps ^{3/}	3 ramps ^{3/}
	Trails Activities:						
	Walking	240 ^{4/}				28 miles	3 miles
	Bicycling	128 ^{4/}				15 miles	4 miles
	Nature Study	92 ^{4/}				11 miles	2 miles
	Combined Walking, Bicycling, Nature Study	460 ^{4/}	0	460		54 miles	9 miles

1/ Includes only swimming participation occurring in swimming pools, 70.48 percent of the total in urban areas on the Gulf Coast.
 2/ Designated freshwater and saltwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.
 3/ Assumes 2.0 lanes per ramp.
 4/ Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

El Paso, the county seat of El Paso County, is located in deep West Texas and borders Mexico. Located in a mountain pass from which its name was derived, El Paso, the City of Sun, is one of the fastest growing major cities in the nation. Leading industries include smelting and metal refining, petroleum refining and distribution, building materials, manufacture, and food processing. El Paso is a center for the manufacture, distribution, processing and sale of agricultural products and supplies. El Paso also serves as an important trade center for West Texas, Arizona, New Mexico and the Mexican state of Chihuahua. El Paso's economy is further boosted by nearby Fort Bliss, an air defense training center of the U.S. Army. El Paso is the leading medical center for West Texas with twelve hospitals. Numerous museums and historic Spanish missions which vividly tell the stories of the past are found in El Paso. Located in El Paso is the University of Texas at El Paso. Major annual events celebrated in El Paso are the Southwestern International Livestock Show and Rodeo (February), Fiesta Chamizal (October), and the Southwestern Sun Carnival (December and January). One may participate in other events by merely crossing the border into the Mexican city of Juarez.

El Paso dominates the region's economy, and most of the region's population resides here. However, a few small towns in the region contribute to the economy, mostly through agriculture.

POPULATION

1970 Metro Area Population: 322,261

Change 1960-70: +16%

Race Composition

White 96% ^{1/}

Negro 3%

Other 1%

Age Composition (years):

13 or less 32%

14 - 20 15%

21 - 44 31%

45 - 64 16%

65 and over 6%

ECONOMY

Construction

Distribution

Government

Manufacturing

Tourism

^{1/} Includes persons of Mexican and/or Spanish descent.

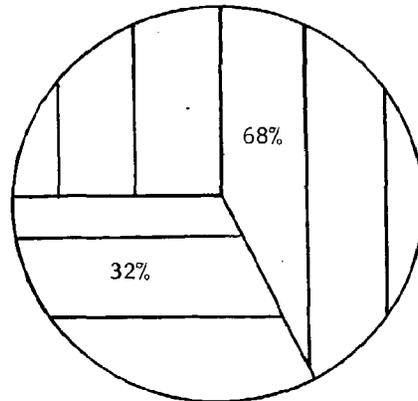
REGION 29

CITY SIZE: METRO

PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

REGION
29
METRO

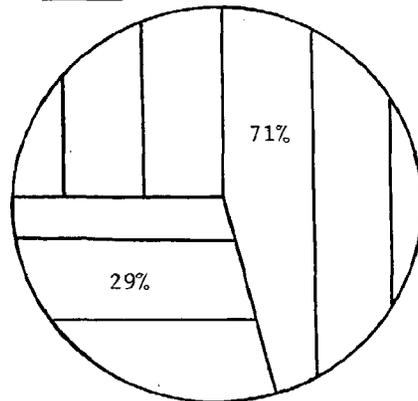


DEVELOPED LAND



UNDEVELOPED LAND

STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 29 METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	886	1,307
Undeveloped Land	416	536
Total Land	1,302	1,843
Water Within or Adjacent	50	1,006
Total Land and Water	1,352	2,849

El Paso has a total of 1,302 acres of land set aside as park and recreation areas. In addition, 50 surface acres of water either within or adjacent to these parks were reported.

Of the total land acreage, 886 acres are developed with facilities, leaving 416 acres available for future development. With 68 percent of the land acreage currently developed, El Paso is just under the Statewide Metro average of 71 percent.

PARKS AND ACREAGE BY TYPE OF PARK

	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	6.000	46.000	4.000	9.000	65.000	72.000
Parks Per Thousand	.019	.143	.012	.028	.202	.267
People Per Park	53,710.000	7,006.000	80,565.000	35,807.000	4,958.000	3,754.000
.....						
Land Acres	592.000	432.000	9.000	269.000	1,302.000	1,843.000
Acres Per Thousand	1.837	1.341	.028	.835	4.040	6.864
People Per Acre	544.000	746.000	35,807.000	1,198.000	248.000	146.000

More than seventy percent of the 65 parks in El Paso are Community Parks. Nine Open Land and six District Parks were reported along with 4 Specialty Parks. The acreage figures show that 592 acres, or 45 percent of the total land acreage, are in the six District Parks followed by 432 acres in Community Parks. The Open Land Parks contain a total of 269 acres, while the four Specialty Parks average a little over 2 acres each. The dispersion of the four types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the population of El Paso, .202 parks per 1,000 and 4.040 acres per 1,000 population exist.

Another way to present this data is that 4,958 people share each park while 248 people must share each acre of park land.

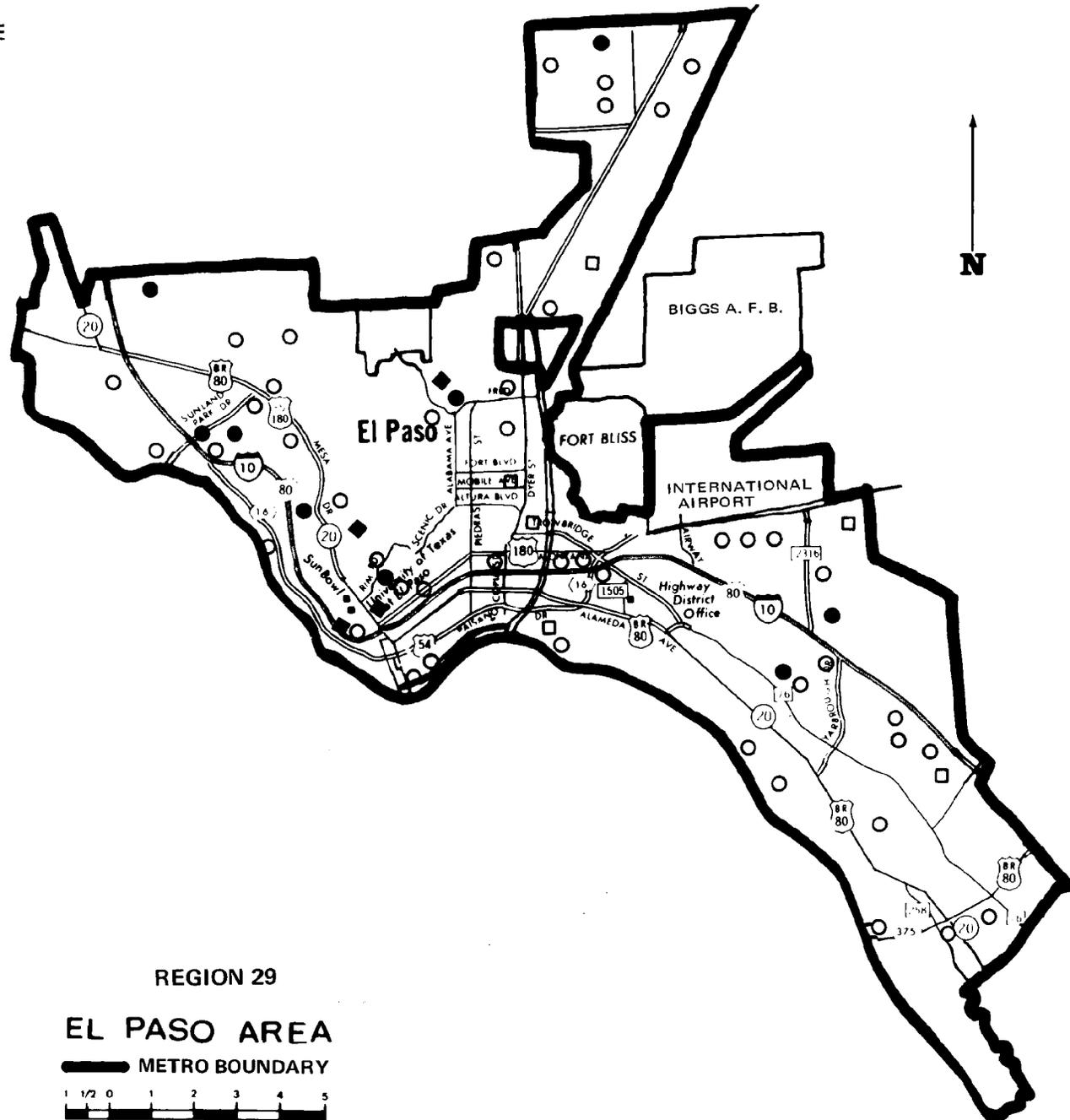
With .202 parks per 1,000, El Paso ranks well below the Statewide Metro average. The 4.041 acres per 1,000 also gives El Paso a figure well below the Statewide Metro average for acres per 1,000.

DISPERSION OF PARKS BY TYPE

URBAN PARKS

- DISTRICT PARK
- COMMUNITY PARK
- ◆ SPECIALTY PARK
- OPEN-LAND PARK

Source: 1971 Municipal Inventory Update



REGION 29

EL PASO AREA

— METRO BOUNDARY



PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 29 METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	6	31	2	39	8,263	.121	.150
Tennis Courts.....	12	29	0	41	7,860	.127	.142
Basketball Courts.....	4	30	0	34	9,478	.105	.071
Baseball/Softball Fields.....	14	21	1	36	8,951	.111	.186
Football/Soccer Fields.....	0	0	0	0	---	---	.032
Picnicking:							
Parks.....	6	35	0	41	7,860	.127	.124
Tables.....	150	210	0	360	895	1.110	1.230
Playground:							
Parks.....	6	44	2	52	6,197	.161	.170
Acres Developed.....	12	68	3	83	3,882	.257	.258
Swimming:							
Parks.....	3	5	0	8	40,282	.024	.050
Pools (Sq. Yd.).....	3,000	200	0	3,200	101	9.937	25.950
Designated Fresh Water (Sq. Yd.)...	0	0	0	0	---	---	52.242
Boating:							
Parks.....	1	0	0	1	322,261	.003	.006
Ramp Lanes - Fresh Water.....	4	0	0	4	80,565	.012	.008
Camping:							
Parks.....	0	0	0	0	---	---	.002
Campsites.....	0	0	0	0	---	---	.121
Fishing:							
Parks.....	1	0	0	1	322,261	.003	.013
Pier/Barge/Marina-Fresh Water (Yd.)	0	0	0	0	---	---	.049
Golfing:							
Courses.....	1	0	0	1	322,261	.003	.005
Holes.....	18	0	0	18	17,903	.055	.100
Trails:							
Parks.....	0	0	0	0	---	---	.006
Nature (Mi.).....	0	0	0	0	---	---	.009
Horseback (Mi.).....	0	0	0	0	---	---	.003
Bicycle (Mi.).....	0	0	0	0	---	---	.007
Hiking (Mi.).....	0	0	0	0	---	---	.006
Total Trails (Mi.).....	0	0	0	0	---	---	.021

PARK AND RECREATION FACILITIES BY TYPE OF PARK

CITY SIZE: METRO

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 29 METRO	STATEWIDE AVERAGE METRO AREAS
Sport Shooting:							
Parks.....	0	0	0	0	---	---	.002
Traps.....	0	0	0	0	---	---	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	0	0	0	0	---	---	.011
Miscellaneous:							
Parks.....	4	13	0	17	18,956	.052	.038
Amphitheatre Seats.....	0	0	0	0	---	---	1.077
Botanical Gardens (Acres).....	0	0	0	0	---	---	.077
Zoos (Acres).....	5	0	0	5	64,452	.015	.051
Community/Recreation Centers.....	3	13	0	16	20,141	.049	.038

Almost all of the park and recreation facilities in El Paso are in District and Community Parks. The Specialty Parks have only playgrounds and one baseball/softball field. The only facilities for boating as well as the only golf course are in District Parks. In addition, a zoo was reported in one of the District Parks. Fishing waters are available in a District Park although no specific fishing facilities were reported. A total of 16 community/recreation centers were inventoried.

Of the 65 parks, 52 have playgrounds, 41 have picnicking facilities, 39 have facilities for games and sports and 8 have swimming pools. The most common types of games and sports facilities are tennis with 41 courts, followed by baseball/softball with 36 fields and basketball with 34 courts.

Looking at selected facilities in relation to the number of potential users we find the following:

20,141 persons for each community/recreation center	7,860 persons for each tennis court
17,903 persons for each golf hole	3,882 persons for each acre of playground
9,478 persons for each basketball court	895 persons for each picnic table
8,951 persons for each baseball/softball field	101 persons for each square yard of swimming pool

El Paso is above the Statewide Metro average for facility units per 1,000 only for basketball courts, boat ramp lanes and community/recreation centers, while falling below the average for tennis courts, baseball/softball fields, picnic tables, playground acres, square yards of swimming pools, golf holes and zoo acreage. No football/soccer fields, designated fresh water swimming area, campsites, yards of fishing pier/barge/marina, trail miles, sport shooting facilities, amphitheatre seats, or acres of botanical gardens were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

<u>ACTIVITY-FACILITY</u>	<u>ANNUAL DAYS AVAILABLE</u>	<u>DAYS PER THOUSAND POPULATION</u>	
		<u>REGION 29 METRO</u>	<u>STATEWIDE AVERAGE METRO</u>
Swimming (Pools) - square yards	480,000	1,491	3,891
Child's Play - playground acres	2,292,709	7,120	7,137
Baseball/Softball - fields	496,944	1,543	2,577
Picnicking - tables	612,720	1,903	2,093
Football/Soccer - fields	0	0	235
Golf - holes	72,846	226	414
Tennis - courts, double	110,454	343	384
Basketball - courts, full	299,030	929	625
 Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	20,858	65	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	53,944	168	103
 Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	0	0	164

The El Paso Metro Area offers the most opportunity days for child's play, followed by picnicking, baseball/softball and swimming (in pools). A comparison between the opportunity days per thousand population for the El Paso Metro Area and the Statewide Metro average shows that the El Paso Metro Area surpasses the statewide average for two types of facilities -- basketball courts and freshwater boat ramps. The El Paso Metro Area is below the Statewide Metro average for swimming (in pools), child's play, baseball/softball, picnicking, golf, tennis and surface acres for freshwater boating, boat fishing and skiing, with no opportunities available for football/soccer and the trails activities.

The fifth ranking metro area, based on population, El Paso also ranked fifth in total participation for the year 1970. Estimates for 1970 indicate that residents and non-residents in the area spent over 13.1 million recreation days in pursuit of urban outdoor recreation opportunities available within the metro area.

Resident

Total days of participation in urban outdoor recreation activities by the residents of the El Paso Metropolitan Area for the 16 activities shown were estimated to be 12.9 million days in 1970. Total participation is expected to increase to 19.6 million days in 1975 and to 28.4 million days in 1980. These projections represent increases of 50.5 percent by 1975 and 121.0 percent by 1980. Participation on a days per household basis is projected to increase from 144.9 days in 1970 to 193.3 days in 1975, and to 247.4 days in 1980--increases of 33.4 and 70.7 percent, respectively, over the 1970 level. Residents of the El Paso Metropolitan Area are expected to participate at a rate of 21, 32, and 45 days per household above the statewide average for the other Texas metropolitan areas in 1970, 1975, and 1980, respectively. For the more distant years of 1990 and 2000, both total days of participation and days per household are expected to increase and days per household will remain above the statewide average for all metropolitan areas.

Projections for specific activities indicate that each of the 16 activities will increase in total days of participation through the years 1975 and 1980. Participation on a days per household basis is also expected to increase in all 16 activities. In 1970, the six most popular activities, based on total participation, were estimated to be: swimming, bicycling, walking, driving for pleasure, child's play, and picnicking, respectively. By 1975, child's play and driving for pleasure are expected to switch positions, with all other activities holding their relative rankings.

Non-Resident

When considering participation in urban outdoor recreation activities in 1970, a total of 281,000 days of participation, according to the projections, were recorded by non-residents in the El Paso Metropolitan Area. As compared to the 1970 level, total participation is expected to increase 11.7 percent to 314,000 days by 1975 and 23.1 percent to 346,000 days by 1980. This trend of increased participation is expected to continue through the years 1990 and 2000.

The estimates for 1970 indicate that the top six ranked activities, in order of popularity, were sightseeing, swimming, driving for pleasure, picnicking, walking, and child's play with totals of 152,000, 47,000, 37,000, 17,000, 16,000, and 5,000 days, respectively. It is anticipated that all activities will increase in participation through the year 2000 and hold their 1970 ranking in terms of popularity.

CURRENT AND PROJECTED RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970				1975				1980				1990				2000			
	PART.		REG. 29	STATE-																
	DAYS	RANK	AVERAGE	WIDE																
		DAYS/HH	METROS			DAYS/HH	METROS			DAYS/HH	METROS			DAYS/HH	METROS			DAYS/HH	METROS	
Swimming	3,093	1	34.84	27.41	4,648	1	45.76	36.52	6,603	1	57.45	47.17	12,780	2	89.41	75.28	21,320	2	127.03	110.14
Child's Play	1,476	5	16.63	14.08	2,139	4	21.06	17.72	3,118	4	27.13	22.00	5,623	4	39.34	32.20	9,206	4	54.85	43.99
Baseball/Softball	293	8	3.30	2.78	386	10	3.80	3.19	524	9	4.56	3.59	780	9	5.46	4.41	1,117	9	6.66	5.22
Picnicking	809	6	9.11	5.72	881	6	8.67	5.66	1,066	6	9.27	5.66	1,129	8	7.90	5.61	1,273	8	7.58	5.64
Football/Soccer	387	7	4.36	1.43	423	9	4.16	1.42	469	10	4.08	1.41	547	11	3.83	1.39	618	12	3.68	1.38
Golf	282	9	3.18	3.92	430	8	4.23	4.98	626	8	5.45	6.16	1,236	7	8.65	8.96	2,128	7	12.68	12.07
Tennis	246	11	2.77	6.06	340	11	3.35	9.21	434	12	3.78	11.49	646	10	4.52	16.07	885	10	5.27	21.46
Basketball	252	10	2.84	1.60	551	7	5.42	2.59	921	7	8.01	3.57	1,884	6	13.18	5.52	3,080	6	18.35	7.53
Walking	1,861	3	20.96	18.21	3,168	3	31.19	23.09	4,761	3	41.42	29.20	8,845	3	61.88	39.89	13,820	3	82.34	50.31
Bicycling	1,867	2	21.03	20.30	3,931	2	38.70	32.77	6,480	2	56.38	45.25	13,111	1	91.73	68.44	21,328	1	127.08	95.49
Nature Study	38	15	.43	.72	63	15	.62	1.67	95	15	.83	2.64	175	15	1.22	4.63	272	15	1.62	6.70
Fishing	159	13	1.79	1.80	191	13	1.88	1.88	226	14	1.97	1.97	305	14	2.13	2.13	387	14	2.31	2.30
Boating	78	14	.88	.88	162	14	1.60	1.60	266	13	2.31	2.31	535	12	3.74	3.74	868	11	5.17	5.17
Skiing	37	16	.42	.42	63	15	.62	.62	94	16	.82	.82	174	16	1.22	1.22	272	15	1.62	1.81
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	233	12	2.62	2.25	279	12	2.75	2.34	462	11	4.01	2.50	451	13	3.16	2.70	585	13	3.49	3.01
Dr. for Pleas.	1,755	4	19.77	13.38	1,980	5	19.49	13.52	2,293	5	19.95	13.67	2,703	5	18.91	13.86	3,126	5	18.63	14.10
TOTAL	12,866		144.93	120.96	19,635		193.30	158.78	28,438		247.42	199.41	50,924		356.28	286.05	80,285		478.36	386.32

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000
Swimming	47	53	58	70	80
Child's Play	5	6	6	8	9
Baseball/Softball	*	*	*	*	*
Picnicking	17	19	21	25	29
Football/Soccer	3	3	4	4	5
Golf	1	1	1	1	1
Tennis	*	*	*	*	*
Basketball	1	1	1	2	2
Walking	16	18	20	24	28
Bicycling	*	*	*	*	*
Nature Study	2	2	2	3	3
Fishing	*	*	*	*	*
Boating	*	*	*	*	*
Skiing	*	*	*	*	*
Surfing	---	---	---	---	---
Sightseeing	152	170	188	227	258
Dr. for Pleas.	37	41	45	55	62
TOTAL	281	314	346	419	477

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000
Swimming	3,140	4,701	6,661	12,850	21,400
Child's Play	1,481	2,145	3,124	5,631	9,215
Baseball/Softball	293	386	524	780	1,117
Picnicking	826	900	1,087	1,154	1,302
Football/Soccer	390	426	473	551	623
Golf	283	431	627	1,237	2,129
Tennis	246	340	434	646	885
Basketball	253	552	922	1,886	3,082
Walking	1,877	3,186	4,781	8,869	13,848
Bicycling	1,867	3,931	6,480	13,111	21,328
Nature Study	40	65	97	178	275
Fishing	159	191	226	305	387
Boating	78	162	266	535	868
Skiing	37	63	94	174	272
Surfing	---	---	---	---	---
Sightseeing	385	449	650	678	843
Dr. for Pleas.	1,792	2,021	2,338	2,758	3,188
TOTAL	13,147	19,949	28,784	51,343	80,762

Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the El Paso Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with the 1971 recreation opportunities^{2/} available in the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to subsections of the metro characterized by residents having similar incomes and ethnic backgrounds. Particular attention was given to those subsections expected to undergo relatively rapid population growth and physical expansion in the future.

Conclusions reached from analyzing the distribution of recreation opportunities within the metropolitan area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist.

In the discussion that follow, results of the distribution analysis of parks within subsections of the El Paso Metro Area are presented. Then, estimates of current and future requirements for selected recreation facilities are presented, and qualified by conclusions reached from the distribution analysis of recreation facilities within subsections of the El Paso Metro Area.

PARK DISTRIBUTION ANALYSIS

The accessibility of a park to the people who use it determines to a significant extent the frequency and length of time that recreationists will participate in the activities provided at that park. The distribution of parks among the people of any municipality determines the extent to which parks are accessible to recreationists. In analyzing the availability and distribution of parks to people in the El Paso Metro, several characteristics were considered; changes in population (or trends, in general, 1960 to 1970), areas of the metro which exhibited the strongest growth tendencies, and the dispersion of existing parks among subsections of the metro characterized by residents of different incomes and ethnic backgrounds. From these interrelated characteristics certain conclusions have been reached with specific inferences drawn to requirements for additional parks.

Population growth affected current and future participated estimates used to project recreation resource requirements. Projections of population growth indicate that the 1970 metro population of 322,261 will increase almost sixty-five percent by the year 2000. Information provided by planners in 1971 shows that directions of major urban expansion were likely to occur toward the east near the El Paso International Airport, the northeast (along the major north/south highway), and the northwest (along Interstate 10). This information is presented graphically on the map, titled "Predominant Ethnic Background and Income Subsections".

^{1/}"Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

^{2/}"Current" recreation opportunities refers to computed figures derived from the numbers of publicly-administered facilities by type available within the metro area in 1971.

This same map shows eight major income/ethnic subsections, as delineated by planners in 1971. A large area between Highway 80 and the Rio Grande was made up basically of low-income Mexican-Americans. Low-income Anglos were concentrated in three parts of the metro: in southeast El Paso, in the near north side (north of Trowbridge), and in the far north (along the main north/south highway). Middle-income Anglos were dispersed through most areas of the metro, including the east and southeast, the north, and the northwest portions of El Paso. There were three small areas of high-income Anglos: just east of Farm Road 2316, along the northern fringe (west of Biggs Air Force Base), and in northwest El Paso in the vicinity of Highway 20.

The "Dispersion of Parks by Type" map shows the geographic distribution of parks, as of 1971. Comparison with the "Predominant Ethnic Background and Income Subsections" map indicates that most areas of the metro had at least some type of park, although there were four small subsections which had no parks at all: the two low-income Anglo subsections in north central El Paso, the high-income Anglo area along the northern fringe, and the high-income Anglo area east of Farm Road 2316. Also, the middle-income Anglo area in the vicinity of Fort Bliss seemed to be relatively distant from parks.

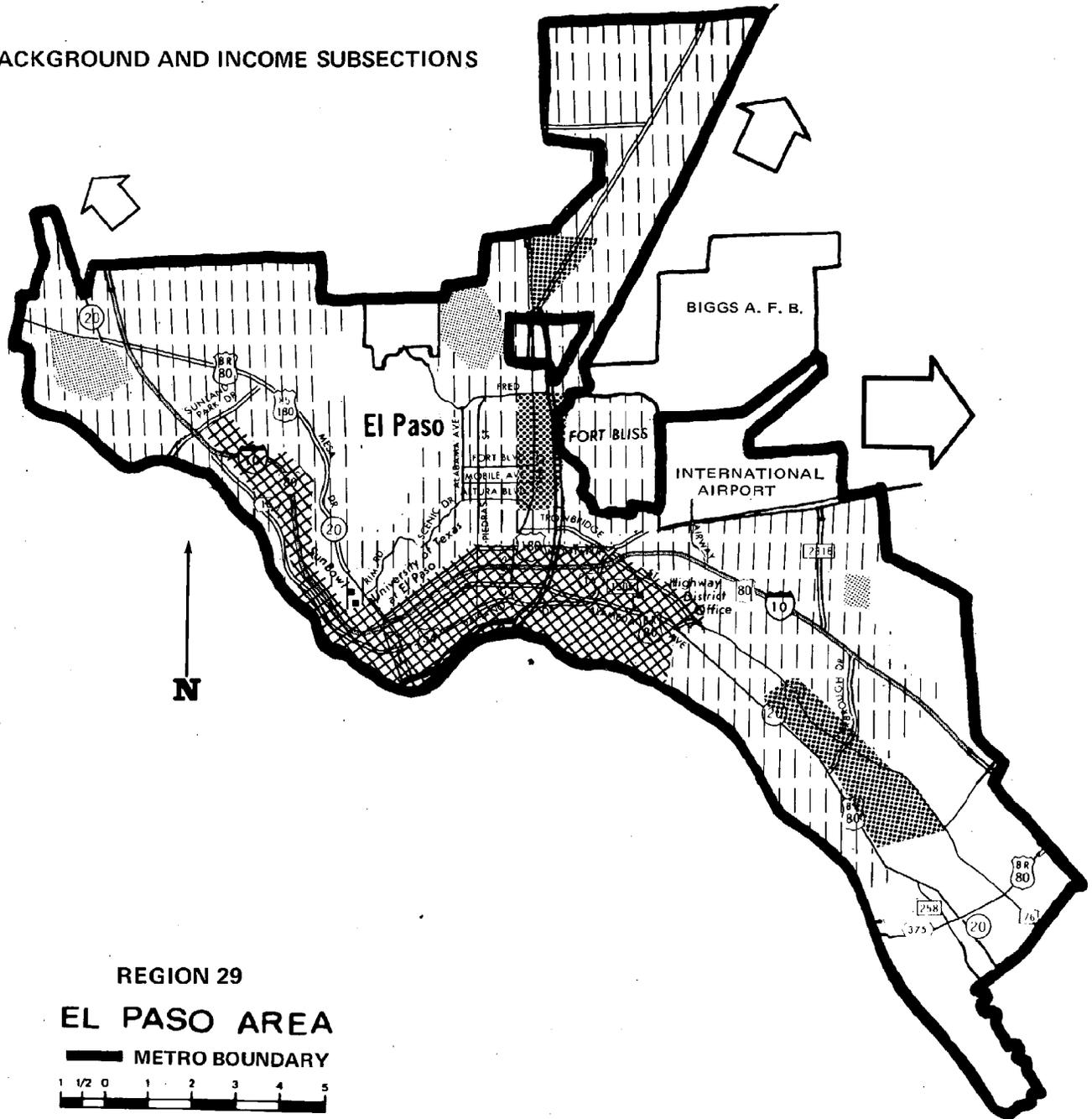
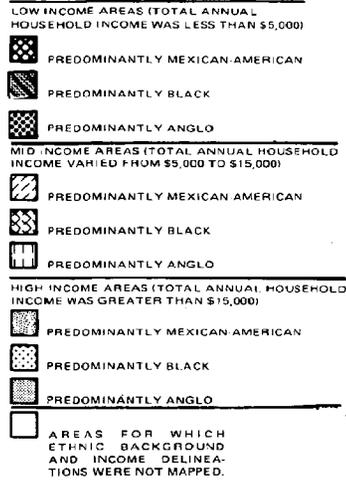
The distribution of district parks was not altogether balanced; generally, they were located along the main north/south highway, and in southeastern El Paso. There were no district parks west of Piedras Street. While community parks were distributed on a fairly uniform basis, the few specialty parks tended to be clustered within a two mile radius of the University of Texas at El Paso campus. All of the open land parks were situated within the large middle-income Anglo area which comprised most of the metro; there were no open land parks in any of the other seven income/ethnic subsections.

In addition to maintaining an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities in parks is also an important consideration. An analysis of the current and future requirements for selected recreational facilities and the current dispersion of facilities in the El Paso Metro is presented in the following discussions.

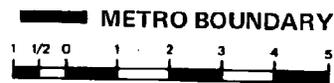
FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. Then, an analysis of the dispersion of existing facilities among the predominant income/ethnic background subsections and the major growth areas of the metro was conducted. Conclusions reached from the facility dispersion analysis were then used to qualify the facility requirement estimates, particularly in those cases where no additional facilities were estimated as being needed within the metropolitan area. Usually, special note is made where growth areas appeared to have limited facilities. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the Urban Volume. In the discussions that follow, resource requirements for recreational facilities are generally referred to by units of the most important features necessary to allow participation. For example, when a requirement is shown for

PREDOMINANT ETHNIC BACKGROUND AND INCOME SUBSECTIONS



REGION 29 EL PASO AREA



Note: Arrows indicate major areas of expected growth.

Source: Metropolitan area recreation planners for the 1971 Urban Planners Survey

swimming pools, features such as a bathhouse, cleaning and filtering system, and other support features are implied when a requirement for the major facility is shown.

Swimming

The El Paso Metro reported 3,200 square yards of swimming pools in 1971. Each square yard (unit) was estimated to provide 150 days of swimming opportunity per year which yielded an estimated 480,000 opportunity days. To determine if there was a surplus or deficit of opportunity, estimated participation days and estimated opportunity days were compared. For swimming there was a substantial deficit of opportunity in 1970, and larger deficits were shown in each planning year thereafter. In 1970, 16,480 square yards of pools were required. By 1975 the cumulative requirement was estimated at 26,260 square yards of pools. Cumulative 1980 requirements were estimated at 38,540 square yards. Cumulative requirements in 1990 and 2000 were estimated at 77,327 and 130,907 square yards respectively. Only eight parks were shown to have swimming facilities in 1971, and most swimming facilities were located in north central and south central El Paso in predominantly middle-income Anglo and low-income Mexican-American neighborhoods, respectively. This may indicate that additional facilities were needed especially in the northeastern, northwestern, and southeastern extremities of the metro with special considerations given to the more rapidly expanding residential sections.

Child's Play

The El Paso Metro area in 1971 had eighty-three acres of playground divided among fifty-two parks within the metro boundary. Multiplying the eighty-three acre units by the playground standard (each acre was calculated to provide 27,623 days of recreation opportunity per unit per year) provided an estimated 2,293,000 annual opportunity (potential participation) days. Annual opportunity days were then compared with the forecasted demands, as shown in the El Paso resource requirements table for the planning horizon years 1970, 1975, 1980, 1990, and 2000. Playground area surpluses were apparent for 1970 and 1975. The cumulative requirement for 1980 was thirty additional acres above the existing eighty-three acres in 1971. Requirements will grow incrementally by 91 acres and 130 acres in the remaining planning horizon years of 1990 and 2000, respectively, to a total requirement of 251 acres by the year 2000. Therefore, if all the playground areas expected to be required by the year 2000 are constructed, the total combined available playground area within the metro area should be approximately 334 acres. Since the existing playgrounds were relatively well distributed among the subsections, additional playgrounds should be similarly dispersed with emphasis placed on the major growth areas.

Baseball/Softball

With an existing thirty-six baseball/softball fields providing approximately 497,000 opportunity days (the facility standard utilized was 13,804 opportunity days provided per field each year), the El Paso Metropolitan Area appeared to have a sufficient quantity of fields to meet the activity requirements of their baseball/softball recreationists through the year 1975. The cumulative requirement for 1980 is 2 additional fields, with incremental requirements for 1990 and 2000 of 19 fields and 24 fields, respectively. If all the baseball/softball fields expected to be

required by the year 2000 are constructed, the cumulative total should be forty-five fields. Since existing fields were reasonably well distributed in the metro, additional fields should be similarly distributed with emphasis on growth areas.

Picnicking

There were 360 public picnic tables in the El Paso Metro in 1971. At 1,702 days of opportunity per table per year (standard) the existing tables provided approximately 613,000 days annually. In 1970 there was a cumulative requirement of 125 tables, with incremental requirements of 44 tables for 1975 and 109 tables for 1980. Another 40 tables will be needed by the year 1990, and an additional 87 tables will be needed to bring the year 2000 El Paso Metro Area cumulative total to 405 tables. The distribution analysis of picnicking facilities indicated good dispersion among the existing populace; however, as the metro area grows, provision of additional tables in the growing areas should be considered.

Football/Soccer

In 1971 there were no football/soccer fields in El Paso Metro parks. To make up this deficit, fifty-four fields were needed by 1970, each providing on the average 7,224 days of opportunity annually. Each successive planning horizon year shows further incremental requirements: 5 fields for 1975, 6 fields for 1980, 11 fields for 1990, and 10 fields for 2000. By 2000 the combined total required for El Paso will be eight-six fields. Development of these fields should produce even dispersion throughout the metro, with special attention to major growth areas.

Golf

In 1971 one publicly-administered course provided eighteen holes for golf. Using the urban golf standard, each golf hole was calculated to be capable of providing 4,047 days of recreation opportunity annually. El Paso golfers, then, should have had about 73,000 days of opportunity provided by the public course. Comparing the expected participation for the projection years with the available opportunity days shows that the golfers would have required an additional fifty-two holes (almost three eighteen-hole courses) in 1970. Incrementally, additions of 36, 49, 151, and 220 holes would be needed in the years 1975, 1980, 1990, and 2000, respectively, to meet expected increases in golfing participation. As a general rule, golf courses are constructed in multiples of nine holes; therefore, by the year 2000 the El Paso Metro Area will need slightly over fifty-eight additional nine-hole courses (522 holes) or twenty-nine eighteen-hole courses, or some appropriate combination which considers local resources. In view of the fact that there was only one municipal golf course in 1971, consideration should be given to most areas of the metro in the provision of additional courses. Particular attention should be given especially to central, northern, and north-western areas.

Tennis

The 110,000 opportunity days provided by the forty-one tennis courts available in 1971 (each court can make available about 2,694 days of opportunity per year) left a serious deficit of opportunity in the metro. In 1970, fifty additional courts were required, with incremental requirements of 35, 35, 79, and 89 courts for the years 1975, 1980, 1990, and 2000, respectively, which brings the cumulative requirement to 288 courts by the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Basketball

According to the urban basketball standard, each of the thirty-four basketball courts in the El Paso Metro Area should provide approximately 8,795 days of opportunity per year for a total of about 299,000 opportunity days. Though the thirty-four courts were sufficient for 1970 facility needs, there were requirements of 29 additional courts for 1975, and increments of 42, 109, and 136 courts needed for the years 1980, 1990, and 2000, respectively. Therefore, the cumulative requirement for the year 2000 totaled 316 courts. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Trails Activities

There were no trails in the El Paso Metro Area in 1971. Analysis indicated that approximately thirty-three miles of combined trails should have been provided in 1970. Given the expected participation growth in the trails activities, incremental additions were projected to increase to 27 miles in 1975, 32 miles in 1980, 84 miles in 1990, and 103 miles in 2000. Overall, a combined total of 279 miles of trails should be added by the year 2000 to meet expected participation levels.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly-administered park and recreation areas. It is likely, however, that as trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of resources required may be conservative in the long run and should be considered as minimum estimates. In addition to the expectations for increases in participation in trails and related activities at publicly-administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local neighborhoods, on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, SkiingSurface Acres - Freshwater Lakes
(Boating, Boat Fishing, Skiing)

A total of fifty surface acres of freshwater lakes was located with the El Paso Metro Area in 1971. Using participation patterns of households recreating in the urban areas, it was estimated that boating would have totaled 78,000 days, boat fishing 34,000 days, and skiing 37,000 days for a total of 149,000 days in 1970, if adequate freshwater lakes had been available. Comparing estimated participation with the opportunities provided by the surface acres existing in 1971 indicates that incremental resource requirements are expected to expand from an additional 307 acres needed in 1970 to 278 acres in 1975, 343 acres in 1980, 875 acres in 1990, and 1,076 acres in the year 2000. This brings the cumulative resource requirement to an additional 2,879 surface acres by the year 2000. To obtain an adequate quantity of recreational water has been difficult, however, because the western part of the State has exceedingly high evaporation rates combined with low annual rainfall rates.

Freshwater Boat Ramps^{1/}

Four publicly-administered freshwater boat lanes were reported for the El Paso Metro Area in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using freshwater boat ramp facilities to gain access to the water if sufficient ramps were available, it was calculated that two additional boat ramps were needed in 1970. Projected increases in freshwater boat fishing, skiing, and boating participation are expected to require three additional freshwater boat ramps in 1975, four more in 1980, nine in 1990, and twelve in the year 2000, bringing the cumulative resource requirement to thirty ramps by the year 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, the provision of freshwater surface acres and freshwater boat ramps required should be planned as joint projects if the provision of freshwater lakes is potential

Summary of Facilities Requirements

The following selected types of additional recreation facilities were found to be required in each planning horizon year: public swimming pools, picnic tables, football/soccer fields, public golf courses, tennis courts, designated trails for walking, bicycling, and nature study, as well as boat ramps, and surface acres of freshwater lakes. In addition, resource requirements for basketball were estimated to appear beginning in 1975, and playgrounds and baseball/softball fields by 1980.

^{1/} In calculating freshwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

A dispersion analysis was possible only for a few facility types. Additional swimming facilities appear to have been needed in the northeastern, northwestern, and southeastern extremities of the metro. The only municipal golf course was in El Paso's near southeastern side; consequently, additional courses appear to have been needed in most sections of the metro, especially the central, northern, and northwestern sections. The dispersion of playgrounds and picnicking facilities appear to have been fairly even. In the provision of outdoor recreation activities, consideration should be given to a balanced distribution relative to growth areas and the various income/ethnic subsections.

YEAR	ACTIVITY	TOTAL	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		PARTICIPATION (000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE
	Swimming (Pools)	2,952 ^{1/}	480	2,472		16,480 square yards ^{2/}	16,480 square yards ^{2/}
	Child's Play (Playgrounds)	1,481	2,293		812	0 acres	0 acres
	Baseball/Softball	293	497		204	0 fields	0 fields
	Picnicking	826	613	213		125 tables	125 tables
	Football/Soccer	390	0	390		54 fields	54 fields
	Golf	283	73	210		52 holes	52 holes
	Tennis	246	110	136		50 courts, dbl.	50 courts, dbl.
	Basketball	253	299		46	0 courts, full	0 courts, full
1970	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	149	21	128		307 surface acres	307 surface acres
	Boating, Boat Fishing, Skiing FW . . .	113	54	59		2 ramps ^{3/}	2 ramps ^{3/}
	Trails Activities:						
	Walking	197 ^{4/}				23 miles	23 miles
	Bicycling	75 ^{4/}				9 miles	9 miles
	Nature Study	8 ^{4/}				1 mile	1 mile
	Combined Walking, Bicycling, Nature Study	280 ^{4/}	0	280		33 miles	33 miles
	<u>ACTIVITY</u>						
	Swimming (Pools)	4,419 ^{1/}	480	3,939		26,260 square yards ^{2/}	9,780 square yards ^{2/}
	Child's Play (Playgrounds)	2,145	2,293		148	0 acres	0 acres
	Baseball/Softball	386	497		111	0 fields	0 fields
	Picnicking	900	613	287		169 tables	44 tables
	Football/Soccer	426	0	426		59 fields	5 fields
	Golf	431	73	358		88 holes	36 holes
	Tennis	340	110	230		85 courts, dbl.	33 courts, dbl.
	Basketball	552	299	253		29 courts, full	29 courts, full
1975	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	265	21	244		585 surface acres	278 surface acres
	Boating, Boat Fishing, Skiing FW . . .	194	54	140		5 ramps ^{3/}	3 ramps ^{3/}
	Trails Activities:						
	Walking	335 ^{4/}				40 miles	17 miles
	Bicycling	157 ^{4/}				19 miles	10 miles
	Nature Study	13 ^{4/}				1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	505 ^{4/}	0	505		60 miles	27 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS	UNITS OF RECREATION		
		(000'S OF	DAYS AVAILABLE	(000'S OF	RESOURCES REQUIRED		
		ACTIVITY DAYS)	(000'S OF	ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE
	Swimming (Pools)	6,261 ^{1/}	480	5,781		38,540 square yards ^{2/}	12,280 square yards ^{2/}
	Child's Play (Playgrounds)	3,124	2,293	831		30 acres	30 acres
	Baseball/Softball	524	497	27		2 fields	2 fields
	Picnicking	1,087	613	474		278 tables	109 tables
	Football/Soccer	473	0	473		65 fields	6 fields
	Golf	627	73	554		137 holes	49 holes
	Tennis	434	110	324		120 courts, dbl.	35 courts, dbl.
	Basketball	922	299	623		71 courts, full	42 courts, full
1980	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	408	21	387		928 surface acres	343 surface acres
	Boating, Boat Fishing, Skiing FW . . .	293	54	239		9 ramps ^{3/}	4 ramps ^{3/}
	Trails Activities:						
	Walking	502 ^{4/}				59 miles	19 miles
	Bicycling	259 ^{4/}				31 miles	12 miles
	Nature Study	19 ^{4/}				2 miles	1 mile
	Combined Walking, Bicycling, Nature Study	780 ^{4/}	0	780		92 miles	32 miles
<hr/>							
	Swimming (Pools)	12,079 ^{1/}	480	11,599		77,327 square yards ^{2/}	38,787 square yards ^{2/}
	Child's Play (Playgrounds)	5,631	2,293	3,338		121 acres	91 acres
	Baseball/Softball	780	497	283		21 fields	19 fields
	Picnicking	1,154	613	541		318 tables	40 tables
	Football/Soccer	551	0	551		76 fields	11 fields
	Golf	1,237	73	1,164		288 holes	151 holes
	Tennis	646	110	536		199 courts, dbl.	79 courts, dbl.
	Basketball	1,886	299	1,587		180 courts, full	109 courts, full
1990	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	773	21	752		1,803 surface acres	875 surface acres
	Boating, Boat Fishing, Skiing FW . . .	547	54	493		18 ramps ^{3/}	9 ramps ^{3/}
	Trails Activities:						
	Walking	931 ^{4/}				110 miles	51 miles
	Bicycling	524 ^{4/}				62 miles	31 miles
	Nature Study	36 ^{4/}				4 miles	2 miles
	Combined Walking, Bicycling, Nature Study	1,491 ^{4/}	0	1,491		176 miles	84 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	20,116 ^{1/}	480	19,636		130,907 square yards ^{2/}	53,580 square yards ^{2/}
	Child's Play (Playgrounds)	9,215	2,293	6,922		251 acres	130 acres
	Baseball/Softball	1,117	497	620		45 fields	24 fields
	Picnicking	1,302	613	689		405 tables	87 tables
	Football/Soccer	623	0	623		86 fields	10 fields
	Golf	2,129	73	2,056		508 holes	220 holes
	Tennis	885	110	775		288 courts, dbl.	89 courts, dbl.
	Basketball	3,082	299	2,783		316 courts, full	136 courts, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW	1,222	21	1,201		2,879 surface acres	1,076 surface acres
	Boating, Boat Fishing, Skiing FW	857	54	803		30 ramps ^{3/}	12 ramps ^{3/}
	Trails Activities:						
	Walking	1,454 ^{4/}				172 miles	62 miles
	Bicycling	853 ^{4/}				100 miles	38 miles
	Nature Study	55 ^{4/}				7 miles	3 miles
	Combined Walking, Bicycling, Nature Study	2,362 ^{4/}	0	2,362		279 miles	103 miles

^{1/} Includes only swimming participation occurring in swimming pools, 94 percent of the total in urban areas.
^{2/} Designated freshwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.
^{3/} Assumes 2.0 lanes per ramp.
^{4/} Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

The Region 33 metropolitan area is composed solely of Corpus Christi. Corpus Christi, with one of the nation's highest economic potentials, is predicted to become a "boom town" within the next ten years. It is located on Corpus Christi Bay, which opens to the Gulf of Mexico. The city received its name from Alonso Alvarez de Pineda, a Spanish explorer who claimed the outer island and adjacent land for the King of Spain in 1519. Early Spanish attempts at colonization were hindered by the Karankawas and other Indians. Between 1817 and 1821, the area was used as a base by Jean LaFitte, the French pirate.

Corpus Christi was founded in 1839 by Henry L. Kinney, a Pennsylvanian who established a trading post here. The city did not prosper until 1848 when Kinney advertised the site widely as the "Italy of America" and began real estate promotion, which attracted many immigrants. Kinney also opened trade by wagon train with El Paso and Chihuahua.

The Corpus Christi Metropolitan Area is the mercantile center for a large area of South Texas. The economy is chiefly supported by agriculture, the petrochemical and metal industries, and various manufacturing plants. Industries now operating in the area are working together in a self-policing program to maintain a clean environment.

Museums located here include the Corpus Christi Museum, the Old Texas Museum, the Centennial Art Museum, and the Centennial Museum. The city has a little theater group and a symphony orchestra. It is the home of Del Mar College and the University of Corpus Christi. A U. S. Naval Air Station is on the southern edge of the city. The city's largest hospital, Memorial Medical Center, is operated by the local government.

Among annual events in the city are the New Year's Day Swim, the Boat Show (January), the Motorcycle Show (February), the Rose Show (March), the Lola Forester Flower Show (April), the South Texas Traditional Art Show (April), Cinco de Mayo (May), the Navy Relief Festival (June), the State Senior Golf Tourney (October), and the Emerald Beach Pro-Am Golf Tourney (October). The outstanding annual attraction is the Buccaneer Days Celebration, an eleven-day festival held in April or May.

POPULATION

1970 Metro Area Population: 204,525

Change 1960-70: +22%

Race Composition

White 94% ^{1/}

Negro 5%

Other 1%

Age Composition (years):

13 or less 30%

14 - 20 14%

21 - 44 31%

45 - 64 19%

65 and over 6%

ECONOMY

Agribusiness

Military Installation

Petrochemical

Seafood Processing

Seaport

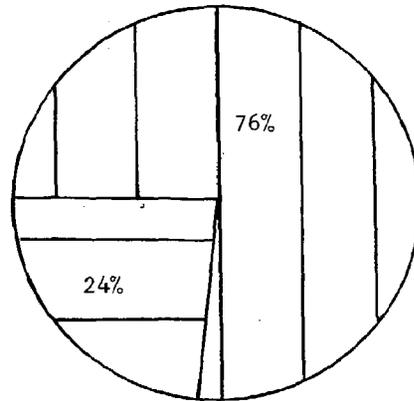
Tourism

^{1/} Includes persons of Mexican and/or Spanish descent.

PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

REGION
33
METRO

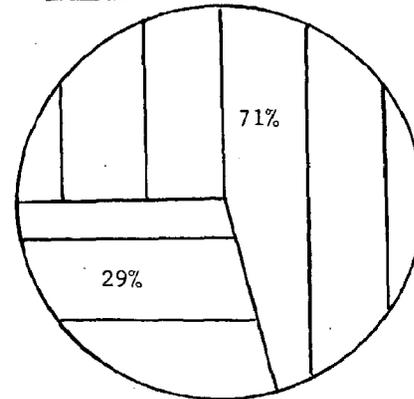


DEVELOPED LAND



UNDEVELOPED LAND

STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 33 METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	800	1,307
Undeveloped Land	257	536
Total Land	1,057	1,843
Water Within or Adjacent	19	1,006
Total Land and Water	1,076	2,849

Corpus Christi has a total of 1,057 acres of land set aside as park and recreation areas. In addition, 19 surface acres of water either within or adjacent to these parks were reported.

Of the total land acreage, 800 acres are developed with facilities, leaving 257 acres available for development in the future. With 76 percent of the land acreage currently developed, Corpus Christi is just above the Statewide Metro average of 71 percent.

PARKS AND ACREAGE BY TYPE OF PARK

	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	6.000	63.000	7.000	75.000	151.000	72.000
Parks Per Thousand	.029	.308	.034	.367	.738	.267
People Per Park	34,088.000	3,246.000	29,218.000	2,727.000	1,354.000	3,754.000
.....						
Land Acres	367.000	265.000	168.000	257.000	1,057.000	1,843.000
Acres Per Thousand	1.794	1.296	.821	1.256	5.168	6.864
People Per Acre	557.000	772.000	1,217.000	796.000	193.000	146.000

About one-half of the 151 parks in Corpus Christi are Open Land Parks, followed by 63 Community Parks. Seven Specialty Parks and six District Parks were also reported. The acreage figures show that more than one-third of the total land acreage is in District Parks. The 63 Community Parks have a total of 265 acres, while the 75 Open Land Parks average about 3.4 acres each. The seven Specialty Parks consist of a total of 168 acres. The dispersion of the four types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the population of Corpus Christi, .738 parks per 1,000 and 5.168 acres per 1,000 population exist.

Another way to present this data is that 1,354 people share each park while 193 people must share each acre of park land.

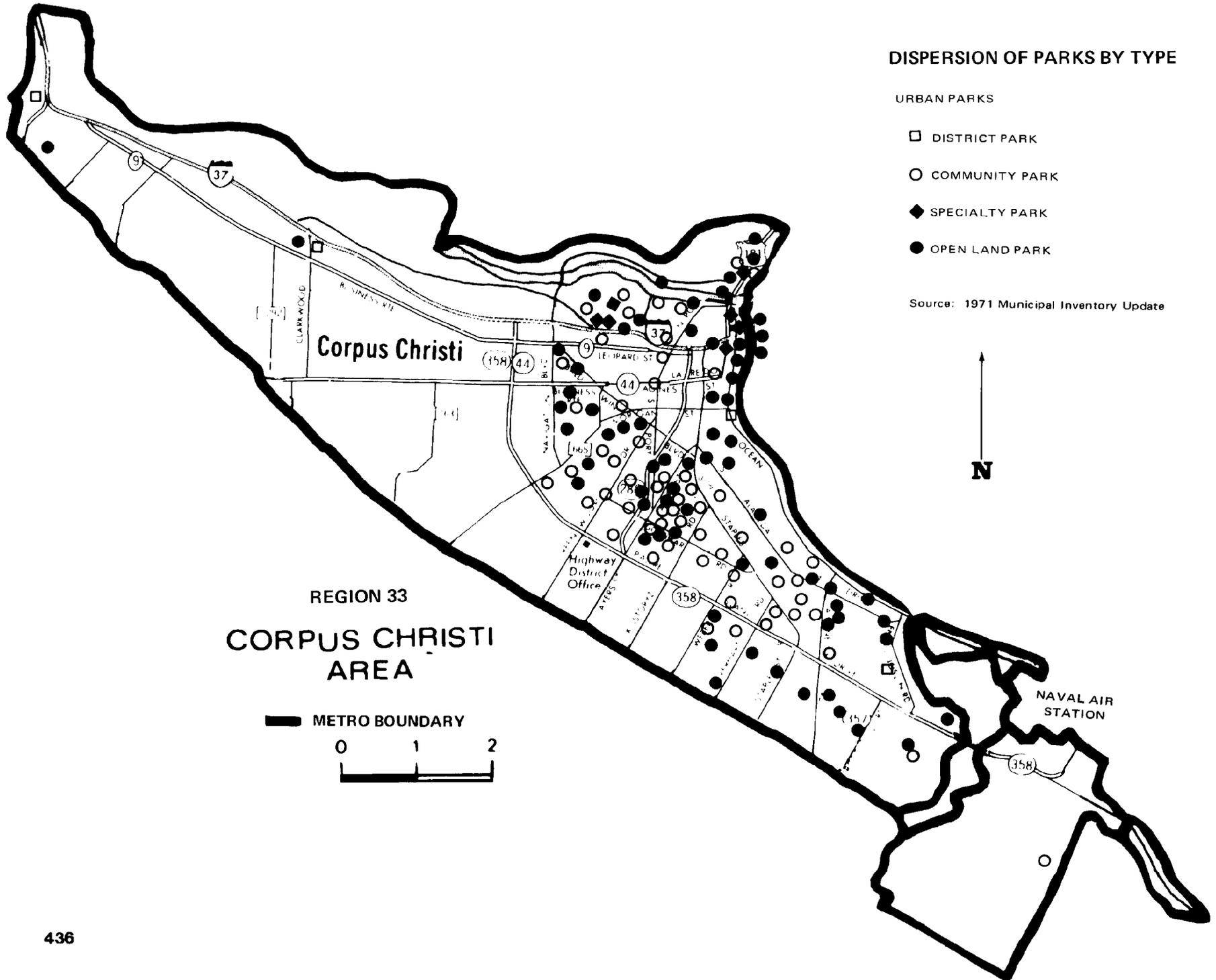
With .738 parks per 1,000, Corpus Christi has almost three times the Statewide Metro average. However, the 5.168 acres per 1,000 gives Corpus Christi a figure well below the Statewide Metro average for acres per 1,000.

DISPERSION OF PARKS BY TYPE

URBAN PARKS

- DISTRICT PARK
- COMMUNITY PARK
- ◆ SPECIALTY PARK
- OPEN LAND PARK

Source: 1971 Municipal Inventory Update



REGION 33
CORPUS CHRISTI
AREA



PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 33 METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	4	51	0	55	3,718	.268	.150
Tennis Courts.....	0	27	0	27	7,575	.131	.142
Basketball Courts.....	0	6	0	6	34,087	.029	.071
Baseball/Softball Fields.....	0	6	0	6	34,087	.029	.186
Football/Soccer Fields.....	0	0	0	0	---	---	.032
Picnicking:							
Parks.....	3	19	1	23	8,892	.112	.124
Tables.....	140	360	85	585	349	2.853	1.230
Playground:							
Parks.....	5	54	4	63	3,246	.307	.170
Acres Developed.....	10	108	8	126	1,623	.614	.258
Swimming:							
Parks.....	1	5	1	7	29,217	.034	.050
Pools (Sq. Yd.).....	910	3,324	0	4,234	48	20.653	25.950
Designated Fresh Water (Sq. Yd.)..	0	0	0	0	---	---	52.242
Designated Salt Water (Sq. Yd.)...	0	0	0	0	---	---	---
Boating:							
Parks.....	1	0	0	1	204,525	.004	.006
Ramp Lanes - Fresh Water.....	2	0	0	2	102,262	.009	.008
Ramp Lanes - Salt Water.....	0	0	0	0	---	---	---
Camping:							
Parks.....	0	0	0	0	---	---	.002
Campsites.....	0	0	0	0	---	---	.121
Fishing:							
Parks.....	3	0	0	3	68,175	.014	.013
Pier/Barge/Marina-Fresh Water(Yd.)	0	0	0	0	---	---	.049
Pier/Barge/Marina-Salt Water(Yd.)..	0	0	0	0	---	---	---
Golfing:							
Courses.....	0	0	1	1	204,525	.004	.005
Holes.....	0	0	18	18	11,362	.087	.100
Trails:							
Parks.....	1	0	0	1	204,525	.004	.006
Nature (Mi.).....	0	0	0	0	---	---	.009
Horseback (Mi.).....	0	0	0	0	---	---	.003
Bicycle (Mi.).....	0	0	0	0	---	---	.007
Hiking (Mi.).....	1	0	0	1	204,525	.004	.006
Total Trails (Mi.).....	1	0	0	1	204,525	.004	.021

PARK AND RECREATION FACILITIES BY TYPE OF PARK

CITY SIZE: METRO

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 33 METRO	STATEWIDE AVERAGE METRO AREAS
Sport Shooting:							
Parks.....	0	0	0	0	---	---	.002
Traps.....	0	0	0	0	---	---	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	0	0	0	0	---	---	.011
Miscellaneous:							
Parks.....	1	5	0	6	34,087	.029	.038
Amphitheatre Seats.....	0	0	0	0	---	---	1.077
Botanical Gardens (Acres).....	0	0	0	0	---	---	.077
Zoos (Acres).....	0	0	0	0	---	---	.051
Community/Recreation Centers.....	1	5	0	6	34,087	.029	.038

Most of the park and recreation facilities in Corpus Christi are in the Community Park category. One of the Specialty Parks has the only golf course while the only boating and trails facilities are in the District Park category. Three of the District Parks have water available for fishing, although no specific fishing facilities were reported. A total of six community/recreation centers were inventoried. No salt water swimming, boating or fishing facilities were reported.

Of the 151 parks, 63 have playgrounds, 55 have facilities for games and sports, 23 have picnicking facilities and 7 have swimming facilities. The most common types of games and sports facilities are tennis with 27 courts followed by baseball/softball with 6 fields and basketball with 6 courts.

Looking at selected facilities in relation to the number of potential users we find the following:

- | | |
|---|--|
| 204,525 persons for each mile of trails | 7,575 persons for each tennis court |
| 34,087 persons for each basketball court | 1,623 persons for each acre of playground |
| 34,087 persons for each baseball/softball field | 349 persons for each picnic table |
| 34,087 persons for each community/recreation center | 48 persons for each square yard of swimming pool |
| 11,362 persons for each golf hole | |

Corpus Christi is above the Statewide Metro average for facility units per 1,000 only for picnic tables, playground acres and boat ramp lanes-fresh water, while falling below the average for tennis courts, basketball courts, baseball/softball fields, square yards of swimming pools, golf holes, trail miles and community/recreation centers. No football/soccer fields, designated fresh water swimming area, campsites, yards of fishing pier/barge/marina, sport shooting facilities, amphitheatre seats, acres of botanical gardens or zoo acreage were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

<u>ACTIVITY-FACILITY</u>	<u>ANNUAL DAYS AVAILABLE</u>	<u>DAYS PER THOUSAND POPULATION</u>	
		<u>REGION 33 METRO</u>	<u>STATEWIDE AVERAGE METRO</u>
Swimming (Pools) - square yards	635,100	3,098	3,891
Child's Play - playground acres	3,480,498	16,978	7,137
Baseball/Softball - fields	82,824	404	2,577
Picnicking - tables	995,670	4,857	2,093
Football/Soccer - fields	0	0	235
Golf - holes	72,846	355	414
Tennis - courts, double	72,738	355	384
Basketball - courts, full	52,770	257	625
Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	7,926	39	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	26,972	132	103
Boating, Boat Fishing, Skiing SW - boat ramps	0	0	33
Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	8,464	41	164

The Corpus Christi Metro Area offers the most opportunity days for child's play, followed by picnicking and swimming (in pools). A comparison between the opportunity days per thousand population for the Corpus Christi Metro Area and the Statewide Metro average shows that the Corpus Christi Metro Area surpasses the statewide average for three types of facilities -- children's playgrounds (in acres), picnic tables, and freshwater boat ramps. The Corpus Christi Metro Area is below the Statewide Metro average for swimming (in pools), baseball/softball, golf, tennis, basketball, surface acres for freshwater boating, boat fishing and skiing, and the trails activities, with no opportunity days available for football/soccer and saltwater boat ramps.

The eighth ranking metro area based on population, Corpus Christi also ranked eighth in total participation for the year 1970. Estimates for 1970 indicate that residents and non-residents in the area spent over 8.8 million recreation days in pursuit of urban outdoor recreation opportunities available within the metro area.

Resident

Total days of participation in urban outdoor recreation activities by the residents of the Corpus Christi Metropolitan Area for the 19 activities shown were estimated to be 6.3 million days in 1970. Total participation is expected to increase to 9.8 million days in 1975 and to 14.2 million days in 1980. These projections represent increases of 56.9 percent by 1975 and 126.3 percent by 1980. Participation on a days per household basis is projected to increase from 104.6 days in 1970 to 143.2 days in 1975, and to 181.3 days in 1980--increases of 36.9 and 73.3 percent, respectively, over the 1970 level. Residents of the Corpus Christi Metropolitan Area are expected to participate at a rate of 22, 21, and 24 days per household below the statewide average for the other Texas metropolitan areas in 1970, 1975, and 1980, respectively. For the more distant years of 1990 and 2000, both total days of participation and days per household are expected to increase but days per household will remain below the statewide average for all metropolitan areas.

Projections for specific activities indicate that each of the 19 activities, except saltwater skiing, will increase in total days of participation through the years 1975 and 1980. On a days per household basis, participation is expected to increase in 13 activities by 1980 while saltwater skiing and basketball will remain relatively constant and picnicking, football, sightseeing, and driving for pleasure will decline slightly. Based on total days of participation, the six most popular activities in 1970 were: swimming, child's play, driving for pleasure, bicycling, picnicking, and walking. By 1975, the six most popular activities in the Corpus Christi Metropolitan Area are expected to be: bicycling, swimming, child's play, walking, driving for pleasure, and nature study, respectively. In 1980, walking and child's play will change positions, as will nature study and driving for pleasure, with bicycling and swimming still ranking first and second, respectively.

Non-Resident

When considering participation in urban outdoor recreation activities in 1970, a total of 2,576,000 days of participation, according to the projections, was recorded by non-residents in the Corpus Christi Metropolitan Area. As compared to the total 1970 level, total participation is expected to increase 6.6 percent to 2,747,000 days in 1975, and 12.8 percent to 2,905,000 days by 1980. This trend of increased participation is expected to continue for the years of 1990 and 2000.

The estimates for 1970 indicate that the top six ranked activities, in order of popularity, were saltwater fishing, swimming, sightseeing, saltwater boating, saltwater skiing, and picnicking with total of 873,000, 542,000, 513,000, 284,000, 116,000, and 92,000 days, respectively. It is expected that all 19 activities listed in the Table will increase in participation through the year 2000 and retain their order of participant popularity.

CURRENT AND PROJECTED RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970				1975				1980				1990				2000			
	PART. DAYS	RANK	REG. 33 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 33 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 33 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 33 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 33 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH
Swimming	1,408	1	23.54	27.41	1,878	2	27.39	36.52	2,427	2	31.10	47.17	3,957	2	41.54	75.28	6,073	3	52.98	110.14
Child's Play	834	2	13.95	14.08	1,084	3	15.81	17.72	1,377	4	17.64	22.00	2,127	5	22.33	32.20	3,118	5	27.20	43.99
Baseball/Softball	333	8	5.57	2.78	397	9	5.79	3.19	462	9	5.92	3.59	623	8	6.54	4.41	807	8	7.04	5.22
Picnicking	443	5	7.41	5.72	477	7	6.96	5.66	510	8	6.53	5.66	583	9	6.12	5.61	656	9	5.72	5.64
Football/Soccer	123	13	2.06	1.43	132	13	1.93	1.42	140	15	1.79	1.41	160	15	1.68	1.39	180	16	1.57	1.38
Golf	173	11	2.89	3.92	224	10	3.27	4.98	281	10	3.60	6.16	435	10	4.57	8.96	636	10	5.55	12.07
Tennis	124	12	2.07	6.06	172	12	2.51	9.21	225	11	2.88	11.49	333	12	3.50	16.07	488	12	4.26	21.46
Basketball	31	17	.52	1.60	36	18	.53	2.59	40	18	.51	3.57	49	18	.51	5.52	59	18	.51	7.53
Walking	377	6	6.30	18.21	1,005	4	14.66	23.09	1,795	3	23.00	29.20	3,781	3	39.69	39.89	6,462	2	56.38	50.31
Bicycling	663	4	11.09	20.30	1,972	1	28.77	32.77	3,624	1	46.43	45.25	7,791	1	81.78	68.44	13,426	1	117.13	95.49
Nature Study	300	9	5.02	.72	676	6	9.86	1.67	1,148	5	14.71	2.64	2,323	4	24.38	4.63	3,904	4	34.06	6.70
Fishing																				
Freshwater	107	14	1.79	1.80	129	14	1.88	1.88	153	14	1.96	1.97	203	14	2.13	2.13	264	14	2.30	2.30
Saltwater	336	7	5.62	1.81	475	8	6.93	1.79	634	7	8.12	1.78	966	6	10.14	1.77	1,335	6	11.65	1.78
Boating																				
Freshwater	53	15	.89	.88	109	15	1.59	1.60	180	13	2.31	2.31	356	11	3.74	3.74	593	11	5.17	5.17
Saltwater	50	16	.84	.84	58	16	.85	.84	66	16	.85	.84	80	17	.84	.84	96	17	.84	.84
Skiing																				
Freshwater	25	18	.42	.42	42	17	.61	.62	64	17	.82	.82	116	16	1.22	1.22	186	15	1.62	1.81
Saltwater	3	19	.05	.05	3	19	.04	.04	3	19	.04	.04	4	19	.04	.04	5	19	.04	.04
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	191	10	3.19	2.25	205	11	2.99	2.34	218	12	2.79	2.50	246	13	2.58	2.70	274	13	2.39	3.01
Dr. for Pleas.	681	3	11.39	13.38	743	5	10.84	13.52	805	6	10.31	13.67	933	7	9.79	13.86	1,065	7	9.29	14.10
TOTAL	6,255		104.61	123.66	9,817		143.21	161.45	14,152		181.31	202.07	25,066		263.12	288.70	39,627		345.70	388.98

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000	ACTIVITY	1970	1975	1980	1990	2000
Swimming	542	578	611	662	735	Swimming	1,950	2,456	3,038	4,619	6,808
Child's Play	4	4	5	5	5	Child's Play	838	1,088	1,382	2,132	3,123
Baseball/Softball	3	3	4	4	4	Baseball/Softball	336	400	466	627	811
Picnicking	92	98	104	112	125	Picnicking	535	575	614	695	781
Football/Soccer	3	3	3	3	4	Football/Soccer	126	135	143	163	184
Golf	1	1	1	1	1	Golf	174	225	282	436	637
Tennis	*	*	*	*	*	Tennis	124	172	225	333	488
Basketball	1	1	1	1	1	Basketball	32	37	41	50	60
Walking	70	75	79	86	95	Walking	447	1,080	1,874	3,867	6,537
Bicycling	*	*	*	*	*	Bicycling	663	1,972	3,624	7,791	13,426
Nature Study	3	3	3	3	4	Nature Study	303	679	1,151	2,326	3,908
Fishing						Fishing					
Freshwater	*	*	*	*	*	Freshwater	107	129	153	203	264
Saltwater	873	931	984	1,071	1,189	Saltwater	1,209	1,406	1,618	2,037	2,524
Boating						Boating					
Freshwater	*	*	*	*	*	Freshwater	53	109	180	356	593
Saltwater	284	303	321	347	385	Saltwater	334	361	387	427	481
Skiing						Skiing					
Freshwater	*	*	*	*	*	Freshwater	25	42	64	116	186
Saltwater	116	124	131	142	158	Saltwater	119	127	134	146	163
Surfing	---	---	---	---	---	Surfing	---	---	---	---	---
Sightseeing	513	547	578	626	695	Sightseeing	704	752	796	872	969
Dr. for Pleas.	71	76	80	87	96	Dr. for Pleas.	752	819	885	1,020	1,161
TOTAL	2,576	2,747	2,905	3,150	3,497	TOTAL	8,831	12,564	17,057	28,216	43,124

Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the Corpus Christi Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with the current recreation opportunities^{2/} available in the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to subsections of the Corpus Christi Metro characterized by residents having similar incomes and ethnic backgrounds. Particular attention was given to those subsections expected to undergo relatively rapid population growth and physical expansion in the future.

Conclusions reached from analyzing the distribution of recreation opportunities within the metropolitan area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist.

In the discussions that follow, results of the distribution analysis of parks within subsections of the Corpus Christi Metro Area are presented. Then, estimates of current and future requirements for selected recreation facilities are presented, and are qualified by conclusions reached from the distribution analysis of recreation facilities within subsections of the Corpus Christi Metro.

PARK DISTRIBUTION ANALYSIS

In analyzing the availability and distribution of parks in the Corpus Christi Metro, several characteristics were considered: changes in population (or trends, in general, 1960 to 1970), areas of the metro which were expected to exhibit relatively major expansion, and the dispersion of existing parks among the income/ethnic subsections of the metro. From these interrelated characteristics general conclusions were reached with respect to future park developments for the metro area.

Population trends affected estimations of future recreation participation. Projections for Corpus Christi indicate that the 1970 metro population of 204,505 will increase to approximately 369,000 by the year 2000. Planners indicated in 1971 that the metro was likely to expand toward the west and southwest, as indicated by arrows on the map, titled "Predominant Ethnic Background and Income Subsections."

^{1/} "Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

^{2/} "Current" recreation opportunities refers to computed figures derived from the numbers of publicly-administered facilities by type available within the metro area in 1971.

This same map shows that there were seven major income/ethnic subsections, as delineated by planners in 1971. Five of the seven subsections were composed of predominantly low-income residents. Low-income Anglos were concentrated in three subsections: one such area extended west and southwest from the intersection of Highway 44 and Baldwin Blvd.; another extended along the bayshore from just west of Highway 181 south to about Collihar Road; the third subsection of low-income Anglos was located south and west of the Naval Air Station. An elongated subsection extending south from Highway 44 to the metro boundary was composed of predominantly low-income Mexican Americans, and a small area of low-income Blacks was situated near the central business district (in the vicinity of the intersection of Highway 9 and 181, on the map). Most of Corpus Christi north of Highway 44, and southeast of Weber Road was composed of predominantly middle-income Anglos.

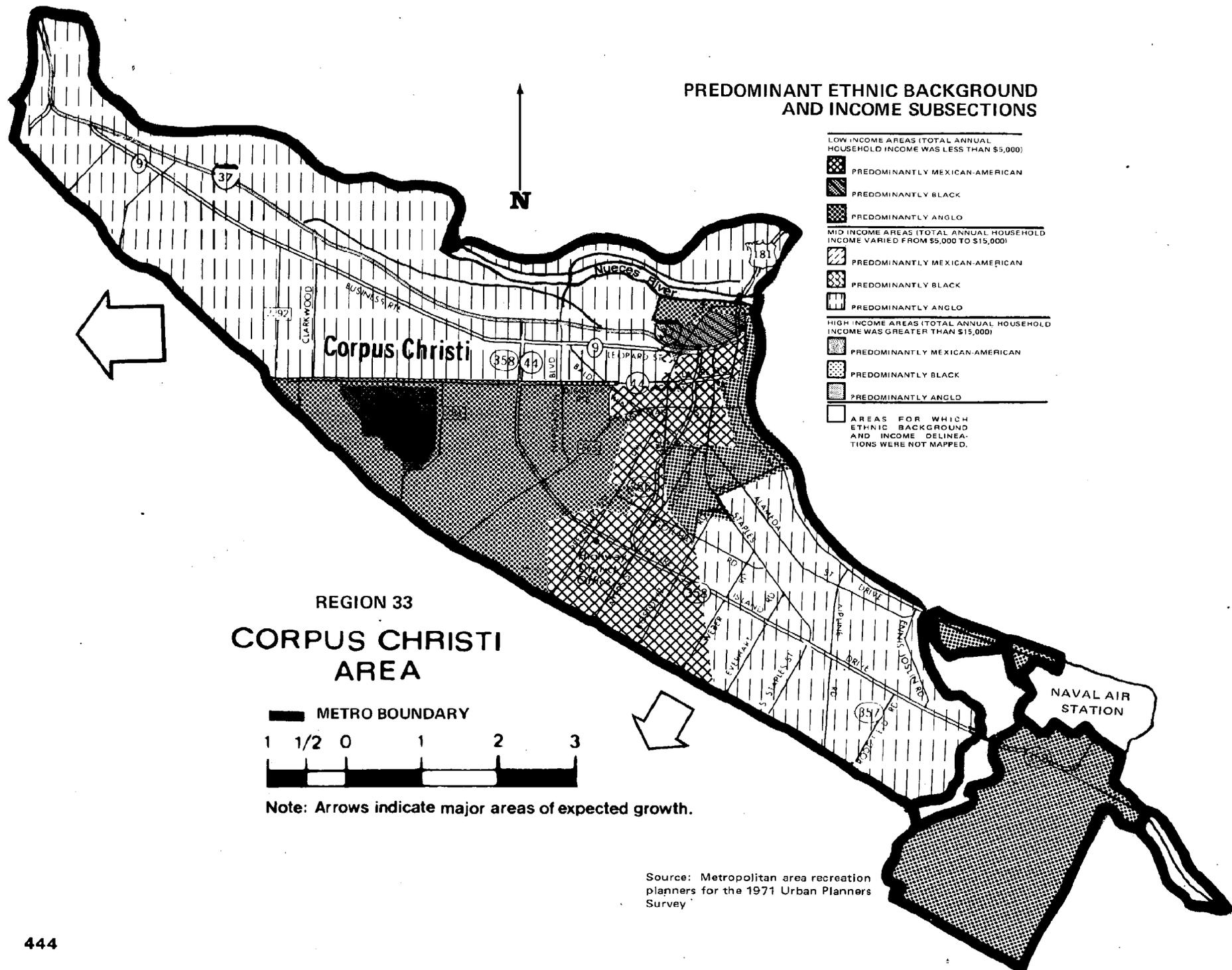
The "Dispersion of Parks By Type" map shows the geographic distribution of parks, as of 1971. Compared with the "Predominant Ethnic Background and Income Subsections" map, parks in general were distributed on a fairly uniform basis, relative to concentrations of population. All seven income/ethnic subsections had at least one public park. On the other hand, the low-income Anglo area south of the Naval Air Station had only two parks, a relatively small number compared to other subsections.

District parks, the large parks with facilities for at least two major urban activities, generally were absent from highly populated parts of the metro; rather, they tended to be located in the fringe areas. Four of the five low-income subsections had no district parks. Specialty parks tended to be clustered along the bayshore; essentially, there were none south and southeast of Leopard Street. On the other hand, community and open land parks appeared to be numerous and well dispersed. All income/ethnic subsections had at least one community park, and only the low-income Black area had no open land parks in 1971.

In addition to maintaining an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities in parks is also an important consideration. An analysis of the current and future requirements for selected recreational facilities and the current dispersion of facilities in the Corpus Christi Metro is presented in the following discussions.

FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. Then, an analysis of the dispersion of existing facilities among the predominant income/ethnic subsections and the major growth areas of the metro was conducted. Conclusions reached from the facility dispersion analysis were then used to qualify the facility requirement estimates, particularly in those cases where no additional facilities were estimated as being needed within the metropolitan area. Usually, special note is made where growth areas appeared to have limited facilities. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the urban volume. In the



discussions that follow, resource requirements for recreation facilities are generally referred to by units of the most important feature necessary to allow participation. For example, when a requirement is shown for swimming pools, features such as a bathhouse, cleaning and filtering system, and other support features are implied when a requirement for the major facility is shown.

Swimming

A total of 4,234 square yards of swimming pools in 1971 provided 635,000 opportunity days, about one-half of the number required to satisfy the 1970 demand of 1,374,000 participation days. The resulting deficit of 739,000 days suggested a need for an additional 4,927 square yards, given a conversion standard of 150 days per year per square yard of swimming pool. Assuming that the 1971 supply level remained constant, the cumulative requirement of 4,927 square yards in 1970 was expected to increase to 7,307 square yards in 1975, to 10,040 square yards in 1980, to 17,466 square yards in 1990, and to 27,753 square yards by the year 2000. Except for the absence of swimming facilities in the low-income Anglo subsection south of the Naval Air Station, the 1971 distribution appeared to be relatively even.

Child's Play

In 1971 a total of sixty-three parks provided a combined total of 126 acres of developed playground. These 126 acres provided almost 3.5 million days of opportunity in 1971, given a facility standard of 27,623 days per year per acre of playground. With a 1970 demand of 838,000 participation days and a relatively slow increase in demand forecasted for subsequent years, it seems that the 1971 supply level should be adequate through the year 2000. All of the income/ethnic subsections had at least some playground facilities. If any additional facilities are provided, consideration should be given to rapidly growing residential neighborhoods.

Baseball/Softball

In 1971 there were six baseball/softball fields which, when multiplied by a conversion standard of 13,804 days per year per field, provided 83,000 opportunity days. When measured against estimated participation in 1970, an additional eighteen fields were required to satisfy demand in that year. With no change in the 1971 supply level, the cumulative resource requirement was expected to increase from 18 additional fields in 1970, to 23 additional fields in 1975, to 28 additional fields in 1980, to 39 additional fields in 1990, and to 53 fields above the 1971 level by the year 2000. Although available data did not permit a dispersion analysis of baseball/softball fields, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Picnicking

The 585 public picnic tables in 1971 provided 996,000 opportunity days, given a facility standard of 1,702 days per year per picnic table. Demand was estimated to be 535,000 participation days in 1970, resulting in a surplus of 461,000 days. When estimated increases in demand are compared with the 1971 supply level, it becomes evident that the 585 public picnic tables enumerated in 1971 should be adequate through the year 2000; consequently, the resource requirement remains at zero for all planning years through the year 2000. Because the distribution of picnic tables in 1971 appears to be quite good, any additional facilities probably should be considered for growth areas.

Football/Soccer

The Corpus Christi metropolitan area reported no public football/soccer fields in 1971. In 1970 a requirement for seventeen fields was calculated from the 126,000 participation days estimated for 1970, given a conversion standard of 7,224 days per year per football field. The cumulative resource requirement was calculated to increase from 17 fields in 1970, to 19 fields in 1975, to 20 fields in 1980, to 23 fields in 1990, and to 25 fields by the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income ethnic subsections.

Golf

When the number of public golf holes provided in 1971 (eighteen) is multiplied by the appropriate conversion standard (4,047 days per year per hole), the product is the number of opportunity days (73,000) provided in that year. The 1971 supply level of 73,000 opportunity days was 101,000 less than the estimated number of participation days in 1970. The calculated shortage of 25 holes was projected to increase to 38 holes in 1975, to 52 holes in 1980, to 90 holes in 1990, and to 139 holes by the year 2000, if no additional units have been provided above the 1971 level. Based on the conventional nine holes, eighteen holes per course, the above cumulative requirements translated into approximately 1 eighteen-hole and 1 nine-hole course in 1970, approximately 2 eighteen-hole courses in 1975, approximately 3 eighteen-hole courses in 1980, 5 eighteen-hole courses in 1990, and approximately 8 eighteen-hole courses, above the 1971 level by the year 2000. In view of the fact that the metro had only one municipal golf course (located in the middle-income Angle subsection in southeast Corpus Christi), it would appear that many of the income/ethnic subsections lacked easy access to this course.

Tennis

There were twenty-seven public tennis courts in the Corpus Christi Metropolitan Area in 1971, and these courts provided a combined total of 73,000 opportunity days, which compared to 124,000 participation days. The resulting deficit of 51,000 days generated a requirement for nineteen additional courts in 1970. On the other hand, if the 1971 supply level has remained at 27 courts, the cumulative requirement was projected to increase from 19 courts in 1970, to 37 courts in 1975, to 56 courts in 1980, to 97 courts in 1990, and to 154 courts by the year 2000. Although a

dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income ethnic subsections.

Basketball

The six basketball courts reported in 1971 provided a combined total of 53,000 opportunity days in that year. Given a 1970 demand of 32,000 participation days, the supply of basketball courts was estimated to be adequate not only for 1970, but for each projection year through 1990. By the year 2000, three additional courts will be required to satisfy a relatively slow rise in the number of participation days. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income ethnic subsections.

Trails Activities

In 1971, the Corpus Christi Metropolitan Area reported a one mile trail which provided approximately 8,000 days of opportunity, on the basis of 8,464 days per year per mile of trail. The demand for trails activities in 1970 was estimated to be about 135,000 participation days, or 127,000 days above 1971 opportunities. In order to have satisfied demand in 1970, fifteen additional miles of trail were required for that year. If no additional miles were added to the 1971 supply level, the cumulative requirement increased to 38 additional miles in 1975, to 67 additional miles in 1980, to 139 additional miles in 1990, and to 237 miles above the 1971 level by the year 2000.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly-administered park and recreation areas. It is likely, however, that as additional trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of additional resources required may be conservative in the long run and should be considered as minimum estimates. In addition to the expectations for increases in participation in trail and related activities at publicly-administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local neighborhoods, on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, SkiingSurface Acres - Freshwater Lakes
(Boating, Boat Fishing, Skiing)

A total of nineteen surface acres of freshwater lakes was located within the Corpus Christi Metro Area in 1971. Because of the limited freshwater available, no freshwater boat fishing, boating, or water skiing participation was reported in the Texas Outdoor Recreation Household Demand Survey. Using participation patterns of households recreating in the urban areas, it was estimated that boating would have totaled 53,000 days, boat fishing 23,000 days, and skiing 25,000 days for a total of 101,000 days in 1970 if adequate freshwater lakes had been available. A comparison of estimated participation with the opportunities provided by the surface acres existing in 1971 indicated that incremental resource requirements should increase from an additional 223 acres needed in 1970, to another 185 acres in 1975, 234 acres more in 1980, 573 additional acres in 1990, and another 767 acres in the year 2000, bringing the cumulative resource requirement total to 1,982 surface acres by the year 2000.

Freshwater Boat Ramps^{1/}

Two publicly-administered freshwater boat lanes were reported for the Corpus Christi Metro Area in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using freshwater boat ramp facilities to gain access to the water if sufficient ramps were available, it was calculated that two additional boat ramps were needed in 1970. Projected increases in freshwater boat fishing, skiing, and boating participation are expected to require two additional freshwater boat ramps in 1975, two in 1980, six in 1990, and nine in the year 2000, bringing the cumulative resource requirement to twenty-one ramps in 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, the provision of freshwater surface acres and freshwater boat ramps required should be planned as joint projects, even though, in some cases, this may require the construction of boat ramps prior to the years reflected in the boat ramp resource requirement projections.

Saltwater Boat Ramps^{1/}

Corpus Christi, the only metro area in Region 33 in 1970, does have access to coastal waters. However, no publicly-administered saltwater boat lanes providing access to and from the saltwater resources were reported within the metro in 1971. By estimating the 1970 total saltwater boat fishing, skiing, and boating participation which would

^{1/} In calculating freshwater and saltwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

have occurred using saltwater boat ramp facilities to gain access to the saltwater areas if ramps had been available, it was calculated that nineteen ramps were needed in 1970. Expected increases in saltwater boat fishing, skiing, and boating participation are projected to require incremental saltwater boat ramp additions of two in 1975, two in 1980, four in 1990, and five in the year 2000, bringing the cumulative requirement to an additional thirty-two ramps by the year 2000.

Summary of Facilities Requirements

In 1971 the only types of designated facilities which were not available within the Corpus Christi Metro Area were public football/soccer fields and public saltwater boat ramps. Resource requirements were shown for each planning horizon year for both types of facilities.

To augment existing resources, resource requirements were shown for each planning horizon year for public swimming pools, baseball/softball fields, holes of golf, tennis courts, miles of trail, acres of recreational freshwater, and freshwater boat ramps. The number of basketball courts was estimated to be adequate until the year 2000, when a small deficit is predicted. The 1971 supply of public picnic tables and playgrounds was estimated to be sufficient through the year 2000.

An important criterion in locating additional facilities is a geographic distribution which considers the various income/ethnic subsections, and growth areas. In 1971 the dispersion of designated facilities for most activities in the Corpus Christi Metro seemed good, but the estimated requirements for most facilities suggest that additional units should be added. There was an absence of public swimming pools in the low-income Anglo subsection south of the Naval Air Station, and the only municipal golf course was in the middle-income Anglo subsection in southeast Corpus Christi. Any additional courses probably should be considered for central and western portions of the metro.

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	1,374 ^{1/}	635	739		4,927 square yards ^{2/}	4,927 square yards ^{2/}
	Child's Play (Playgrounds)	838	3,480		2,642	0 acres	0 acres
	Baseball/Softball	336	83	253		18 fields	18 fields
	Picnicking	535	996		461	0 tables	0 tables
	Football/Soccer	126	0	126		17 fields	17 fields
	Golf	174	73	101		25 holes	25 holes
	Tennis	124	73	51		19 courts, dbl.	19 courts, dbl.
	Basketball	32	53		21	0 courts, full	0 courts, full
1970	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	101	8	93		223 surface acres	223 surface acres
	Boating, Boat Fishing, Skiing FW . . .	77	27	50		2 ramps ^{3/}	2 ramps ^{3/}
	Boating, Boat Fishing, Skiing SW . . .	413	0	413		19 ramps ^{3/}	10 ramps ^{3/}
	Trails Activities:						
	Walking	47 ^{4/}				5 miles	5 miles
	Bicycling	27 ^{4/}				3 miles	3 miles
	Nature Study	61 ^{4/}				7 miles	7 miles
	Combined Walking, Bicycling, Nature Study	135 ^{4/}	8	127		15 miles	15 miles
<hr/>							
	ACTIVITY						
	Swimming (Pools)	1,731 ^{1/}	635	1,096		7,307 square yards ^{2/}	2,380 square yards ^{2/}
	Child's Play (Playgrounds)	1,088	3,480		2,392	0 acres	0 acres
	Baseball/Softball	400	83	317		23 fields	5 fields
	Picnicking	575	996		421	0 tables	0 tables
	Football/Soccer	135	0	135		19 fields	2 fields
	Golf	225	73	152		38 holes	13 holes
	Tennis	172	73	99		37 courts, dbl.	18 courts, dbl.
	Basketball	37	53		16	0 courts, full	0 courts, full
1975	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	178	8	170		408 surface acres	185 surface acres
	Boating, Boat Fishing, Skiing FW . . .	131	27	104		4 ramps ^{3/}	2 ramps ^{3/}
	Boating, Boat Fishing, Skiing SW . . .	461	0	461		21 ramps ^{3/}	2 ramps ^{3/}
	Trails Activities:						
	Walking	113 ^{4/}				13 miles	8 miles
	Bicycling	79 ^{4/}				9 miles	6 miles
	Nature Study	136 ^{4/}				16 miles	9 miles
	Combined Walking, Bicycling, Nature Study	328 ^{4/}	8	320		38 miles	23 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	2,141 ^{1/}	635	1,506		10,040 square yards ^{2/}	2,733 square yards ^{2/}
	Child's Play (Playgrounds)	1,382	3,480		2,098	0 acres	0 acres
	Baseball/Softball	466	83	383		28 fields	5 fields
	Picnicking	614	996		382	0 tables	0 tables
	Football/Soccer	143	0	143		20 fields	1 field
	Golf	282	73	209		52 holes	14 holes
	Tennis	225	73	152		56 courts, dbl.	19 courts, dbl.
	Basketball	41	53		12	0 courts, full	0 courts, full
1980	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	276	8	268		642 surface acres	234 surface acres
	Boating, Boat Fishing, Skiing FW . . .	199	27	172		6 ramps ^{3/}	2 ramps ^{3/}
	Boating, Boat Fishing, Skiing SW . . .	509	0	509		23 ramps ^{3/}	2 ramps ^{3/}
	Trails Activities:						
	Walking	197 ^{4/}				23 miles	10 miles
	Bicycling	145 ^{4/}				17 miles	8 miles
	Nature Study	231 ^{4/}				27 miles	11 miles
	Combined Walking, Bicycling, Nature Study	573 ^{4/}	8	565		67 miles	29 miles
	<u>ACTIVITY</u>						
	Swimming (Pools)	3,255 ^{1/}	635	2,620		17,466 square yards ^{2/}	7,426 square yards ^{2/}
	Child's Play (Playgrounds)	2,132	3,480		1,348	0 acres	0 acres
	Baseball/Softball	627	83	544		39 fields	11 fields
	Picnicking	695	996		301	0 tables	0 tables
	Football/Soccer	163	0	163		23 fields	3 fields
	Golf	436	73	363		90 holes	38 holes
	Tennis	333	73	260		97 courts, dbl.	41 courts, dbl.
	Basketball	50	53		3	0 courts	0 courts
1990	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	515	8	507		1,215 surface acres	573 surface acres
	Boating, Boat Fishing, Skiing FW . . .	364	27	337		12 ramps ^{3/}	6 ramps ^{3/}
	Boating, Boat Fishing, Skiing SW . . .	602	0	602		27 ramps ^{3/}	4 ramps ^{3/}
	Trails Activities:						
	Walking	406 ^{4/}				48 miles	25 miles
	Bicycling	312 ^{4/}				36 miles	19 miles
	Nature Study	468 ^{4/}				55 miles	28 miles
	Combined Walking, Bicycling, Nature Study	1,186 ^{4/}	8	1,178		139 miles	72 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	4,798 ^{1/}	635	4,163		27,753 square yards ^{2/}	10,287 square yards ^{2/}
	Child's Play (Playgrounds)	3,123	3,480		357	0 acres	0 acres
	Baseball/Softball	811	83	728		53 fields	14 fields
	Picnicking	781	996		215	0 tables	0 tables
	Football/Soccer	184	0	184		25 fields	2 fields
	Golf	637	73	564		139 holes	49 holes
	Tennis	488	73	415		154 courts, dbl.	57 courts, dbl.
	Basketball	60	53	7		3 courts, full	3 courts, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	835	8	827		1,982 surface acres	767 surface acres
	Boating, Boat Fishing, Skiing FW . . .	585	27	558		21 ramps ^{3/}	9 ramps ^{3/}
	Boating, Boat Fishing, Skiing SW . . .	714	0	714		32 ramps ^{3/}	5 ramps ^{3/}
	Trails Activities:						
	Walking	688 ^{4/}				81 miles	33 miles
	Bicycling	537 ^{4/}				63 miles	27 miles
	Nature Study	786 ^{4/}				93 miles	38 miles
	Combined Walking, Bicycling, Nature Study	2,011 ^{4/}	8	2,003		237 miles	98 miles

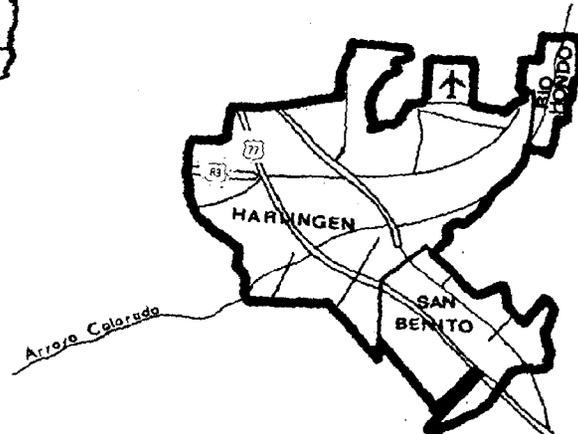
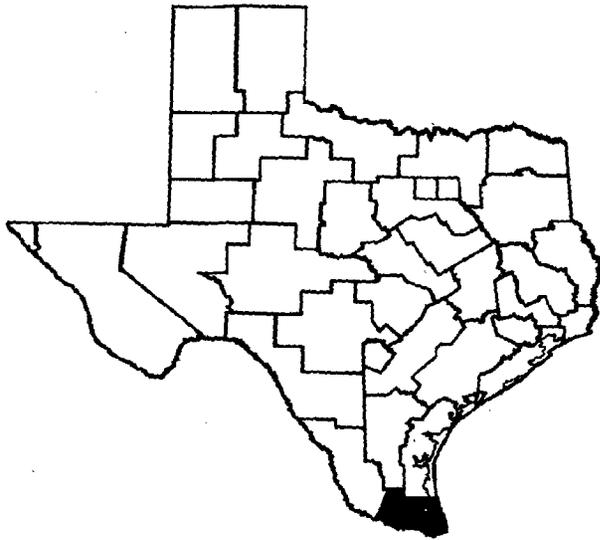
^{1/} Includes only swimming participation occurring in swimming pools, 70.48 percent of the total in urban areas on the Gulf Coast.

^{2/} Designated freshwater and saltwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.

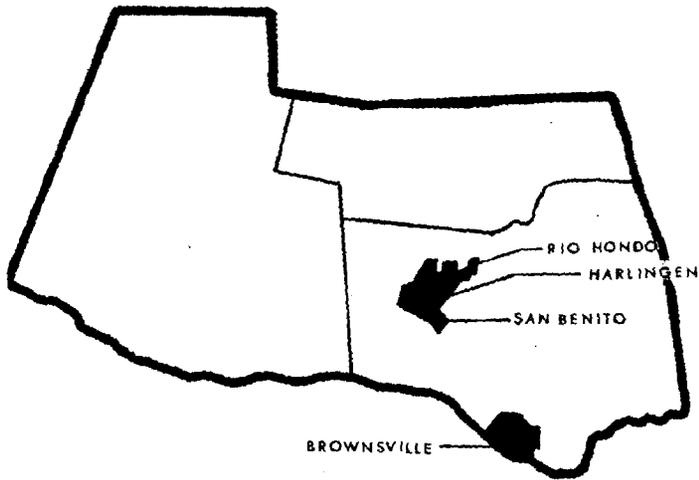
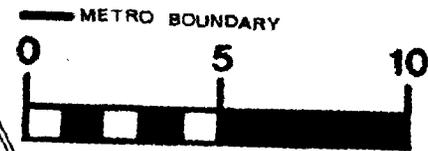
^{3/} Assumes 2.0 lanes per ramp.

^{4/} Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

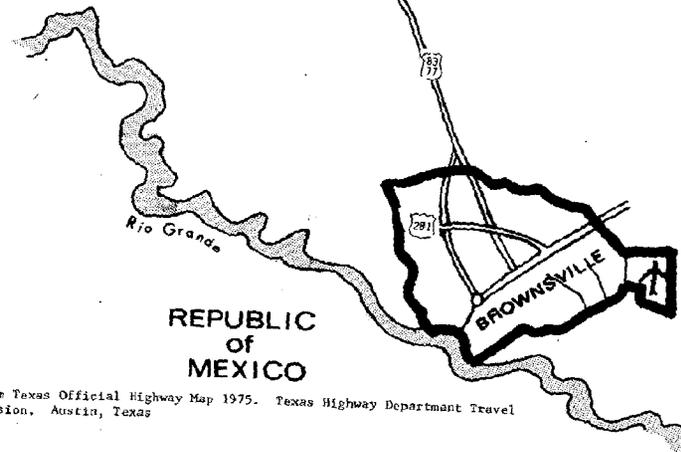
Region 34



BROWNSVILLE—HARLINGEN—
SAN BENITO AREA



RIO HONDO
HARLINGEN
SAN BENITO
BROWNSVILLE



Source: Adapted from Texas Official Highway Map 1975. Texas Highway Department Travel and Information Division, Austin, Texas

Region 34 contains two metropolitan areas. One consists of the cities and towns of Brownsville, Harlingen, Rio Hondo, and San Benito.

Brownsville, the county seat of Cameron County, is the southernmost city in Texas. The city is an international seaport and has over twenty industries located in it. Annual events in Brownsville include Charro Days (February) and the Cotton Carnival (September). Brownsville is the home of Texas Southmost College.

Harlingen is a transportation and distribution center for the Rio Grande Valley. There is always a harvest in progress in the Harlingen area with citrus, cotton, and vegetables produced in large amounts. A major event in Harlingen is the Life Begins at 40 Golf Tournament (February). Harlingen is the home of the Marine Military Academy and the Rio Grande Campus Branch of the Texas State Technical Institute.

Rio Hondo, between Harlingen and the Laguna Atascosa National Wildlife Refuge, is a town whose economy depends chiefly on the citrus industry and tourism.

San Benito was settled as early as 1770 by ranchers. The city is noted for its beautiful lakes or "resacas," which are formed by the shifting course of the Rio Grande. San Benito is chiefly a tourist-agribusiness center.

POPULATION

1970 Metro Area Population: 102,368

Change 1960-70: -4%

Race Composition^{1/}

White 98%^{2/}

Negro 1%

Other 1%

Age Composition (years):^{1/}

13 or less 33%

14 - 20 15%

21 - 44 26%

45 - 64 17%

65 and over 9%

ECONOMY

Agribusiness

Fishing

Shipping

Tourism

^{1/} Rio Hondo not included due to lack of data. Rio Hondo's population is 1,167.

^{2/} Includes persons of Mexican and/or Spanish descent.

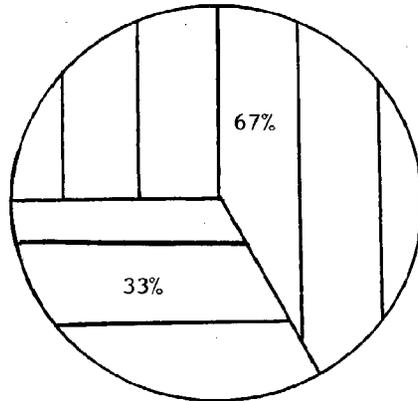
REGION 34 BROWNSVILLE

CITY SIZE: METRO

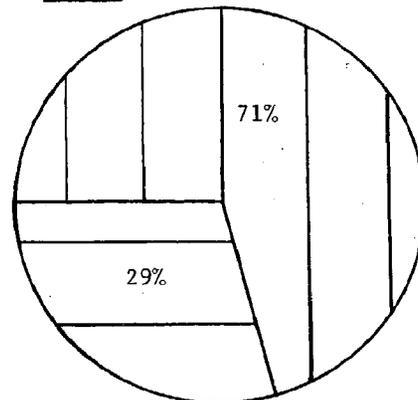
PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

REGION 34
BROWNSVILLE
METRO



STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 34 BROWNSVILLE METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	481	1,307
Undeveloped Land	237	536
Total Land	718	1,843
Water Within or Adjacent	179	1,006
Total Land and Water	897	2,849

The Brownsville Metro Area has a total of 718 acres of land set aside as park and recreation areas. In addition, 179 surface acres of water either within or adjacent to these parks were reported.

Of the total land acreage, 481 acres are developed with facilities, leaving 237 acres available for future development. With 67 percent of the land acreage developed, the Area is just below the Statewide Metro average of 71 percent.

PARKS AND ACREAGE BY TYPE OF PARK

	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	4.000	16.000	8.000	13.000	41.000	72.000
Parks Per Thousand	.039	.156	.078	.127	.401	.267
People Per Park	25,592.000	6,398.000	12,796.000	7,874.000	2,497.000	3,754.000
.....						
Land Acres	156.000	60.000	356.000	146.000	718.000	1,843.000
Acres Per Thousand	1.524	.586	3.478	1.426	7.014	6.864
People Per Acre	656.000	1,706.000	288.000	701.000	143.000	146.000

Of the 41 parks in the Brownsville Metro Area, 16 are Community Parks, followed by 13 Open Land Parks. Eight Specialty Parks and 4 District Parks were reported. However, about one-half of the total acreage, or 356 acres, are in Specialty Parks. The District Parks total 156 acres, while Open Land Parks consist of a total of 146 acres. The 16 Community Parks average less than 4 acres each. The dispersion of the four types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the total population of the Brownsville Metro Area, .401 parks per 1,000 and 7.014 acres per 1,000 population exist.

Another way to present this data is that 2.497 people share each park while 143 people must share each acre of park land.

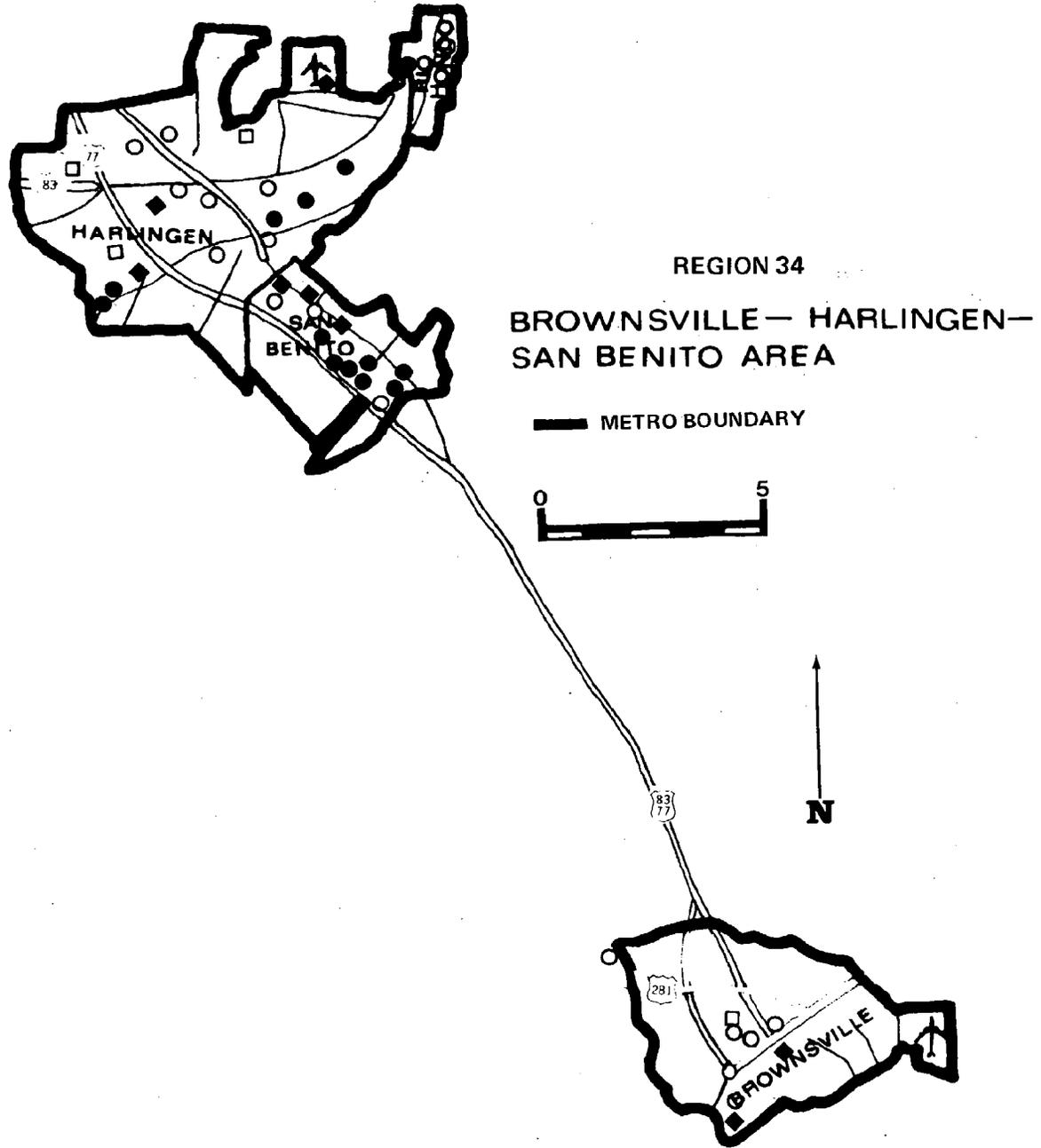
With .401 parks per 1,000, the Brownsville Metro Area ranks well above the Statewide Metro average. The 7.014 acres per 1,000 gives the area a figure just above the Statewide Metro average for acres per 1,000.

DISPERSION OF PARKS BY TYPE

URBAN PARKS

- DISTRICT PARK
- COMMUNITY PARK
- ◆ SPECIALTY PARK
- OPEN-LAND PARK

Source: 1971 Municipal Inventory Update



PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 34 BROWNSVILLE METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	3	9	2	14	7,312	.137	.150
Tennis Courts.....	8	1	0	9	11,374	.088	.142
Basketball Courts.....	2	2	0	4	25,592	.039	.071
Baseball/Softball Fields.....	9	0	2	11	9,306	.107	.186
Football/Soccer Fields.....	0	0	0	0	---	---	.032
Picnicking:							
Parks.....	4	15	1	20	5,118	.196	.124
Tables.....	149	55	8	212	482	2.079	1.230
Playground:							
Parks.....	4	16	1	21	4,874	.205	.170
Acres Developed.....	5	17	1	23	4,450	.225	.258
Swimming:							
Parks.....	3	1	0	4	25,592	.039	.050
Pools (Sq. Yd.).....	1,913	2,800	0	4,713	22	46.205	25.950
Designated Fresh Water (Sq. Yd.)...	0	0	0	0	---	---	52.242
Boating:							
Parks.....	0	2	1	3	34,122	.029	.006
Ramp Lanes - Fresh Water.....	0	2	1	3	34,122	.029	.008
Camping:							
Parks.....	1	0	1	2	51,184	.019	.002
Campsites.....	600	0	0	600	170	5.882	.121
Fishing:							
Parks.....	2	1	1	4	25,592	.039	.013
Pier/Barge/Marina-Fresh Water (Yd.)	0	0	0	0	---	---	.049
Golfing:							
Courses.....	0	0	2	2	51,184	.019	.005
Holes.....	0	0	36	36	2,843	.352	.100
Trails:							
Parks.....	0	0	0	0	---	---	.006
Nature (Mi.).....	0	0	0	0	---	---	.009
Horseback (Mi.).....	0	0	0	0	---	---	.003
Bicycle (Mi.).....	0	0	0	0	---	---	.007
Hiking (Mi.).....	0	0	0	0	---	---	.006
Total Trails (Mi.).....	0	0	0	0	---	---	.021

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 34	STATEWIDE
						BROWNSVILLE METRO	AVERAGE METRO AREAS
Sport Shooting:							
Parks.....	0	0	1	1	102,368	.009	.002
Traps.....	0	0	0	0	---	---	.002
Shooting Targets.....	0	0	24	24	4,265	.235	.004
Archery Targets.....	0	0	0	0	---	---	.011
Miscellaneous:							
Parks.....	1	1	0	2	51,184	.019	.038
Amphitheatre Seats.....	0	0	0	0	---	---	1.077
Botanical Gardens (Acres).....	0	0	0	0	---	---	.077
Zoos (Acres).....	27	0	0	27	3,791	.264	.051
Community/Recreation Centers.....	0	1	0	1	102,368	.009	.038

The park and recreation facilities in the Brownsville Metro Area are about evenly distributed among all three of the park categories. The only golf and sport shooting facilities are in the Specialty Park category. One of the District Parks contains a zoo, while the only community/recreation center is in a Community Park. Four parks have fishing waters available although no specific fishing facilities were reported. A total of only four parks with swimming pools were reported in the Brownsville Metro Area.

Of the 41 parks, 21 have playgrounds, 20 have picnicking facilities, 14 have games and sports facilities and 4 have swimming facilities. The most common types of games and sports facilities are baseball/softball with 11 fields, followed by tennis with 9 courts and basketball with 4 courts.

Looking at selected facilities in relation to the number of potential users we find the following:

102,368 persons for each community/recreation center	2,843 persons for each golf hole
25,592 persons for each basketball court	482 persons for each picnic table
11,374 persons for each tennis court	170 persons for each campsite
9,306 persons for each baseball/softball field	22 persons for each square yard of swimming pool
4,450 persons for each acre of playground	

The Brownsville Metro Area is above the Statewide Metro average for facility units per 1,000 for picnic tables, square yards of swimming pools, boat ramp lanes, campsites, golf holes, shooting targets and zoo acreage. The Area is below the average for tennis courts, basketball courts, baseball/softball fields, playground acres and community/recreation centers. No football/soccer fields, designated fresh water swimming area, yards of fishing pier/barge/marina, trail miles, shooting traps, archery targets, amphitheatre seats or acres of botanical gardens were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

<u>ACTIVITY-FACILITY</u>	<u>ANNUAL DAYS AVAILABLE</u>	<u>DAYS PER THOUSAND POPULATION</u>	
		<u>REGION 34 BROWNSVILLE METRO</u>	<u>STATEWIDE AVERAGE METRO</u>
Swimming (Pools) - square yards	706,950	6,931	3,891
Child's Play - playground acres	635,329	6,229	7,137
Baseball/Softball - fields	151,844	1,489	2,577
Picnicking - tables	360,824	3,537	2,093
Football/Soccer - fields	0	0	235
Golf - holes	145,692	1,428	414
Tennis - courts, double	24,246	238	384
Basketball - courts, full	35,180	345	625
 Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	257,385	2,523	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	40,458	397	103
 Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	0	0	164

The Brownsville Metro Area offers the most opportunity days for swimming (in pools), followed by child's play and picnicking. A comparison between the opportunity days per thousand population for the Brownsville Metro Area and the Statewide Metro average shows that the Brownsville Metro Area surpasses the statewide average for four types of facilities -- swimming pools, picnic tables, golf courses (holes), and freshwater boat ramps. The Brownsville Metro Area is below the Statewide Metro average for child's play, baseball/softball, tennis, basketball and surface acres for freshwater boating, boat fishing and skiing, with no opportunity days available for football/soccer and the trails activities.

The ninth ranking metro area, based on population, Brownsville ranked twelfth in total participation for the year 1970. Estimates for 1970 indicate that residents and non-residents in the area spent over 4 million recreation days in pursuit of urban outdoor recreation opportunities available within the metro area.

Resident

Total days of participation in urban outdoor recreation activities by the residents of the Brownsville Metropolitan Area for the 16 activities shown were estimated to be 3.6 million days in 1970. Total participation is expected to increase to 4.4 million days in 1975 and to 5.1 million days in 1980. These projections represent increases of 19.7 percent by 1975 and 40.4 percent by 1980. Participation on a days per household basis is projected to increase from 132.0 days in 1970 to 157.0 days in 1975, and to 183.4 days in 1980--increases of 18.9 and 38.9 percent, respectively, over the 1970 level. Residents of the Brownsville metro area are expected to participate at a rate 8 days above the Statewide average days per household in 1970, however, the Brownsville average will be below the Statewide average by 5 days and 19 days in 1975 and 1980, respectively. For the more distant years of 1990 and 2000, both total days of participation and days per household are expected to increase, but will remain below the statewide average for all metropolitan areas.

Projections for specific activities indicate that 11 activities will increase in total days of participation through the year 2000, while football, picnicking, tennis, basketball, and fishing will decrease slightly. Participation on a days per household basis is expected to increase in 14 activities by 2000, and football and basketball will decline slightly. In 1970 the six most popular activities, based on total participation, were estimated to be: driving for pleasure, swimming, picnicking, bicycling, walking, and child's play, respectively. By the year 1975 it is anticipated that the following ranking will occur: driving for pleasure, swimming, bicycling, walking, picnicking, and child's play. In 1980 driving for pleasure is expected to remain the first ranked activity, swimming will remain number two, and walking will be third. Bicycling, picnicking, and child's play are expected to remain the fourth, fifth, and sixth ranked activities.

Non-Resident

Participation in urban outdoor recreation activities within the Brownsville Metropolitan Area by non-residents was estimated to total 315,000 days for the activities specified by 1970. Compared to the 1970 level, total participation is expected to decrease 4.8 percent (to 300,000 days) by 1975, and 8.9 percent (to 287,000 days) by 1980. Similar decreases are anticipated through the years 1990 and 2000.

Of the specified activities selected, the most popular activities by non-residents for 1970 were: sightseeing, with, 77,000 days; fishing, with 77,000 days; swimming, with 46,000 days; driving for pleasure, with 32,000 days; and picnicking, with 23,000 days. All activities are expected to decrease at a moderate rate through the year 2000 while retaining their 1970 rankings in terms of popularity.

ACTIVITY	1970				1975				1980				1990				2000			
	PART. DAYS	RANK	REG. 34 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 34 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 34 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 34 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 34 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH
Swimming	582	2	21.10	27.41	690	2	24.84	36.52	810	2	29.05	47.17	910	4	39.50	75.28	1,060	3	51.17	110.14
Child's Play	308	6	11.17	14.08	369	6	13.28	17.72	435	6	15.60	22.00	491	5	21.31	32.20	579	5	27.95	43.99
Baseball/Softball	157	7	5.69	2.78	181	7	6.52	3.19	204	7	7.32	3.59	216	7	9.38	4.41	242	7	11.68	5.22
Picnicking	420	3	15.23	5.72	435	5	15.66	5.66	447	5	16.03	5.66	409	6	17.75	5.61	407	6	19.65	5.64
Football/Soccer	.88	8	3.19	1.43	86	8	3.10	1.42	84	9	3.01	1.41	70	10	3.04	1.39	62	11	2.99	1.38
Golf	31	11	1.12	3.92	38	12	1.37	4.98	45	12	1.61	6.16	53	11	2.30	8.96	63	10	3.04	12.07
Tennis	26	12	.94	6.06	29	13	1.04	9.21	31	13	1.11	11.49	27	14	1.17	16.07	25	14	1.21	21.46
Basketball	9	15	.33	1.60	9	15	.32	2.59	9	15	.32	3.57	7	15	.30	5.52	6	15	.29	7.53
Walking	322	5	11.67	18.21	547	4	19.69	23.09	772	3	27.69	29.20	1,007	2	43.71	39.89	1,237	1	59.71	50.31
Bicycling	390	4	14.14	20.30	570	3	20.52	32.77	750	4	26.90	45.25	914	3	39.68	68.44	1,086	2	52.42	95.49
Nature Study	1	16	.04	.72	1	16	.04	1.67	1	16	.04	2.64	2	16	.09	4.63	2	16	.10	6.70
Fishing	50	10	1.81	1.80	52	10	1.87	1.88	55	11	1.97	1.97	49	12	2.13	2.13	48	12	2.32	2.30
Boating	24	13	.87	.88	44	11	1.58	1.60	64	10	2.30	2.31	86	9	3.73	3.74	107	9	5.17	5.17
Skiing	12	14	.44	.42	17	14	.61	.62	23	14	.83	.82	28	13	1.22	1.22	34	13	1.64	1.81
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	58	9	2.10	2.25	73	9	2.63	2.34	92	8	3.30	2.50	121	8	5.25	2.70	174	8	8.40	3.01
Dr. for Pleas.	1,164	1	42.20	13.38	1,220	1	43.91	13.52	1,290	1	46.27	13.67	1,184	1	51.40	13.86	1,191	1	57.49	14.10
TOTAL	3,642		132.04	120.96	4,361		156.98	158.78	5,112		183.35	199.41	5,574		241.96	286.05	6,323		305.23	386.32

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000
Swimming	46	44	42	28	22
Child's Play	*	*	*	*	*
Baseball/Softball	3	3	3	2	2
Picnicking	23	22	21	14	11
Football/Soccer	2	2	2	1	1
Golf	*	*	*	*	*
Tennis	*	*	*	*	*
Basketball	*	*	*	*	*
Walking	3	3	3	2	2
Bicycling	*	*	*	*	*
Nature Study	*	*	*	*	*
Fishing	77	73	70	47	38
Boating	52	49	47	32	25
Skiing	*	*	*	*	*
Surfing	---	---	---	---	---
Sightseeing	77	73	70	48	38
Dr. for Pleas.	32	31	29	20	16
TOTAL	315	300	287	194	155

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000
Swimming	628	734	852	938	1,082
Child's Play	308	369	435	491	579
Baseball/Softball	160	184	207	218	244
Picnicking	443	457	468	423	418
Football/Soccer	90	88	86	71	63
Golf	31	38	45	53	63
Tennis	26	29	31	27	25
Basketball	9	9	9	7	6
Walking	325	550	775	1,009	1,239
Bicycling	390	570	750	914	1,086
Nature Study	1	1	1	2	2
Fishing	127	125	125	96	86
Boating	76	93	111	118	132
Skiing	12	17	23	28	34
Surfing	---	---	---	---	---
Sightseeing	135	146	162	169	212
Dr. for Pleas.	1,196	1,251	1,319	1,204	1,207
TOTAL	3,957	4,661	5,399	5,768	6,478

Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the Brownsville-Harlingen Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with the current recreation opportunities^{2/} available within the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to various subsections of the Brownsville-Harlingen Metro Area. Conclusions reached from analyzing the distribution of recreation opportunities within the metropolitan area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist. In the discussions that follow, results of the distribution analysis of parks within subsections of the metro are presented. Then, estimates of current and future requirements for selected recreation facilities are presented, and are qualified by conclusions reached from the distribution analysis of recreation facilities within subsections of the Brownsville-Harlingen Metro.

PARK DISTRIBUTION ANALYSIS

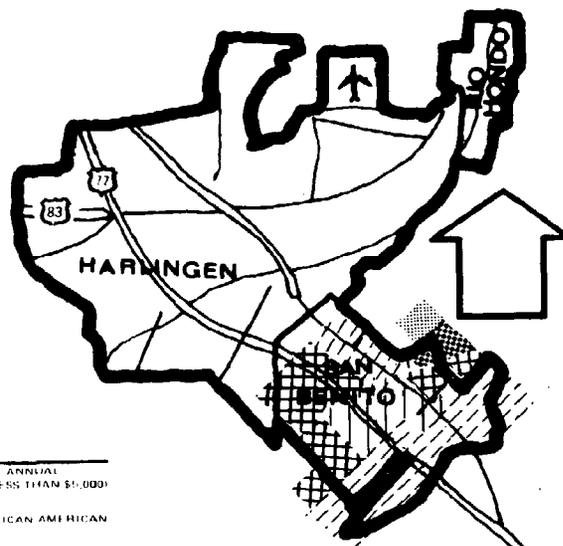
In analyzing the availability and distribution of parks within the Brownsville-Harlingen Metro Area, several characteristics were considered: changes in population (or trends in general, 1960 to 1970), areas of the metro which were expected to exhibit expansion (available only for San Benito), and the dispersion of existing parks among income/ethnic subsections (available only for San Benito). From these interrelated characteristics, general conclusions were reached with respect to future park developments for portions of the metro area.

Population trends affected estimations of future recreation participation. Projections for the Brownsville-Harlingen Metro indicate that the 1970 metro population of 102,368 should remain about the same to 1980, after which a slight decline is predicted. Information available in 1971 indicates that the direction of major urban expansion for San Benito will be toward the north, as illustrated by the arrow on the map, titled "Predominant Ethnic Background and Income Subsections". Comparable information for Brownsville, Harlingen, and Rio Hondo was not available.

In 1971, a breakdown by income/ethnic subsection was available only for San Benito, which reported a total of seven subsections. Low-income Mexican-Americans were concentrated in the western third of San Benito, and in a small area on the east side. A small area of low-income Anglos was situated on the east side, also. The central and southeastern portion of San Benito was populated predominantly by middle-income Anglos and Mexican-Americans, while a small subsection of high-income Anglos was situated on the northern extremity of San Benito. These subsections are presented graphically on the map, titled "Predominant Ethnic Background and Income Subsections".

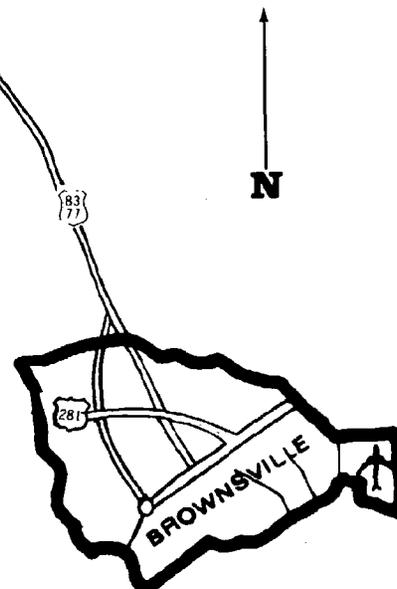
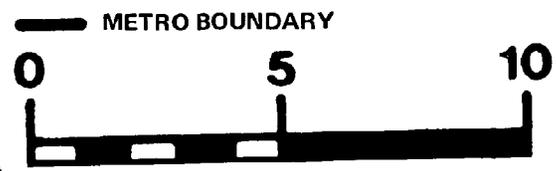
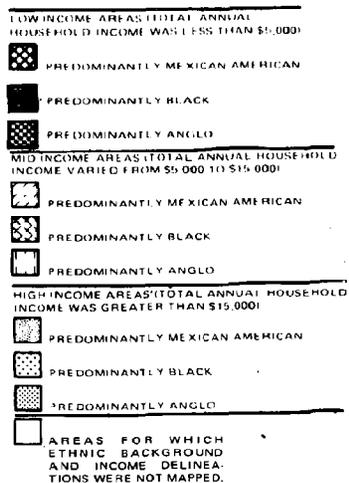
^{1/} "Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

^{2/} "Current" recreation opportunities refers to computed figures derived from the numbers of publicly-administered facilities by type available with the metro area in 1971.



**PREDOMINANT ETHNIC BACKGROUND
AND INCOME SUBSECTIONS**

**REGION 34
BROWNSVILLE — HARLINGEN —
SAN BENITO AREA**



Source: Metropolitan area recreation planners for the 1971 Urban Planners Survey

Note: Arrow indicates major areas of expected growth.

NOTE: SOCIO-ECONOMIC DATA FOR BROWNSVILLE, HARLINGEN, AND RIO HONDO WERE NOT AVAILABLE.

The "Dispersion of Parks By Type" map shows the geographic distribution of parks in the metro as of 1971. Parks in general did not appear to be adequately distributed. In spite of the fact that about fifty percent of the metro's population resided in Brownsville, only about twenty percent of the parks were located in Brownsville; a large majority of parks were concentrated in Harlingen and San Benito.

Relative to the income/ethnic subsections in San Benito, a large population of the parks was situated in the middle-income areas of central and southeastern San Benito. The low-income Mexican American subsection in the western third had only one park, while the low-income Mexican-American and Anglo subsections in eastern San Benito, as well as the high-income Anglo area, had no parks of any kind.

District parks were located primarily in Harlingen; Brownsville had one, while San Benito and Rio Hondo had no district parks. Community parks appeared to be reasonably well distributed, but there were very few specialty parks anywhere in the metro. Open land parks were highly concentrated in Harlingen and San Benito, while Brownsville reported no open land parks at all. In the allocation of additional parks, regardless of type, consideration probably should be given to most areas of Brownsville, as well as the low-income subsections and growth area of San Benito.

In addition to maintaining an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities in parks is also an important consideration. An analysis of the current and future requirements for selected recreational facilities and the current dispersion of facilities in the Brownsville-Harlingen Metro Area is presented in the following discussions.

FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. Then, an analysis of the dispersion of existing facilities among the predominant income/ethnic background subsections and the major growth areas of the metro was conducted whenever this information was available. Conclusions reached from the facility dispersion analysis were then used to qualify the facility requirement estimates, particularly in those cases where no additional facilities were estimated as being needed within the metropolitan area. Usually, special note is made where growth areas appeared to have limited facilities. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the Urban Volume. In the discussions that follow, resource requirements for recreational facilities are generally referred to by units of the most important feature necessary to allow participation. For example, when a requirement is shown for swimming pools, features such as a bathhouse, cleaning and filtering system, and other support features are implied when a requirement for the major facility is shown.

Swimming

In 1971, the Brownsville-Harlingen Metropolitan Area reported 4,713 square yards of swimming area which, when multiplied by the facility standard of 150 days per year per square yard, provided about 707,000 opportunity days. With an estimated 443,000 participation days in 1970, no additional resources were required for that year. In fact, the 1971 opportunities level should be adequate, for the metro as a whole, until the year 2000 when a small amount of additional square yards will be required. Even though the metro as a whole apparently had an adequate supply of swimming pools, Brownsville had only one; there were no public outdoor swimming pools in the northern and northwestern area of Brownsville.

Child's Play

With a conversion standard of 27,623 days per year per acre of playground, the twenty-three acres enumerated in 1971 provided 635,000 opportunity days, which was 327,000 days more than the estimated demand for 1970. Accordingly, no additional facilities were required for that year, and projections of demand through the year 2000 suggest that the 1971 supply of playgrounds should be adequate through the year 2000 for the metro as a whole. A distribution analysis, however, shows that Brownsville had relatively fewer playgrounds compared to other parts of the metro.

Baseball/Softball

The eleven baseball/softball fields enumerated in 1971 provided a combined total of 152,000 opportunity days in 1971, given a standard of 13,804 days per year per field. Demand was calculated to be approximately 160,000 participation days in 1970 resulting in a slight deficit for that year. Assuming that supply remained at the 1971 level, the deficit was projected to increase from 8,000 days in 1970 to 32,000 days in 1975, and to 55,000 days by 1980. Given these deficits, cumulative resource requirements were projected to increase from one additional field over the 1971 level, to two additional fields in 1975, to four additional fields by 1980, to five additional fields in 1990, and to a cumulative total of seven fields by the year 2000. Information available in 1971 does not allow a distribution analysis. However, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Picnicking

In 1971, the Brownsville-Harlingen Metro Area reported 212 public picnic tables. With a conversion standard of 1,702 days per year per picnic table, these 212 units provided 361,000 opportunity days resulting in a deficit of 82,000 opportunity days. In order to have satisfied demand in 1970, an additional forty-eight tables were required. On the other hand, assuming that the 1971 supply level remained unchanged, the cumulative requirement of 48 tables in 1970 was expected to increase to 56 tables in 1975 and to 63 tables in 1980. When the 1980 resource requirement is fulfilled, no further development is considered necessary. A distribution analysis of public picnic facilities shows that in 1971 there were relatively fewer picnic tables in Brownsville, particularly in the north part, than in other municipalities in the metro. Also, there was an apparent lack of facilities in some of the low-income Mexican-American subsection in

San Benito.

Football/Soccer

The metro area reported no public football fields in 1971. In order to have satisfied demand in 1970, twelve fields would have been required, given a facility standard of 7,244 days per year per field. With a decline in demand predicted for the remaining time periods, no additional fields are expected to be required once the twelve fields have been provided. It is suggested that the fields should be located so as to maximize access.

Golf

The two municipal golf courses in 1971 provided approximately 146,000 opportunity days, given a facility standard of 4,047 days per year per golf hole. Since demand was not expected to reach that level for any of the target dates, the 1971 supply level of thirty-six holes should be adequate for the metro as a whole through the year 2000. However, in 1971 there was no public golf course in San Benito. Also, the north part of Brownsville, the northern and northeastern portions of Harlingen, as well as Rio Hondo appeared to be relatively distant from public courses.

Tennis

In 1971 the metro area reported nine public tennis courts which, when multiplied by the facility standard of 2,694 days per year per tennis court, provided about 24,000 opportunity days. This was slightly below the estimated demand of 26,000 participation days. In order to satisfy demand, one additional court was needed in 1970. A total of two additional courts above the 1971 supply level was required to satisfy demand in 1975, with the cumulative resource requirement of three projected for 1980. When the 1980 resource requirement is fulfilled, no further development is considered necessary. Information available in 1971 did not permit a dispersion analysis. However, consideration should be given to providing a balanced dispersion relative to growth areas and the various income/ethnic subsections.

Basketball

The four basketball courts enumerated in 1971 provided about 35,000 days of opportunity, given a standard of 8,795 days per year per court. This supply level was expected to satisfy demand through the year 2000; hence, no additional courts were forecasted. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Trails Activities

The Brownsville-Harlingen Metropolitan Area reported no designated trails in 1971. An estimated demand of 50,000

1970 - 2000

participation days in 1970 suggested the need for six miles of trail, given a conversion standard of 8,464 days per year per mile of trail. Assuming that no trails have been established to date, the cumulative requirements are projected to increase to 10 miles of trail in 1975, 13 miles by 1980, 17 miles by 1990, and 20 miles of trail by the year 2000.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly-administered park and recreation areas. It is likely, however, that as trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of resources required may be conservative in the long run and should be considered as minimum estimates. In addition to the expectations for increases in participation in trail and related activities at publicly-administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local neighborhoods, on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and greenbelt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, Skiing

Surface Acres - Freshwater Lakes
(Boating, Boat Fishing, Skiing)

A total of 617 surface acres of freshwater lakes was located within the Brownsville Metro of Region 34 in 1971. Because of the limited freshwater available for skiing, no participation was reported in the Texas Outdoor Recreation Household Demand Survey. Using participation patterns of households recreating in the urban areas, it was estimated that boating would have totaled 76,000 days, boat fishing 27,000 days, and skiing 12,000 days for a total of 115,000 days in 1970. Comparing estimated participation with the opportunities provided by the surface acres existing in 1971 indicates that existing freshwater lakes will be sufficient through the year 2000.

Freshwater Boat Ramps^{1/}

Three publicly-administered freshwater boat lanes were reported for the Brownsville Metro of Region 34 in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using

^{1/} In calculating freshwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

freshwater boat ramp facilities to gain access to the water if ramps were available, it was calculated that two boat ramps were needed in 1970. Projected increases in freshwater boat fishing, skiing, and boating participation are expected to require no additional freshwater boat ramps in 1975, one in 1980, none in 1990, and none in the year 2000, bringing the cumulative resource requirement to three ramps in 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, freshwater boat ramps required could be constructed on existing freshwater lakes if the lakes are available for participation in the water-related activities.

Summary of Facilities Requirements

In 1971 there were two types of public outdoor recreation facilities unavailable within the metro boundaries of Region 34: public football fields and miles of designated trail. Development of trail facilities was estimated to be required in every planning horizon year. Twelve football/soccer fields were estimated to be necessary in 1970, after which no additional requirements were indicated.

Other requirements included additional freshwater boat ramps in 1970 and 1980, additional public swimming pools in the year 2000, additional baseball fields in all planning horizon years, as well as additional picnic tables and tennis courts in 1970, 1975, and 1980. The number of surface acres of freshwater lakes, playground acres, holes of golf, and basketball courts enumerated in 1971 was estimated to be sufficient through the year 2000.

A dispersion analysis was possible only for a few facility types. Brownsville had only one public swimming pool in 1971, and there appeared to be relatively few playgrounds and picnicking facilities in Brownsville, compared to other parts of the metro. Also, there was an apparent lack of picnicking facilities in some of the low-income Mexican-American subsections of San Benito. San Benito also reported having no municipal golf course, and some areas of Brownsville, Harlingen, and the municipality of Rio Hondo appeared to be relatively distant from public courses. In the allocation of additional facilities for all types of outdoor recreation activities, consideration should be given to a balanced distribution relative to growth areas and the various income/ethnic subsections.

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	443 ^{1/}	707		264	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	308	635		327	0 acres	0 acres
	Baseball/Softball	160	152	8		1 field	1 field
	Picnicking	443	361	82		48 tables	48 tables
	Football/Soccer	90	0	90		12 fields	12 fields
	Golf	31	146		115	0 holes	0 holes
	Tennis	26	24	2		1 court, dbl.	1 court, dbl.
	Basketball	9	35		26	0 courts, full	0 courts, full
1970	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	115	257		142	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	84	40	44		2 ramps ^{3/}	2 ramps ^{3/}
	Trails Activities:						
	Walking	34 ^{4/}				4 miles	4 miles
	Bicycling	16 ^{4/}				2 miles	2 miles
	Nature Study	* ^{4/}				<1 mile	<1 mile
	Combined Walking, Bicycling, Nature Study	50 ^{4/}	0	50		6 miles	6 miles
	<u>ACTIVITY</u>						
	Swimming (Pools)	517 ^{1/}	707		190	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	369	635		266	0 acres	0 acres
	Baseball/Softball	184	152	32		2 fields	1 field
	Picnicking	457	361	96		56 tables	8 tables
	Football/Soccer	88	0	88		12 fields	0 fields
	Golf	38	146		108	0 holes	0 holes
	Tennis	29	24	5		2 courts, dbl.	1 court, dbl.
	Basketball	9	35		26	0 courts, full	0 courts, full
1975	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	136	257		121	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	99	40	59		2 ramps ^{3/}	0 ramps ^{3/}
	Trails Activities:						
	Walking	58 ^{4/}				7 miles	3 miles
	Bicycling	23 ^{4/}				3 miles	1 mile
	Nature Study	* ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	81 ^{4/}	0	81		10 miles	4 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	600 ^{1/}	707		107	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	435	635		200	0 acres	0 acres
	Baseball/Softball	207	152	55		4 fields	2 fields
	Picnicking	468	361	107		63 tables	7 tables
	Football/Soccer	86	0	86		12 fields	0 fields
	Golf	45	146		101	0 holes	0 holes
	Tennis	31	24	7		3 courts, dbl.	1 court, dbl.
	Basketball	9	35		26	0 courts, full	0 courts, full
1980	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW	160	257		97	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW	116	40	76		3 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	81 ^{4/}				9 miles	2 miles
	Bicycling	30 ^{4/}				4 miles	1 mile
	Nature Study	* ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	111 ^{4/}	0	111		13 miles	3 miles
	<u>ACTIVITY</u>						
	Swimming (Pools)	661 ^{1/}	707		46	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	491	635		144	0 acres	0 acres
	Baseball/Softball	218	152	66		5 fields	1 field
	Picnicking	423	361	62		63 tables	0 tables
	Football/Soccer	71	0	71		12 fields	0 fields
	Golf	53	146		93	0 holes	0 holes
	Tennis	27	24	3		3 courts, dbl.	0 courts, dbl.
	Basketball	7	35		28	0 courts, full	0 courts, full
1990	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW	166	257		91	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW	118	40	18		3 ramps ^{3/}	0 ramps ^{3/}
	Trails Activities:						
	Walking	106 ^{4/}				13 miles	4 miles
	Bicycling	37 ^{4/}				4 miles	0 miles
	Nature Study	* ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	143 ^{4/}	0	143		17 miles	4 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE
	Swimming (Pools)	763 ^{1/}	707	56		373 square yards ^{2/}	373 square yards ^{2/}
	Child's Play (Playgrounds)	579	635		56	0 acres	0 acres
	Baseball/Softball	244	152	92		7 fields	2 field
	Picnicking	418	361	57		63 tables	0 tables
	Football/Soccer	63	0	63		12 fields	0 fields
	Golf	63	146		83	0 holes	0 holes
	Tennis	25	24	1		3 courts, dbl.	0 courts, dbl.
	Basketball	6	35		29	0 courts, full	0 courts, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	184	257		73	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	130	40	90		3 ramps ^{3/}	0 ramps ^{3/}
	Trails Activities:						
	Walking	130 ^{4/}				15 miles	2 miles
	Bicycling	43 ^{4/}				5 miles	1 mile
	Nature Study	* ^{4/}				<1 mile	0 miles
	Combined, Walking, Bicycling, Nature Study	173 ^{4/}	0	173		20 miles	3 miles

Note: Asterisks indicate that projected annual activity days were less than 500.

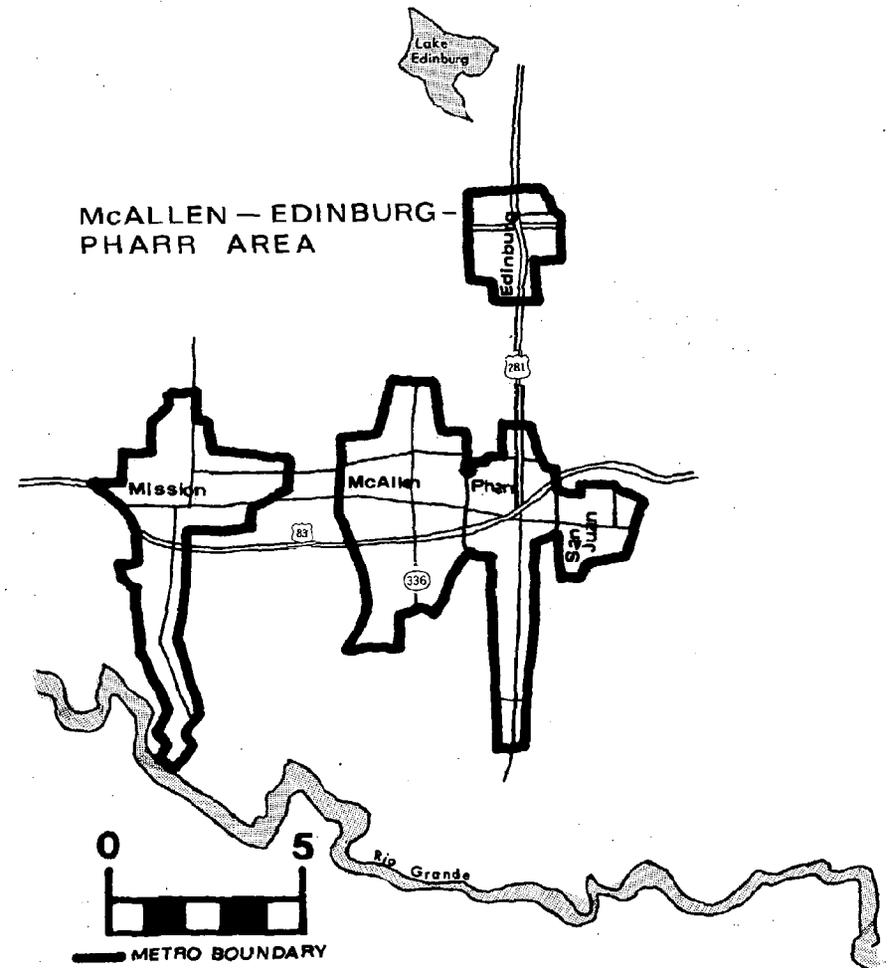
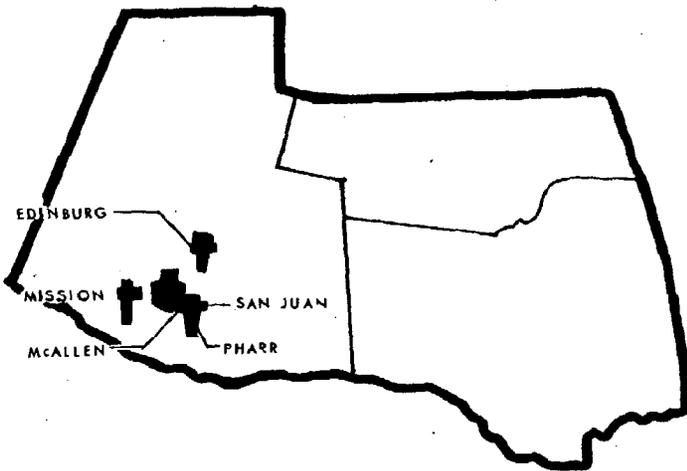
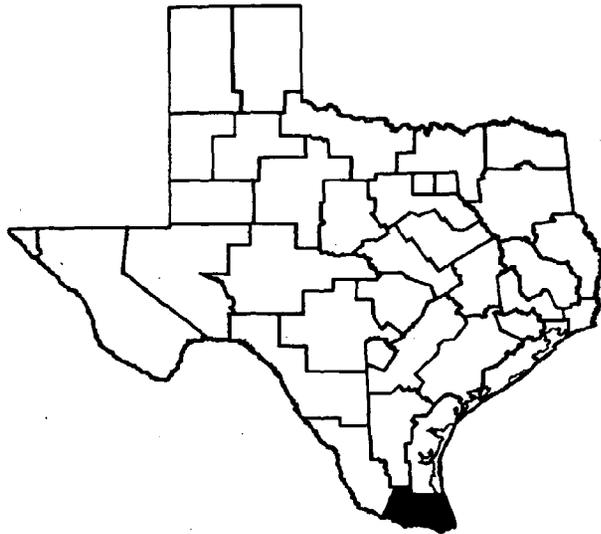
^{1/} Includes only swimming participation occurring in swimming pools, 94 percent of the total in urban areas.

^{2/} Designated freshwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation

^{3/} Assumes 2.0 lanes per ramp.

^{4/} Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

Region 34



Source: Adapted from Texas Official Highway Map 1975. Texas Highway Department Travel and Information Division. Austin, Texas.

The other metropolitan area of Region 34 consists of the cities and towns of Edinburg, McAllen, Mission, Pharr and San Juan.

Edinburg, the county seat of Hidalgo County, is the center for a citrus-growing area and is a major shipping point. Industries found in Edinburg involve food processing, furniture, home fixtures, fertilizer, petroleum, and dairy products. Major events celebrated annually in the city are the All-Valley Tourist Days (February) and the Pan American Days (April). Edinburg is the location of Pan American University.

McAllen is a city whose economy is based on tourism, citrus crops, vegetables, oil, gas, and international trade with Mexico. Major events in McAllen include the International Border Gem Fiesta (February) and the International Spring Fiesta (March).

Mission is a commercial center for a citrus crop area and has over thirty industries located in the city. Major annual events in Mission are the Poinsettia Show (December) and the Texas Citrus Fiesta (January).

Pharr is a commercial center for the production of winter vegetables, citrus crops, cotton, and natural gas. A major annual event in Pharr is the All-Valley Winter Vegetable Show (December).

Located in the irrigated valley of the Rio Grande, San Juan was organized in 1909. The name of the town is derived from the Spanish name given the town's organizer John Closner. San Juan has a large plant manufacturing concrete irrigation pipe, but it is also a tourist and agribusiness center.

POPULATION

1970 Metro Area Population: 88,741

Change 1960-70: ^{1/}+6%

Race Composition

White 98%^{2/}

Negro 1%

Other 1%

Age Composition (years):^{1/}

13 or less 32%

14 - 20 16%

21 - 44 27%

45 - 64 17%

65 and over 8%

ECONOMY

Agribusiness

Minerals

Tourism

^{1/} San Juan not included due to lack of data. San Juan's population is 5,070.

^{2/} Includes persons of Mexican and/or Spanish descent.

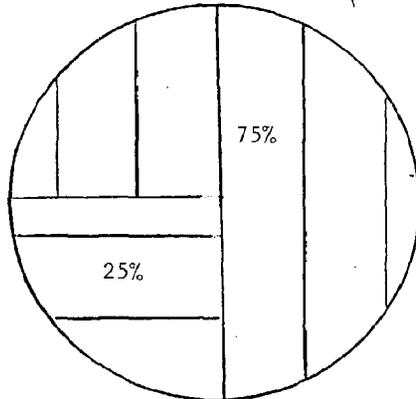
REGION 34 McALLEN

CITY SIZE: METRO

PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

REGION 34
McALLEN
METRO

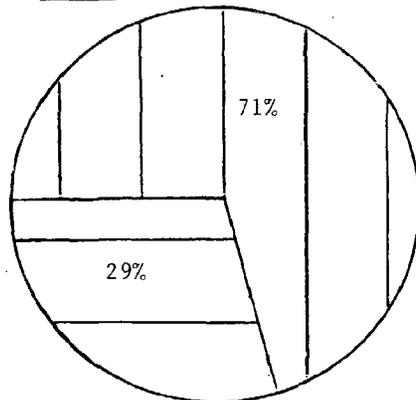


DEVELOPED LAND



UNDEVELOPED LAND

STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 34 McALLEN METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	361	1,307
Undeveloped Land	122	536
Total Land	483	1,843
Water Within or Adjacent	41	1,006
Total Land and Water	524	2,849

The McAllen Metro Area has a total of 483 acres of land set aside as park and recreation areas. In addition, 41 surface acres of water either within or adjacent to these parks were reported.

Of the total land acreage, 361 acres are developed with facilities, leaving 122 acres available for development in the future. With 75 percent of the land acreage currently developed, the Area is just above the Statewide Metro average of 71 percent.

PARKS AND ACREAGE BY TYPE OF PARK

	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	2.000	23.000	12.000	10.000	47.000	72.000
Parks Per Thousand	.023	.259	.135	.113	.530	.267
People Per Park	44,371.000	3,858.000	7,395.000	8,874.000	1,888.000	3,754.000
.....						
Land Acres	93.000	154.000	132.000	104.000	483.000	1,843.000
Acres Per Thousand	1.048	1.735	1.488	1.172	5.443	6.864
People Per Acre	954.000	576.000	672.000	853.000	184.000	146.000

Almost one-half of the 47 parks in the McAllen Metro Area are Community Parks. Twelve Specialty and ten Open Land Parks were reported, along with only two District Parks. The 23 Community Parks contain a total of 154 acres, followed by Specialty Parks with 132 acres. The ten Open Land Parks average about 10 acres each, while the two District Parks total 93 acres. The dispersion of the four types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the total population of the McAllen Metro Area, .530 parks per 1,000 and 5.443 acres per 1,000 population exist.

Another way to present this data is that 1,888 people share each park while 184 people must share each acre of park land.

With .530 parks per 1,000, the McAllen Metro Area has almost double the Statewide Metro average. However, the 5.443 acres per 1,000 gives the area a figure below the Statewide Metro average for acres per 1,000.

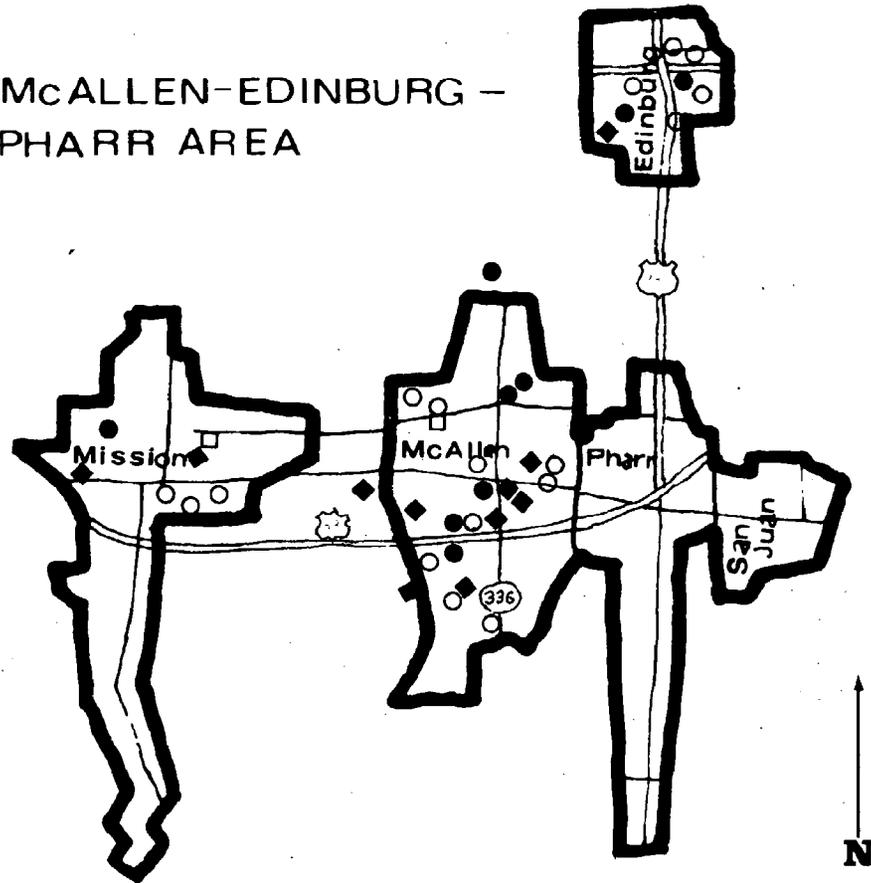
DISPERSION OF PARKS BY TYPE

URBAN PARKS

- DISTRICT PARK
- COMMUNITY PARK
- ◆ SPECIALTY PARK
- OPEN-LAND PARK

Source: 1971 Municipal Inventory Update

REGION 34 McALLEN-EDINBURG - PHARR AREA



— METRO BOUNDARY

PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 34 McALLEN METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	2	14	8	24	3,697	.269	.150
Tennis Courts.....	0	7	20	27	3,286	.303	.142
Basketball Courts.....	0	10	2	12	7,395	.134	.071
Baseball/Softball Fields.....	6	6	6	18	4,930	.202	.186
Football/Soccer Fields.....	1	0	3	4	22,185	.044	.032
Picnicking:							
Parks.....	2	16	2	20	4,437	.224	.124
Tables.....	27	101	11	139	638	1.561	1.230
Playground:							
Parks.....	2	21	0	23	3,858	.258	.170
Acres Developed.....	11	74	0	85	1,044	.955	.258
Swimming:							
Parks.....	1	8	0	9	9,860	.101	.050
Pools (Sq. Yd.).....	120	5,756	0	5,876	15	66.022	25.950
Designated Fresh Water (Sq. Yd.)...	0	0	0	0	---	---	52.242
Boating:							
Parks.....	0	0	0	0	---	---	.006
Ramp Lanes - Fresh Water.....	0	0	0	0	---	---	.008
Camping:							
Parks.....	0	0	0	0	---	---	.002
Campsites.....	0	0	0	0	---	---	.121
Fishing:							
Parks.....	0	0	0	0	---	---	.013
Pier/Barge/Marina-Fresh Water (Yd.)	0	0	0	0	---	---	.049
Golfing:							
Courses.....	1	0	1	2	44,370	.022	.005
Holes.....	9	0	9	18	4,930	.202	.100
Trails:							
Parks.....	0	0	1	1	88,741	.011	.006
Nature (Mi.).....	0	0	2	2	44,370	.022	.009
Horseback (Mi.).....	0	0	0	0	---	---	.003
Bicycle (Mi.).....	0	0	0	0	---	---	.007
Hiking (Mi.).....	0	0	1	1	88,741	.011	.006
Total Trails (Mi.).....	0	0	3	3	29,580	.033	.021

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 34	STATEWIDE
						McALLEN METRO	AVERAGE METRO AREAS
Sport Shooting:							
Parks.....	0	0	0	0	---	---	.002
Traps.....	0	0	0	0	---	---	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	0	0	0	0	---	---	.011
Miscellaneous:							
Parks.....	1	5	2	8	11,092	.089	.038
Amphitheatre Seats.....	0	0	0	0	---	---	1.077
Botanical Gardens (Acres).....	0	0	17	17	5,220	.191	.077
Zoos (Acres).....	0	0	0	0	---	---	.051
Community/Recreation Centers.....	1	5	1	7	12,677	.078	.038

The park and recreation facilities in the McAllen Metro Area are about evenly distributed among all three of the park categories. In the Specialty Park category are the only trails in addition to a botanical garden. One golf course each in the District and Specialty Park categories were reported. A total of 9 parks with swimming pools were reported, all but one of these in Community Parks. A total of seven community/recreation centers were inventoried.

Of the 47 parks, 24 have facilities for games and sports, 23 have playgrounds, 20 have picnicking facilities and 9 have swimming pools. The most common types of games and sports facilities are tennis with 27 courts, followed by baseball/softball with 18 fields, basketball with 12 courts and football/soccer with 4 fields.

Looking at selected facilities in relation to the number of potential users we find the following:

29,580 persons for each mile of trails	4,930 persons for each golf hole
22,185 persons for each football/soccer field	3,286 persons for each tennis court
12,677 persons for each community/recreation center	1,044 persons for each acre of playground
7,395 persons for each basketball court	638 persons for each picnic table
4,930 persons for each baseball/softball field	15 persons for each square yard of swimming pool

The McAllen Metro Area is above the Statewide Metro average for facility units per 1,000 for tennis courts, basketball courts, baseball/softball fields, football/soccer fields, picnic tables, playground acres, square yards of swimming pools, golf holes, trail miles, acres of botanical gardens and community/recreation centers. No designated fresh water swimming area, boat ramp lanes, campsites, yards of fishing pier/barge/marina, sport shooting facilities, amphitheatre seats or zoo acreage were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

<u>ACTIVITY-FACILITY</u>	<u>ANNUAL DAYS AVAILABLE</u>	<u>DAYS PER THOUSAND POPULATION</u>	
		<u>REGION 34 MCALLEN METRO</u>	<u>STATEWIDE AVERAGE METRO</u>
Swimming (Pools) - square yards	881,400	9,903	3,891
Child's Play - playground acres	2,347,955	26,382	7,137
Baseball/Softball - fields	248,472	2,792	2,577
Picnicking - tables	236,578	2,658	2,093
Football/Soccer - fields	28,896	325	235
Golf - holes	72,846	818	414
Tennis - courts, double	72,738	817	384
Basketball - courts, full	105,540	1,186	625
Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	274,904	3,089	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	0	0	103
Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	25,392	285	164

The McAllen Metro Area offers the most opportunity days for child's play, followed by swimming (in pools), surface acres for freshwater boating, boat fishing and skiing, and baseball/softball. A comparison between the opportunity days per thousand population for the McAllen Metro area and the Statewide Metro average shows that the McAllen Metro Area surpasses the statewide average for all types of facilities except freshwater boat ramps, for which there are no opportunity days available.

The fifteenth ranking metro area, based on population, McAllen ranked fourteenth in total participation for the year 1970. Estimates for 1970 indicate that residents and non-residents in the area spent 2.7 million recreation days in pursuit of the various forms of urban outdoor recreation opportunities available within the metro area.

Resident

Total days of participation in urban outdoor recreation activities by the residents of the McAllen Metropolitan Area for the 16 activities shown were estimated to be 2.6 million days in 1970. Total participation is expected to increase to 2.7 million days in 1975 and to 2.9 million days in 1980. These projections represent increases of 6.9 percent by 1975 and 12.8 percent by 1980. Participation on a days per household basis is projected to increase from 120.2 days in 1970 to 133.7 days in 1975, and to 147.2 days in 1980--increases of 11.3 and 22.5 percent, respectively, over the 1970 level. Residents of the McAllen Metropolitan Area are expected to participate at a rate of 4 days per household below the statewide average for the other Texas metropolitan areas in 1970. Participation will be below the average by 28 days in 1975 and by 55 days in 1980. For the most distant years of 1990 and 2000, total days of participation are expected to decrease while participation on a days per household basis will increase. Days per household will remain below the statewide average for all metropolitan areas.

Projections for specific activities indicate that eight of the 16 activities will increase in total days of participation through the year 2000. Baseball, picnicking, football, tennis, basketball, bicycling, and fishing are expected to decline through the year 2000, with nature study remaining relatively constant. Participation on a days per household basis is expected to increase in eleven activities by 1980, while picnicking, football, bicycling, sightseeing, and driving for pleasure will decline slightly. In 1970 the six most popular activities, based on total participation were estimated to be: driving for pleasure, picnicking, swimming, walking, child's play, and sightseeing, respectively. By 1975 the relative ranking for the six most popular activities are as follows: driving for pleasure, picnicking, walking, swimming, child's play, and sightseeing. In 1980 walking will still be ranked first followed by driving for pleasure, swimming, picnicking, child's play, and sightseeing in that order.

Non-Resident

For the urban outdoor recreation activities specified in 1970, participation within the McAllen Metropolitan Area by non-residents, was estimated to total 139,000 days. Compared to the 1970 level, total participation is expected to decrease 4.3 percent (to 133,000 days) by 1975 and 9.4 percent (to 126,000 days) by 1980. Similar decreases are anticipated for the years 1990 and 2000.

In terms of days of participation for 1970, the most popular non-resident activities of the specified activities were: sightseeing, with 49,000 days; picnicking, with 26,000 days; golf, with 18,000 days; driving for pleasure, with 13,000 days; child's play, with 11,000 days; and swimming, with 11,000 days; respectively. A significant decrease in non-resident participation for all activities is expected through the year 2000. The relative order of the six most popular activities is expected to remain constant through the year 2000.

ACTIVITY	1970				1975				1980				1990				2000			
	PART. DAYS	RANK	REG. 34 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 34 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 34 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 34 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 34 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH
Swimming	369	3	17.27	27.41	437	4	21.29	36.52	503	3	25.57	47.17	540	2	36.25	75.28	592	2	47.99	110.14
Child's Play	216	5	10.11	14.08	246	5	11.99	17.72	270	5	13.72	22.00	268	5	17.99	32.20	275	5	22.29	43.99
Baseball/Softball	35	10	1.64	2.78	36	10	1.75	3.19	36	12	1.83	3.59	30	11	2.01	4.41	26	11	2.11	5.22
Picnicking	601	2	28.12	5.72	546	2	26.60	5.66	494	4	25.11	5.66	353	4	23.70	5.61	276	4	22.37	5.64
Football/Soccer	48	8	2.25	1.43	44	8	2.14	1.42	40	9	2.03	1.41	29	12	1.95	1.39	23	12	1.86	1.38
Golf	12	13	.56	3.92	14	13	.68	4.98	15	14	.76	6.16	15	14	1.01	8.96	15	14	1.22	12.07
Tennis	35	10	1.64	6.06	36	10	1.75	9.21	37	11	1.88	11.49	32	9	2.15	16.07	29	8	2.35	21.46
Basketball	3	15	.14	1.60	3	15	.15	2.59	3	15	.15	3.57	2	15	.13	5.52	2	15	.16	7.53
Walking	344	4	16.10	18.21	510	3	24.85	23.09	662	1	33.65	29.20	763	1	51.22	39.89	849	1	68.82	50.31
Bicycling	54	7	2.53	20.30	52	7	2.53	32.77	50	7	2.54	45.25	38	8	2.55	68.44	31	7	2.51	95.49
Nature Study	1	16	.05	.72	1	16	.05	1.67	1	16	.05	2.64	1	16	.07	4.63	1	16	.08	6.70
Fishing	38	9	1.78	1.80	39	9	1.90	1.88	39	10	1.98	1.97	32	9	2.15	2.13	28	9	2.27	2.30
Boating	19	12	.89	.88	33	12	1.61	1.60	45	8	2.29	2.31	56	6	3.76	3.74	64	6	5.19	5.17
Skiing	9	14	.42	.42	13	14	.63	.62	16	13	.81	.82	18	13	1.21	1.22	20	13	1.62	1.81
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	106	6	4.96	2.25	90	6	4.39	2.34	75	6	3.81	2.50	44	7	2.95	2.70	28	9	2.27	3.01
Dr. for Pleas.	678	1	31.72	13.38	645	1	31.43	13.52	611	2	31.06	13.67	462	3	31.01	13.86	379	3	30.72	14.10
TOTAL	2,568		120.18	120.96	2,745		133.74	158.78	2,897		147.24	199.41	2,683		180.11	286.05	2,638		213.83	386.32

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000	ACTIVITY	1970	1975	1980	1990	2000
Swimming	11	11	10	7	6	Swimming	380	448	513	547	598
Child's Play	11	11	10	7	6	Child's Play	227	257	280	275	281
Baseball/Softball	7	6	6	4	3	Baseball/Softball	42	42	42	34	29
Picnicking	26	25	24	16	13	Picnicking	627	571	518	369	289
Football/Soccer	3	3	3	2	1	Football/Soccer	51	47	43	31	24
Golf	18	17	16	11	9	Golf	30	31	31	26	24
Tennis	*	*	*	*	*	Tennis	35	36	37	32	29
Basketball	*	*	*	*	*	Basketball	3	3	3	2	2
Walking	1	1	1	1	1	Walking	345	511	663	764	850
Bicycling	*	*	*	*	*	Bicycling	54	52	50	38	31
Nature Study	*	*	*	*	*	Nature Study	1	1	1	1	1
Fishing	*	*	*	*	*	Fishing	38	39	39	32	28
Boating	*	*	*	*	*	Boating	19	33	45	56	64
Skiing	*	*	*	*	*	Skiing	9	13	16	18	20
Surfing	---	---	---	---	---	Surfing	---	---	---	---	---
Sightseeing	49	46	44	30	24	Sightseeing	155	136	119	74	52
Dr. for Pleas.	13	13	12	8	7	Dr. for Pleas.	691	658	623	470	386
TOTAL	139	133	126	86	70	TOTAL	2,707	2,878	3,023	2,769	2,708

Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the McAllen-Edinburg Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with the current recreation opportunities^{2/} available within the metro. In addition, the availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were analyzed with respect to various subsections of the metro, particularly with regard to income/ethnic subsections, if this information was available. Conclusions reached from analyzing the distribution of recreation opportunities within the metro area were used to qualify resource requirement estimates where a less than adequate distribution appeared to exist. In the discussion that follows, results of the distribution analysis of parks within subsections of the McAllen-Edinburg Metro are presented. Then, estimates of current and future requirements for selected recreation facilities are presented, and are qualified by conclusions reached from the distribution analysis of recreation facilities within subsections of the McAllen-Edinburg Metro Area.

PARK DISTRIBUTION ANALYSIS

In analyzing the availability and distribution of parks within the McAllen-Edinburg Metro Area, several characteristics were considered: changes in population (or trends, in general, 1960 to 1970), areas of the metro which were expected to exhibit expansion (available only for Edinburg), and the dispersion of existing parks among income/ethnic subsections (available only for Edinburg). From these interrelated characteristics general conclusions were reached with respect to future park developments for portions of the metro area.

Population trends affected estimations of future recreation participation. Projections for the McAllen-Edinburg Metro indicate that the 1970 metro population of 88,741 will decline over the next several decades to about 46,000 by the year 2000. An analysis was not possible regarding directions of growth for four of the five municipalities comprising the metro, because no information was available in 1971. In the case of Edinburg, planners indicated that the main direction of growth was likely to be toward the southwest, the east, and the northwest, as illustrated by arrows on the map, titled "Predominant Ethnic Background and Income Subsections."

In 1971, a breakdown by income/ethnic subsection was available only for Edinburg, and this information is presented graphically on the accompanying map. While six subsections were reported, most of Edinburg was comprised of four main subsections. These four included: an area of low-income Mexican-Americans in the eastern half of Edinburg, a middle-income Mexican-American neighborhood in west central Edinburg, a middle-income Anglo area in the north central portion, and a high-income Anglo area in the southern and southwestern part of Edinburg.

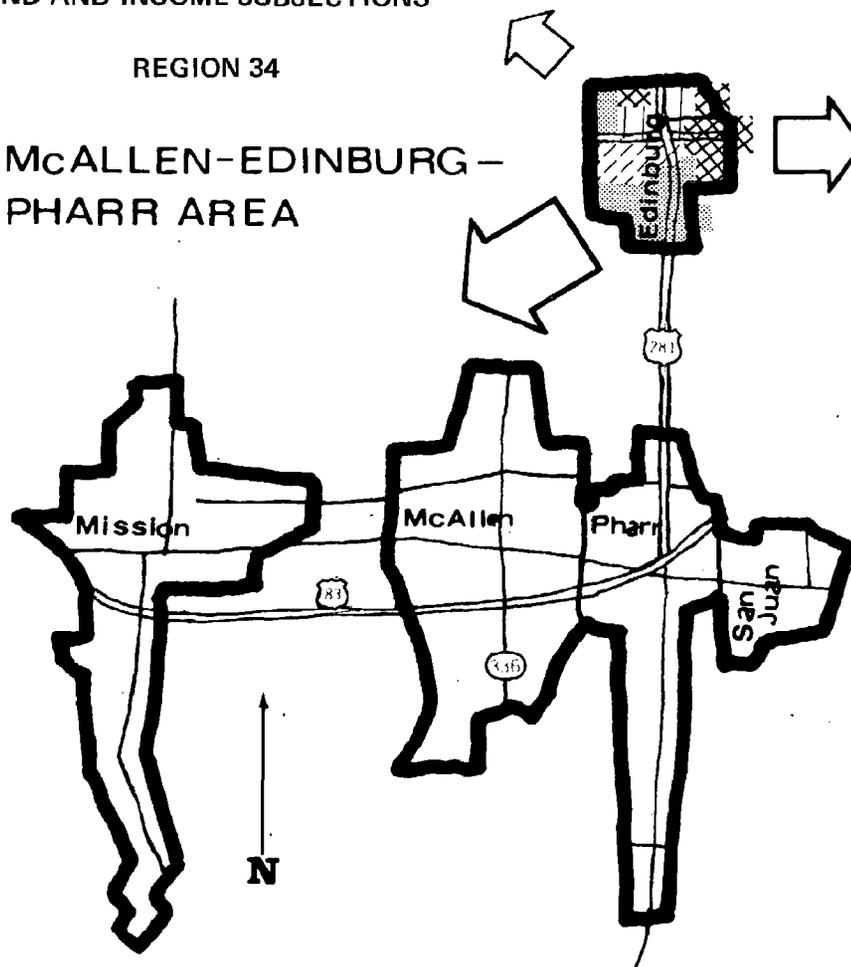
^{1/} "Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

^{2/} "Current" recreation opportunities refers to computed figures derived from the numbers of publicly-administered facilities by type available within the metro area in 1971.

PREDOMINANT ETHNIC BACKGROUND AND INCOME SUBSECTIONS

REGION 34

McALLEN-EDINBURG-
PHARR AREA



— METRO BOUNDARY

Source: Metropolitan area recreation planners for the 1971 Urban Planners Survey

Note: Arrows indicate major areas of expected growth.

NOTE: SOCIO-ECONOMIC DATA FOR SAN JUAN, PHARR, McALLEN, AND MISSION WERE NOT AVAILABLE.

The "Dispersion of Parks by Type" map shows the geographic distribution of parks in Mission, McAllen, and Edinburg, as of 1971. Comparable information for San Juan and Pharr was not available. Parks in general were reasonably well distributed, although Mission and Edinburg each had slightly fewer parks than their respective populations would predict. Relative to the income/ethnic subsections in Edinburg, there were three subsections which had no parks of any kind: a low-income Mexican-American subsection, a middle-income Anglo subsection, and a high-income Anglo area, all of which were in the north and northwest part of Edinburg.

While Mission and McAllen each had one district park, Edinburg did not have a district park in 1971. Community and specialty parks tended to be reasonably well distributed among the three municipalities; however, in Mission, all three community parks were concentrated in the southeast corner of that municipality. Most populated areas in Edinburg and McAllen seemed to have reasonably good access to open land parks, but there was only one such park in Mission, and it was located in the extreme northwest corner of the populated area.

In addition to maintaining an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities in parks is also an important consideration. An analysis of the current and future requirements for selected recreational facilities and the current dispersion of facilities in the McAllen-Edinburg Metro Area is presented in the following discussions.

FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. Then, an analysis of the dispersion of existing facilities among the predominant income/ethnic subsections and the major growth areas of portions of the metro was conducted. Conclusions reached from the facility dispersion analysis were then used to qualify the facility requirement estimates, particularly in those cases where no additional facilities were estimated as being needed within the metropolitan area. Usually, special note is made where growth areas appeared to have limited facilities. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the Urban Volume. In the discussions that follow, resource requirements for recreational facilities are generally referred to by units of the most important feature necessary to allow participation. For example, when a requirement is shown for swimming pools, features such as a bathhouse, cleaning and filtering system, and other support features are implied when a requirement for one major facility is shown.

Swimming

In 1971, the McAllen-Edinburg Metropolitan Area reported 5,876 square yards of public swimming area which, when multiplied by the facility standard of 150 days per year per square yard, provided approximately 881,000 days of opportunity. A comparison of opportunity days with estimated participation days suggests that the 1971 supply level should be adequate through the year 2000 for the metro as a whole. Dispersion of public swimming facilities in 1971 appeared to be

relatively balanced, except for a lack of pools in the northwest half of Mission.

Child's Play

With a conversion standard of 27,623 days per year per acre of developed playground, the eighty-five acres enumerated in 1971 should be adequate to accommodate estimated demand through the year 2000, for the metro as a whole. Portions of the metro which appeared to lack adequate playgrounds were the extreme northern part of McAllen, and the central portion of Mission.

Baseball/Softball

A total of 248,000 opportunity days was provided by the eighteen baseball/softball fields enumerated in 1971, using a facility standard of 13,804 days per year per field. With a demand estimated at 42,000 participation days in 1970 and a projection of slightly fewer participation days for subsequent horizon years, the eighteen fields were estimated to be adequate through the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections, if additional facilities are provided.

Picnicking

The McAllen-Edinburg Metropolitan Area reported 139 public picnic tables in 1971, and this translates into 237,000 opportunity days, given a standard of 1,702 days per year per picnic table. This total was substantially below demand, estimated at 627,000 participation days for the year 1970. A total of 229 additional tables would have been required in 1970 to satisfy this demand. The participation level, however, was expected to decline in subsequent years to a low of 289,000 participation days in the year 2000. Consequently, once the 229 tables, required to satisfy demand in 1970 have been provided, no further additions should be anticipated. The north part of McAllen, the western half of Mission, and the northwest quarter of Edinburg were suggested locations for additional public picnicking facilities.

Football/Soccer

The four football fields enumerated in 1971 provided an estimated 29,000 opportunity days for that year, given a facility standard of 7,224 days per year per field. Three additional fields would have been required to erase the 22,000 day deficit in 1970; however, once the three additional fields have been provided, no further development should be anticipated in view of a projected decline in participation days through the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income/ethnic subsections.

Golf

The two public golf courses enumerated in 1971 provided about 73,000 days of opportunity as calculated on the basis of

4,047 days per year per hole of golf. This supply level was estimated to remain ahead of projected demand through the year 2000. The dispersion of golf courses, however, was not even. Mission did not have a public golf course in 1971; hence, if resources permit, consideration probably should be given to the development of a public golf course in that municipality.

Tennis

The 73,000 opportunity days available in 1971, as calculated by multiplying the number of tennis courts (twenty-seven) by the appropriate facility standard (2,694 days per year per tennis court), was substantially above the estimated demand for the year 1970, as well as for all subsequent years; consequently, existing facilities should be adequate through the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income ethnic subsections, if additional facilities are provided.

Basketball

The metro area reported twelve basketball courts in 1971 which, when multiplied by the facility standard of 8,795 days per year per court, provided about 106,000 opportunity days in 1971. A comparison of opportunity days with estimates of participation days suggests that the existing number of basketball courts should be adequate through the year 2000. Although a dispersion analysis was not possible from available information, consideration should be given to providing a balanced distribution relative to growth areas and the various income ethnic subsections, if additional facilities are provided.

Trails Activities

The three miles of trail enumerated in 1971 provided about 25,000 opportunity days, given a conversion standard of 8,464 days per year per mile of trail. A comparison of the 25,000 opportunity days with estimates of demand suggests that an additional two miles of trail would have been required in 1970 to erase a deficit of 13,000 opportunity days. The cumulative resource requirement showed a requirement for four miles of trail above the 1971 supply level to satisfy the 1975 demand of 56,000 participation days. The cumulative requirement increases to 6 miles for the year 1980, to 7 miles for 1990, and to 8 miles by the year 2000.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly-administered park and recreation areas. It is likely, however, that as additional trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of additional resources required may be conservative in the long run and should be considered as minimum estimates. In addition to the expectations for increases in participation in trail and related activities at publicly-administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local

neighborhoods, on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, Skiing

Surface Acres - Freshwater Lakes
(Boating, Boat Fishing, Skiing)

A total of 659 surface acres of freshwater lakes was located within the McAllen-Edinburg Metro Area of Region 34 in 1971. Using participation patterns of households recreating in the urban areas, it was estimated that boating totaled 19,000 days, boat fishing 8,000 days, and skiing 9,000 days for a total of 36,000 days in 1970. Comparing estimated participation with the opportunities provided by the surface acres existing in 1971 indicates that no additional freshwater lakes will be needed before the year 2000.

Freshwater Boat Ramps^{1/}

No publicly-administered freshwater boat lanes were reported for the McAllen Metro in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using freshwater boat ramp facilities to gain access to the water if sufficient ramps were available, it was calculated that one additional boat ramp was needed in 1970. Projected increases in freshwater boat fishing, skiing, and boating participation are expected to require no additional freshwater boat ramps in 1975, one in 1980, none in 1990, and none in the year 2000, bringing the cumulative resource requirement to two ramps in 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, the provision of freshwater boat ramps required could be constructed on existing freshwater lakes if the lakes are available for water-related activities.

Summary of Facilities Requirements

In 1971 the McAllen-Edinberg Metro reported some facilities for all designated activities except freshwater boat ramps. For the metro as a whole, existing facilities were estimated to be adequate through the year 2000 for swimming, child's play, baseball/softball, golf, tennis, basketball, and surface acres of freshwater lakes.

To augment existing resources, additional facilities were estimated to be required only in 1970 for picnicking and football/soccer. Additional trail facilities were estimated to be needed in all planning horizon years. Freshwater boat ramps were estimated to be required in 1970 and again in 1980.

^{1/} In calculating freshwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

Available data relevant to the distribution of facilities was rather limited; consequently, only limited comments can be offered. While the number of opportunity days for the metro as a whole was estimated to be adequate for golf, no public golf course was reported for Mission, in 1971. Also, there appeared to be a scarcity of public picnic tables in some sections of McAllen, Mission, and Edinburg, as well as an inadequate supply of public swimming facilities in the northwest half of Mission. In locating additional facilities for all types of outdoor recreation activities, consideration should be given to providing an adequate distribution relative to growth areas and the various income/ethnic subsections of the metro.

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION RESOURCES REQUIRED	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	357 ^{1/}	881		524	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	227	2,348		2,121	0 acres	0 acres
	Baseball/Softball	42	248		206	0 fields	0 fields
	Picnicking	627	237	390		229 tables	229 tables
	Football/Soccer	51	29	22		3 fields	3 fields
	Golf	30	73		43	0 holes	0 holes
	Tennis	35	73		38	0 courts, dbl.	0 courts, dbl.
	Basketball	3	106		103	0 courts, full	0 courts, full
1970	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW	36	275		239	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW	27	0	27		1 ramp ^{2/}	1 ramp ^{2/}
	Trails Activities:						
	Walking	36 ^{4/}				2 miles	2 miles
	Bicycling	2 ^{4/}				<1 mile	<1 mile
	Nature Study	* ^{4/}				<1 mile	<1 mile
	Combined Walking, Bicycling, Nature Study	38 ^{4/}	25	13		2 miles	2 miles
<hr/>							
	<u>ACTIVITY</u>						
	Swimming (Pools)	421 ^{1/}	881		460	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	257	2,348		2,091	0 acres	0 acres
	Baseball/Softball	42	248		206	0 fields	0 fields
	Picnicking	571	237	334		229 tables	0 tables
	Football/Soccer	47	29	18		3 fields	0 fields
	Golf	31	73		42	0 holes	0 holes
	Tennis	36	73		37	0 courts, dbl.	0 courts, dbl.
	Basketball	3	106		103	0 courts, full	0 courts, full
1975	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW	54	275		221	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW	40	0	40		1 ramp ^{3/}	0 ramps ^{3/}
	Trails Activities:						
	Walking	54 ^{4/}				4 miles	2 miles
	Bicycling	2 ^{4/}				<1 mile	0 miles
	Nature Study	* ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	56 ^{4/}	25	31		4 miles	2 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		(000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	482 ^{1/}	881		399	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	280	2,348		2,068	0 acres	0 acres
	Baseball/Softball	42	248		206	0 fields	0 fields
	Picnicking	518	237	281		229 tables	0 tables
	Football/Soccer	43	29	14		3 fields	0 fields
	Golf	31	73		42	0 holes	0 holes
	Tennis	37	73		36	0 courts, dbl.	0 courts, dbl.
	Basketball	3	106		103	0 courts, full	0 courts, full
1980	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	69	275		206	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	50	0	50		2 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	70 ^{4/}				6 miles	2 miles
	Bicycling	2 ^{4/}				<1 mile	0 miles
	Nature Study	* ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	72 ^{4/}	25	47		6 miles	2 miles
	Swimming (Pools)	514 ^{1/}	881		367	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	275	2,073		2,073	0 acres	0 acres
	Baseball/Softball	34	248		214	0 fields	0 fields
	Picnicking	369	237	132		229 tables	0 tables
	Football/Soccer	31	29	2		3 fields	0 fields
	Golf	26	73		47	0 holes	0 holes
	Tennis	32	73		41	0 courts, dbl.	0 courts, dbl.
	Basketball	2	106		104	0 courts, full	0 courts, full
1990	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	81	275		194	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	58	0	58		2 ramps ^{3/}	0 ramps ^{3/}
	Trails Activities:						
	Walking	80 ^{4/}				7 miles	1 mile
	Bicycling	2 ^{4/}				<1 mile	0 miles
	Nature Study	* ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	82 ^{4/}	25	57		7 miles	1 miles

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	562 ^{1/}	881		319	0 square yards ^{2/}	0 square yards ^{2/}
	Child's Play (Playgrounds)	281	2,348		2,067	0 acres	0 acres
	Baseball/Softball	29	248		219	0 fields	0 fields
	Picnicking	289	237	52		229 tables	0 tables
	Football/Soccer	24	29		5	3 fields	0 fields
	Golf	24	73		49	0 holes	0 holes
	Tennis	29	73		44	0 courts, dbl.	0 courts, dbl.
	Basketball	2	106		104	0 courts, full	0 courts, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	90	275		185	0 surface acres	0 surface acres
	Boating, Boat Fishing, Skiing FW . . .	63	0	63		2 ramps ^{3/}	0 ramps ^{3/}
	Trails Activities:						
	Walking	89 ^{4/}				8 miles	1 mile
	Bicycling	1 ^{4/}				<1 mile	0 miles
	Nature Study	* ^{4/}				<1 mile	0 miles
	Combined Walking, Bicycling, Nature Study	90 ^{4/}	25	65		8 miles	1 mile

Note: Asterisks indicate that projected annual activity days were less than 500.

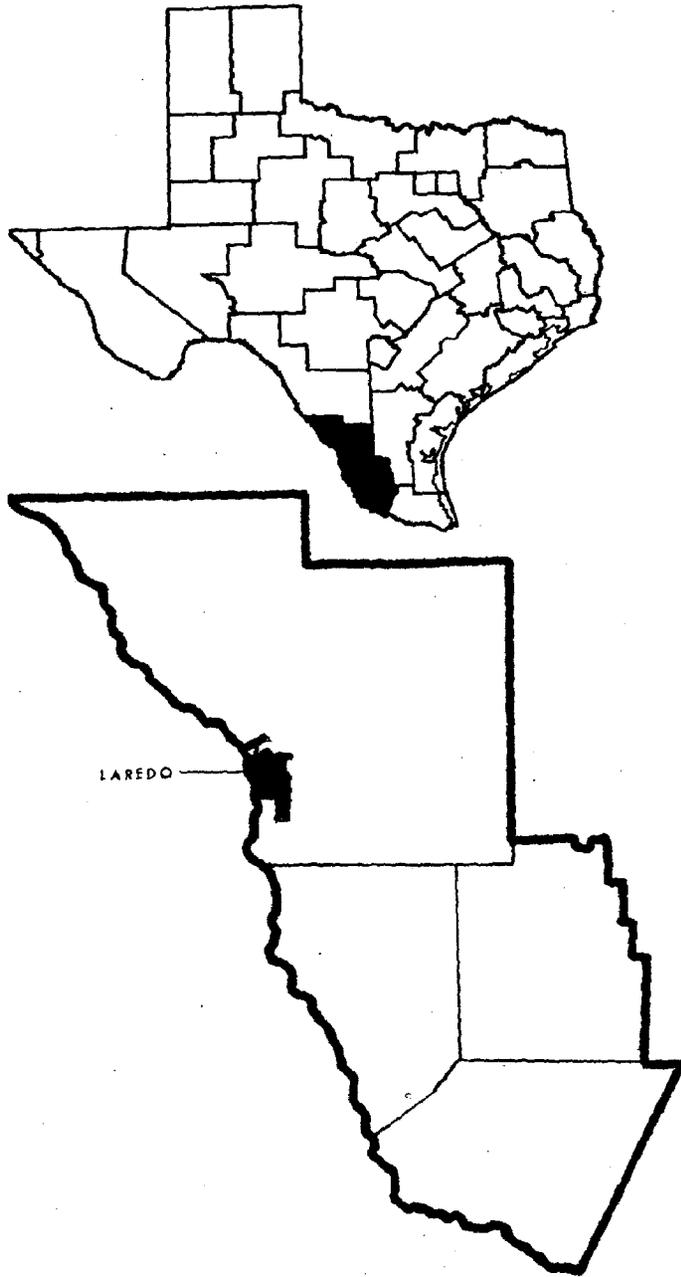
1/ Includes only swimming participation occurring in swimming pools, 94 percent of the total in urban areas.

2/ Designated freshwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.

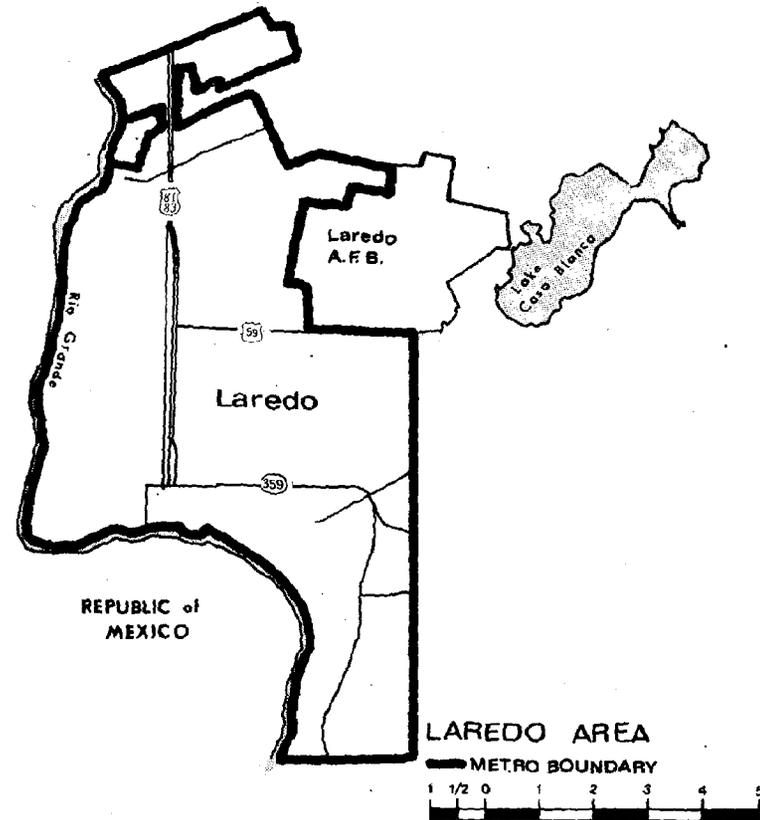
3/ Assumes 2.0 lanes per ramp.

4/ Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

Region 35



Source: Adapted From General Highway Map Webb County Texas. 1967, 1970 Census figures, Highways revised to July 1, 1974. Texas State Highway Department Planning and Research Division. Austin, Texas.



Laredo is the only city or town in the Region 35 metropolitan area. It is the county seat of Webb County, and is the major international crossing along the United States/Mexico border in Texas. This city has the distinction of having served under seven flags, the seventh being the short-lived Republic of the Rio Grande. Industry and business include the manufacture of apparel, feeds, fertilizers, petroleum products, bricks, tiles, insecticides, electronic equipment, and sporting goods. With visitors from both sides of the Rio Grande, tourism is an important facet of the economy. Major annual events celebrated in Laredo are the Washington's Birthday Celebration (February), the Quarter Horse and Thoroughbred Futurities and Derby (February and April), the Laredo International Fair and Exposition (March), the Border Olympics (March), and the Laredo Flower and Art Show (April). Laredo is the site of Laredo Air Force Base and Laredo Junior College.

POPULATION

1970 Metro Area Population: 69,024

Change 1960-70: +14%

Race Composition

White 98%^{1/}

Negro 1%

Other <.5%

Age Composition (years):

13 or less 34%

14 - 20 15%

21 - 44 28%

45 - 64 15%

65 and over 8%

ECONOMY

Export Trade

Manufacturing

Mineral Processing

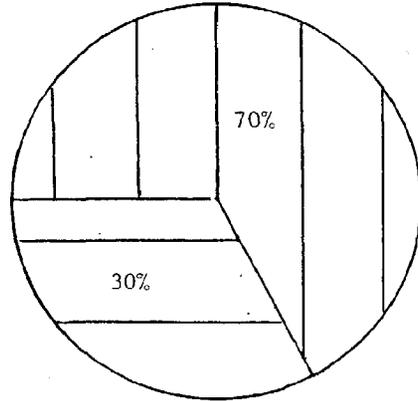
Tourism

^{1/} Includes persons of Mexican and/or Spanish descent.

PUBLICLY ADMINISTERED RECREATION OPPORTUNITIES

LAND AND WATER ACREAGE

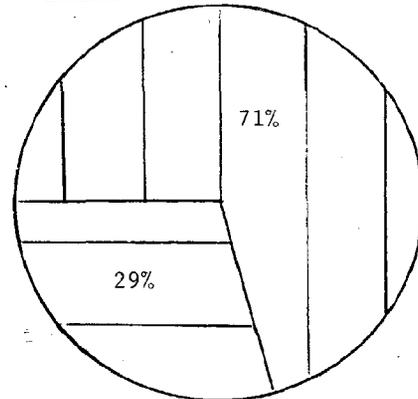
REGION
35
METRO



DEVELOPED LAND

UNDEVELOPED LAND

STATEWIDE
AVERAGE
METRO AREAS



	ACRES	
	REGION 35 METRO	STATEWIDE AVERAGE METRO AREAS
Developed Land	33	1,307
Undeveloped Land	14	536
Total Land	47	1,843
Water Within or Adjacent	0	1,006
Total Land and Water	47	2,849

Laredo has a total of 47 acres of land set aside as park and recreation areas. No surface acres of water either within or adjacent to the parks were reported.

Of the total land acreage, 33 acres are developed with facilities, leaving 14 acres available for future development. With 70 percent of the land acreage currently developed, Laredo almost matches the Statewide Metro average of 71 percent.

PARKS AND ACREAGE BY TYPE OF PARK

	<u>DISTRICT PARK</u>	<u>COMMUNITY PARK</u>	<u>SPECIALTY PARK</u>	<u>OPEN LAND PARK</u>	<u>TOTAL</u>	<u>STATEWIDE AVERAGE METRO AREAS</u>
Number of Parks	0	0	6.000	7.000	13.000	72.000
Parks Per Thousand	0	0	.087	.101	.188	.267
People Per Park	0	0	11,504.000	9,861.000	5,310.000	3,754.000
.....						
Land Acres	0	0	35.000	12.000	47.000	1,843.000
Acres Per Thousand	0	0	.507	.174	.681	6.864
People Per Acre	0	0	1,972.000	5,752.000	1,469.000	146.000

Of the 13 parks in Laredo, 7 are Open Land Parks and the remainder are Specialty Parks. No District or Community Parks were reported. Almost three-fourths of the total land acreage, or 35 acres, are in Specialty Parks while the 7 Open Land Parks contain a total of only 12 acres. The dispersion of the two types of urban parks are depicted graphically in the accompanying map titled "Dispersion of Parks by Type."

Looking at the total park and acreage figures in relation to the population of Laredo, .188 parks per 1,000 and .681 acres per 1,000 population exist.

Another way to present this data is that 5,310 people share each park while 1,469 people must share each acre of park land.

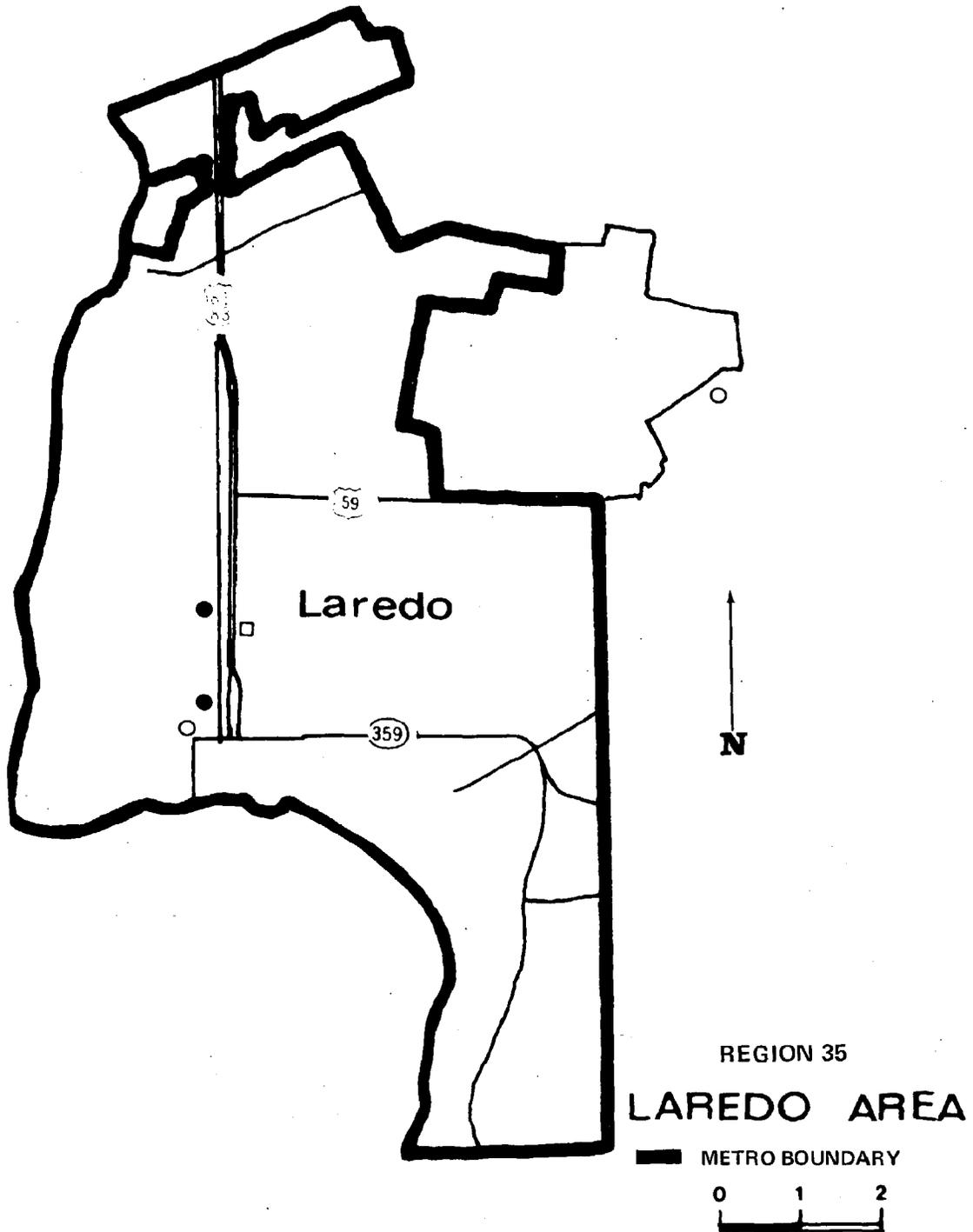
With .188 parks per 1,000, Laredo ranks well below the Statewide Metro average. The .681 acres per 1,000 gives Laredo a figure only one-tenth that of the Statewide Metro average.

DISPERSION OF PARKS BY TYPE

URBAN PARKS

- DISTRICT PARK
- COMMUNITY PARK
- ◆ SPECIALTY PARK
- OPEN-LAND PARK

Source: Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities



PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION 35 METRO	STATEWIDE AVERAGE METRO AREAS
Games and Sports:							
Parks.....	0	0	4	4	17,256	.058	.150
Tennis Courts.....	0	0	5	5	13,804	.072	.142
Basketball Courts.....	0	0	0	0	---	---	.071
Baseball/Softball Fields.....	0	0	3	3	23,008	.043	.186
Football/Soccer Fields.....	0	0	0	0	---	---	.032
Picnicking:							
Parks.....	0	0	0	0	---	---	.124
Tables.....	0	0	0	0	---	---	1.230
Playground:							
Parks.....	0	0	0	0	---	---	.170
Acres Developed.....	0	0	0	0	---	---	.258
Swimming:							
Parks.....	0	0	1	1	69,024	.014	.050
Pools (Sq. Yd.).....	0	0	1,619	1,619	43	23.463	25.950
Designated Fresh Water (Sq. Yd.)...	0	0	0	0	---	---	52.242
Boating:							
Parks.....	0	0	0	0	---	---	.006
Ramp Lanes - Fresh Water.....	0	0	0	0	---	---	.008
Camping:							
Parks.....	0	0	0	0	---	---	.002
Campsites.....	0	0	0	0	---	---	.121
Fishing:							
Parks.....	0	0	0	0	---	---	.013
Pier/Barge/Marina-Fresh Water (Yd.)	0	0	0	0	---	---	.049
Golfing:							
Courses.....	0	0	0	0	---	---	.005
Holes.....	0	0	0	0	---	---	.100
Trails:							
Parks.....	0	0	0	0	---	---	.006
Nature (Mi.).....	0	0	0	0	---	---	.009
Horseback (Mi.).....	0	0	0	0	---	---	.003
Bicycle (Mi.).....	0	0	0	0	---	---	.007
Hiking (Mi.).....	0	0	0	0	---	---	.006
Total Trails (Mi.).....	0	0	0	0	---	---	.021

PARK AND RECREATION FACILITIES BY TYPE OF PARK

TYPE OF FACILITY	DISTRICT PARK (UNITS)	COMMUNITY PARK (UNITS)	SPECIALTY PARK (UNITS)	TOTAL UNITS	PEOPLE PER UNIT	UNITS PER THOUSAND	
						REGION	STATEWIDE
						35 METRO	AVERAGE METRO AREAS
Sport Shooting:							
Parks.....	0	0	0	0	---	---	.002
Traps.....	0	0	0	0	---	---	.002
Shooting Targets.....	0	0	0	0	---	---	.004
Archery Targets.....	0	0	0	0	---	---	.011
Miscellaneous:							
Parks.....	0	0	1	1	69,024	.014	.038
Amphitheatre Seats.....	0	0	0	0	---	---	1.077
Botanical Gardens (Acres).....	0	0	0	0	---	---	.077
Zoos (Acres).....	0	0	0	0	---	---	.051
Community/Recreation Centers.....	0	0	1	1	69,024	.014	.038

All of the developed park and recreation facilities in Laredo are in the Specialty Park category, as no District or Community Parks were reported. The only types of facilities in the Specialty Parks are for swimming, games and sports and a community/recreation center. A total of 1,619 square yards of swimming pool area exists in the one park with swimming facilities.

Of the 13 parks, 4 have games and sports facilities, one has swimming facilities and one has a community/recreation center. The only types of games and sports facilities are tennis with 5 courts and baseball/softball with 3 fields.

Looking at the facilities in relation to the number of potential users we find the following:

- 69,024 persons for each community/recreation center
- 23,008 persons for each baseball/softball field
- 13,804 persons for each tennis court
- 43 persons for each square yard of swimming pool

Laredo is not above the Statewide Metro average for any of the facility units per 1,000 figures, while falling below the average for tennis courts, baseball/softball fields, square yards of swimming pools and community/recreation centers. No basketball courts, football/soccer fields, picnic tables, playground acres, designated fresh water swimming area, boat ramp lanes, campsites, yards of fishing pier/barge/marina, golf holes, trail miles, sport shooting facilities, amphitheatre seats, acres of botanical gardens or zoo acreage were reported.

Current opportunity days for 1971 were calculated by multiplying the number of facilities available for each activity in the metro area (determined from the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities) times the standard for the facility.

<u>ACTIVITY-FACILITY</u>	<u>ANNUAL DAYS AVAILABLE</u>	<u>DAYS PER THOUSAND POPULATION</u>	
		<u>REGION 35 METRO</u>	<u>STATEWIDE AVERAGE METRO</u>
Swimming (Pools) - square yards	242,850	3,520	3,891
Child's Play - playground acres	0	0	7,137
Baseball/Softball - fields	41,412	600	2,577
Picnicking - tables	0	0	2,093
Football/Soccer - fields	0	0	235
Golf - holes	0	0	414
Tennis - courts, double	13,470	195	384
Basketball - courts, full	0	0	625
Water-Related Activities:			
Boating, Boat Fishing, Skiing FW - surface acres	0	0	2,962
Boating, Boat Fishing, Skiing FW - boat ramps	0	0	103
Trail Activities:			
Combined Walking, Bicycling, and Nature Study - miles	0	0	164

The Laredo Metro Area offers annual opportunity days for only three activity types. Swimming (in pools) leads with the most opportunity days, followed by baseball/softball and tennis. A comparison between opportunity days per thousand for the Laredo Metro Area and the Statewide Metro average shows that the Laredo Metro Area is below the statewide average for these three activity types.

The eighteenth ranking metro area, based on population, Laredo also ranked eighteenth in total participation for the year 1970. Estimates for 1970 indicate that participation by residents as well as non-residents in the area spent over 1.8 million recreation days in pursuit of the various forms of urban outdoor recreation opportunities available within the metro area.

Resident

Total days of participation in urban outdoor recreation activities by the residents of the Laredo Metropolitan Area for the 16 activities shown were estimated to be 1.5 million days in 1970. Total participation is expected to increase to 2.0 million days in 1975 and to 2.7 million days in 1980. These represent increases of 34.0 percent by 1975 and 76.7 percent by 1980. Participation on a days per household basis is projected to increase from 88.8 days in 1970 to 106.6 days in 1975, and to 126.6 days in 1980--increases of 20.0 and 42.4 percent, respectively, over the 1970 level. Residents of the Laredo Metropolitan Area are expected to participate at a rate of 35, 55, and 76 days per household below the statewide average for the other Texas metropolitan areas in 1970, 1975, and 1980, respectively. For the more distant years of 1990 and 2000, both total days of participation and days per household are expected to increase, but days per household will remain below the statewide average for all metropolitan areas.

Projections for specific activities indicate that each of the 16 activities will increase in total days of participation through the years 1975 and 1980. On a days per household basis, participation is expected to increase in 12 activities by 1980, while walking, picnicking, football, and driving for pleasure will decline slightly. Based on total days of participation, the six most popular activities in 1970 were: swimming, driving for pleasure, picnicking, child's play, football, and walking, respectively. Participation in child's play is expected to increase and will replace picnicking as the third ranked activity. Picnicking will then drop to fourth. By 1980 the six most popular activities in the Laredo Metropolitan Area are expected to be: swimming, driving for pleasure, child's play, picnicking, football, and walking, respectively.

Non-Resident

Participation in urban outdoor recreation activities within the Laredo Metropolitan Area by non-residents was estimated to total 247,000 days for the activities specified for 1970. Compared to the 1970 level, total participation is expected to increase 8.1 percent (to 267,000 days) by 1975, and 15.4 percent (to 285,000 days) by 1980. Similar increases are anticipated through the years 1990 and 2000.

Of the specific activities projected, the most popular activities by non-residents for 1970 were: sightseeing, with 161,000 days; swimming, with 34,000 days; driving for pleasure, with 30,000 days; child's play, with 10,000 days; picnicking, with 4,000 days; and walking, with 4,000 days. Assuming adequate facilities are made available, all activities are expected to increase at a moderate rate through the year 2000, with sightseeing, swimming, driving for pleasure, child's play, picnicking and walking retaining their ranking of one through six, respectively.

CURRENT AND PROJECTED RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970				1975				1980				1990				2000			
	PART. DAYS	RANK	REG. 35 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 35 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 35 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 35 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH	PART. DAYS	RANK	REG. 35 METROS AVERAGE DAYS/HH	STATE-WIDE METROS AVERAGE DAYS/HH
Swimming	456	1	26.49	27.41	726	1	37.76	36.52	1,082	1	50.68	47.17	2,166	1	85.77	75.28	3,778	1	129.41	110.14
Child's Play	142	4	8.25	14.08	214	3	11.13	17.72	309	3	14.47	22.00	580	2	22.97	32.20	979	2	33.53	43.99
Baseball/Softball	49	7	2.85	2.78	69	7	3.59	3.19	94	7	4.40	3.59	162	5	6.41	4.41	254	4	8.70	5.22
Picnicking	177	3	10.28	5.72	187	4	9.73	5.66	197	4	9.23	5.66	219	4	8.67	5.61	240	5	8.22	5.64
Football/Soccer	94	5	5.46	1.43	103	5	5.36	1.42	112	5	5.25	1.41	132	8	5.23	1.39	151	8	5.17	1.38
Golf	12	13	.70	3.92	20	13	1.04	4.98	32	13	1.50	6.16	73	11	2.89	8.96	146	10	5.00	12.07
Tennis	20	11	1.16	6.06	28	12	1.46	9.21	36	12	1.69	11.49	52	13	2.06	16.07	71	12	2.43	21.46
Basketball	28	9	1.63	1.60	49	8	2.55	2.59	74	9	3.47	3.57	133	7	5.27	5.52	206	7	7.06	7.53
Walking	80	6	4.65	18.21	89	6	4.63	23.09	99	6	4.64	29.20	117	9	4.63	39.89	136	11	4.66	50.31
Bicycling	23	10	1.34	20.30	47	9	2.44	32.77	77	8	3.61	45.25	148	6	5.86	68.44	237	6	8.12	95.49
Nature Study	*	0	---	.72	1	16	.05	1.67	1	16	.05	2.64	2	16	.08	4.63	3	16	.10	6.70
Fishing	31	8	1.80	1.80	36	10	1.87	1.88	42	11	1.97	1.97	54	12	2.14	2.13	67	13	2.30	2.30
Boating	15	12	.87	.88	31	11	1.61	1.60	49	10	2.30	2.31	94	10	3.72	3.74	151	8	5.17	5.17
Skating	7	14	.41	.42	12	14	.62	.62	17	14	.80	.82	31	14	1.23	1.22	47	14	1.61	1.81
Surfing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sightseeing	2	15	.12	2.25	3	15	.16	2.34	4	15	.19	2.50	7	15	.28	2.70	10	15	.34	3.01
Dr. for Pleas.	393	2	22.83	13.38	434	2	22.57	13.52	476	2	22.30	13.67	556	3	22.02	13.86	632	3	21.65	14.10
TOTAL	1,529		88.84	120.96	2,049		106.57	158.78	2,701		126.55	199.41	4,526		179.23	286.05	7,108		243.47	386.32

CURRENT AND PROJECTED NON-RESIDENT PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

TOTAL CURRENT AND PROJECTED PARTICIPATION, 1970-2000
(000'S OF ANNUAL ACTIVITY DAYS)

ACTIVITY	1970	1975	1980	1990	2000	ACTIVITY	1970	1975	1980	1990	2000
Swimming	34	37	39	44	48	Swimming	490	763	1,121	2,210	3,826
Child's Play	10	11	11	13	14	Child's Play	152	225	320	593	993
Baseball/Softball	1	1	1	1	1	Baseball/Softball	50	70	95	163	255
Picnicking	4	5	5	6	6	Picnicking	181	192	202	225	246
Football/Soccer	1	1	1	1	1	Football/Soccer	95	104	113	133	152
Golf	2	2	2	3	3	Golf	14	22	34	76	149
Tennis	*	*	*	*	*	Tennis	20	28	36	52	71
Basketball	*	*	*	*	*	Basketball	28	49	74	133	206
Walking	4	4	4	5	5	Walking	84	93	103	122	141
Bicycling	*	*	*	*	*	Bicycling	23	47	77	148	237
Nature Study	*	*	*	*	*	Nature Study	*	1	1	2	3
Fishing	*	*	*	1	1	Fishing	31	36	42	55	68
Boating	*	*	*	*	*	Boating	15	31	49	94	151
Skating	*	*	*	*	*	Skating	7	12	17	31	47
Surfing	---	---	---	---	---	Surfing	---	---	---	---	---
Sightseeing	161	174	187	210	229	Sightseeing	163	177	191	217	239
Dr. for Pleas.	30	32	35	39	42	Dr. for Pleas.	423	466	511	595	674
TOTAL	247	267	285	323	350	TOTAL	1,776	2,316	2,986	4,849	7,458

Note: Asterisks indicate that projected annual activity days were less than 500. Dashes indicate not applicable. Zeros indicate that the activity was not ranked due to insignificant participation days recorded.

Estimates of urban outdoor recreation resource requirements were developed for the Laredo Metropolitan Area for the years 1970, 1975, 1980, 1990, and 2000 by comparing current^{1/} and projected recreation participation with the current recreation opportunities^{2/} available in the metro area. The availability and spatial distribution of recreation opportunities provided by parks and recreation facilities were not analyzed with respect to subsections of the metro characterized by residents having similar incomes and ethnic backgrounds because the socio-economic data was not available. Income/ethnic background subsections were analyzed with respect to the distribution of parks and recreation facilities within these parks for other metros, or parts of metro areas, of the State for which this type information was available.

The accessibility of parks to urban residents significantly affects the frequency of park use. Further, recreationists from different income groups and ethnic backgrounds often have distinguishably different recreation patterns and preferences. Both of these factors are important and should be considered in developing additional recreation opportunities in the Laredo Metro Area.

In the discussions that follow, the availability and distribution of parks in the Laredo Metro are presented (insofar as the limited data available allows). Then, estimates of current and future requirements for selected recreation facilities are provided.

PARK DISTRIBUTION ANALYSIS

In analyzing the availability and distribution of parks in the Laredo Metro Area, changes in population (from 1960 to 1970), and dispersion of existing parks were considered.

Population trends affected estimations of future recreation participation. Population estimates show that the 1970 metro population of 69,024 will increase to about 111,000 by the year 2000. No information was available in 1971 relative to directions of future growth; however, in developing additional parks, the growth areas should be considered.

Park distribution information was also incomplete for 1971 for the Laredo Metro Area; consequently, a comprehensive analysis cannot be made. The accompanying "Dispersion of Parks by Type" map does show the location of five of the thirteen public parks. These five parks are located within a few blocks of Highways 81 and 83. Of these five parks, two were specialty parks and three were open land parks. The limited park distribution data available did not permit conclusions to be drawn suggesting the location of parks by type needed throughout the Laredo Metro. However, data presented in the "Parks and Acreage by Type of Park" table does show that no district or community parks were reported

^{1/} "Current" participation refers to levels of participation by type of selected recreation activity which were estimated for the year 1970.

^{2/} "Current" recreation opportunities refers to computed figures derived from the numbers of publicly-administered facilities by type available within the metro area in 1971.

LOW INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS LESS THAN \$5,000)

 PREDOMINANTLY MEXICAN AMERICAN
 PREDOMINANTLY BLACK
 PREDOMINANTLY ANGLO

MID INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME VARIED FROM \$5,000 TO \$15,000)

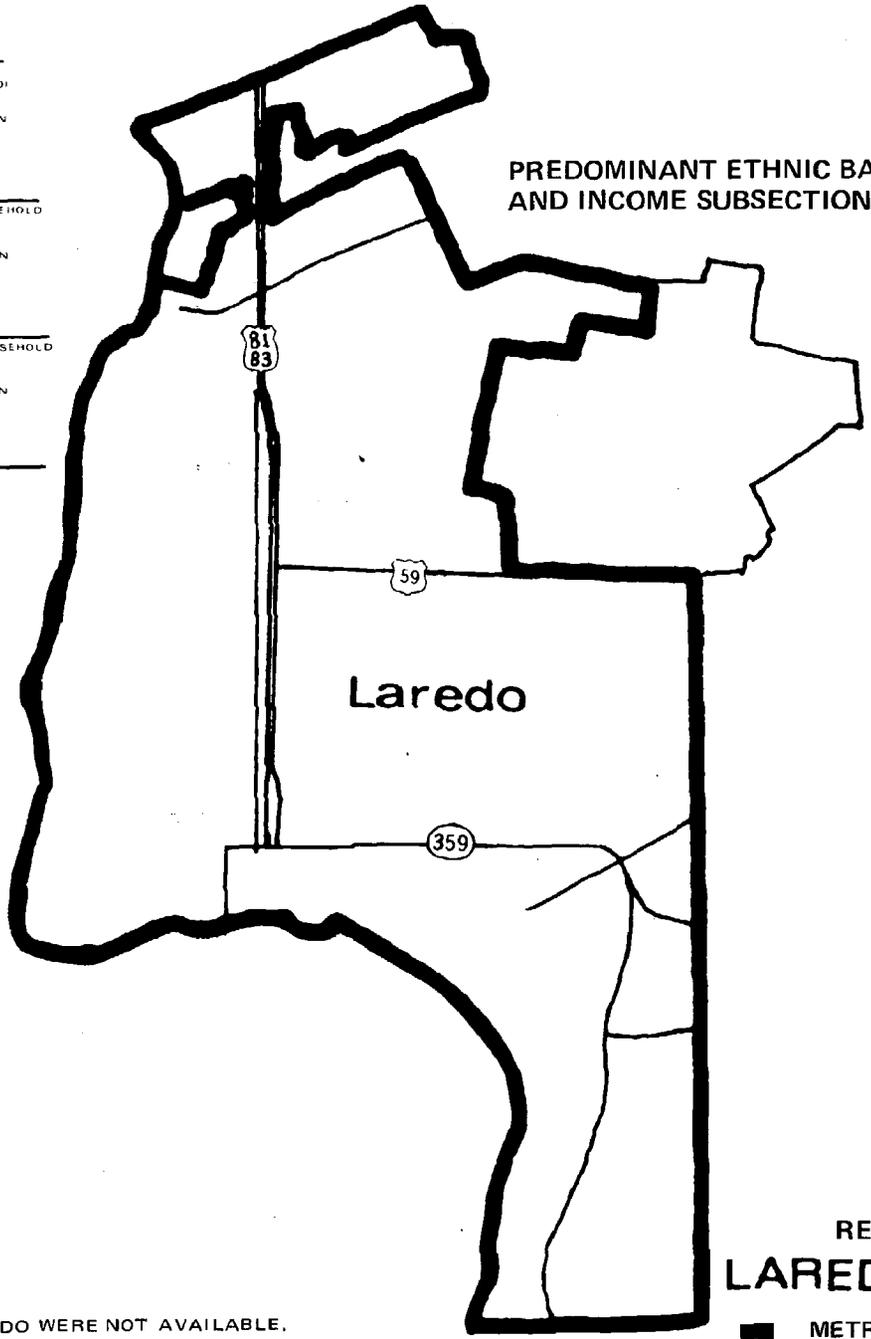
 PREDOMINANTLY MEXICAN AMERICAN
 PREDOMINANTLY BLACK
 PREDOMINANTLY ANGLO

HIGH INCOME AREAS (TOTAL ANNUAL HOUSEHOLD INCOME WAS GREATER THAN \$15,000)

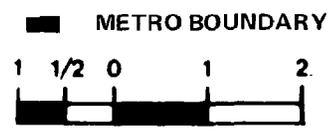
 PREDOMINANTLY MEXICAN AMERICAN
 PREDOMINANTLY BLACK
 PREDOMINANTLY ANGLO

 AREAS FOR WHICH ETHNIC BACKGROUND AND INCOME DELINEATIONS WERE NOT MAPPED.

PREDOMINANT ETHNIC BACKGROUND AND INCOME SUBSECTIONS



REGION 35
LAREDO AREA



NOTE: SOCIO-ECONOMIC DATA FOR LAREDO WERE NOT AVAILABLE.

for the Laredo Metro. The absence of these two type parks suggests that there is a requirement for district and community parks throughout the metro area.

In addition to maintaining an adequate dispersion of parks in all portions of the metro area, the provision of different types of recreational facilities in parks is also an important consideration. Current and future requirements for selected recreational facilities in the Laredo Metro are presented in the following discussions in terms of the quantities of facilities needed.

FACILITY REQUIREMENTS AND DISTRIBUTION ANALYSIS

As mentioned previously, requirements for selected recreational facilities (see the following table) were calculated for the years 1970, 1975, 1980, 1990, and 2000. The methodology used to calculate facility requirements in general is explained in Appendix C, Part I--An Overview of the Urban Volume. In the discussion that follows, resource requirements for recreational facilities are generally referred to by units of the most important feature necessary to allow participation. For example, when a requirement is shown for swimming pools, features such as a bathhouse, cleaning and filtering system, and other support features are implied when a requirement for the major facility is shown.

Swimming

There was one public swimming pool in the Laredo Metro Area in 1971. The pool contained 1,619 square yards of swimming area and provided approximately 243,000 days of opportunity, given a facility standard of 150 days per year per square yard. An additional 1,453 square yards of swimming area would have been required to adequately meet an estimated demand of 461,000 days in 1970. The cumulative resource requirement has been calculated to increase from 1,453 square yards in 1970 to 3,160 square yards in 1975, to 5,406 square yards in 1980, to 12,226 square yards in 1990, and to 22,353 square yards above the 1971 supply level by the year 2000.

Child's Play

There were no public playgrounds reported as being available in the metro area in 1971. In order to satisfy projected participation, six acres of developed playground would have been required in 1970, based on a facility standard of 27,623 days per year per acre. The cumulative resource requirements were calculated to increase from 6 acres in 1970, to 8 acres in 1975, to 12 acres in 1980, to 21 acres in 1990, and to 36 acres of playgrounds by the year 2000.

Baseball/Softball

The three public baseball/softball fields reported in 1971 provided approximately 41,000 days of opportunity, given a standard of 13,804 days per year per field. One additional field would have been required to satisfy a 1970 demand estimated at 50,000 participation days. Based on 1971 information, the cumulative resource requirement has been calculated to increase from 1 additional field in 1970 to 2 fields in 1975, to 4 fields in 1980, to 9 in 1990, and to 16 fields above the 1971 supply level by the year 2000.

Picnicking

No public picnic tables were reported as being available in the metro area in 1971. Based on a standard of 1,702 days per year per table, 106 tables would have been needed in 1970 to accommodate a 1970 demand estimated at 181,000 participation days. The cumulative resource requirements were calculated to increase from 106 tables in 1970 to 113 tables in 1975, to 119 tables in 1980, to 132 tables in 1990, and to a total of 145 picnic tables by the year 2000.

Football/Soccer

Laredo had no public football fields in 1971. Thirteen fields were needed in 1970 to accommodate a demand estimated at 95,000 participation days, based on a conversion standard of 7,224 days per year per field. The cumulative resource requirements were calculated to increase from 13 fields in 1970, to 14 fields in 1975, to 16 fields in 1980, to 18 fields in 1990, and to 21 fields by the year 2000.

Golf

Laredo had no public golf courses in 1971. With a conversion standard of 4,047 days per year per hole of golf, three holes would have been required in 1970 to accommodate a 1970 demand estimated at 14,000 participation days. The cumulative resource requirements were calculated to increase from 3 holes in 1970, to 5 holes in 1975, to 8 holes in 1980, to 19 holes in 1990, and to 37 holes by the year 2000. Since golf courses are constructed in multiples of nine holes, 1975 would be the first horizon year that one nine hole course might be considered feasible.

Tennis

The five public tennis courts in Laredo in 1971, when multiplied by a facility standard of 2,694 days per year per court, provided approximately 13,000 days of tennis opportunity. Three additional courts would have been required in 1970 to satisfy a 1970 demand estimated at 20,000 participation days. The cumulative resource requirements were calculated to increase from 3 additional courts in 1970, to 6 courts in 1975, to 9 courts in 1980, to 14 courts in 1990, and to 22 courts above the 1971 level by the year 2000.

Basketball

No public basketball courts were reported as being available in the metro in 1971. With a standard of 8,795 days per year per court, three courts would have been required to satisfy a 1970 demand of 28,000 participation days. The cumulative resource requirements have been calculated to increase from 3 courts in 1970 to 6 courts in 1975, to 8 courts in 1980, to 15 courts in 1990, and to a total of 23 basketball courts by the year 2000.

Trails Activities

Laredo reported no designated trail facilities in 1971. One mile would have been required in 1970 to satisfy demand estimated at 10,000 participation days, on the basis of a standard of 8,464 days per year per mile of trail. The

cumulative resource requirements were calculated to remain at one mile until 1980 where an additional mile will be required. By 1990 the cumulative requirement was calculated to increase to three miles. A total of three miles of trail should be adequate to meet expected demand through the year 2000.

A relatively small proportion of the total participation in trail and related activities was estimated to take place in publicly administered park and recreation areas. It is likely, however, that as trail facilities are provided, the relative proportion of total participation will increase at these recreation areas. Thus, the above estimates of resources required may be conservative in the long run and should be considered as minimum estimates. In addition to the expectations for increases in participation in trail and related activities at publicly-administered park and recreation areas, it is clear that the major proportion of walking, bicycling, and nature study is occurring in places other than established recreation areas. The majority of this participation is most likely taking place in local neighborhoods, on city streets, and on available open lands within the area. This phenomenon has direct policy implications with respect to the provision of sidewalks within currently existing and newly developing neighborhoods, the development of a system of bike lanes in high use areas, and the provision of adequate open space and green belt areas within the metro area.

Water-Related Activities: Boating, Boat Fishing, Skiing

Surface Acres-Freshwater Lakes
(Boating, Boat Fishing, Skiing)

No surface acres of freshwater lakes were reported available for water-related recreation within the Laredo Metro Area in 1971. Using participation patterns of the households recreating within the urban areas, it was estimated that a total of 29,000 days of freshwater boating, boat fishing, and skiing participation would have occurred in 1970 if adequate freshwater lakes had been available. Of these 29,000 days, 15,000 were boating participation days, 7,000 were boat fishing days, and 7,000 were skiing days. Projections developed for the water-related activities indicate incremental resource requirements of 70 surface acres in 1970, 52 surface acres in 1975, 58 surface acres in 1980, 148 surface acres in 1990, and 180 surface acres in 2000. This brings the cumulative resource requirement to 508 surface acres by the year 2000.

Freshwater Boat Ramps^{1/}

No publicly-administered freshwater boat lanes were reported for the Laredo Metro in 1971. By estimating the 1970 total freshwater boat fishing, skiing, and boating participation which would have occurred using freshwater boat ramp facilities to gain access to the water if ramps were available, it was calculated that one boat ramp was needed in 1970.

^{1/} In calculating freshwater boat ramp resource requirements the assumption was made that each boat ramp has two lanes. Supply figures listed in the "Park and Recreation Facilities by Type of Park" table and quoted in the narratives are in terms of single lanes.

Projected increases in freshwater boat fishing, skiing, and boating participation are expected to require no additional freshwater boat ramps in 1975, one in 1980, two in 1990, and two in the year 2000, bringing the cumulative resource requirement to six ramps in 2000. Since boat ramps are the most frequently used means by which boaters, skiers, and boat fishermen gain access to freshwater lakes, the provision of freshwater surface acres and freshwater boat ramps required should be planned as joint projects, even though, in some cases, this may require the construction of boat ramps prior to the years reflected in the boat ramp resource requirement projections.

Summary of Facilities Requirements

In 1971 the Laredo Metro reported no public facilities for child's play, picnicking, football/soccer, golf, basketball, designated trail activities, or activities requiring surface acres of freshwater lakes or boat ramps. Resource requirements were calculated for all planning horizon years for each of these facilities, except for trails and boat ramps. Designated trails were estimated to be required in 1970, 1980, and 1990, while freshwater boat ramps were estimated to be required for 1970, 1980, 1990, and the year 2000. The metro reported minimal amounts of facilities for swimming, tennis, and baseball/softball; resource requirements were indicated for all planning horizon years.

While no information was available regarding the dispersion of parks and facilities among the various income/ethnic subsections or growth areas of Laredo, these are important planning factors and should be considered in the provision of additional parks and facilities in the metro area.

YEAR	ACTIVITY	TOTAL PARTICIPATION (000'S OF ACTIVITY DAYS)	1971 OPPORTUNITY DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	NET OPPORTUNITY DAYS (000'S OF ACTIVITY DAYS)		UNITS OF RECREATION RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	461 ^{1/}	243	218		1,453 square yards ^{2/}	1,453 square yards ^{2/}
	Child's Play (Playgrounds)	152	0	152		6 acres	6 acres
	Baseball/Softball	50	41	9		1 fields	1 fields
	Picnicking	181	0	181		106 tables	106 tables
	Football/Soccer	95	0	95		13 fields	13 fields
	Golf	14	0	14		3 holes	3 holes
	Tennis	20	13	7		3 courts, dbl.	3 courts, dbl.
	Basketball	28	0	28		3 courts, full	3 courts, full
1970	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	29	0	29		70 surface acres	70 surface acres
	Boating, Boat Fishing, Skiing FW . . .	22	0	22		1 ramp ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	9 ^{4/}				1 miles	1 miles
	Bicycling	1 ^{4/}				<1 miles	<1 miles
	Nature Study	* ^{4/}				<1 miles	<1 miles
	Combined Walking, Bicycling, Nature Study	10 ^{4/}	0	10		1 miles	1 miles
<hr/>							
	<u>ACTIVITY</u>						
	Swimming (Pools)	717 ^{1/}	243	474		3,160 square yards ^{2/}	1,707 square yards ^{2/}
	Child's Play (Playgrounds)	225	0	225		8 acres	2 acres
	Baseball/Softball	70	41	29		2 fields	1 fields
	Picnicking	192	0	192		113 tables	7 tables
	Football/Soccer	104	0	104		14 fields	1 fields
	Golf	22	0	22		5 holes	2 holes
	Tennis	28	13	15		6 courts, dbl.	3 courts, dbl.
	Basketball	49	0	49		6 courts, full	3 courts, full
1975	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	51	0	51		122 surface acres	52 surface acres
	Boating, Boat Fishing, Skiing FW . . .	37	0	37		1 ramp ^{3/}	0 ramps ^{3/}
	Trails Activities:						
	Walking	10 ^{4/}				1 miles	0 miles
	Bicycling	2 ^{4/}				<1 miles	0 miles
	Nature Study	* ^{4/}				<1 miles	0 miles
	Combined Walking, Bicycling, Nature Study	12 ^{4/}	0	12		1 miles	0 miles

YEAR	ACTIVITY	TOTAL	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		PARTICIPATION (000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	DEFICIT	SURPLUS	RESOURCES REQUIRED	
						CUMULATIVE	INCREMENTAL
	Swimming (Pools)	1,054 ^{1/}	243	811		5,406 square yards ^{2/}	2,246 square yards ^{2/}
	Child's Play (Playgrounds)	320	0	320		12 acres	4 acres
	Baseball/Softball	95	41	54		4 fields	2 fields
	Picnicking	202	0	202		119 tables	6 tables
	Football/Soccer	113	0	113		16 fields	2 fields
	Golf	34	0	34		8 holes	3 holes
	Tennis	36	13	23		9 courts, dbl.	3 courts, dbl.
	Basketball	74	0	74		8 courts, full	2 courts, full
1980	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	75	0	75		180 surface acres	58 surface acres
	Boating, Boat Fishing, Skiing FW . . .	54	0	54		2 ramps ^{3/}	1 ramp ^{3/}
	Trails Activities:						
	Walking	11 ^{4/}				2 miles	1 miles
	Bicycling	3 ^{4/}				<1 miles	0 miles
	Nature Study	* ^{4/}				<1 miles	0 miles
	Combined Walking, Bicycling, Nature Study	14 ^{4/}	0	14		2 miles	1 miles
<hr/>							
	<u>ACTIVITY</u>						
	Swimming (Pools)	2,077 ^{1/}	243	1,834		12,226 square yards ^{2/}	6,820 square yards ^{2/}
	Child's Play (Playgrounds)	593	0	593		21 acres	9 acres
	Baseball/Softball	163	41	122		9 fields	5 fields
	Picnicking	225	0	225		132 tables	13 tables
	Football/Soccer	133	0	133		18 fields	2 fields
	Golf	76	0	76		19 holes	8 holes
	Tennis	52	13	39		14 courts, dbl.	5 courts, dbl.
	Basketball	133	0	133		15 courts, full	7 courts, full
1990	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	137	0	137		328 surface acres	148 surface acres
	Boating, Boat Fishing, Skiing FW . . .	96	0	96		4 ramps ^{3/}	2 ramps ^{3/}
	Trails Activities:						
	Walking	13 ^{4/}				2 miles	0 miles
	Bicycling	6 ^{4/}				1 miles	1 miles
	Nature Study	* ^{4/}				<1 miles	0 miles
	Combined Walking, Bicycling, Nature Study	19 ^{4/}	0	19		3 miles	1 mile

YEAR	ACTIVITY	TOTAL	1971 OPPORTUNITY	NET OPPORTUNITY DAYS		UNITS OF RECREATION	
		PARTICIPATION (000'S OF ACTIVITY DAYS)	DAYS AVAILABLE (000'S OF ACTIVITY DAYS)	(000'S OF ACTIVITY DAYS)		RESOURCES REQUIRED	
				DEFICIT	SURPLUS	CUMULATIVE	INCREMENTAL
	Swimming (Pools)	3,596 ^{1/}	243	3,353		22,353 square yards ^{2/}	10,127 square yards ^{2/}
	Child's Play (Playgrounds)	993	0	993		36 acres	15 acres
	Baseball/Softball	255	41	214		16 fields	7 fields
	Picnicking	246	0	246		145 tables	13 tables
	Football/Soccer	152	0	152		21 fields	3 fields
	Golf	149	0	149		37 holes	18 holes
	Tennis	71	13	58		22 courts, dbl.	8 courts, dbl.
	Basketball	206	0	206		23 courts, full	8 courts, full
2000	Water-Related Activities:						
	Boating, Boat Fishing, Skiing FW . . .	212	0	212		508 surface acres	180 surface acres
	Boating, Boat Fishing, Skiing FW . . .	149	0	149		6 ramps ^{3/}	2 ramps ^{3/}
	Trails Activities:						
	Walking	15 ^{4/}				2 miles	0 miles
	Bicycling	9 ^{4/}				1 miles	0 miles
	Nature Study	1 ^{4/}				<1 miles	0 miles
	Combined Walking, Bicycling, Nature Study	25 ^{4/}	0	25		3 miles	0 miles

Note: Asterisks indicate that projected annual activity days were less than 500.

^{1/} Includes only swimming participation occurring in swimming pools, 94 percent of the total in urban areas.

^{2/} Designated freshwater swimming areas may be substituted for swimming pools. When making substitutions consider total swimming participation.

^{3/} Assumes 2.0 lanes per ramp.

^{4/} Reflects estimated participation occurring in park and recreation areas; does not include participation occurring outside park and recreation areas. Of the total walking, bicycling, and nature study participation it was determined that 10.5, 4.0, and 20.1 percent, respectively for each activity, occurs in park and recreation areas.

Appendix A: Glossary



Introduction

The terms in this glossary relate most closely to the analyses of outdoor recreation in the urban areas of Texas. Glossaries in other volumes of the Texas Outdoor Recreation Plan may have more or fewer words described, as applicable.

In developing the Texas Outdoor Recreation Plan (TORP), unconventional or specialized meanings have sometimes been assigned to familiar words. This was done in order to make the analyses of large amounts of data more readable and useful to the general public. For this reason, the following glossary has been prepared so that the public, as well as other planners, might acquaint themselves with the meanings, translations, or uses of these terms in the TORP.

To facilitate more efficient communication and common understanding, several attempts have been made to standardize terms and concepts used in recreation research and planning. The definitions of terms offered here do not necessarily imply that other definitions are unacceptable. However, these definitions are of particular significance as they are found in the official document that is to guide recreation development in the State of Texas. If the words prove useful enough, their use should become standardized throughout the State.

Any questions or comments regarding the clarity or accuracy of these terms and their uses should be sent to: Comprehensive Planning Branch, Texas Parks and Wildlife Department, John H. Reagan Building, Austin, Texas 78701.

Access; area, recreation area, and/or park - the opportunity or means of approaching a given geographic area, a recreation area, and/or park or other recreation destination via existing transportation routes. In a sense refers to the physical and legal availability, the reputation, and/or the quality of the routes and the recreation area or park. In another sense refers to available modes of transportation providing conveyance to the recreation destination.

Access, facility - refers to route availability, reputation (i.e.; do people know route exists; are there signs, etc.), and quality from park entrance to recreational facility destination (i.e., can people get to the facility from the park entrance; do they have to walk long distances; is there parking nearby; etc.)

Access, fishing - Fishing access refers to physical and legal availability of fishing facilities, including the recreationists' opportunity to reach fishing water--i.e., is there a boat ramp available, can the recreationist get to the waters edge, etc.

Access, private - (Also, see: Access, public) No legal public access. Area is open to owner(s) of the area, and only those other persons that the owner(s) allow(s) to use the property. In other words, use by the general public is controlled by the property owner.

Access, public - the opportunity or means for the general public to approach and use a recreation destination. (As considered in the TORP, public access means, in effect--

a park, or recreation area, is open to the public either for a fee or for free.) The recreation destination--either park or recreation area--may be publicly or privately administered and/or owned, but the general public must be allowed to use the resource. The facilities available at a given park or recreation area are called the facilities mix. Correspondingly, but not necessarily, the facilities mix determines the activities package for a given park.

Accessibility - refers to the ease with which recreationists may use recreation resources. Among the factors which may influence accessibility are land ownership, transportation facilities, the proximity of recreation resources to urban centers, user fees, and signs and information which identify the recreation resources for the recreationist.

Accessible Shoreline - that water frontage, e.g., either on the Gulf, on a bay, a lake, river, stream, reservoir, etc., which presents recreational opportunities for the public via existing modes and routes of transportation.

Acquisition - receiving control of a land and/or water resource by a variety of means for purposes of altering the present use of the resource to recreational. Means of acquiring vary from outright purchase (fee simple) of title or deed to receiving as a gift. Recreational uses may vary from strict preservation--no development; to high-intensity uses--completely developed areas for many activities.

Action Programs - significant outdoor recreation related actions which the State proposes to

- initiate or continue during the period of plan use.
- Active Recreation - See: Recreation, active
- Activities, recreational - a wide array of individual pursuits which tend to refresh or relax, entertain or amuse, and invigorate or recharge the mind and body, and which tend to release the tensions or frustrations created by day-to-day interactions.
- Activities, saltwater associated - recreational activities which occur in or near saltwater areas to include Gulf and bay areas along the Texas Gulf Coast.
- Activities, spectator - applies only to observance of organized activities.
- Activity, primary - (Also, see: Activity Package) This activity provided the major reason for going to a park, the major reason for stopping while on a trip, and/or the major impetus for participation. The "primary" activity might vary from recreationist to recreationist, while often the primary is the same for all members of a group.
- Activity, secondary - (Also, see: Activity Package) A secondary activity is a recreational activity which results from a variety of conditions. There must be a "primary" activity, then secondary activities evolve from preplanning, from pursuit by members of the household or group who are not as enthusiastic for the primary activity as others, from a selection from alternative activities, from recreationists tiring of the primary activity, from a lack of opportunity for the primary activity, or from overcrowding of the primary facility.
- Activity Day - (Participation Day) -- a unit of measurement used to describe participation in recreational activities. One day of participation was recorded in the TORP surveys if any part of a day was devoted to a selected recreational activity. If the same members from the same household or group participated in the same activity twice in the same day at two different parks or recreation areas, it would be recorded as two days for each participating member. Participation by the same household or group in the same activity several times during the same day at the same one location would be recorded as one day for each member.
- Activity Package - activity "packages" are those sets of recreational activities which were generally shown to be closely related. Recreationists have, as a general rule, different preferences and capacities to pursue the activities of their choice. Most parks provide facilities for two or more activities. One activity is usually the primary activity, or the reason for going; and, an activity which might also be pursued within the same park is
- Aggregate Analysis - The process of combining an analysis of supply, participation, and/or resource requirements for particular geographic delineations, i.e., analysis of an entire metropolitan area including contiguous municipalities, a group of cities excluding those contiguous to metro areas, or a group of towns excluding those contiguous to a metro in each of the 37 analytical regions. In the volume of the TORP titled Outdoor Recreation in the Urban Areas of Texas--when analyzing a metropolitan area--aggregate analysis implies that the data used to determine resource requirements related not only to the metro core, but to all immediately adjacent, contiguous, and surrounded smaller municipalities. When analyzing the "cities" within a given analytical region the data were combined for all cities in that region such that supply, participation, and resource requirements for the region were expressed as if there was only one city in that given region. Likewise, when analyzing the "towns" of a given region, these were expressed in the "aggregate" as well.
- Amphitheatre Seats - refers to outdoor theatre seating capacities only. Seating capacity was estimated if individual seats were not designated (i.e., if there were only benches).
- Analytical Regions (Same as the 37 Texas Outdoor Recreation Analytical Planning Regions for TORP) Territorial delineations among the political subdivisions (i.e., groups of counties) within the State based on a combination of factors which allows state recreation planners to apply recreational demand and supply data to recreation problems at the regional level. Counties were aggregated for regional analyses based primarily on the initially established Governor's Planning Regions. Certain of those regions were subdivided to provide the capability to analyze data at a more local level.
- called a secondary activity. For example, the primary activity might be picnicking, while on the outing recreationists might also pursue such secondary activities as swimming, baseball, horseback riding, nature study, boating, etc.
- Analytical Subsections - portions of an urban area delineated by local urban or recreation planners in the 1971 Texas Outdoor Recreation Urban Planners Survey. Delineations were based on the combined, predominant income and ethnic background characteristics of the urban areas of the State. For example, middle-income Anglo subsection. Breakdowns of the income levels were based on total annual (average) household income as follows: Low - up to \$5,000; Middle - \$5,000 to \$15,000; High - greater than \$15,000. The three ethnic backgrounds which characterize most Texas municipalities--Anglo, Black, and Mexican-American--were selected as the other delineation criteria.
- Analytical Techniques - (Also, see volume of TORP titled Techniques of Analysis) The various scientific or empirical and recreation planning methodologies used to synthesize and analyze pertinent data from the surveys conducted to support statewide recreation planning in Texas.
- Archeological Site/Area - those archeological, historical, and cultural resources present in areas, districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and are identified as being important in pre-history and/or history.
- Archery - (Also, see: Sport Shooting) A recreational activity involving the use of bow and arrow equipment for competitive or non-competitive, non-school and non-professional target shooting as well as for other unspecified uses. Participation normally occurred at either a practice range or empty field. Hunting with a bow was counted in the TORP as hunting participation.
- Archery Targets - See: Sport Shooting
- Available Surface Acres of Bay - approximate total surface acres of bays located in or near counties in the coastal region which are available for the water related activities of boating, fishing, or water skiing.

Barge, fishing - a floating structure usually attached to the shore and usually providing access to more desirable fishing water than is available from the shore.

Baseball - a recreational activity generally involving competition between two teams in a wide variety of types of baseball activity involving for example, from sandlot, to little league participation (usually requiring a field, bats, balls, gloves, etc.); but, organized school, semi-professional, or professional games were not included in the TORP. Participation could have taken place in the street, at a school baseball diamond after school, at park facilities, or at some other resource with or without sport facilities

Baseball/Softball Fields - fields with facilities for baseball and/or softball play.

Basketball - A recreational activity which normally involves two opposing teams of five members each which pass, throw, or bounce (i.e., dribble) a ball toward the opponents goal at indoor or outdoor facilities, i.e., gymnasium, vacant lot, standard court, etc. City parks and school gyms or playgrounds were prime areas for participation. Any number could play and there were no restrictions on rules. Indoor participation was eliminated from the projections of recreation demand.

Basketball Courts - an area designed, constructed, and/or used for recreational basketball participation. Full-court basketball courts were enumerated for recreation resource inventory purposes of the TORP.

Bicycle Route - A course designated on existing streets, roadways, and/or highways which has been specifically allocated for bicycle traffic or which has special traffic control signs which mark the route indicating to others that bicyclers may be in traffic ahead. This type of course would most often be found in an urban area, but not within a park.

Bicycle Trail - A course which has been specifically designed and constructed primarily for recreational bicycling. The course may be designed on an existing roadway, but generally the trails are off-road except for short stretches for crossing traffic, in rough terrain, or for more expedient use of re-

sources. This type of course would often be found in parks and recreation areas.

Bicycling - A recreational activity which involves riding a two-wheel unmotorized vehicle for pleasure. The activity could include use of designated trails or paths. Does not include going to and from school or to and from work unless the destination was incidental to the reason for using the bicycle.

Boat Fishing - A recreational activity which involves fishing while using a boat to gain access to fishing waters which may not be available from shore.

Boat Ramp - An area for launching and retrieving boats; generally, a sloping road-like structure constructed of asphalt, concrete, gravel, or dirt leading down into the water.

Boat Ramp, lane - a subdivision of a boat ramp; one lane providing access for one boat at a time. A ramp will most often have one, two, three, or four lanes. If the ramp is not physically partitioned by curbs or other barriers, number of lanes was determined by estimating number of boats which could be launched or retrieved safely, side-by-side, at one time on the same ramp.

Boating - A recreational activity involving riding around in a boat as an objective in itself. Fishing from a boat, pulling a skier, or using a boat for transportation would not be accepted as boating participation unless the respondents specifically stated that they were riding around in the boat for recreational purposes. Types of boats included canoes, kayaks, houseboats, various motorboats, paddleboats, rowboats, sailboats, yachts, etc.

Botanical Gardens - areas devoted to specific collections or arrangements of endangered, indigenous, ornamental, or otherwise extraordinary plant materials used for scientific study, exhibition, interpretation, education, landscape enhancement, etc.

Camping - A recreational activity involving any overnight stay on the premises of a public or private recreation enterprise regardless of type of camping shelter used. For example, a recreationist who spent the night in his car, in a tent, in a recreational vehicle, etc., at a designated campsite would be considered a camper. On the other hand, those staying at motels were not considered campers.

Campsites - refers to any space designated and used as a camping area excepting sites used primarily for picnicking. There are many types of camping sites, the following are the most common in Texas:

Single Unit Campsites:

Tent Sites - normally consists of an area which has been leveled and includes one or more facilities; such as table, grill, trash can, and/or water. The site is normally used by campers using tents or other similar portable materials for shelter.

Trailer, Mobile Camper, and Pickup Camper Site - normally a designated site having a similar complement of amenities as tent sites used by persons with travel trailers (includes tent foldout trailers) motorized or self-powered fixed construction camping vehicles, and pickup campers, or any site having a sewer connection.

Screened Shelter - this type campsite is a permanent or semi-permanent structure consisting of a roof and two or more screened walls, the remainder of which is fully enclosed (with fewer than two screens, the structure would be a cabin and was not included); the height of the screens may vary, however. Most of these shelters are insect resistant and provide some degree of privacy for a single family or single group of campers.

Group Campsites:

This type would appear as a cluster of single unit campsites in one location. They can be used for tent or trailer camping.

Group Screened Shelters - these are also permanent or semi-permanent structures designed to accommodate two or more families or groups of campers. The definition of screened shelters applies otherwise.

Capacity - The environmental, physical, biological, psychological, social, and cultural limitations of a given resource or set of resources. (For example, some types of limitations are size, space, interfamilial distances, perceptions of crowding, carrying ability of the soils, flora, and fauna, etc.) The carrying ability of a given resource. For purposes of the TORP, most references to capacity relate to seating capacity or the

- maximum number of persons a theatre or rodeo arena can seat; however, in another context the word has been used to describe the limiting point for resource use beyond which degradation of the resource begins and from which the resource cannot recover naturally. If use levels are maintained above capacity eventual destruction of the resource occurs.
- Children's Play - primarily unorganized play at a field, park, playground, or undesignated area not at a private residence lawn or yard. Organized play might occur at a club or neighborhood outing with supervised games for children. Adults, such as parents, watching the children were not recorded unless actually participating. Types of play included swinging, sliding, riding merry-go-rounds, arts, crafts, free play, etc.
- Cities - (Also, see: Urban Area, Metro Area, and Towns) Any urban area with a population of 10,000 to 49,999 persons and which is not a part of or contiguous to a metropolitan area.
- City Park - See: Urban Park
- Communication - (Also, see: Statewide Recreation Information System; Cooperation; and Coordination) For purposes of the TORP, this word describes a vital component necessary in the implementation of the statewide recreation planning process. Communicating timely information among the entities providing recreational opportunities, technical, and/or financial support; other decision-makers and planners; and the general public regarding recreation problems, solutions, and actions, provides more efficient, expedient, and long lasting solutions to the identified recreation related problems.
- Community Park - (Also, see: Urban Park) An urban park with less than 20 acres of developed land and containing facilities for two or more of the following activities: games and sports, picnicking, playground, or swimming. See games and sports.
- Community Recreation Center - A building or structure providing indoor recreation facilities for all age groups.
- Comprehensive Planning - See: Planning, Comprehensive
- Conservation - The wise use of resources. In this plan the major focus is on conservation of recreation resources by achieving sound, environmentally sensitive, citizen-formulated recreation goals via actions implemented through the comprehensive recreation planning process.
- Contiguous Area - Those incorporated cities and towns which for purposes of analyses in the TORP were considered integral areas immediately adjacent to, surrounded by, or otherwise connected to the metropolitan core area. (For example, Irving was considered part of the Dallas metro area.)
- Contiguous to Bay or Gulf - On, adjacent, or near (accessible) the Texas Gulf Coast or bay water shorelines.
- Cooperation - (Also, see: Statewide Recreation Information System, Communication, and Coordination) Describes a necessary ingredient for efficient and effective implementation of the statewide recreation plan. By acting in a cooperative manner, recreation planners, decision makers, lawmakers, and citizens can participate in the planning process and thereby provide solutions to the recreation problems facing Texas in providing adequate recreational opportunities for all Texans, our out-of-state and our out-of-country visitors.
- Coordination - (Also, see: Statewide Recreation Information System, Communication, and Cooperation) Describes an integral function of the statewide recreation planning process. By coordinating information, actions, plans, laws, and the desires of the public; Texans from all levels of government, the private sector, and individual citizens will be aware of the status, actions, and needs (or requirements) for providing adequate recreational opportunities for Texas' recreationists, thus eliminating costly duplications of efforts.
- Councils of Governments - Refers to those organizations established under Article 1011m, V.A.C.S. as Regional Planning Commissions. Regional councils are voluntary associations of local governments composed of at least two-thirds voting majority of local elected officials. These organizations are primarily engaged in regional planning and the promotion of intergovernmental cooperation among member local governments. In Texas, regional councils are referred to variously as "regional councils," "planning councils," "councils of governments or COGs," "development councils," and "associations of governments."
- Cultural Site/Area - See: Archeological Site/Area
- Data - (Also, see: Information) The sets of quantitative and qualitative information required to make well-informed and statistically significant analyses of the recreational supply, demand, trends, patterns, and other recreation related factors in Texas.
- Data Base - (Also, see: Data) The foundation of information that the Texas Outdoor Recreation Plan is established on.
- Demand - A schedule of the quantities of a particular good or service that would be purchased in a specified period of time at all alternative prices, holding all other factors (such as income, population, consumers tastes, and preferences, etc.) constant. More detailed discussions of recreation demand can be found in the volume Techniques of Analysis.
- Demand, Outdoor Recreation - (Also, see: Demand) A schedule of the quantities of outdoor resources and/or facilities that would be utilized (in terms of participation days, occasions, visits, trips, etc.) over some period of time (i.e., an hour, a day, a year) at all alternative costs of participation, holding all other factors (such as income, population, consumers' tastes and preferences, etc.) constant.
- Demand Models, recreation - mathematical formulae used in explaining or projecting demand for selected recreational activities. Detailed discussions of the several models utilized in the TORP are presented in the volume Techniques of Analysis along with discussions of the assumption and limitations on which they are based.
- Designated - Indicates the acceptable recreational uses of a given resource by signs or markings describing direction, area, and purpose. However, physical barriers such as cables, buoys, ropes, fences, etc., are often used.

Designated Freshwater Swimming Area - Square yards of freshwater specifically marked for swimming by signs, roping, fencing, buoys, or any other physical features that may be used to delineate the swimming area. Swimming pools are not included.

Designated Saltwater Swimming Area - Square yards of saltwater specifically marked off by buoys, signs, roping, groins, jetties, etc., to establish a restricted swimming area. Includes only saltwater swimming areas located on a bay or on the Gulf. Usually these areas are measured in terms of square yards.

Designated Swimming Area - Square yards of water specifically marked off for control by signs, roping, etc., to establish a restricted swimming area.

Developed Land - (With Recreation-Related Facilities) Land areas, measured in acres, in parks where facilities are specifically developed for recreational activities. This does not include areas adjacent to nature or other trails in a natural setting unless developed for various activities. This does not include open areas unless they are specifically designed to provide free play, access to other areas, or activity of the outdoor sports and games variety. (Excludes water acreage.)

Development - The modification of land resources by the influences of man. Residential, commercial, industrial, agricultural, recreational, or other types of structural activities influence, or change, the natural landscape to satisfy human needs or want.

District Park - (Also, see: Urban Park) An urban park with 20 acres or more of developed land containing facilities for two or more of the following activities: games and sports, picnicking, playground (children's play), or swimming.

Driving for Pleasure - (Also, see: Sightseeing) A recreational activity consisting of driving or riding with no specific destination in mind, this being the principal distinction between driving and sightseeing. Includes use of designated roads and trails primarily in a car but use of motorcycles or airplanes was also recorded. Could begin immediately upon leaving the recreationist's residence.

Ecology - The study of interrelationships among living organisms and between the organisms and their living environment. This includes the study of human populations and their interrelations with regard for physical environment, demographic and cultural characteristics.

Environment - The aggregate surrounding conditions within which organisms, or groups of organisms, exist and function.

Environment, recreational - The surrounding external conditions within which persons or groups of persons recreate. The recreation environment includes such influential factors as sights, sounds, smells, social and cultural factors, availability of recreational resources, the weather, the availability of transportation, and many others.

Facilities, private - those facilities owned and/or administered by private entrepreneurs, corporations, and other non-public enterprises, most often operated to make a profit.

Facilities, public - those facilities owned and/or administered by public agencies.

Facilities, support (support units) - Equipment and/or resources which can be identified with a particular activity and/or activities. Developments which are not absolutely necessary for any particular recreational activity. For example, bleachers, water fountains, lockers, parking, bath houses, maintenance building, lighting, etc.

Facility Mix - (Also, see: Activity Package) The grouping of facilities types in a particular park or recreation area.

Facility Requirements - (Also, see: Resource Requirements) Quantitative estimates of the units of selected recreational facilities expected to be needed to meet current and future demands.

Federal Agencies - Governmental entities under the direct auspices of the United States of America. As they are related to recreation (TORP) federal agencies are divided into three categories: those which provide opportunities for recreation as a primary

function; those which provide opportunities for recreation as a secondary function; and those which provide only technical or financial assistance to other entities providing opportunities.

Fee Simple Ownership - The complete ownership of land with exclusive and unrestricted rights of disposition, excluding only those rights retained by the government for exercise of its taxation, eminent domain, and police powers.

Fishing - A recreational activity involving the taking of fish from the Gulf, a bay, a lake, pond, tank, river or stream, in a public or private area. Types include fishing with bow, gig (flounder, frogs), pole, rod and reel, seine, trotline, spear, or fly rod; from a bank or a chartered boat, etc. Excludes commercial fishing.

Fishing (Sport Fishing) - See: Fishing

Fishing Barge - See: Barge, fishing

Fishing Barge/Marina (Length) - A measurement of total fishing access enumerated in linear yards around the exterior and interior of a barge or marina.

Fishing Barges/Marinas - A barge or marina is a floating structure often attached to the shore providing access to fishing water.

Fishing Jetties - A jetty is a type of wall built into the water to restrain currents or for protection of a harbor or pier but used by recreationists primarily for fishing. To differentiate between a pier and a jetty, a pier is supported above the water and a jetty is built to divide the water. The circumference and/or length in linear yards from the access point of the jetty around the last yard of area where recreationists may fish has been measured to give planners an indication of the amount of access provided by jetties.

Fishing Pier - (Also, see: Fishing Jetties) A platform which extends over the water and provides access to fishing water.

Fishing Pier (Length) - A measurement of length in linear yards along the edge of a pier, considering only the portion that is actually over water suitable for fishing.

Both sides of any pier wide enough to allow fishing from both sides were enumerated. Circumferential length around "T" head piers was also evaluated.

Football - A body contact sport or game played with a ball. Touch, tackle, flag, and other common American variations played for recreation were included in TORP surveys. As few as two persons on each side or as many as eleven was acceptable for indicating participation. Organized leagues were included in acceptable TORP survey responses, but school or professional games were excluded from consideration. Persons watching these games would be considered football spectators.

Football/Soccer Fields - Facilities designed and designated (marked or provided) for football and/or soccer play. Did not have to be used exclusively for those sports to be considered in TORP, just so the field would accommodate organized events.

Freshwater Swimming Area - (Also, see: Designated Swimming Areas) Water areas, both designated and undesignated, generally found on rivers, streams, creeks, lakes, reservoirs, which are used predominantly by swimming recreationists. Excludes consideration of swimming pools.

Games and Sports - Any of a variety of the more common recreational activities, normally competitive, which require facilities of the courts, fields, or nets varieties. Some examples are: tennis, volleyball, football, baseball, basketball, etc.

Games and Sports Facilities - As enumerated in the TORP, fields or courts associated with a particular game or sport on which regulation or league games can be played.

Geological Features - Those extraordinary physical or physiographical attributes of an area (i.e., mountains, caverns, plains, faults, river basins, etc.) which presently or potentially could provide recreational resources.

Goals - (Also, see: Objectives) Short range or long range aims, achievements, or objectives established during the recreation

planning process. In other words, the interim and ultimate steps along the schedule toward achieving adequate recreational opportunities for all.

Golf - A recreational activity involving play at regular courses with nine or more holes, par three, or miniature courses, and at driving ranges. Recreational participation can occur any place facilities are available, but not as a school activity or professional contest.

Golf Course (Holes of) - (Also, see: Golf) A golf course provides facilities to support golf activities. Only par three and regular courses were enumerated for purposes of the TORP. The number of holes available to the general public was considered. Since the numbers of holes vary (i.e., some regular courses may have only nine holes, while others may have 18, 27, 36, or more) in many cases, the number of holes was selected as the unit of measurement and comparison for golf activities (i.e., the common denominator). By determining the number of holes needed, planners may then determine, based on local resources and analyses, what the most appropriate number of holes would be to provide for a given situation. Country clubs and other private courses open only to members were excluded.

Grants-in-Aid - Financial assistance in the form of grants made by the federal and/or state governments to a local government to assist in a public project. Regarding recreation, grants are normally made on a matching basis (e.g., 50 percent of cost might be paid by each entity-grantor and grantee).

Greenbelts - Commonly, linear areas along river and stream basins or transportation corridors which are often left "green" or in a minimally developed state.

Group Campsite - See: Campsites

Group Screened Shelters - See: Campsites

Handicapped - A person with some mental or physical disadvantage which might prevent or deter utilization of recreation facilities or resources.

Hiking - A recreational activity which depends on the recreationists' determination that the activity is a hike instead of a walk. Usually involves a specific destination, preparation of some kind, vigorous physical exertion, and is often of greater distance than associated with walking for pleasure.

Hiking/Walking for Pleasure/Nature Study Trail - A designated trail measured in linear miles, for the primary purpose of walking and/or hiking and/or nature study.

Historic Site/Area - See: Archeological Site/Area

Horseback Riding - A recreational activity involving riding a horse for pleasure. Includes equestrian pursuits such as trail riding and open land riding. Does not include rodeo or racing pursuits or when professional or school activities are involved. Also does not include range riding as a part of an occupation such as ranching.

Horseback Riding Area - A recreational space devoted to riding horses. This type of area was typically measured in acres devoted to the activity.

Horseback Riding Trail - A trail devoted to equestrian riding. Generally this trail can accommodate two or more horses abreast and has some overhead clearance (approximately 15 feet) provided. Not included were riding arenas, race tracks (unless part of trail), etc.

Household - The unit of people residing in a particular residence whether they are a group of single, unrelated individuals; a traditional family; or members of two families related or unrelated.

Houston-Galveston Region - Generally referred to as the political region coinciding with the original eight-county jurisdiction of the Houston-Galveston Area Council of Governments. The region included Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties.

Hunting - A recreational activity which is typically characterized by the taking of

wild game for personal consumption. Usually involves preparation of some kind, pursuit, and killing of the animal(s). Included the use of bow, dog (to tree or locate game), handgun, rifle, shotgun, and other weapons in the pursuit of deer and other big game, dove, goose and/or duck, quail, turkey, squirrel, varmints, and other game.

Implementation - An essential step or element in the planning process during which the recommendations of a plan are carried out. Regarding the TORP, implementation is a complete, integrated, and on-going process because provision of adequate recreational opportunities statewide cannot be an "overnite," or short-range, step in the planning process because of the paucity of immediately available resources, physical, and financial.

Information System - See: Statewide Recreation Information System

Interpretive Facilities - Normally, a building, or site, or area comprising artifacts or surroundings of an era which have been arranged or analyzed to tell a story in an interesting, educational, or otherwise "interpreted" fashion. Interpretive facilities can include any resource--amphitheatres, trails, open land, natural areas, flora, fauna, puppets, loud speakers, etc., which can be used to "tell the story," whatever the story happens to be. (Regarding recreation the "story" is usually based on historical, cultural, archeological, natural, or other aspects of the area.)

Jetty(s) - A barrier usually constructed of concrete and boulders extending from the shoreline out into the water. The primary purpose of the jetty is usually to protect shipping channels from erosion, siltation and rough water; however, it also may provide access to more desirable fishing water than which is available from the shore.

Land, rural recreation - Recreation land located in a country atmosphere usually located outside of urban areas or in small rural towns of less than 200 in population.

Land, urban recreation - Recreation land within or adjacent to urban areas, usually within city limits with the exception of those areas within the urban area that are sparsely developed.

Land and Water Conservation Fund - The Land and Water Conservation Fund Act of 1965 (Public Law 88-578) established a fund to increase outdoor recreation opportunities for the American people. The program provides for (1) acquisition of lands for federally administered recreation areas; and (2) matching grants for state recreation planning and state as well as local land acquisition and development. The fund is administered by the Bureau of Outdoor Recreation of the Department of the Interior at the federal level and the Texas Parks and Wildlife Department at the state level. The Texas Parks and Wildlife Department has deferred all grants from the fund to local political subdivisions. In order for Texas to receive grants from the fund, the State must develop a statewide comprehensive outdoor recreation plan (i.e., the Texas Outdoor Recreation Plan), and update and refine this plan on a continuing basis.

Land Use - A general term referring to the uses that land resources are put to. For example, some lands are used to support industry, others support commercial, agricultural, recreational uses, etc. In other words, land use is how man exercises his stewardship over lands and waters in his domain--what is done to and with the land.

Legal Authority - Senate Bill 165, Acts of the 59th Texas Legislature, Regular Session 1965, authorized the Parks and Wildlife Department as the primary state office to (1) develop outdoor recreation in Texas including the preparation and maintenance of a statewide comprehensive outdoor recreation plan and to (2) regulate the allocation of federal aid from the Land and Water Fund to all political subdivisions in the State in accordance with the Texas Outdoor Recreation Plan.

Level of Government - Refers to the organization of government into federal, state, regional, and local governments.

Linear Parks - See: Parks, linear; Greenbelts.

Local Agencies-- For purposes of the TORP, local agencies are either county or municipal political subdivisions of the State.

Marina(s) - A floating structure usually attached to the shore and usually providing access to more desirable fishing water than is available from the shore. Marinas also often provide boat stalls; gasoline; concessions for fishing, boating, skiing, and swimming recreationists; and other amenities.

Metropolitan Area - (Also, See: Cities and Towns) Any of the 24 Texas urban areas in 1970 with a population of 50,000 or more, plus all incorporated and some unincorporated urbanized areas contiguous to the core city area; for example, San Antonio plus Alamo Heights, Castle Hills, Terrell Hills, etc. Municipal populations over 2,500 persons that were close to but not part of the contiguously developed metropolitan area were considered under the city or town category.

Models, demand - See: Demand Models

Multi-Use Courts - Courts for a selected number of games or sports activities on which regulation or league games can be played at different times. For example, basketball or volleyball can be played on the same court that might at another time have tennis matches.

Multi-Use Trail - A trail, measured in miles, designated for two or more combined or associated activities such as walking, hiking, and nature study.

Museums - Organized and permanent non-profit institutions, essentially educational or aesthetic in purpose, which exhibit objects with intrinsic value to science, history, art, or culture, and which are open to the public.

Natural Area (potential recreation area) - An area noted for its extraordinary characteristics and natural qualities.

Nature and/or Interpretive Trail - Nature trails are routed through essentially natural environments for the purposes of providing access for witnessing, studying, feeling, or appreciating natural features of the area. Interpretive trails are those courses which seek to reveal meanings, insights, or relationships in the natural environment by means of signs, objects, or other interpretive media to enhance appreciation of nature.

Nature Center - Normally a man-made structure housing organic and/or material exhibits of flora and/or fauna utilized most often in an educational way to centralize aspects of nature which many persons may have neither the means nor expertise to locate and appreciate in a native setting. Zoos, botanical gardens, aquaria, and wildlife exhibits are but a few examples.

Nature Study - This recreational activity normally includes a specific destination and/or purpose that includes studying flora and/or fauna in a natural environment, such as bird watching at Aransas National Wildlife Refuge, beach combing, or rock hunting, etc. Recreational nature study can be done individually or in a group, organized or unorganized.

Needs - See: Requirements

Non-Recreationists - Those persons in Texas who because of lack of opportunity, handicap, choice, or other reason did not participate in outdoor recreational activities.

Objective - (Also, see: Goals) Those essential steps in the recreation planning process which have to be achieved to accomplish the short and long range goals of the process, i.e., the solutions to recreation problems in the State. Objectives and goals are semantically equivalent, or synonymous, terms as defined in most dictionaries; however, in recreation planning objectives must be reached to achieve goals. An objective, for example, might be to provide a certain number of picnic tables to meet 1980 needs in a certain analytical planning region. By providing part of those picnic tables by 1975, a part of an identified problem will have been

solved, or part of a (1980) goal achieved. Another type of equally essential objective would be to achieve a state funding program to support land and water acquisition and recreational developments at the regional or local level in order to pursue the ultimate goal of providing adequate opportunities statewide.

Open Land Park - (Also, see: Urban Park) An urban park in which no conventional outdoor recreational facilities have been developed. However, the acreage may be landscaped or maintained.

Open Space - (Also, see: Recreation and Open Space Plans) Land area free or relatively free of man-made structures and where water bodies, land forms, or vegetation predominate.

Open Space, Recreational - Open space which is devoted to recreational activities that do not require developed facilities and are compatible with conserving open space for designed purposes.

Opportunity Days - (Also, see: Activity Day) An estimation of the number of recreational activity days satisfactorily provided by one unit (or the sum of opportunity days for any number of units) of a selected recreation facility per year within a selected geographic area of the State. For further discussions of opportunity days refer to the volume Techniques of Analysis.

Opportunity Days, deficit - A deficit of opportunity days results when the supply of facilities, expressed in opportunity days, was less than the estimated demand, expressed in participation days, for the selected activity during the selected time period.

Opportunity Days, surplus - A surplus of opportunity days resulted when the supply of facilities, expressed in opportunity days, exceeded the estimated demand, expressed in participation days, for the selected activity during the selected time period.

Out-of-State Visitors - (Also, see: Residents, Out-of-State) Recreationists who reside

outside Texas, but participate in recreational activities while visiting the State.

Outdoor Recreation - (Also, see: Activities, recreation) Recreational activities which are participated in outside buildings or completely enclosed shelters. Excludes indoor recreation.

Outdoor Recreation Resources Review Commission - In 1958, Public Law 85-478, 72 Stat. 238, created the Outdoor Recreation Resources Review Commission, charging it with the massive task of recommending courses of action to insure that the necessary outdoor recreation opportunities are provided for each citizen of this country now and in the future. The results of the Commission's work, Outdoor Recreation in America, were published in 1962, in twenty-seven volumes containing many recommendations for action. Responding to the recommendations in the report, Congress and the President began enacting legislation which created the Land and Water Conservation Fund, the Bureau of Outdoor Recreation under the United States Department of the Interior, and which broadened outdoor recreation responsibilities in several federal agencies.

Park - Areas of land and/or water which have been set aside by public or private entities for the recreational uses of present or future generations.

Parkland, developed - See: Developed Land

Parks, linear - Refers to parks and recreation areas, so designated, normally occurring along some natural or man-made features such as river, creek, and stream basins or along highway or railroad rights-of-way, etc. The park normally is much longer than it is wide, which gives it a "linear" physical characteristic.

Parks and Recreation Department - An officially recognized entity of a federal, state, regional, or local government agency which has been given the primary responsibility for providing and maintaining recreation land and facilities areas within its jurisdictional boundaries.

Participant - (Also, see: Recreation, active; Recreation, passive; and Spectator) An individual who actively engages in a recrea-

tion activity. Participation could occur indoors or outdoors but not in the participants' back yard or as a school activity. However, participants could use school facilities after school hours. Organized participation such as club or church related was included.

Participation Day - See: Activity Day

Peak Use Season - The two, three, or four month period during which an activity or a park receives the highest monthly totals of total annual participation. Normally, heaviest participation for most activities is during the summer months. (However, for hunting in Texas most activity occurs in the fall and winter months as does camping along the Gulf Coast and in South Texas.)

Picnic (Group table unit) - A large picnicking table unit for use by large groups of people (measured in numbers of single tables it represents); e.g., family reunions, church groups, etc. The unit may include a central facility for serving food and may also provide some type of shelter from the weather. To estimate single table equivalents, one needs only to determine the length or area of one group table; divide by length or area of any single table unit, then multiply this result times the number of group units in the park (e.g., if a park has five group units of the same approximate size, one of which is 36 feet long, and assuming one single table unit is six feet long, then the single table equivalent number is arrived at by dividing 36' by 6' (36 divided by 6) and result is 6 single units per group unit. Total single table equivalents is determined by multiplying the original five group units by six single table equivalents (5 x 6) the result of which is 30 total equivalent units.)

Picnic (Single table units) - A table unit designed to accommodate one or two picnicking families and normally includes provisions in the area for trash cans, drinking water and possibly lighting for night use. Generally this type of unit is from six to eight feet in length and three to four feet in width.

Picnicking - A recreational activity involving one or more people on an outing or at a social gathering where the eating of food is usually the main activity. Only recreationists using facilities less than or equal to one day could qualify as picnickers.

Picnicking Area/Site - Refers to all space (measured in acres) designated and used as picnicking areas excepting sites used primarily for camping. The activities picnicking and camping sometimes overlap, therefore, special designation is needed to eliminate double counting and get as complete a view of each activity as possible by primary allocation of space.

Pier - See: Fishing Pier

Plan - (Also, see: Planning Process) There are many types of plans most of which have similar characteristics. In general, a plan constitutes the end product of the planning process, which could be represented by a scheme, an approach, a schedule, a guide, a method, a technique, a program, or other pre-conceived way of influencing things or events in the future. Most plans describe a process by which objectives and goals stated in the plan may be achieved or accomplished.

Planning, Comprehensive - A specific type of planning process that involves development, maintenance, review, evaluation, coordination, and updating of a single on-going plan, or coordinates two or more plans, in relation to established (specified) objectives and/or goals. With respect to the TORP, emphasis is placed on providing the information and planning expertise necessary to relate the TORP objectives and goals with other types of plans such as The Texas Water Plan and regional transportation, waste disposal, or other plans (at any level of government) to more effectively guide the provision of outdoor recreation opportunities in Texas.

Planning Horizon - Recreational resource requirements for selected activities were estimated in the TORP for five different years--1970, 1975, 1980, 1990, and 2000. Those planning years have been variously called planning horizons, projection years, target dates, etc., implying that those are the years that the plan is gen-

erally "aimed" at and the estimated resource requirements represent the goals for those years.

Planning Process - A planning process normally comprises a phased series of actions or approaches directed toward solving identified problem(s). By stating objectives and goals to be achieved, and a methodology or schedule for attainment, a plan is specified. In the TORP, the planning process is an on-going, dynamic set of approaches directed toward solving the recognized recreational problems in Texas. Since recreational patterns change over time, the static portions of the process; i.e., the documents; must be updated periodically to keep the process continually viable. In Texas recreational planning, the planning process integrates a statewide recreation information system for the purposes of improving and maintaining communication, cooperation, and coordination within the phases of the planning process (i.e., step to step) and among the responsible entities in the State.

Playground - (Also, see: Children's Play) Developed land acres with apparatus such as merry-go-rounds, swings, jungle gyms, see-saws, etc.

Plinking - Shooting at, generally with a firearm, tin cans or similar targets.

Pool - A man-made structure (usually concrete) which contains water, measured in square yards, and is used for swimming. Also, an indoor recreational activity played on a table, but not considered in the TORP.

Preservation - The process of protecting a site or an area from damage, deterioration, development, or use in order to maintain, in an unaltered state, the characteristics which make it valuable (i.e., saving it for future use).

Private Entrepreneur/Enterprise - A private citizen or business utilizing resources, usually in a monetarily gainful manner, to provide recreational opportunities for public consumption.

Private Supply, Recreation - Privately owned recreational resources and facilities made available to the general public generally, but not always, for a fee.

- Programs, administrative - Any prearranged policy and manpower managing methodology or plan for effectively administering the park and money resources made available for recreational purposes.
- Programs, budgeting - Plans for managing the accounting of funds, the capital investments, payments, operations, depreciations, etc., associated with recreational resources.
- Programs, Comprehensive Planning - (Also, see: Planning Process) Means or methods by which comprehensive planning goals are achieved.
- Programs, implementation - Means, methods, and/or schedules put into action for accomplishing objectives or short and long range goals.
- Programs, interpretive - (Also, see: Interpretive Facilities) Planned guidelines or schedules for managing and utilizing interpretive facilities and personnel associated with recreational resources.
- Programs, maintenance and operation - Planned schedules or guidelines for managing park operations, the care of facilities and grounds, operational personnel, maintenance personnel, and maintenance and operations equipment.
- Programs, recreation - Planned or prearranged scheduling for the actual uses that recreational resources will be put to. For example, many urban (and rural) communities have "Learn-to-Swim" programs, while others program (i.e., determine) the use of games and sports areas such as baseball fields and tennis courts, and still others may have cultural events scheduled. Many municipalities schedule the use of all facilities so that as many persons as practical get to utilize the resources.
- Public Supply, Recreation - (Also, see: Private Supply, Recreation) Recreational resources and facilities made available to the general public by governmental entities.
- Quality - That characteristic which describes the relative value or condition of recreational resources and facilities in terms of repair state, maintenance of area and grounds, condition of water, etc.
- Quantity - The magnitude in terms of areal and numerical measurements of individual types of recreational resources and facilities in discrete units (i.e., the number of picnic tables, the number of surface acres of water, the number of acres of land, etc.)
- Quasi-public - Used to indicate a level of administration which is neither public nor private but in-between having characteristics of both. Usually the level of administration has no governmental responsibilities and is usually considered a non-profit organization. Considered in TORP in the capacity of a resource manager that open its resources to a limited segment of the public (e.g., boy or girl scouts, church camps, private summer camps, etc.)
- Questionnaire - An instrument utilized to solicit or collect information. Several types have been used for the TORP. For a detailed discussion see the volume titled A Statewide Recreation Information System.
- Racing - A recreational activity involving active or spectator participation in auto, horse, motorcycle, dog, boat, and other categorical kinds of competition among two or more competitors.
- Ramps and Lanes, - See: Boat Ramps
- Recommendations - Suggestions for action.
- Recommended Responsibilities - State recommendations pertaining to the planning and provision of additional outdoor recreation opportunities various levels and agencies of government and the private sector should undertake, recognize, exercise, and signify in accomplishing their respective responsibilities in Texas from 1975-1980.
- Recreation, active - (Also, see: Recreation, passive; Participant; and Spectator) That portion of recreational participation which is accounted for by persons who physically exert themselves, often strenuously, while participating in the activity. Most often the activities where a distinction was made between active and passive recreation were games and sports where fields and courts were required for active participation; whereas, a seating capacity or number of seats were required for spectators. Active recreation excluded spectator involvement.
- Recreation, passive - (Also, see: Recreation, active) Participation in activities accounted for by recreationists who are more sedentary in their pursuits and who often watch others actively participate, i.e., spectators, or this type is accounted for by those who would observe, hear, feel, or sense in some way rather than consume or use the resource. This type of activity usually requires little physical exertion on the part of the recreationist; however, some passive pursuits are especially strenuous, such as bird watching, wildlife photography, etc.
- Recreation, rural - Outdoor recreation participation occurring in a country atmosphere and/or in communities of less than 200 in population.
- Recreation, urban - Outdoor recreation participation occurring in urbanized areas with populations of 200 people or more.
- Recreation and Open Space Plans - Those planning instruments (or tools) generated by regional planning entities (Councils of Governments and Regional Planning Commissions) for purposes of assessing regional recreation and open space resources in order to provide these amenities in adequate quantities and qualities for regional needs.
- Recreation Area - (Also, see: Park) A land and/or water area so named or otherwise designated which is set aside for recreational purposes and which has characteristics indistinguishable in most cases from parks. In other words, parks and recreation areas are generally considered to be synonymous. However, when a recreation area is considered to be a large geographical area designated for recreation, such as the Lake Meredith National Recreation Area, there may be several "parks" or "recreation areas" within the area.
- Recreational Activities - See: Activities, Recreational
- Regional Amusements or Attractions - Recreational resources or events with greater than local appeal. Generally these resources

are considered to be of such quality that recreationists will travel lengthy distances to utilize. Examples of such attractions might be the Sonoran or Longhorn Caverns, the Astrodome, Six Flags, Searama, etc.

Regional Park - An area designated as a park having significance or appeal of greater than a local nature.

Requirements, cumulative - A running total of all incremental requirements up to and including the time period being considered. In the example shown in the following definition for 1970, the cumulative requirements would be 10; for 1975, 17; for 1980, 22; for 1990, 27; and for 2000, 30.

Requirements, incremental (additions) - The number of units needed within a specified time period, assuming that the units of facilities needed for previous time periods have been provided. For example, if incremental requirements are cited as being 10 picnic tables in 1970, 7 by 1975, 5 by 1990, and 3 by 2000, this can be interpreted as:

Example:

1. 1970 - 10 tables are needed in addition to the existing facilities.
2. 1975 - 7 additional tables will be needed if 1970 resource requirements are satisfied.
3. 1980 - 5 additional tables will be needed if 1975 resource requirements are satisfied.
4. 1990 - 5 additional tables will be needed if 1980 resource requirements are satisfied.
5. 2000 - 3 additional tables will be needed if 1990 resource requirements are satisfied.

Requirements, resource - Those resource and facility development goals specified in the TORP as needed in a specified planning horizon year. The accomplishment of these specified requirements implies fulfillment of estimated demands for the selected geographic area or for the state as a whole, based on the methodology utilized in the TORP.

Residents, out-of-state - Person or persons residing outside of Texas but using recreational facilities within the State.

Residents, rural - Persons living in places of less than 200 in population.

Residents, urban - Persons living in metropolitan areas, cities, towns, and communities of 200 or more in population.

Residents and Non-Residents - Texans who by virtue of the location of their residences have been categorized with respect to urban areas. For any selected urban area there are residents and non-residents. Resident-- person or persons living in the respective urban area or group of urban areas under consideration. Non-Resident-- person or persons not living in the specified urban area but using recreational facilities within that urban area or group of urban areas. Excludes recreationists from out-of-state origins.

Resource Requirements - See: Requirements, resource

Resources, land - The land and all other associated natural resources which lie ready for utilization.

Resources, natural - Actual and potential form of wealth or raw materials supplied by nature and used to satisfy various human needs and wants.

Resources, recreation - The natural and cultural surroundings that provide the basis for and contribute to enjoyable recreation experiences. Recreational resources are a part of our larger store of natural resources. Used synonymously with land, facilities and/or water available for recreational use.

Rifle and Pistol - See: Sport Shooting

Rifle Targets - See: Sport Shooting

Rodeo - A recreational activity that includes both active and spectator participation. School and professional rodeo participants were excluded.

Rodeo, Number of Arenas and Seats - The number of arenas in all parks and the total approximate seating capacity.

Rural Area - Areas located outside urbanized areas where there are no residential areas adjacent and in essentially an undeveloped or non-urban environment. May possibly occur within a city's corporate limits; however, there must be very sparse, if any, development, and again the environment or adjacent land uses must be rural in nature.

Rural Environments - (Also, see: Environment) Those areas which are typified by country or countryside settings and surroundings and which are away from the residential, commercial, industrial, and other developments of man. Those environments generally outside municipal limits and away from residential subdivisions.

Sanitary Facilities - Normally, restrooms, with all showers, water closets (toilets), wash basins, trash cans, etc., are considered as sanitary facilities. However, these facilities can be reduced to only chemical toilets. Additionally, in some cases in Texas, there are ancillary facilities for waste treatment and disposal.

Seating Capacity - See: Capacity

Sightseeing - (Also, see: Driving for Pleasure) Driving, riding, or walking to a particular destination or area for the purpose of viewing natural or man-made attractions. Means of conveyance could include walking, motorcycle, car, bus, train, boat, airplane, horse, etc.

Single Unit Campsites - See: Campsites

Skiing - A recreational activity that involves the participant moving freely or being pulled over some supporting medium, i.e., water, snow, or sand; on runners of wood, fiberglass, plastic or metal attached to the feet. Water skiing was the primary type; however, snow and sand (as in Monahans State Park) were evaluated and included.

Small Community - Municipalities which had between 200 and 2,499 population in the 1970 census, and which were not contiguous to a metropolitan area.

Soccer - A variation of football in which a "soccer ball" is kicked, bumped, butted, or otherwise (excepting the use of a player's hands or forearms) propelled toward an opponent's goal. The goal keeper for each side is allowed to touch or strike with the forearms or hands. Officially referred to in the United States as "association football."

Spatial Distribution - The geographic distribution of the types and numbers of recreation areas and facilities in relation to the user populations in an individual urbanized area, among the urban areas of an analytical region or in the rural areas of a region, etc.

Specialty Park - (Also, see: Urban Park; and Games and Sports) An urban park containing facilities for only one of the four major urban activities: games and sports, any one of which would qualify; picnicking; children's play, i.e., playgrounds; or swimming. The amount of acreage was not a factor and any number of units for the facility type could be present.

Spectator - (Also, see: Participant) An individual who engaged in the observance of an organized activity.

Sport Shooting - A recreational activity in which the recreationists use equipment such as rifles, shotguns, bows and arrows, slingshots, etc., to shoot at inanimate objects such as targets. Included plinking and/or target shooting, field; skeet and/or trap, competitive or non-competitive; target, competitive; and other miscellaneous kinds of shooting.

Sport Shooting Facilities - All skeet (trap) apparatus, rifle and pistol targets, and archery targets.

Trap and Skeet: Number of traps - An enumeration of target throwing units counted to give an indication of how widespread or prevalent they are in Texas and how important they are to the activity of sport shooting overall.

Rifle and Pistol: Number of targets - An enumeration of fixed or mobile target units (comprised by designated sport

shooting facilities) giving an indication of how widespread or prevalent they are in Texas and how important they are to the activity of sport shooting overall.

Archery: Number of targets - An enumeration of fixed or mobile target units (comprised by designated sport shooting facilities) giving an indication of how widespread or prevalent they are in Texas and how important they are to the activity of sport shooting overall.

Standard - (Also, see: Opportunity Days) Standards are of many varied types when related to recreation. In the TORP, a standard is the average number of outdoor recreation opportunities, measured in participation days, which can be provided by one unit of a specified outdoor recreation facility per unit of time, given the current participation patterns and preferences of outdoor recreationists.

Standards, facilities - See: Standards

State Actions - Those approaches or programs utilized (implemented) by state agencies in general and the Texas Parks and Wildlife Department in particular, for solving recreation problems in the State.

State Agencies - Institutions of the Texas government. As they are related to recreation, state agencies are categorized by their levels of influence on the provision of recreational opportunities as a function of the agency. An agency may have recreation as a primary or secondary function, or the agency may provide technical or financial assistance to those state agencies and political subdivisions which do provide recreational opportunities.

Statewide Comprehensive Outdoor Recreation Plans (SCORP) - (Also, see: Land and Water Conservation Fund) Each state which chooses to participate in the Land and Water Conservation Fund program must develop a SCORP. The SCORP for Texas is titled the Texas Outdoor Recreation Plan.

Statewide Recreation Information System (SRIS) - (Also, see: Planning Process) A statewide intercommunication network which is an integral part of the recreation planning

process in Texas and is used to transfer, or exchange, recreational information. As a coordinating tool, it is conceptually envisioned as the link between involved entities and the phases or steps of the planning process. Via the SRIS, information is collected, edited, stored, analyzed, synthesized, documented, and disseminated for purposes of determining and monitoring the status of recreational opportunities versus recreational demand. (Further discussions are provided in the volume A Statewide Recreation Information System.)

Supply - A schedule of the quantities of a particular good or service that would be made available for purchase in a specified period of time at all alternative prices, holding all other factors (such as income, population, consumers' tastes and preferences, etc.) constant.

Supply, outdoor recreation - (Also, see: Supply) A schedule of the quantities of outdoor resources and/or facilities that would be made available for use (in terms of opportunity days, numbers and/or areal quantities, units, etc.) over some period of time at all alternative costs (of utilization or purchase) to the consumer, holding all other factors (such as income, population, consumer's tastes and preferences, etc.) constant. Also, a generic term referring to the number and areal quantity of opportunities made available for the outdoor recreational purposes of the general public.

Surface Acres - (Also, see: Units) Units of measurement ascribed to water resources.

Surfing - A recreational activity in which the recreationist rides the crests of waves toward shore usually on a board used for support, but "body surfing" is included.

Surplus Opportunity Days - See: Opportunity Days, surplus

Swimming - A recreational activity in which the recreationists float on or move in, through, or across a body of water. Participation, as considered in the TORP, could occur indoors or outdoors but not in the household's backyard or as a school activity. However, school facilities could be used after school hours. Types

- of swimming include from scuba and skin diving to a child splashing in the shallow end, at a lake, pond, tank, river, ocean, pool, or drainage ditch. Indoor swimming was not used in calculations of requirements in the TORP.
- Swimming, Area - See: Designated Swimming Area
- Swimming, Designated Area - See: Designated Swimming Area
- Swimming Facilities, Designated - See: Designated Swimming Area
- Swimming Pools (total square yards) - An enumeration of the total number of square yards of all publicly available outdoor pools. Includes only water surface area. Includes wading pools. Excludes pool side walking surface, buildings, and grounds.
- Targets - See: Sport Shooting
- Technical Assistance - Providing advise or expertise, (i.e., manpower and often machines and operators) not normally available to the recipient through the recipient's organizational structure. Many of the exacting skills of the recreation planning and design experts cannot be feasibly utilized on a long term basis by local entities and thus must be provided by a more centralized entity available to those with limited resources.
- Techniques of Analysis - See: Analytical Techniques. Also, see volume of TORP titled, Techniques of Analysis.
- Tennis - A recreational activity (a game or sport) involving the use of rackets, balls, a net, and a court on which two recreationists compete in singles, or two pairs of recreationist compete in doubles matches. The matches involve hitting a ball back and forth across a net stretched and bisecting the length of a rectangular court. Also involves strenuous physical exertion. Tennis played on a home or private court, (i.e., not publicly available), at school as a school curriculum activity, or as a professional match was not included. Tennis played using school facilities after school hours was considered.
- Tennis Courts, Number of - (Also see: Unit) An enumeration of courts on which official, standard, regular, or organized doubles matches can be played.
- Tent Site - See: Campsites
- Texas Outdoor Recreation Plan (TORP) - (Also, see: Planning Process) The ongoing recreation planning process in and for the State of Texas, periodically updated and subsequently documented for the purpose of guiding the provision of adequate recreational opportunities to support the recreational activities of all Texans and their visitors from other states and countries. Also, the title of the state-wide recreation planning documents.
- Toilets - enumerated to indicate the occurrence of sanitary facilities.
- Total Land Acres - The sum of recreation land acres developed with facilities plus undeveloped land acres devoted to recreation.
- Towns - Any urbanized area of 2,500 to 9,999 population which was not within or contiguous to a metropolitan area in the 1970 census.
- Trail - Any path, passage, route, etc., specifically designated for trail activities, e.g., nature study and/or appreciation, hiking, walking for pleasure, bicycling, horseback riding, multi-use, etc. Measured in linear miles in the TORP.
- Trail Activities - Recreational pursuits which involve walking, hiking, or riding on a trail or route.
- Trailer and Pickup Camper Site - See: Campsites
- Trails, Bicycle Route (Designated) - See: Bicycle Route
- Trails, Bicycle Trail (Designated) - See: Bicycle Trail
- Trails, Handicapped (designated or adapted for) - Any trails having special adaptations for handicapped persons or those trails constructed for their use.
- Trails, Horseback Riding (designated) - The length of trails devoted to equestrian riding. Generally, these trails can accommodate two or more horses abreast and have some overhead clearance (approximately 15 feet) provided. Riding arenas, race tracks (unless part of trail), etc., were excluded.
- Trails, Miles of - See: Trails Facilities
- Trails, Multi-Use - a trail that was designated specifically for combined trails activities such as walking, hiking, and nature study.
- Trails, Nature and/or Interpretive (designated) - See: Nature and/or Interpretive Trails
- Trails, Walking for Pleasure/Hiking - All trails which were designated as walking and/or hiking trails and on which the primary use is by walking and/or hiking enthusiasts. Hiking trails are generally longer and require more strenuous physical exertion than walking.
- Trails Facilities (Length in Miles; Only Designated Trails were included) - total number and total miles of designated trails in a park. The total number of trails for all types and the sum of their lengths in miles.
- Trap and Skeet - See: Sport Shooting
- Traps, Number of - See: Sport Shooting
- Trends - The ways, directions, or tendencies recreational patterns or influencing factors in Texas appear to be changing or developing over time, given past and existing circumstances.
- Trips, combined weekday and weekend - Trips occurring on one or more days of the week, i.e., Monday through Friday, plus Saturday and/or Sunday.
- Trips, weekday - Trips occurring anytime during Monday through Friday.
- Trips, weekend - Trips occurring anytime during Saturday and/or Sunday.
- Undesignated - Those resources which are used for recreational purposes but have no official designation.
- Undeveloped Land - The total number of land acres in parks that do not comprise recreational facilities constructed by man.

Unit - The numerical designation assigned to recreational facilities by type and resources by area to enable recreation planners to assess the quantities of available recreational opportunities. The following are units enumerated in the TORP by type of facility:

Type Resource	Unit
Archery	Target
Baseball	Field
Basketball	Court
Boat Ramp	Lane
Camping	Campsite
Fishing Pier	Linear Yard
Football	Field
Games and Sports	Court/Field/Hole
Golf	Hole
Land	Acre
Picnicking	Table
Playground	Acre
River	Linear Mile
Sport Shooting	Target or Trap
Stream	Linear Mile
Swimming Pool	Square Yard
Tennis	Court
Trail	Linear Mile
Volleyball	Court
Water	Surface Acre
Other	Number

Units, by activity and/or facility type - In order to effectively inventory recreational resources, typically the major facility required to support a given activity was enumerated or measured by the lowest common measurement normally assigned to the facility type. In the TORP recreational supply, demand, and resource requirements for selected activities are expressed in comparable units. Numbers and areal quantities of existing resources (and/or facilities) were considered the major indicators of supply and/or opportunity.

Units Per Thousand - Ratio of resource units to a selected population; determined by dividing the number of units by the selected population (in 000's).

Urban - Within municipal limits of a metropolitan area, city, town, or small community (population over 200) unless located in a sparsely developed environment.

Urban Growth Areas - Sections and general directions (of metropolitan areas) that were experiencing rapid development, or

those sections projected by local urban/recreation planners to grow most significantly from 1971. Areas around a metro area which are changing most rapidly from rural to urban land uses.

Urban Park - A park within or adjacent to municipal limits excepting those parks in rural environments. For example, no residential areas adjacent and which are essentially in a countryside environment. Most parks within city limits will, therefore, be urban and most parks outside city limits will be rural, but not always.

Use Intensity - An average measurement or estimation by park superintendents of how heavily (percent full) a park and/or its facilities are being used during a typical peak use week (Monday through Sunday). Measured during the peak use season, gives an indication of the park capacity to attract and support recreationists.

Also, can give an indication of overcrowding or insufficient facilities. Weekday use intensity is a measurement of participation on the five weekdays Monday through Friday. Weekend use intensity is a measurement of participation on Saturdays and Sundays.

Volleyball - Recreational activity normally considered a game requiring a net (suspended at a given height) and a court over which two opponent teams, normally six persons per team, attempt to maintain a ball in flight over the net by bouncing the ball with head or hands from person to person for a limited number of times on each side of the net until the ball touches the ground. A point is lost if ball touches ground inside a team's portion of court.

Wading Pool - Normally, a shallow pool that is two feet or less in depth and is not part of a larger pool.

Walking for Pleasure - A recreational activity involving traversing or moving over, through, or by an area on foot for the pleasure or enjoyment of the pursuit itself. This could include use of designated trails or paths. This is one of the few activities which could begin immediately upon leaving the house.

Water; lake, reservoir, pond, tank - Inland bodies of water.

Water, fresh - Bodies and courses of water before reaching saltwater.

Water, river or stream - Inland water courses.

Water, suitable (for recreation purposes) - That portion of the water bodies in the State which can support three selected water-related recreational activities. As used in the TORP, suitable water was considered that portion of freshwater lakes and reservoirs suitable to support the activities of boating, skiing, and boat fishing. Unsuitable waters for the three activities were considered those which were too shallow, too small in area, had excessive debris, or were otherwise unsafe.

Water, surface acres - The units assigned to recreational water to enumerate freshwater resources for purposes of the TORP.

Water, within - That water wholly contained within parks and recreation areas boundaries.

Water Adjacent - That water at which a park or recreation area can provide public recreational access, i.e., by means of water frontage, public boat ramps, etc.

Water Length in Miles Adjacent to or Within - Parks which have continually running water from a river or stream within the park boundaries, length in statute miles (for the length within the park) was specified. If a park was adjacent to a river or stream, only the length to which the park was adjacent to and not the entire length of the river or stream was specified.

Water within or adjacent - The total surface acres of all lakes, ponds, or tanks within or adjacent to the boundaries of parks. Swimming pools were not included. Water adjacent to refers to any water which may be located on the park boundary and is accessible from the park. Water within refers to any water which is either impounded in or running through the park.

Zoos, Acres of - Areas including only those acres with zoo facilities.

Appendix B

LISTING OF METROPOLITAN AREAS: CORE CITIES AND CONTIGUOUS URBAN AREAS (POPULATIONS 50,000 AND OVER IN 1970)

<u>Planning Region - Core City</u>	<u>Contiguous Areas</u>	<u>Planning Region - Core City</u>	<u>Contiguous Areas</u>
Region 1	Amarillo	Region 17	San Angelo
Region 4	Lubbock	Region 18	Midland
Region 5	Wichita Falls	Region 18	Odessa
Region 7	Abilene	Region 20	Waco
Region 10	Fort Worth		Bellmead Woodway Robinson Lacy-Lakeview Beverly Hills Northcrest
		Region 21	Bryan-College Station
	Arlington Haltom City Hurst North Richland Hills White Settlement Bedford Richland Hills Forest Hills River Oaks Benbrook Lake Worth Village Sansom Park Village Westworth Village Kennedale Saginaw Pantego Edgecliff Village Dalworthington Gardens Westover Hills	Region 23	Austin
			Westlake Hills Rollingwood Sunset Valley
Region 11	Dallas	Region 25	Houston
			Pasadena Bellaire West University Place Deer Park South Houston Galena Park Jacinto City La Porte Nassau Bay Bunker Hill Village Hunters Creek Village Seabrook Hedwig Village Spring Valley Piney Point Village Lomax Village
	Irving Garland Mesquite Grand Prairie Richardson Farmers Branch University Park Duncanville Carrollton Lancaster Balch Springs Highland Park Kleberg Seagoville Cockrell Hill Hutchins	Region 27	Beaumont-Port Arthur
			Groves Nederland Port Neches Pear Ridge Lakeview Griffing Park
Region 12	Sherman-Danison	Region 28	Galveston-Texas City
Region 13	Texarkana	Region 29	El Paso
Region 14	Tyler	Region 33	Corpus Christi
Region 16	San Antonio	Region 34	Brownsville-Harlingen- San Benito
	Alamo Heights Castle Hills Terrell Hills Windcrest Kirby Balcones Heights Olmos Park Leon Valley	Region 34	McAllen-Edinburg-Pharr
			Mission San Juan
		Region 35	Laredo

SOURCE: 1970 Bureau of Census



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