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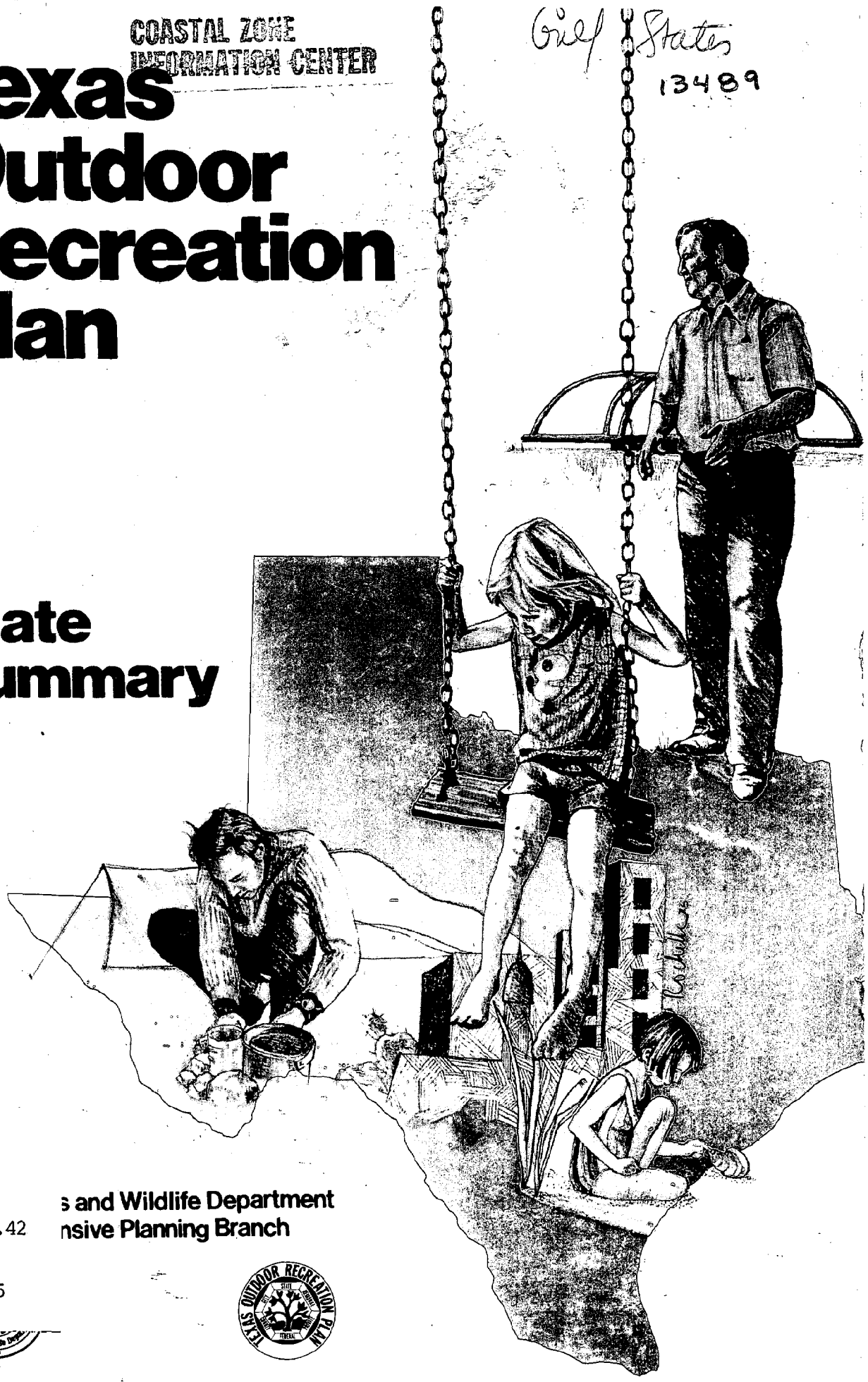
Texas Outdoor Recreation Plan

State Summary



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Conducted By:

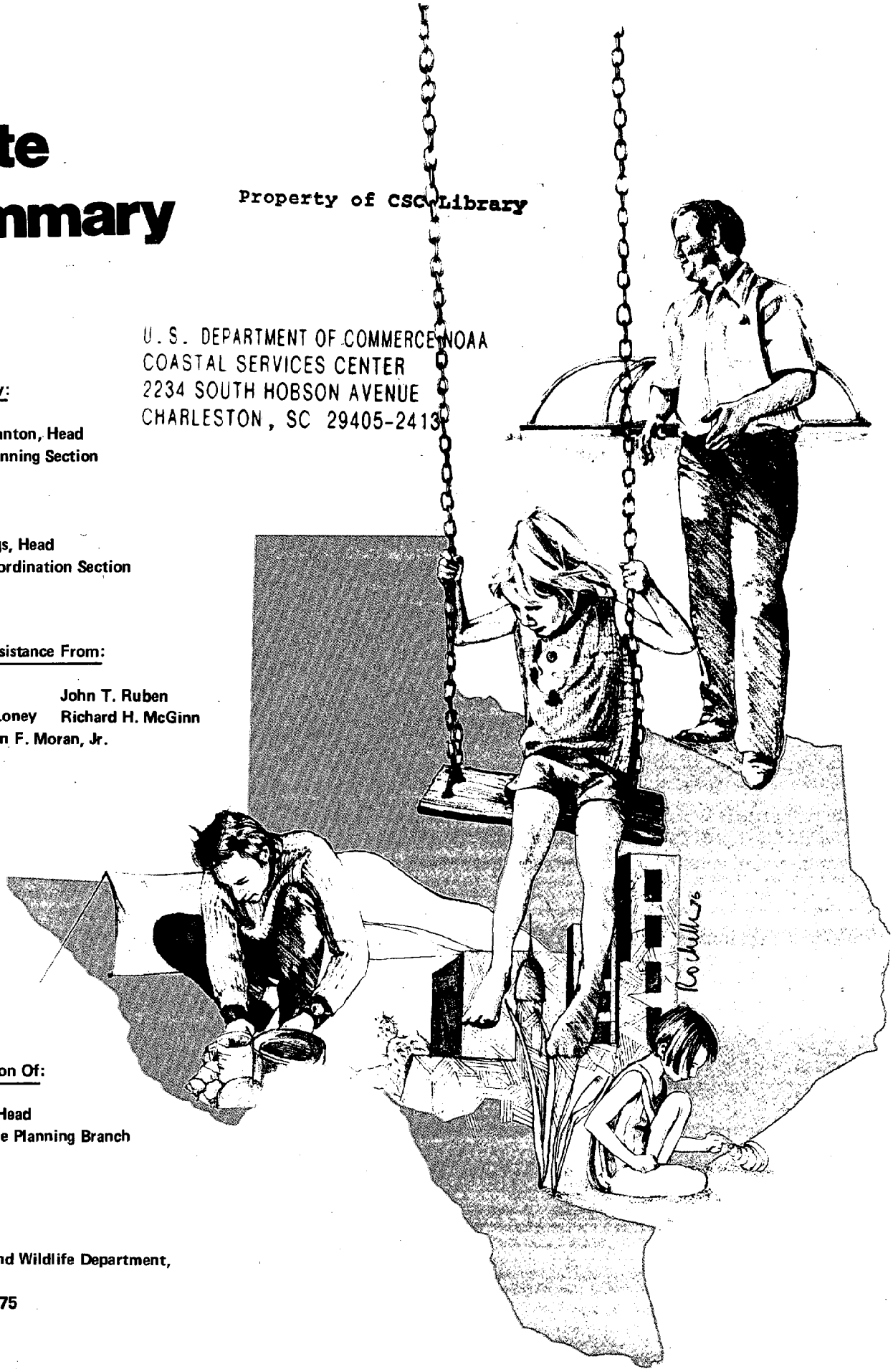
Charles L. Branton, Head
Consumer Planning Section

and

James C. Riggs, Head
Statewide Coordination Section

With Staff Assistance From:

Joel S. Seffel
James A. DeLoney
John T. Ruben
Richard H. McGinn
John F. Moran, Jr.



Under Direction Of:

Ron Thuma, Head
Comprehensive Planning Branch

Texas Parks and Wildlife Department,
Austin, Texas
December, 1975

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DOLPH BRISCOE
GOVERNOR

OFFICE OF THE GOVERNOR
STATE CAPITOL
AUSTIN, TEXAS 78711

Mr. James G. Watt
Director
Bureau of Outdoor Recreation
Department of the Interior
Washington D. C. 20240

Dear Mr. Watt:

Outdoor recreation has long been an important element in the lives of Texans. In this respect, citizens of Texas are fortunate to live in a State endowed with abundant natural resources and blessed with a rich variety of recreational resources. In the future, dependence on these resources will increase as the demand for recreation opportunities continues to grow.

The future holds many challenges for Texans. Among these, along with maintaining a viable economy and an agreeable standard of living, is the challenge of insuring that a sufficient quantity of diversified outdoor recreation opportunities is available for present and future generations of Texans. In accomplishing these ambitious goals, the importance of careful planning for the wise use of the State's natural and fiscal resources is a matter of concern for all Texans. The Texas Parks and Wildlife Department has recognized its responsibility for assuring that adequate land, water and facilities for recreation are available to every region of the State.

The ten volume Texas Outdoor Recreation Plan will serve as a guide for action in providing needed recreation opportunities throughout the State. With the completion of this plan, an important new source of information is available for input into the comprehensive planning process.

I am pleased to submit to you this volume of the Texas Outdoor Recreation Plan.

Sincerely,

DOLPH BRISCOE
Governor
State of Texas

DB/jc

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Federal Agencies

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Bureau of Reclamation
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Federal Aviation Agency
National Aeronautics and Space Administration
National Park Service
National Weather Service
Soil Conservation Service, USDA
U.S. Army Corps of Engineers
U.S. Coast and Geodetic Survey
U.S. Fish and Wildlife Service
U.S. Fisheries Service
U.S. Geologic Survey

State Agencies

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General Land Office
Interagency Council on Natural Resources and the Environment
Office of The Governor, Budget and Planning Office
Rice University
Sam Houston State University
Texas Air Control Board
Texas A&M University

Texas Agricultural Extention Service
Texas Archeological Service
Texas College Coordinating Board of Colleges, Universities
Texas Department of Agriculture
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Texas Water Districts

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Private Organizations

Citizens Environmental Coalition
Chambers of Commerce
Dow Chemical, U.S.A.
Gulf Universities Research Corporation
Houston Archeological Society
Houston Hike and Bike
Houston Outdoor Nature Club
Houston Power Squadron
Houston Yacht Club
Mitchell Energy and Development Corporation
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Nature Conservancy, Texas Chapter
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Consultants

Mr. Robert R.. Wilson, Consulting Economist
- Dr. R. J. Freund, Texas A&M University at College Station
- Dr. Stanley R. Johnson, University of Missouri at Columbia
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Special recognition is due Mr. Paul Schlimper, Director, Parks Division, Texas Parks and Wildlife Department for his administrative direction and support during various phases of the **Texas Outdoor Recreation Plan.**

Members of the staff of the Comprehensive Planning Branch who contributed substantially to this volume include William C. Morrow who supervised the development of data systems and programming involved in the development of the Plan and provided editorial review of this volume; Connie A. Lewis, present clerical supervisor and Robert B. Evans, former clerical supervisor, who supervised the clerical staff in compiling the data associated with this volume; Stephen R. Puckett who contributed to data systems and computer program development; Pat Wiles and her assistants, Margaret Rochelle and Wallace W. Snell, who developed the layout, artwork, other graphics, and coordinated printing arrangements; Auzie L. Blevins who assisted in review and comment on certain recommendations; Martha Davis who provided editorial assistance; and special thanks to the staff secretaries who typed the many transcripts and the clerical staff who assisted in compiling the data.

Past members of the staff also deserve recognition. Foremost of these is Mr. Ron Jones for his guidance during various phases of the entire **Texas Outdoor Recreation Plan.** Others include William Oden and Jim Melton who assisted in narrative development in the draft of this volume; and James Barry who assisted in data systems and program development.

The preparation of this volume was financed in part through a planning grant from the Land and Water Conservation Fund administered by the Bureau of Outdoor Recreation, U.S. Department of the Interior, and through appropriations from the Texas Legislature.

Legal Authority

The development of the **Texas Outdoor Recreation Plan** is authorized by Article 6081r, V.T.C.S. (Chapter 112, Acts of the 59th Legislature, Regular Session, 1965.)

Section 1 of this Act designates the Texas Parks and Wildlife Department as

> "...the State Agency to cooperate with the Federal Government in the administration of the provisions of any federal assistance programs for the planning, acquisition, operation, and development of the outdoor recreation resources of the State..." In addition, the Parks and Wildlife Department is "...authorized and directed to cooperate with the proper departments of the Federal Government and with all other departments of the State and local governments...in the enforcement and administration of the provisions of this act..."

Section 2 authorizes the Texas Parks and Wildlife Department

> "...to prepare, maintain, and keep up-to-date a state-wide comprehensive plan for the development of the outdoor recreation resources of the State of Texas; to develop, operate, and maintain outdoor areas and facilities of the State and to acquire land, waters, and interests in land and waters for such areas and facilities."

Section 3 states that in order for other State or local agencies

> "...to obtain the benefits of any such programs (under the Land and Water Conservation Act of 1965), the Parks and Wildlife Department shall coordinate its activities with and represent the interests of all agencies and political subdivisions of the State of Texas...having interests in the planning, development, acquisition, operation, and maintenance of outdoor recreation resources and facilities."

Attorney General's Opinion No. C-518 issued September 30, 1965, supports the authority that the Department is the proper agency of this State authorized to allocate funding and to carry out the State recreation planning requirements of the Federal Land and Water Conservation Fund Act (Public Law 88-578).

The above legislation and related guidelines have been adhered to both with regard to development and implementation of the **Texas Outdoor Recreation Plan**. The various volumes of the Plan are based on a careful assessment of what was necessary to fulfill the provisions and intent of the planning requirements of the legislation. Basically, two aspects were identified as necessary: (1) a careful determination of the type and quantity of resources necessary to meet the State's recreation needs and, (2) assessment of steps needed to properly utilize resources.

In summary, the Parks and Wildlife Department serves as the primary State Agency authorized to (1) coordinate, develop, and implement the **Texas Outdoor Recreation Plan** for the people of Texas and (2) regulate the allocation of federal aid from the Land and Water Conservation Fund to all political subdivisions of the State in accordance with the priorities set forth in the Plan.

Foreword

In recent years, the demand for outdoor recreation opportunities has rapidly increased throughout Texas. Changes in factors such as population, urbanization, leisure time, buying power and recreational preferences have created a tremendous pressure on public agencies and private entities to provide more outdoor recreational opportunities. Faced with the increased demand, decision makers and planners in Texas have responded in a commendable manner, recognizing the requirement each of us has for recreation in our everyday lives.

In 1958, an act of the Federal Government, (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 the citizens of this country now and in the future. The result of the Commission's work, a report entitled, **Outdoor Recreation in America**, was published in 1962, and contained many recommendations for action. Responding to the recommendations in the report, Congress and the President began enacting legislation which expanded the outdoor recreation responsibilities in several federal agencies, created the Bureau of Outdoor Recreation under the U.S. Department of the Interior, and established the Land and Water Conservation Fund.

The Land and Water Conservation Fund's intent was to increase outdoor recreation opportunities for the American people by providing matching grants for state and local land acquisition and development. In order for state and local governments to receive benefits from the Fund, certain eligibility requirements had to be satisfied. One of these requirements was that each state must develop, maintain, and keep up-to-date a statewide comprehensive outdoor recreation plan. In response to this requirement, the 59th Texas Legislature directed the Texas Parks and Wildlife Department to assume responsibility for the **Texas Outdoor Recreation Plan**. In accordance with this direction, the Department embarked on a continuing course of action designed to provide a strong, viable program to guide outdoor recreation development in Texas.

The first outdoor recreation plan for Texas was published in 1965, and marked the initial effort of the Department to provide a meaningful program and guidelines for Texas. Accepted and recognized by federal, state and local agencies, the Plan served to guide outdoor recreation development in the state and certify Texas eligible to participate in the Land and Water Conservation Fund from 1965 until 1968.

Under the provisions of the Land and Water Conservation Fund Act, each state desiring to participate in the program must update its plan periodically. In 1968, responding to this provision, and with experience gained in the initial planning effort, the Department issued an updated plan which extended Texas' eligibility to participate in the

funding program until 1972. However, in 1967 the Department and the Bureau of Outdoor Recreation, after long and careful considerations, concluded that more complete and accurate information and techniques were necessary to accomplish a further refined and major updating of the Plan. The Bureau agreed with Department proposals to conduct a more extensive program than had been conducted by any state at that time. Extensive statewide data collection efforts were undertaken and sophisticated analytical techniques developed to further refine the Plan.

These efforts are realized in the updated **1975 Texas Outdoor Recreation Plan** which consists of ten volumes as follows:

I. **State Summary**
II. **Regional Summary**
III. **Outdoor Recreation in the Urban Areas of Texas**
IV. **Outdoor Recreation in the Rural Areas of Texas**
V. **Outdoor Recreation on the Texas Gulf Coast**
VI. **A Regional Environmental Analysis**
VII. **Outdoor Recreation Activities**
VIII. **The Roles of the Public and Private Sectors**
IX. **A Statewide Recreation Information System**
X. **Techniques of Analysis**

Although each volume of the Plan presents specific information regarding various aspects of outdoor recreation in Texas, the Plan is organized into three parts: summary volumes, major volumes and volumes of an informational nature. The essence of the Plan is contained in the two summary volumes, the **State Summary** and the **Regional Summary**. All users of the Plan are urged to become familiar with these two volumes.

Major volumes include Volumes III, IV and V, which contain detailed statewide and regional analysis of the recreation opportunities, participation and resource requirements of the urban areas, rural areas and Gulf Coast region of Texas. Also included is Volume VI which addresses the problems of resource conservation.

The informational volumes include Volumes VII, VIII, IX and X, which provide information relating to recreation activities, roles of the public and private sectors, and, an information system and planning methodology.

A brief description of the content of each of these ten volumes is presented below to help the user understand the Plan and more effectively utilize the respective volumes to address particular problems or needs.

Volume I, the **State Summary**, summarizes the major elements of the other nine volumes of the Plan. This volume contains broad information, recommendations, and policy statements to guide the current and future development of outdoor recreation resources in Texas.

Volume II, the **Regional Summary**, summarizes pertinent recreational planning data relevant to the rural and urban areas of Texas, as provided in detail in Volumes III and IV. This volume contains data on existing and future resource requirements, as well as data on existing resources with recreation potential, recommendations and priorities for each of the 37 planning regions.

Volume III, **Outdoor Recreation in the Urban Areas of Texas**, analyzes outdoor recreation in those areas of Texas with an urban environment. This volume contains specific data on existing recreation opportunities, participation, and existing and future resource requirements for metropolitan areas, cities, and towns within each of the 37 planning regions. The volume also contains suggested recreational resource requirements for small communities with a 1969 population from 200 to 2,499 and identifies areas of special concern and associated problems in the urban areas.

Volume IV, **Outdoor Recreation in the Rural Areas of Texas**, analyzes outdoor recreation in areas having a rural environment and in towns with less than 200 population in Texas. This volume contains specific data on existing recreation opportunities, participation, and existing and future resource requirements in each of the 37 planning regions. This volume also identifies areas of special concern and associated problems in rural areas.

Volume V, **Outdoor Recreation on the Texas Gulf Coast**, analyzes saltwater related outdoor recreation in both the urban and rural areas along the Gulf Coast, defined as those seventeen counties contiguous to the Gulf of Mexico or associated bays. This volume contains specific data on each county with respect to existing saltwater related recreation opportunities, participation, and resource requirements, and also identifies areas of special concern and associated problems along the Gulf Coast.

Volume VI, **A Regional Environmental Analysis**, focuses on the problems of conserving wildlife and other recreational resources for present and future recreational use in the face of rapid urban and other development. This study focuses on the 8-county Houston-Galveston Region, with appropriate findings and recommendations projected statewide.

Volume VII, **Outdoor Recreation Activities**, analyzes participation patterns and examines factors significantly influencing participation for the most significant of the more than 70 recreational activities identified in Texas. Factors such as participation by the time of day, seasons of the year, distances travelled, expenditures of time and money, ability to participate, and facility preferences are examined.

Volume VIII, **The Role of the Public and Private Sectors**, compares the roles and influences of public agencies and private entities in providing recreational opportunities for public use.

Volume IX, **A Statewide Recreation Information System**, describes the functions of communication, coordination, and cooperation with the framework of the statewide recreational planning process. This volume also examines the data collection instruments and methodologies used in the past, and presents alternatives for future updates.

Volume X, **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.

With this information and frame of reference in mind, it is important to understand the goal and objectives of this Plan, the recreational planning philosophy of the State, and the major efforts necessary in order for Texas to remain an enjoyable place to live, work and recreate.

The overall goal of the Texas Outdoor Recreation Plan is to provide a framework to guide the allocation of outdoor recreation resources in Texas. Specific objectives of the Plan are to:

- Provide outdoor recreation data and information on a statewide and regional basis to all levels of government and the private sector.
- Guide and assist recreational planning entities in the development of outdoor recreation plans and programs at the state, regional and local levels.
- Provide an official state recreation plan that can be used by non-recreational planning entities to anticipate, identify, accommodate or integrate the interests and resource needs of recreation, within the scope and objectives of such planning endeavors.
- Provide a more effective guide for the allocation of Land and Water Conservation Funds and other outdoor recreation resource related funding programs in Texas.
- Strengthen the ability of all levels of government and the private sector to better coordinate, plan and provide quality outdoor recreation opportunities for Texans and their visitors now and in the future.
- Bring about the expansion of efforts to protect and conserve those resources that have special scenic, historic, scientific, educational or other value to outdoor recreation.
- Provide general information regarding the characteristics of outdoor recreation in Texas.

The development of this Plan in itself cannot solve the recreation problems facing Texas. In attaining the Plan objectives, there are four major efforts that must be accomplished by decision-makers at all levels of government and the private sector:

- **There must be sincere concern** on the part of decision-makers in the public and private sectors to meet this objective.
- **Adequate data and information must be available** to aid decision-makers in fully understanding the alternatives available and the long term effects of decisions affecting outdoor recreation.
- **Adequate funds must be available** from all levels of government and the private sector to insure that necessary recreation opportunities are provided in a timely manner.
- **The various government and private sector entities should coordinate and cooperate** if the State's problems are to be solved. Better coordination and cooperation in data gathering, analysis, and implementation must be achieved.

The philosophy of the State of Texas toward statewide planning for outdoor recreation should be clearly understood. A plan is not a static document but an ongoing process. Various pieces of technical information are out-of-date by the time they are published; therefore, the document should be used as an aid in decision-making rather than a document containing cookbook decisions for every circumstance. Our society is dynamic and our problems are too specialized and complex to depend solely on a static document to guide the development of our outdoor recreation resources. Evaluation of projects for compliance with the State Plan will consider this reality.

Upon completion and distribution of the Plan, the planning staff of the Texas Parks and Wildlife Department will continue working with various government entities and the private sector in efforts to insure that the Plan is kept up-to-date and useful. With the help of all levels of government and the private sector, the people of Texas will continue to have high quality environments in which to live, work and recreate. The staff of the Texas Parks and Wildlife Department is dedicated to this end and welcomes any constructive suggestions or comments pertaining to this effort.

Chapter 1

PLAN OVERVIEW AND SUMMARY

INTRODUCTION

Texans have been exceptionally fortunate to have available a wide variety and abundant quantity of natural resources. However, in the last decade the growth in population and prosperity in the State has been accompanied by a rapid expansion of demand for natural resources and especially recreation resources. Increased demand for outdoor recreation resources is reflected in attendance figures for nearly any recreation area in the country and in almost any series of tabulation of fees, equipment sales, or recreation travel. As a result, Texas is faced with the phenomenon of two opposing and rapidly diverging trends. Demand for outdoor parks grows according to some conceivable ratio with the State's population and concentration of the citizenry. On the other hand, prime space available for recreational activities decreases. As the two demand variables expand, the need for careful planning and the ability to make wise resource allocation decisions become ever more critical. Recognizing this important fact the State of Texas has embarked on a planning effort, the magnitude of which is unequaled by any similar effort in any other state. The result of this effort is the ten volume **Texas Outdoor Recreation Plan**. The volumes are designed to aid recreation planners and other professionals and often exceed the planning requirements of the Bureau of Outdoor Recreation for Texas' participation in the Land and Water Conservation Fund. This volume, **State Summary**, is designed for easy use by public officials, citizens, or others who may not have time to read the entire plan. It contains summarized information from the detailed analysis of 37 planning regions in the State regarding recreation opportunities, recreation demand, recreation resource requirements, recommendations and priorities, and action programs.

PLAN DEVELOPMENT

As mentioned above, the development of the **Texas Outdoor Recreation Plan** required the collection and analysis of large amounts of data in order to recognize and solve problems. While secondary sources of information, including records of the Texas Parks and Wildlife Department, other state agencies, federal agencies, and other sources of published data, can be used in many parts of the planning process, it was found that much primary data had to be collected on existing facilities, recreationists' activity preferences, participation, and a host of other items for which secondary data were not available. As a result, five extensive surveys were conducted. These included two surveys of demand, one a stratified random sample of households (15,125 interviews) from across the State during 1968 and 1969, and the other, of recreationists' participation at a sample of parks (7,801 interviews) through the State in 1970; and three surveys of outdoor recreation resources (1969, 1971, and 1973). These data were tabulated, coded, and computerized for use in mathematical models which develop demand projections, recreation resource requirements, and other information.

The analyses of outdoor recreation for the **Texas Outdoor Recreation Plan** are organized on state and regional bases. While the Governor's Office has delineated 21 State Planning Regions, it was felt that some of these areas were too large for realistic outdoor recreation planning. Therefore, a decision was made to subdivide a number of the State Planning Regions into smaller units. The resulting breakdown of the State into 37 Outdoor Recreation Planning Regions, shown in figure 1-1 on the following page, retains for the most part the integrity of the State Planning Regions, but permits more detailed geographical analysis where needed. In all the Outdoor Recreation Planning

Relaxing Around the Campfire. For most Texans, outdoor recreation is an important component of their present lifestyles. (Photo by Leory Williamson, Texas Parks & Wildlife Department)

Regions, the counties are contiguous, and most comprise more than a single county.

PLAN SUMMARY

This volume presents a synopsis of the entire ten volume **Texas Outdoor Recreation Plan**. The following very brief sections indicate some of the most important findings of the research on Texas recreational patterns conducted to update the current **Plan**. These findings are presented at the beginning of the recreation resources, recreation demands, and resource requirements summary section. The recommendations, priorities, and responsibilities section and the action programs section follow to conclude the overview of the volume.

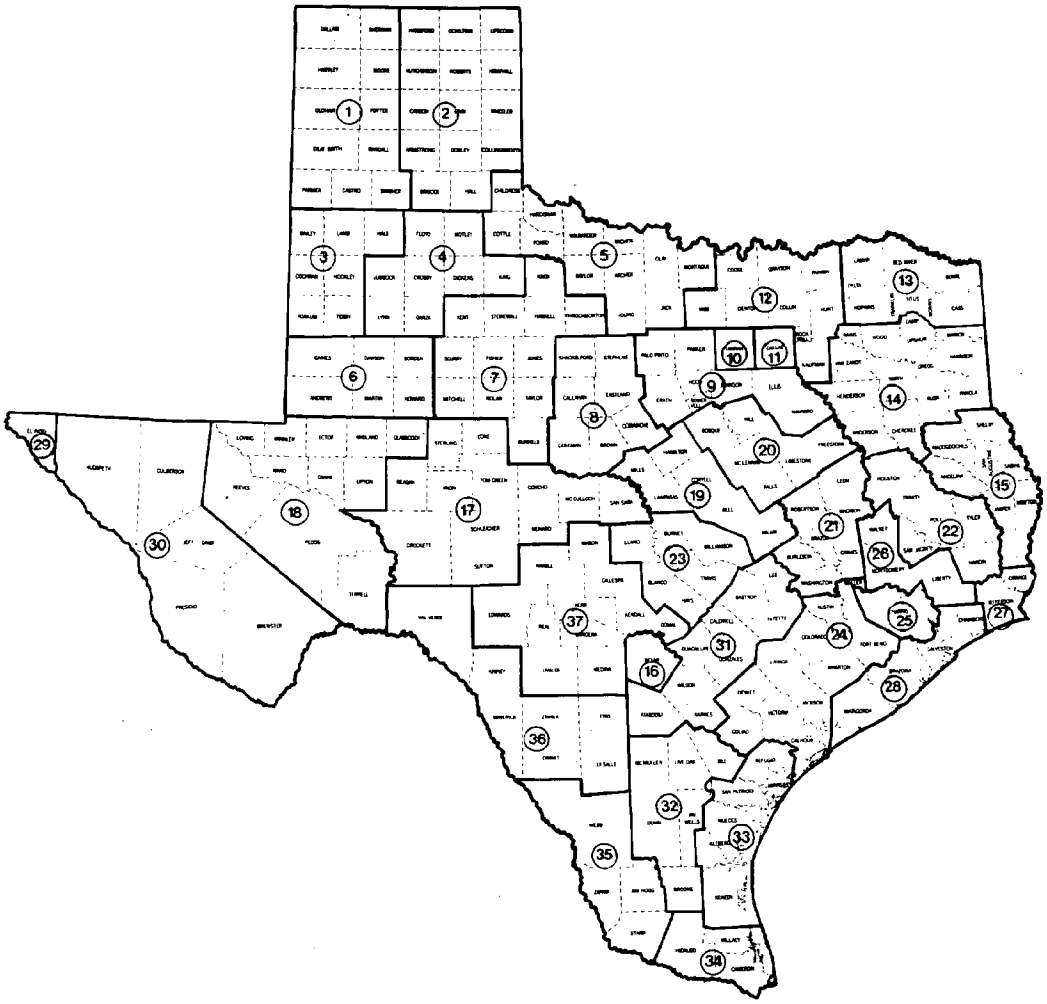
OUTDOOR RECREATION OPPORTUNITIES IN TEXAS

The present supply of recreational opportunities in Texas can be described by the numbers, types, area sizes, and qualities of existing and planned recreational resources—land, water, and recreational facilities—which the public has access to. By ascribing units of measurement to these resources (e.g., number of campsites, miles of trails, square yards of designated freshwater swimming areas), and then enumerating and evaluating the existing and planned resources in terms of how many of each type there are, where they are located, when planned resources will be available, etc., it has been possible and practical to assess the present and future recreation resource situation and patterns in Texas. Knowing the objective facts about the supply of recreational opportunities in the State, or the magnitude and allocation of Texas' recreation resources, has allowed detailed analyses of supply and demand relationships of the State's overall pattern of recreation.

Many of the 11.2 million residents of Texas and the 22 million annual visitors from other states often find themselves somewhat restricted in their potential recreational pursuits or in their enjoyment of activities actually participated in. This occurs because of a lack of available resources for the activities they prefer, increasingly crowded conditions, the occasional inability of existing resources to support the needed level of use, the poor quality of some existing resources, the inapplicability of certain of our existing resources to the needs of current user populations (especially with respect to the aged, those with low incomes, ethnic minorities, and those with disabilities), and many other limiting factors which cause less participation than would otherwise occur.

The State has a substantial quantity of recreation resources. Below, the reader will find a brief overview, or inventory, of the statewide supply of selected recreation resources in terms of the number of units which are reported to exist in the State. Most of the recreation lands are located in the western half of the state, quite far from most of the State's population.

FIGURE 1-1. TEXAS OUTDOOR RECREATION ANALYTICAL PLANNING REGIONS



For this reason, an accurate pattern of the supply of recreational resources cannot be represented by the numbers of units alone; the spatial or geographic distribution must also be considered. Keeping this in mind, the following summation of the numbers of units can be viewed in proper perspective.

RECREATION LAND RESOURCES

More than 1.7 million acres of parkland
Approximately 702 miles of accessible Gulf Coast and bay shoreline
Approximately 67 million land acres, almost totally private, periodically available for hunting.

RECREATION WATER RESOURCES

Over 1.1 million surface acres of major lakes and reservoirs
Approximately 80,000 miles of rivers, streams, and bayous
Approximately 2.1 million surface acres of saltwater bays
An estimated 2,264 miles of Gulf Coast and bay shoreline

RECREATION PARKS AND FACILITIES

4,504 designated parks and recreation areas containing the following facilities:

25,624 picnic tables
297 football/soccer fields
2,344 baseball/softball fields
2,593 golf course holes
303 miles of horseback trails
21,254 campsites
1,309 tennis courts
609 basketball courts
3,530 acres of playgrounds
114 miles of bicycle trails
744 miles of walk, hike, nature study trails
1,036 boat ramps with 1,651 lanes, 9,112 boat slips and stalls
49,135 linear yards of fishing piers, barges, and marinas
404,330 square yards of swimming pools
2,165,948 square yards of designated freshwater swimming areas

OTHER RECREATION RESOURCES

1,100 roadside parks, turnouts, and rest areas
217 nationally registered historic, prehistoric, or archeological sites
24 approved national historic landmarks
10 approved national natural landmarks
4,600 state identified historical and archeological sites
311 museums
44 federal and state areas for fish and wildlife preservation, management, or research, and an undetermined number of similar private conservation areas

Regional analyses of the resources listed above led to the development of many findings and conclusions with respect to the existing supply of recreation resources in the State. Some of the most significant of these findings are as follows:

STATEWIDE FINDINGS

- Texas had 24 Standard Metropolitan Statistical Areas (SMSA'S) in 1970, more than any state in the United States; over 79 percent of the State's 11.2 million population resides in urban areas, and the majority in SMSA'S. However, 41 percent of the designated recreation land in Texas is farther than 200 miles from the nearest SMSA.
- Only one percent of the State's land area is designated for outdoor recreation use.
- Compared to other states, Texas ranks very low in terms of recreation land per capita.
- In 1967 the national average for state park land acreages per 1,000 population was 30.7; the same year, Texas state parks provided 6.3 acres per 1,000. Today state parks have been increased to provide a new average of 7.8 acres per 1,000.
- Texas has no trails included in the National Scenic Trails System.
- Texas with 80,000 miles of rivers, streams, and bayous has no state or nationally designated wild or scenic rivers.
- Nearly 46 percent of the recreation land in Texas is in one isolated 5 county region in far West Texas.
- Recreational lands in Texas are not developed to their optimum potential, especially in the rural areas; statewide, only 8 percent is developed; very little area is left for expansion in the urban areas where 70 percent of the 62,524 acres is developed; only 5 percent of the recreational lands on the Gulf Coast is developed.
- Public entities administer 80 percent, or 3,594, and private entities administer 20 percent, or 910, of the 4,504 parks in the State which are normally open to the general public for recreational purposes; 246 parks, or 5 percent of the total number of parks in the State, are associated with saltwater along the Gulf Coast.
- While 61 percent of the parks in Texas are located in urban areas, they comprise only 4 percent of the State's total recreation lands. Nearly 80 percent of the State's population resides in urban areas.
- Federal agencies own and administer only 6 percent of the total number of parks, but 75 percent (1,294,258 acres) of the designated recreation land acreages in the State.
- The U.S. Army Corps of Engineers is the chief supplier of water-based recreation in the State, administering 219 parks (in 1973) with 85,357 acres of recreation lands associated with

over 523,000 surface acres of water; 34,823 acres of Corps lands are developed.

- Forty percent (101) of the 254 counties in Texas administer outdoor recreation areas. Only 5 counties had formally established parks or recreation departments in 1973.
- There are estimated to be only 138 municipalities out of a total of 1,055 in the State which have at least minimal supervision in their parks and recreational areas; of these, only 61 municipalities are known to have formally established parks and/or recreation departments; 19 have park superintendents and recreation superintendents; 2 have recreation superintendents only; and 55 have park superintendents only.

URBAN FINDINGS

- Over 8,556,000 persons residing in the urban areas of Texas in 1970 shared the 2,742 urban parks which comprised 62,524 urban recreation land acres and 50,174 surface acres of water.
- While providing only 3.6 percent of the State's total recreation lands, urban areas accounted for approximately 25 percent (43,621 acres) of the total developed recreation land in the State (174,969).
- Only about 4.8 percent of the recreational water in the State is associated with urban parks; 49 percent of that water can be found in metropolitan areas; only 1 percent is accounted for by the cities and 50 percent by towns.
- Private entities administered about 6 percent of the number of urban parks and over 8 percent of the land acreages in urban areas.
- Most urban recreation facilities were located near the cores of the State's metropolitan areas while an acute paucity generally characterized growth areas. Many recent residential developments are conspicuously devoid of recreational amenities.
- Each acre of urban recreation land is shared by 179 urban residents (not including out-of-state visitors); each acre of developed land area is shared by 196 urban residents; each urban park is shared by 3,120 urban residents.

RURAL FINDINGS

- Of the reported 1,762 rural parks in the State in 1973, 52 percent were private, 48 percent were public, 600 had designated campsites, 595 had picnic sites, 356 had swimming facilities, 655 had fishing facilities; 803 had boating facilities, 67 had sport shooting areas, 245 had playgrounds, 220 had games and sports, 131 had golf courses, 139 had trails, 344 had lodging facilities, 350 had sanitary facilities.
- Public agencies administer approximately 89 percent of the 1,663,360 acres of recreation land in the rural areas; private entities administer 11 percent.
- The State administers 5 percent, municipalities administer 3 percent, and counties administer 1 percent of the rural recreation land acreages; the majority of the land (78%) is administered by federal entities.
- More than 95 percent of the recreational freshwater in the State is found in the rural areas.
- There were 6,355 persons in the State (not including persons from other states) for each rural park in 1973; 574 persons might have had to share each campsite; there were 875 people for each picnic table, 91 persons for each square yard of swimming pool, 16 persons for each square yard of designated freshwater swimming area, 11,414 person for each boat ramp; 167,115 for each sport shooting area, 26,596 for each acre of playground; 85,471 for each golf course; 45,148 for each trail; and 4,466 for each toilet.

OUTDOOR RECREATION DEMAND IN TEXAS

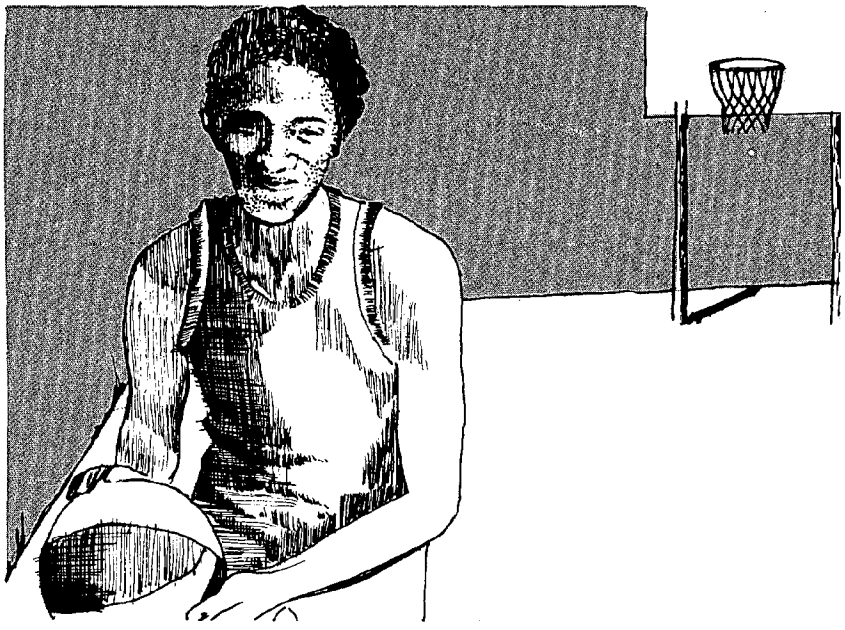
Within recent years, the demand for the various types of outdoor recreation has grown tremendously in Texas, and even larger increases are predicted for the future. The reasons for this enormous growth are varied and highly complex, but a number of factors are generally agreed upon as the most important. These factors can be described in terms of four major groups: demographic, socio-economic, physical, and descriptive. Demographic factors include population and size of the city of residence. Socio-economic factors include household size, age of household head, and household income. Physical factors are made up of the availability of facilities and natural resources and environmental characteristics and quality. Descriptive factors are those which indicate the general tendency of a household to participate in outdoor activities, such as investment in recreation equipment by a household, participation in various outdoor activities, hours per week spent in outdoor recreation by a household, and preferences for various activities. The complexity of the motivating factors involved dictates a need for accurate information and careful attention to analysis and planning in the provision of outdoor recreational opportunities for Texans.

In order to learn more about the demand for outdoor recreation in Texas, the Texas Parks and Wildlife Department conducted two extensive demand surveys during the period 1968/1970. The objective was to discover not only the extent of demand for various activities, but a great deal of other information, such as socio-economic factors with regard to recreation, distance traveled to recreate, expenditures on recreation, seasonality of participation, preferences of the public with regard

to facilities and natural areas and detailed participation patterns. Much of this data was also incorporated into two econometric models used to project recreation participation through the year 2000. The ultimate result was a vast store of knowledge about recreation in Texas. Among the most significant findings of these efforts were the following:

STATEWIDE FINDINGS

- A total of 538 million activity days took place in 1968/1970, of which 65 percent occurred in urban areas and 35 percent in rural areas.
- Fifty-seven percent of all outdoor recreation participation in Texas occurred on land and 43 percent on or in the immediate vicinity of water.
- Eighty percent of all outdoor recreation in Texas takes place in the five major geographic areas known as the Gulf Coast, East Texas Piney Woods, Central Texas Hill Country, North Texas Lakes District, and the West Texas Mountains, with the Gulf Coast accounting for the most of any single area, 29 percent.
- In order, the four planning regions receiving the largest amount of total participation in 1968/1970 were Regions 25 (Houston), 11 (Dallas), 10 (Fort Worth), and 16 (San Antonio).
- All activities are expected to increase in participation between 1968/1970 and 2000, reaching a total of 1,131 million days by 1980 and 2,736 million days by 2000, increases of 110 and 412 percent over 1968/1970 participation.
- The top five activities in 1968/1970 were, in order, swimming, driving for pleasure, bicycling, fishing, and walking for pleasure and in 2000 are expected to be swimming, bicycling, walking for pleasure, picnicking, and child's play.
- An increase in population growth in Texas of 59 percent from 1970 to 2000 is expected to cause large increases in outdoor recreation demand.
- Participation generally tends to rise with increased income and educational levels.
- Participation per household tends to increase rapidly as the ages of household heads increase from 15 to 44 years, and then drops sharply as household head ages increase past 44 years of age.



- As the distance to a recreation facility or natural resource increases, participation normally decreases; an increase in the number of facilities available tends to cause increases in participation.

URBAN FINDINGS

- Total participation occurring in the urban areas of Texas in 1968/1970 was 358 million activity days.
- The five most popular urban activities in 1968/1970 were swimming, driving for pleasure, bicycling, walking for pleasure, and child's play.
- Fifty-four percent of the urban households in the State participated in some form of outdoor recreation in the urban areas in 1968/1970.
- Family size appears to be one of the most significant socio-economic factors affecting participation per household with the average number of days of participation in all activities increasing from 40 days for a family of two to 281 days for a family of eight or larger.
- As an ethnic group, Mexican-Americans participated more in urban outdoor recreation than Anglos or Blacks in 1968/1970.
- Seventy-six percent of all urban outdoor recreation participation in Texas occurs on land, and 24 percent occurs on, or in the immediate vicinity of, water.
- Seventy-eight percent of the total participation in 1968/1970 occurred in metropolitan areas and 11 percent in cities and towns, respectively.
- In 1968/1970, the four largest metropolitan areas—Dallas, Fort Worth, San Antonio, and Houston—accounted for 53 percent of the total participation occurring in urban areas and 35 percent of the total participation in Texas, rural and urban combined.

- Urban participation is expected to increase by 92 percent, over the 1968/1970 level, to 687 million days in 1980 and by 403 percent to 1,802 million days in 2000.
- Increases in population growth and days of participation per household are expected to contribute to the projected increases in participation.

RURAL FINDINGS

- Total participation occurring in the rural areas of Texas amounted to 180 million activity days in 1968/1970.
- The five most popular rural activities in 1968/1970 were fishing, camping, swimming, picnicking, and boating, respectively.
- 58 percent of all Texas households participated in some form of outdoor recreation in the rural areas in 1968/1970.
- As an ethnic group, Anglo households participate almost twice the rate of Mexican-Americans and Blacks in the rural areas.
- Twenty-nine percent of all rural outdoor recreation participation in Texas occurs on land, and 71 percent on, or in the immediate vicinity of, water.
- In 1968/1970, 30 percent of the participation occurring in the rural areas of Texas originated in Dallas, Fort Worth, San Antonio, and Houston.
- More rural outdoor recreation participation originates from Region 11 (Dallas metropolitan area) than from any other analytical planning region.
- Participation is projected to increase 147 percent, over 1968/1970 levels, to 444 million days by 1980 and 430 percent to 954 million days in the year 2000.
- Picnicking is projected to be the most popular activity by the year 2000, and fishing, second.

OUTDOOR RECREATION RESOURCE REQUIREMENTS FOR TEXAS

The participation in outdoor recreation activities in Texas is expected to demonstrate continued growth. Therefore, attention should be focused on providing opportunities through acquisition of lands, development of recreation resources and facilities, and improvement of recreation programs where feasible and practical. Developed facilities are specifically required to meet the present and future demands in certain activities. Natural, historical, and archeological areas or sites should be considered first whenever practical because once such resources are damaged or destroyed, they cannot be replaced.

From the extensive analyses of supply of recreational opportunities and demand for their use, it was possible to determine the optimum numbers, types, and locations of recreational resources required presently and in the future for Texas. Among the major findings of these analyses are the following:

STATEWIDE FINDINGS

- A total requirement of 73,677 acres of developed recreation land existed in 1968/1970, of which 31 percent was urban, and 69 percent rural.
- Total developed recreation land requirements are expected to increase to 211,439 acres by 1980, and 539,501 acres by 2000, increases of 121 percent and 308 percent over the 175,000 developed acres existing at the present time.
- Among the 37 analytical planning regions, those with the largest requirements are regions containing large metropolitan centers or important natural resources, or both, such as Regions 2, 10, 11, 12, 14, 15, 24, 25, 28, and 33.
- Fully 80 percent of the recreation land requirements for Texas occur within the five major geographic areas of the Gulf Coast, East Texas Piney Woods, Central Texas Hill Country, North Texas Lakes District, and West Texas Mountains.
- The provision of hunting lands poses unique problems because of the large amounts of land required (estimated needs of over 280 thousand acres in 1968/1970 are expected to increase to 5.5 million acres by 2000), the heavy dependence upon the private sector, and the continual decline in wildlife habitats due to urbanization, environmental deterioration, and other land use changes.
- The major problems with regard to providing recreational water are feasibility, limited access to water, and the fact that recreational water considerations are inextricably tied to, and largely based upon, factors other than recreation.
- Total requirements for recreational water amounted to 6,700 surface acres in 1968/1970, most of which were urban requirements. It is expected that recreational water requirements will increase to 24,000 surface acres by 1980, and 103,000 surface acres by 2000, increases of 2 percent and 9 percent over the present level of supply.
- Those analytical planning regions with the largest requirements for surface acres of recreational water in 1968/1970 include Regions 24, 16, and 12.
- The five major geographic regions of Texas accounted for 57 percent of the recreational water requirements in 1968/1970.
- The major problems with regard to providing recreational water are feasibility access to water, and the fact that recreational water considerations are inextricably tied to, and largely based upon, factors other than recreation.
- The greatest overall statewide requirements in 1968/1970 for recreational facilities were for campsites; fishing piers, barges, and marinas; picnic tables; swimming

pools and designated freshwater area; boat slips and stalls; tennis courts; and trail miles.

- Of the State's overall 1968/1970 requirements, for additional facilities of all types, 50 percent are needed in the urban areas with the remainder needed in the rural areas.
- As with recreation land, the distribution of facilities with respect to population centers is often inadequate, primarily because good recreational lands and waters are not evenly distributed across the State.
- In the development of recreational facilities, more attention and consideration should be given to the requirements of the physically handicapped and the elderly.
- Areas that should receive primary consideration for recreational purposes include cultural (pre-historic, historic, and archaeological sites) and significant environmental areas (flood plains, shorelines, wetlands, streams, unique natural areas, caves, and wildernesses).

URBAN FINDINGS

Urban developed recreation land requirements totalled 27,000 acres in 1968/1970, and are expected to increase to 62,000 acres by 1980, and to 188,000 acres by 2000. These reflect increases of 62 percent, 142 percent, and 432 percent over the existing 46,621 acres of developed land.

- The metropolitan areas accounted for the greatest proportion of developed recreation land requirements with nearly 85 percent, followed by cities and towns with approximately 7 percent each.
- Among the three types of urban areas, the metropolitan areas are expected to continue to have far greater requirements for recreational facilities than cities and towns.
- Recreation water requirements amounted to 5,700 surface acres in 1968/1970 and are expected to increase by 30 percent to 15,000 surface acres by 1980 and by 107 percent to 54,000 surface acres by 2000 over the existing supply of 50,741 surface acres.
- Metropolitan areas accounted for 52 percent of the total recreational water requirements in 1968/1970, followed by towns with 33 percent, and cities with 15 percent.
- The facility requirements with the greatest increases in urban areas are expected to be acres of playgrounds, basketball courts, swimming pools (during the 1968/1970-2000 period), baseball/softball fields, and tennis courts.

RURAL FINDINGS

- Developed recreation land requirements for the rural areas of Texas totalled 47,000 acres in 1968/1970, and are expected to increase to 150,000 acres by 1980, and 351,000 acres by 2000, increases of 35 percent, 114 percent, and 267 percent over present developed land acreages.
- While rural recreation water requirements were insignificant in 1968/1970, they are expected to increase to over 9,000 surface acres in 1980, and jump to 49,000 surface acres by 2000.
- Particular emphasis should be given to providing rural facilities for activities that occur in conjunction with one another, or in "packages," such as camping and fishing or boating and fishing. This will ensure the provision of facilities for the most prevalent activities, as well as the most prevalent activity combinations.

During the 1968/1970-2000 time period, the facility requirements with the greatest increases in rural areas are expected to be picnic tables, acres of playgrounds, boat slips and stalls, boat ramps and piers, and marinas.

SUMMARY OF RECOMMENDATIONS, PRIORITIES AND RESPONSIBILITIES

In the State outdoor recreation planning effort, the State must present recommendations and priorities to guide the provision and development of lands, waters, and facilities throughout the State. These recommendations and priorities should be directed to responsibilities of federal, state, regional, and local governments and the private sector, and based on the needs of the people of Texas.

A very basic step toward the provision of outdoor recreation opportunities is the establishment of general policies on which to build. These general policies provide the governmental agencies and private enterprises with recommended tasks which are basic to the outdoor recreation effort in Texas. Only after the establishment of general priorities is it practical to assign more detailed responsibilities. As general guidance, Table 1-1 outlines estimated 1975-1980 recource requirements and percentages of responsibility that are suggested to federal, state, local and private entities for consideration.

It is estimated that an additional 211,400 acres of recreational land should be developed in Texas between 1975/1980, either at existing undeveloped recreational lands or through acquisition of new lands. As a result of joint meetings held among the State's major outdoor recreation suppliers, public entities should strive to provide approximately 140,800 acres, while private enterprise should be encouraged to provide approximately 70,500 acres. Roughly 62,000 acres of these additionally developed lands are estimated to be necessary for the urban areas of the State and 149,600 for the rural areas. Land holding federal agencies, such as the U.S. Army Corps of Engineers, National Park Service, U.S. Forest Service, and U.S. Fish and Wildlife Service should strive to provide an

TABLE 1-1.

RECOMMENDED RESPONSIBILTIES FOR PROVIDING DEVELOPED RECREATION LANDS AND FACILITIES IN THE RURAL AND URBAN AREAS, 1975–1980[1]

DEVELOPED RECREATION LANDS & FACILITIES	RURAL AREAS						URBAN AREAS			
	1980 Rural Resource Requirements	Federal	State[2]	Local	Private[3] Sector	Total	1980 Urban Resource Requirements	Municipal	Private[3] Sector	Total
Developed Recreation Land	149,609 acres	14%	19%	31%	36%	100%	61,827 acres	73%	27%	100%
Inland	120,377 acres	15%	21%	29%	35%	100%	---	---	---	---
Saltwater	29,232 acres	5%	10%	37%	48%	100%	---	---	---	---
Campsites	48,792 sites	---	---	---	---	---	---	---	---	---
Inland	33,637 sites	19%	24%	20%	37%	100%	---	---	---	---
Saltwater Associated	15,155 sites	4%	11%	25%	60%	100%	---	---	---	---
Playgrounds	568 acres	8%	10%	61%	21%	100%	785 acres	90%	10%	100%
Golf Courses	40 holes	0%	0%	20%	80%	100%	3,935 holes	62%	38%	100%
Baseball/Softball	187 fields	1%	<1%	73%	26%	100%	166 fields	97%	3%	100%
Picnicking	81,518 tables	---	---	---	---	---	4,709 tables	90%	10%	100%
Inland	66,157 tables	16%	23%	33%	28%	100%	---	---	---	---
Saltwater Associated	15,361 tables	3%	9%	44%	44%	100%	---	---	---	---
Tennis	---	---	---	---	---	---	10,430 courts	60%	40%	100%
Basketball	---	---	---	---	---	---	840 courts	99%	1%	100%
Football	---	---	---	---	---	---	610 fields	100%	0%	100%
Boating Ramps	2,568 ramps[4]	---	---	---	---	---	415 ramps	---	---	---
Inland	2,339 ramps[4]	17%	17%	22%	44%	100%	320 ramps	53%	47%	100%
Saltwater Associated	229 ramps[4]	2%	7%	31%	60%	100%	95 ramps	81%	19%	100%
Boat Slips & Stalls	40,357 slips/stalls	---	---	---	---	---	---	---	---	---
Inland	36,330 slips/stalls	0%	0%	0%	100%	100%	---	---	---	---
Saltwater Associated	4,027 slips/stalls	0%	0%	0%	100%	100%	---	---	---	---
Fishing Facilities	54,958 lin. yds.	---	---	---	---	---	---	---	---	---
Inland (Piers, Barges, Marinas)	30,344 lin. yds.	19%	23%	25%	33%	100%	---	---	---	---
Saltwater Associated (Piers and Jetties)	24,614 lin. yds.	4%	14%	34%	48%	100%	---	---	---	---
Swimming Pools	699,344 sq. yds.	4%	4%	30%	62%	100%	660,170 sq. yds.	70%	30%	100%
Swimming in Designated Areas	39,575,248 sq. yds.	---	---	---	---	---	---	---	---	---
Inland	18,763,550 sq. yds.	22%	16%	26%	36%	100%	---	---	---	---
Saltwater	20,811,698 sq. yds.	1%	7%	53%	39%	100%	---	---	---	---
Bicycle Trails	1,137 miles	9%	12%	69%	10%	100%	616 miles	100%	<1%	100%
Horseback Riding Trails	1,990 miles	5%	8%	11%	76%	100%	---	---	---	---
Combined Walk, Hike, and Nature Study Trails	1,684 miles	---	---	---	---	---	1,235 miles	91%	9%	100%
Inland	1,480 miles	20%	38%	28%	14%	100%	---	---	---	---
Saltwater Associated	204 miles	56%	7%	31%	6%	100%	---	---	---	---

[1] The responsibility allocations presented are set forth as guidance for public agencies. Any agency could provide facilities and/or areas on a concession basis, if so desired.

[2] Also includes water districts.

[3] Includes private enterprise, quasi-public organizations, and private landowners. Saltwater associated responsibilities for the private sector are indicated to allow private enterprise opportunity, as is appropriate under the Texas Open Beach Act.

[4] Two lanes per ramp.

estimated 21,000 acres of developed recreational lands at existing areas or areas to be completed by 1980. State agencies, such as the Texas Parks and Wildlife Department, river authorities, and various special districts should attempt to provide approximately 28,000 additional acres of developed lands, while counties should provide 46,000 and municipalities approximately 45,100 acres.

In providing these opportunities, demand characteristics and geographic placement are of as great a significance as the developed lands themselves. Certain areas of the State are lacking in opportunities, while others require relatively few new ones. In seeking to provide additional opportunities, all entities should place higher priority on actions in or near the larger urban areas, along the Gulf Coast, and, generally, in the eastern one-half of the State. Detailed descriptions of priority areas are presented later in this volume for further guidance.

All entities in Texas also should place higher priority on providing better land accessibility to existing and planned inland and coastal waters which offer recreational opportunities. This could be done through various means, such as considering legislation which would increase the financial capabilities of the State Boat Ramps, Buoy and Marker, and Beach Cleaning Programs; seek the establishment of a State waterway and trail system; and provide substantial financial state grants-in-aid assistance to local governments.

Recreational waters in Texas can support most of the current boating, skiing, and boat fishing demand on a statewide basis. However, the current supply of waters should be increased by approximately 103,000 surface acres by the year 2000. When one looks at geographical distribution of the various reservoirs in the State, or along the Gulf Coast, where a majority of water recreation takes place, two major correctional actions need to be

taken if recreationists are to have what they would prefer — 1) almost all of the larger urban areas of the State should be provided with additional water acres when possible, and 2) land access to existing reservoirs, rivers, and streams, especially in and near urban areas and along the Gulf Coast, should be greatly improved.

New facilities to support outdoor recreation activities, such as campsites, picnic tables, trails, etc., should be provided all over the State. Almost every urban area, all rural areas, and each region along the Gulf Coast are estimated to be lacking in varying numbers and types of facilities, with the more acute requirements occurring in the 24 standard metropolitan statistical areas, most small communities, and the rural areas of the eastern half and mid-coastal areas of the State.

Surveys, meetings, discussions, and conferences conducted by the State have revealed several major areas of outdoor recreation which should be improved in Texas if recreational requirements are to be met. First, many public entities, particularly federal, state, and municipal entities, have recognized requirements for additional recreational opportunities and in fact have plans to provide more. However, funds are often not available, particularly at local government levels, where the bulk of recreational demands are. Local governments repeatedly cite a lack of local funds with which to provide new areas, even a lack of funds to match existing state and federal recreation assistance grant-in-aid programs. Second, the recreational resource management capabilities of state and

local entities should be improved. Counties have no powers to manage resources by such tools as zoning, and are currently limited in the amount of funds they may spend per year. The Coastal Zone's many fine public beaches have not been made the responsibility of either state or local governments. There are not enough organized parks and recreation departments at local government levels.

As can be seen, all public entities in Texas should assume more responsibilities, if the recreational requirements and preferences of highly urbanized Texas, the second largest and third most populous state, are to be provided.

SUMMARY OF ACTION PROGRAMS

The State of Texas will undertake various actions during the 1975/1980 time period in order to improve recreational opportunities offered by federal, state, local and private entities. These actions are for a variety of functions, and further detail is provided later in this volume. In summary, the State's actions are divided into direct programs (designed to provide actual outdoor recreation opportunities); resource allocation and management; technical assistance programs; planning programs; research; education and information programs; governmental coordination; financial assistance programs; and operation of the Land and Water Conservation Fund program.

Through direct program actions, the State will seek to increase annual funding levels for the State Buoy and Markers and Boat Ramp Programs; increase annual funding to allow additional local government participation in the State Beach Cleaning Program; continue to obligate State Park Bond Funds for the acquisition and development of parks in the state systems; continue to utilize funds for the acquisition and development of state parks, based on annual disbursements from the State Comptroller, and received from a portion of the state tax on cigarettes; examine the feasibility of providing the funding necessary for the Texas Conservation Foundation to function as a more effective organization. Also, the State will take action to establish a statewide recreation waterways and trails system; to continue the planned acquisition of new state park lands; to continue the planned acquisition and development of 13 historic sites and structures; to continue efforts to provide improved fishing opportunities; and to continue to enforce and regulate existing laws and regulations pertaining to water and air quality.

The State will undertake, in relationship to the allocation and management of recreation resources, various actions which include continued provision of fish for stocking streams, lakes or ponds; continued removal of rough fish from public waters to improve the propagation and preservation of game fish; continued efforts for eradication of noxious vegetation; continued trapping and transplanting of surplus wildlife species; encouragement of the employment and utilization of qualified wildlife and recreational personnel; encouragement of the utilization of flood-prone areas, waterways, aquifer recharge areas and other similar areas for recreational purposes; determination of the feasibility of establishing multiple-use resource management policies for state-owned lands; and, where feasible, encouragement of proper placement of air and water pollution sources to avoid locations upstream, upwind, or adjacent to existing recreation areas and known state significant natural areas.

In addition, the State will seek to increase the ability of various entities to provide more and better-coordinated recreational activity for technical and financial assistance, research and education, and local and regional government planning. The State will encourage Federal agencies in determining the necessity and improving the provision of recreational areas of federal land holdings, heightening the provision of federal technical and financial assistance to local governments, and establishing more formalized and coordinated recreation information gathering and distribution systems among federal, state, regional and local entities. The State will also encourage the federal government to provide additional funds for recreation development to federal agencies operating recreation areas in Texas.

In order to allow improved capability in providing outdoor recreation opportunities in Texas, selected state and local agencies should encourage the Legislature to consider, but not be limited to, measures which ease the current restrictions placed on counties by Article 6079b, V.T.A.C.S., as amended; to seek to establish a state program of financial assistance to local governments; to encourage or require the reclamation of surface mined lands for recreational purposes; to clarify and define state and/or local entity responsibilities for enforcement of the Texas Open Beaches Act; and to increase county authorities and responsibilities for the management of potential recreational resources.

The preceeding volume summary has presented an overview of information to be presented in the volume in more detail. The following sections provide certain specific information concerning the physical, natural, and sociological characteristics of Texas, and the supply, demand, and resource requirements for outdoor recreation in the State. Finally, recreational problems and special considerations, recommendations and priorities, recommended responsibilities, and action programs are set forth. The reader is encouraged to review this material in depth to obtain a complete picture of outdoor recreation in Texas.

Chapter 2

TEXAS-A PERSPECTIVE AND DESCRIPTION

LOCATION AND A PERSPECTIVE

People are the central focus of recreational planning in Texas, along with a sincere desire to conserve the State's valuable natural resources and fragile ecosystems. The importance of recreation in supporting the desired healthier, more productive society in Texas becomes even more crucial as expectations of population growth, accompanied by simultaneous accumulations of greater urban concentrations, change from projections to realities with the passing of time. Not only is recreation important to a society as a whole, it is a means by which the individual may pursue self-respect, self-fulfillment, and a sense of pride and participation. Providing adequate recreation opportunities to the people of Texas is contingent upon characterizing man's activities, identifying the potential of the State's recreation resource, and analyzing the interactions of recreational supplies and demand. This section is devoted to summarily describing the State's location, history, population characteristics, natural resources, and economy, understandings of which lend additional meaning to the elements of supply and demand in the following sections.

Texas, the second largest of the fifty states, is bordered on the east by Louisiana and Arkansas, on the north by Oklahoma, on the west by New Mexico, and on the south by Mexico and the Gulf of Mexico. From East to West, Texas is located in the center of the United States; from North to South, it is one of the southernmost states. (See Figure 2-1.)

Texas occupies about seven percent of the total water and land area of the United States. Its 267,339 square miles (262,840 square miles of land and 4,499 square miles of inland water) of total land and water area may be compared with Alaska's 586,412 square miles (the largest state) or with California's 158,693 square miles (the third largest state). Distances in Texas amplify the size of the State. For example, a recreationist journeying from the West Texas city of El Paso to the East Texas city of Orange would have to travel 900 road miles.

FIGURE 2-1. TEXAS: LOCATION AND PERSPECTIVE IN THE UNITED STATES

Source: The University of Texas at Austin Bureau of Business Research

HISTORY

The fascinating history of Texas which provides significant potentials for outdoor recreation dates back some 15,000 years ago when the first Texans (called Paleo-Indians by archaeologists) inhabited the geographical area now known as the State of Texas. For several thousand years these early Texans travelled in nomadic bands subsisting on wild animals, fruits, nuts, and berries. White men were first introduced into Texas with the arrival of the Spanish explorers in the early 16th century. These adventurers, while searching for wealth and fame, were the first to explore and map Texas. Although the Spanish failed to locate the riches they were searching for, they did discover and explore vast areas of Texas and the Southwestern United States.

Significant in the series of historical events leading to the independence of Texas was the purchase of the Louisiana Territory in 1803 by the United States. Spanish Texas was a frontier providence to those who would migrate to Texas and eventually defeat the Spanish to declare the independence of Texas on March 2, 1836. The independence of Texas led to its later annexation to the United States, approved on June 21, 1845. Other events of a historical significance affecting Texas' development after its annexation were the Mexican War, Texas entering the American Civil War as a Confederate State, the expansion of the cattle industry in Texas, the expansion of railroad lines in Texas in the 1870's and 1880's, the discovery of oil in Texas in 1867, the development of the Rio Grande Valley as a farm area in the early 1900's, the transition of the population from a rural to an urban society in the 1900's, and the phenomenal population growth in Texas, making its population the fourth largest of the fifty states in 1970 and third largest in 1975.

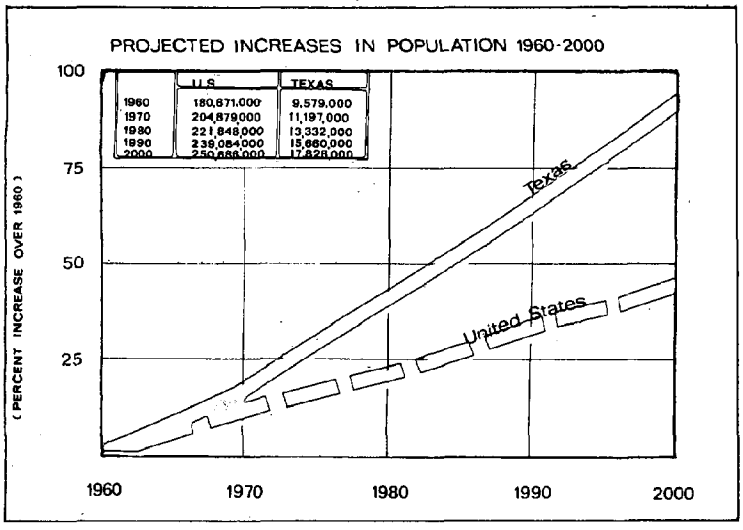
POPULATION*

Between 1960 and 1970 the total population of the United States increased by 24 million to a total of 203.2 million, an increase of 13.3 percent. During the same ten-year period, the population of Texas rose to 11,196,730 residents, an increase of 16.9 percent. In 1970, the total population of Texas was exceeded only by three states—California, New York, and Pennsylvania. The percentage increase in population growth in Texas for the 1960 decade was exceeded by several states; however, only two states, California and Florida, showed a greater numerical increase than the 1.6 million gain of Texas. Population projections (Figure 2-2) indicates a possible increase of approximately 46 million by the year 2000 for the United States. The population in Texas (Figure 2-2) has been projected to increase over 6.6 million between 1970 and 2000, giving Texas a total population in 2000 exceeding 17.8 million residents.

Texans, like U.S. citizens in other states, have migrated from the rural areas to urban areas seeking economic opportunities. Consequently, Texans have moved from rural open space areas to the confines of the urban environment. Across the United States almost 70 percent of the population lived in urban areas in 1970 compared to almost 80 percent in Texas. Even though 80 percent of the population lived in urban areas, Texas ranked 33rd in population density (Figure 2-3) with over 42 persons per square mile. The low population density of Texas is, of course, attributed primarily to the large size of the state.

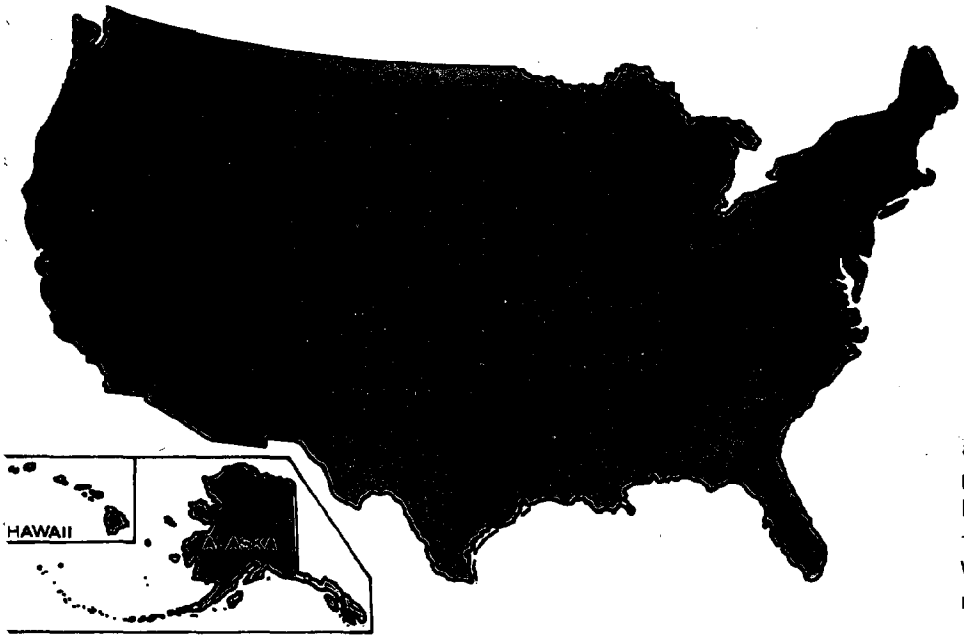
The most significant fact about the population of Texas is the continued shift toward a more highly urbanized society. Review of past and present population trends indicates that the urbanization phenomena will continue in Texas. Since the mid-19th century, Texas has been transformed from a rural to an urban society (see Figure 2-4). Less than 4 percent of the total population resided in urbanized areas in 1850 compared to almost 80 percent by 1970. The total population of Texas became predominantly urban for the first time in modern Texas history between 1940 and 1950. During the 30-year period from 1940 to 1970 rural areas declined in population by 1,227,651, a 32 percent drop from the all time high rural population in 1940 of over 3.5

FIGURE 2-2. POPULATION GROWTH FOR TEXAS AND THE UNITED STATES, 1960–2000



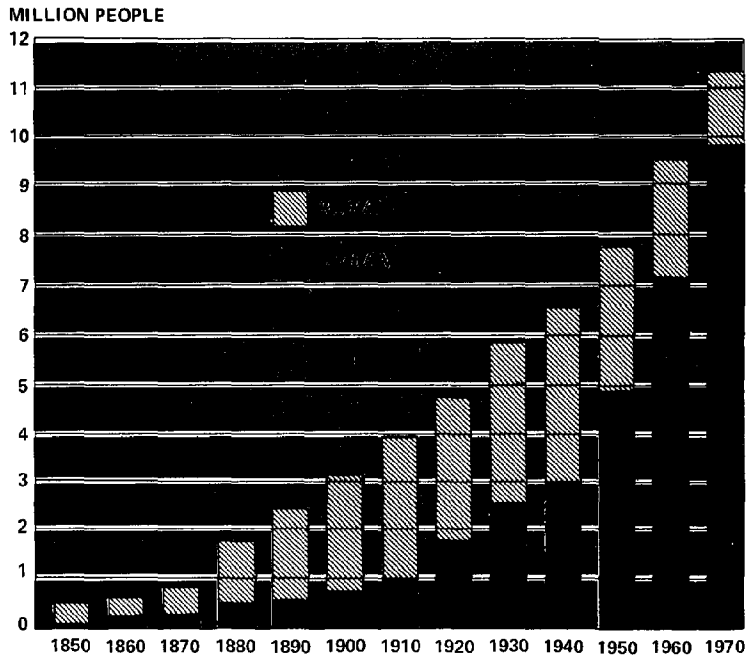
Source: U.S. Bureau of the Census

*Sources: **Outdoor Recreation: A Legacy for America.** Bureau of Outdoor Recreation, U.S. Department of the Interior, (Washington, D.C., U.S. GPO, 1973) p. 6. **Texas Almanac 1972-73.**



Source: Adapted from Outdoor Recreation—A Legacy for America. Bureau of Outdoor Recreation, U.S. Department of the Interior, (Washington, D.C., U.S. GPO, 1973) p. 7.

FIGURE 2-4. TEXAS POPULATION GROWTH, 1850–1970



Source: U.S. Bureau of the Census

million. This decline dropped the rural population to 2,275,784, the lowest since between 1890 and 1900. Recent growth rates have been most dramatic in the SMSA's (standard metropolitan statistical areas) in Texas. The 23 SMSA's recorded in 1970 accounted for 90 percent of the total population increase in Texas occurring from 1960 to 1970. Currently there are 24 SMSA's in Texas as shown in Figure 2-5.

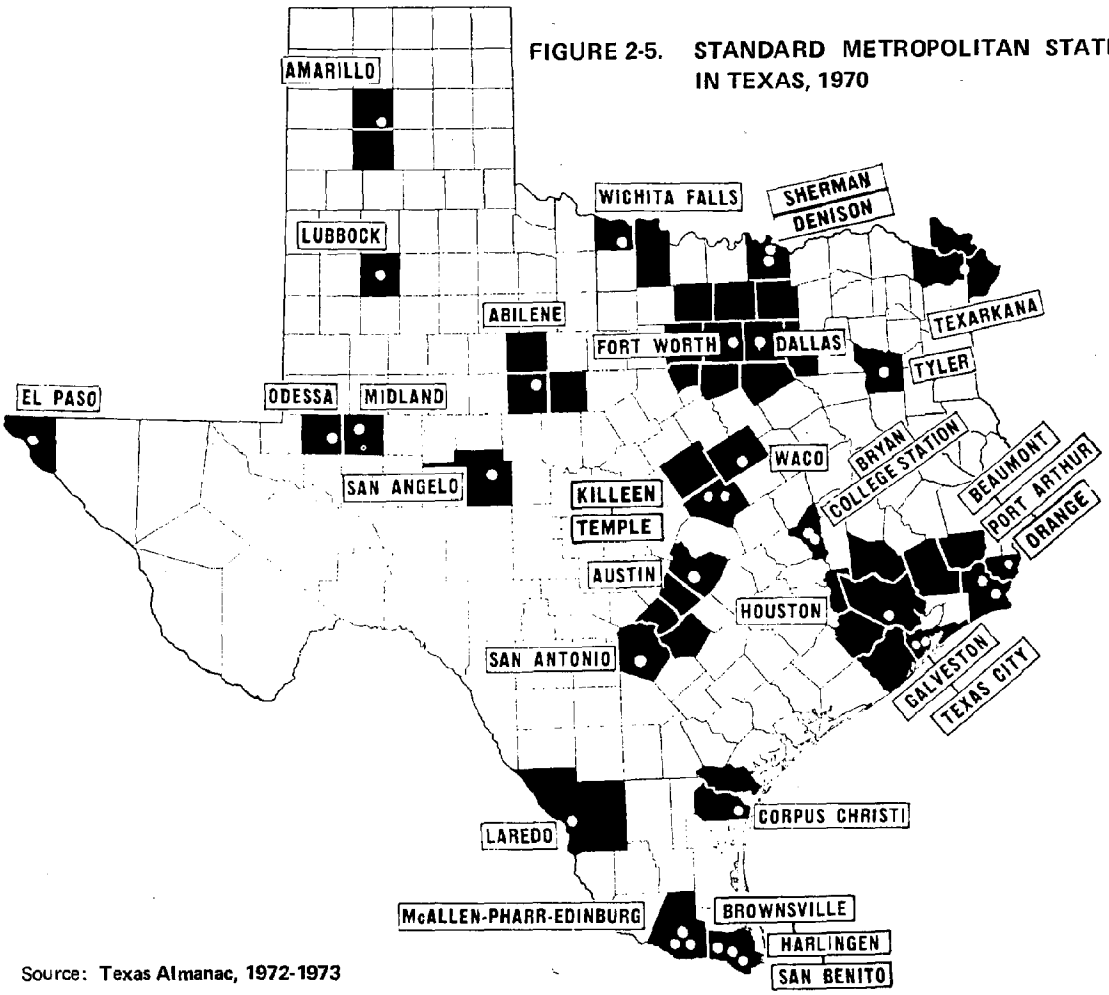
Another important aspect of the population in Texas is the composition by race or ethnic background. In 1970, the composition was approximately 69 percent Anglo, 13 percent Black, 18 percent Mexican-American, and about two-tenths of one percent Indian. While the proportion of Blacks remained relatively constant from 1960 to 1970 (12.4 percent in 1960 and 12.7 percent in 1970), the Mexican-American population reflected a gradual increasing proportion from 14.8 percent in 1960 to 18.4 percent in 1970.

Two other important characteristics of the Texas populations are education and income levels. Of the three ethnic groups—Blacks, Mexican-Americans, and Anglos, Anglos had obtained the highest levels of education, followed in order by Blacks and then Mexican-Americans in 1970. Income (Figure 2-6) and educational levels have increased substantially over the past few decades and are projected to increase in the future, particularly in the urban areas. These changes will in turn cause increases in future outdoor recreation demand levels.

NATURAL RESOURCES

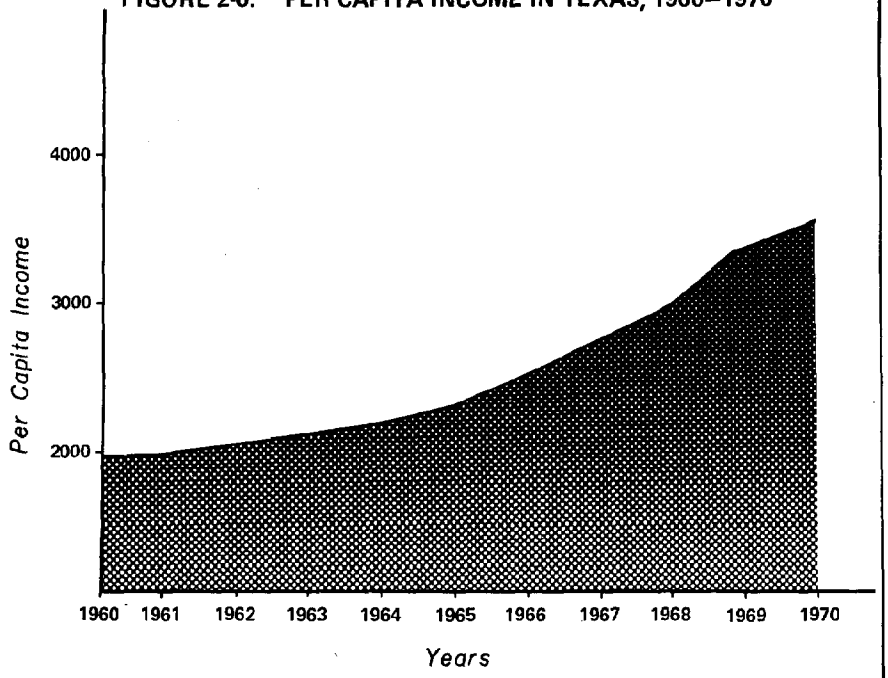
Texas is a geographical crossroads for a wide variety of plant and animal life and other natural resources. This variety of natural resources ranges from the dense forests of humid East Texas to the deserts and mountains of arid West Texas. Between these two

FIGURE 2-5. STANDARD METROPOLITAN STATISTICAL AREAS IN TEXAS, 1970



Source: Texas Almanac, 1972-1973

FIGURE 2-6. PER CAPITA INCOME IN TEXAS, 1960–1970



Source: U.S. Bureau of the Census

extremes are found climatic conditions, vegetation, and wildlife of equal diversities. Natural resources found in Texas contain an excellent base for providing outdoor recreation opportunities. Continued increases in the total population of Texas, chacteristics of the population, and shifts toward a more highly urbanized society combined will continue to accelerate the demands for outdoor recreation opportunities causing greater demands for the natural resources of Texas having recreational potential. This section briefly describes the State's physiographic and natural regions, climate, water resources, and wildlife.

PHYSIOGRAPHIC PROVINCES AND NATURAL REGIONS

Portions of four major physiographic provinces are encompassed by the

Texas boundaries: the Gulf Coast Plains, the Central Plains, the Great Plains, and the Cordilleran Plateau. These four major physiographic provinces are further subdivided into 13 natural regions as follows: Gulf Coast Plains—five regions; Central Plains—four regions; Great Plains—three regions; and that part of the Cordilleran Plateau which passes through Texas is called the Trans-Pecos Region. Figure 2-7 outlines the four physiographic regions and the 13 natural regions.

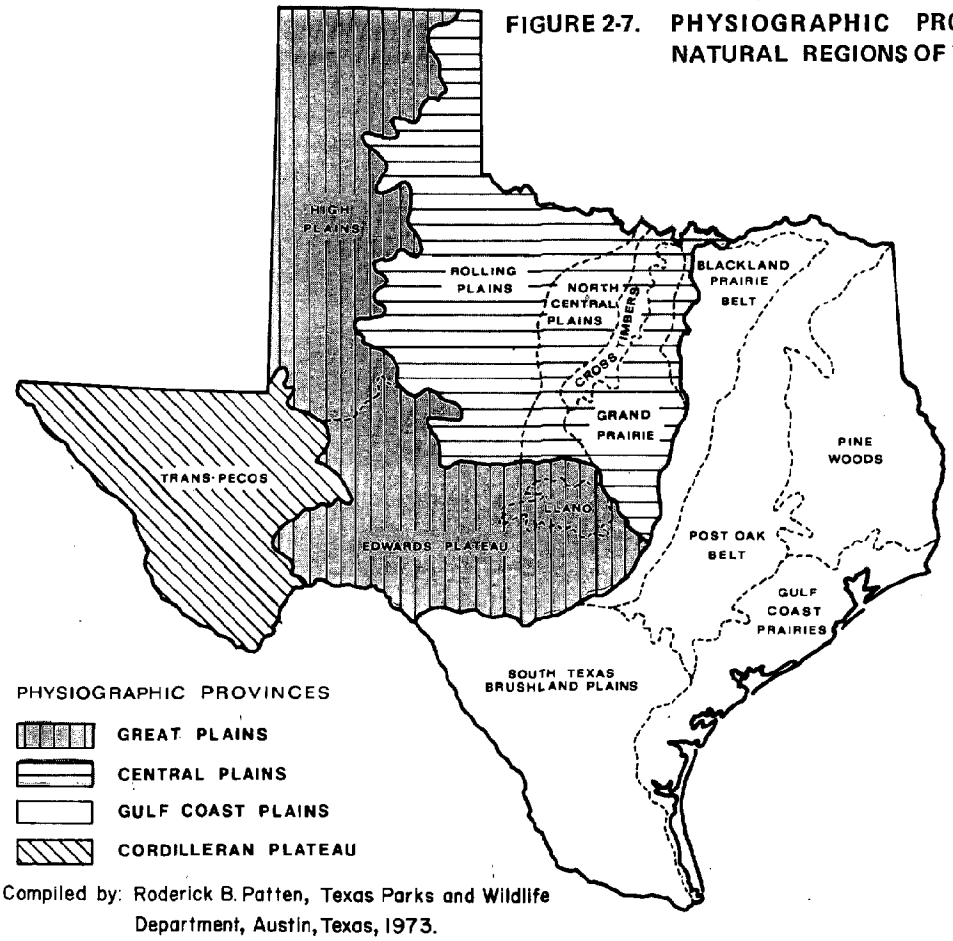
In South Texas the South Texas Plains spreads between the coast and the Rio Grande River. This is brushland country comprised of small trees, scrubs, cactus, weeds, and grasses. Northwest of the South Texas Plains the Edwards Plateau stretches over rolling hills, woodlands, and grassy prairies. In addition to live oak, shinnery oak, elm, mesquite, sycamore, and juniper (cedar), cypress trees also grow profusely along streams. Numerous grasses also grow throughout the area. North of the Edwards Plateau the Rolling Plains stretches from Central to North Texas into the Panhandle. This is a woodland and prairie type area with mesquite and grasses the most commonly found vegetative species. The western half of the Panhandle is comprised of the High Plains, now about one-half native grasslands and the remaining half irrigated for farming. The final major vegetative area is the drought-resistant vegetation comprising the Trans-Pecos Mountain and Basin Area. The principal vegetation includes lechuguilla, ocotillo, yucca, cenizo, agave, and sotol. Penori and ponderosa pine are found in some mountain areas while black grama, burrograss, and fluffgrass is common in the desert areas.

Within Texas, the largest of the four major physiographic regions is the Gulf Coast Plains extending into Texas from the east covering over 104,000 square miles or nearly 40 percent of the total area of Texas. Over 70 percent of the people of Texas (77 persons per square mile) reside in the Gulf Coast Plains. The portion of the Gulf Coast Plains located in Texas can be divided into five physiographic regions: the Pine Woods, the Post Oak Belt, the Gulf Coast Prairies, the South Texas Brushland Plains, and the Blackland Prairie Belt. Natural resources found in the Gulf Coast Plains physiographic province having significant recreational value are the abundant wildlife, natural scenery, and freshwater resources of the Pine Woods region, the many miles of open saltwater beaches in the Gulf Coast Prairies region, and a wide variety of wildlife providing hunting opportunities throughout the Gulf Coast Plains physiographic province.

The major physiographic province called the Central Plains extends into Texas from the north covering an area of nearly 58,000 square miles with 30 persons per square mile. The Central Plains can be divided into four physiographic regions: the Cross Timbers, the Grand Prairie, the North Central Plains, and the Rolling Plains. Reservoirs in the eastern half of the Central Plains provide good fishing opportunities. Wildlife species also make hunting a popular recreational activity in the Central Plains.

The Great Plains province is the third major physiographic province extending into the northwest part of Texas out of New Mexico and Oklahoma. Its 70,000 square mile area is divided into the High plains, the Edwards Plateau, and the Llano area. The population density of the Great Plains is 14 persons per square mile. Popular recreational resources in the Great Plains province are the Palo Duro Canyon, the Highland Lakes along the Colorado River, the spring-fed streams, the scenic geological features, and the white-tailed deer providing good hunting.

The fourth major physiographic province in Texas is the sparsely populated Cordilleran Plateau (14 persons per square mile) found in the westernmost part of the State. It has no divisions in Texas and the entire province is called the Trans-Pecos Region. This area, 31,000 square miles, contains Texas' only true mountains with elevations ranging from 2,500 to 8,751 feet above sea level. The Trans-Pecos region offers the recreationist some spectacular scenery, particularly in Big Bend and Guadalupe Mountains National Parks.



Compiled by: Roderick B. Patten, Texas Parks and Wildlife Department, Austin, Texas, 1973.

FIGURE 2-7. PHYSIOGRAPHIC PROVINCES AND NATURAL REGIONS OF TEXAS

Another favorite natural resource found in this area is the wild and scenic Rio Grande River.

CLIMATE

Because of its vast area and geographic location, Texas has three types of diverse climates—maritime, continental, and mountain. The cooler, drier mountain climate is restricted to the Trans-Pecos region. Along a narrow strip confined to the Gulf Coast, the maritime climate is modified so that temperatures are relatively uniform in all seasons. High humidities accompany each season. Most of Texas experiences a continental climate characterized by rapid temperature changes, marked extremes, and large temperature ranges both daily and annually. The most drastic temperature changes occur from early fall to late spring when polar air masses approach from the northwest.

Although dust storms, snow blizzards, tornadoes, hurricanes, drouth, and floods may occur in Texas, the single most prevalent climatic resource Texas has to offer is sunshine which ranges from just under 60 percent of the possible maximum in extreme East Texas to over 80 percent in the El Paso area. Rains occur most frequently in the springtime except in the mountain area where most of the annual rainfall is provided by afternoon summer showers. In the eastern half of the State a secondary peak in precipitation appears during the fall when tropical disturbances move inland. The average annual rainfall varies from over 56 inches along the Louisiana border to less than 8 inches in El Paso.

The plentiful sunshine causes Texas to be hot during the summer months with little contrast from north to south. Daily highs in the 90's are prevalent over the entire State. In the winter a considerable contrast develops. In the Rio Grande Valley it rarely freezes while daily temperatures average below freezing for five months of the year in the High Plains.

The variable climate of Texas is well suited for outdoor recreation. During the summer, clear skies and warm sunny days promote water activities such as boating, swimming, and skiing. During the clear, crisp autumn days, hunting and other active sports such as

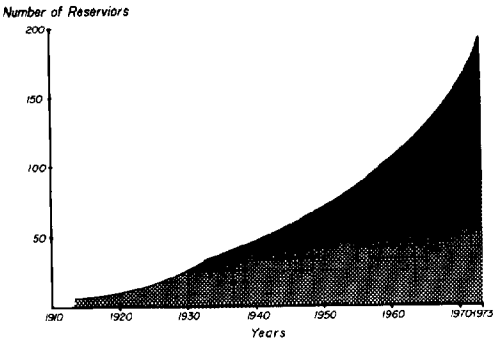
camping, walking, and hiking become very popular. Participation in activities such as fishing and picnicking is heavy from late spring through early fall.

WATER RESOURCES

Wide variations in the annual precipitation falling on the State causes water resources to vary from East to West Texas. Texas' development, largely dependent on water resources, steadily increases the pressure on Texas' water supply. Attempts to ease this pressure include planning the use of water brought in from outside the State; reducing waste, pollution, and loss to noneconomic plants; desalinizing; and modifying the weather to increase rainfall.

Texans get their water from both underground and surface sources. In areas of the State where groundwater resources have not been sufficient to meet local or regional water demands, single purpose water supply reservoirs and/or multi-purpose reservoirs have been constructed by federal, state, and local agencies with the help and guidance of the Texas Water Development Board and pursuant to permits issued by the Texas Water Rights Commission. These lakes provide water for recreational, municipal, industrial, and agricultural use. Natural lakes in Texas are almost non-existent, but approximately 200 major reservoirs have been constructed or are under construction, as shown in Figure 2-8. In addition, there are 80,000 miles of rivers, creeks, and bayous in Texas, and one of the most significant water resources for recreational purposes in Texas is the coastal area. The bay systems, beaches, and Gulf of Mexico serve as important areas for camping, fishing, swimming, boating, picnicking, and hunting. Figure 2-9

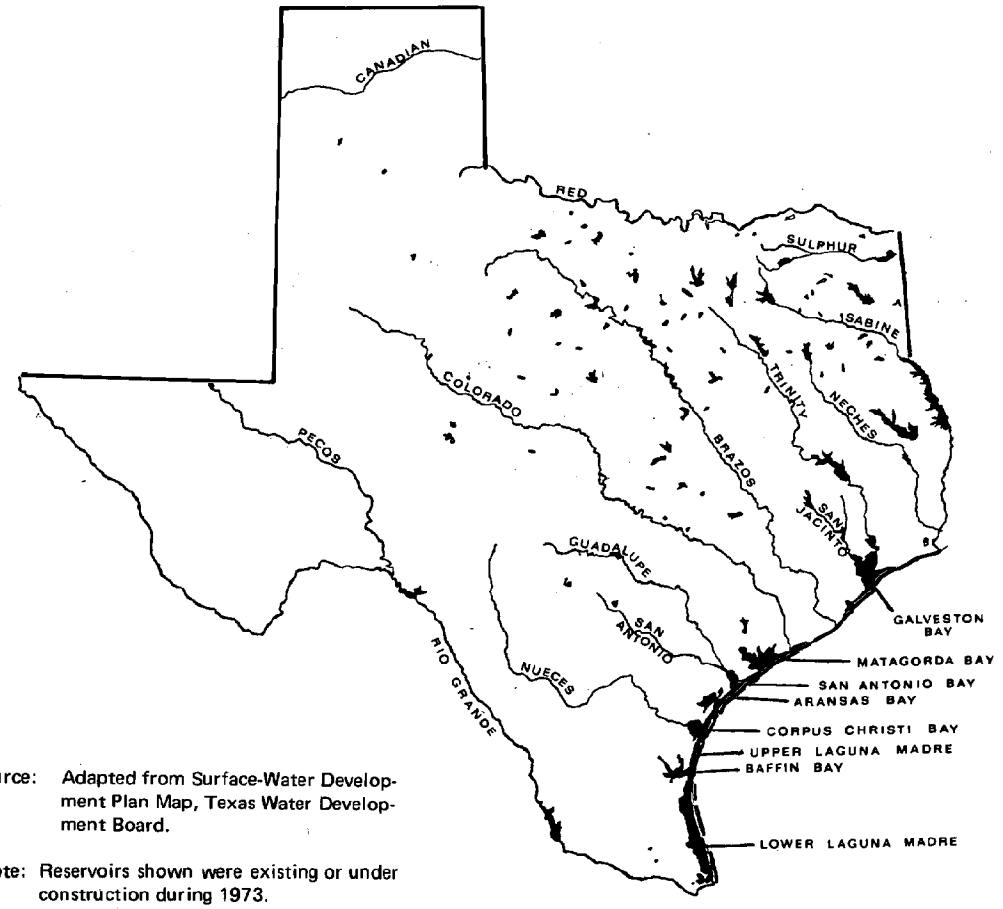
FIGURE 2-8. GROWTH OF MAJOR RESERVOIRS IN TEXAS, 1913–1970



Source: **Texas Almanac, 1972-1973**

Note: Includes only those reservoirs storing 5000 acre-feet of water or more.

FIGURE 2-9. MAJOR RIVERS, RESERVOIRS, AND SALTWATER BAY SYSTEMS IN TEXAS



Source: Adapted from Surface-Water Development Plan Map, Texas Water Development Board.

Note: Reservoirs shown were existing or under construction during 1973.

depicts the major rivers and reservoirs in Texas and identifies some of the more important saltwater bays. Another important water resource in Texas is the many small "tanks" or "ponds" constructed primarily by private landowners. These small bodies of water serve a variety of purposes from watering livestock to supporting private recreational activities.

WILDLIFE AND FISH RESOURCES

Wildlife are important to Texas. Birds, animals, and fish have esthetic and cultural appeal, as well as substantial recreational and economic value. The diversified environments in Texas produce a wide variety of wildlife, including approximately 211 species of freshwater fish, 59 species of amphibians, 167 species of reptiles, about 600 species of birds, and 138 species of mammals.

Hunting and fishing are deep-rooted traditional activities in Texas. The lack of public domain and the trespass law has effectively transferred the ownership of game to the private landowners, although by statute game animals are the property of the people of the State. While hunting and fishing are two of the most popular recreational activities in Texas, many people also enjoy the esthetic and cultural values provided by wildlife.

The distribution of some wildlife (shrews, moles, bats, skunks, racoon, rabbits, mice, white-tailed deer, mourning dove, quail, bass, snakes, rats, gophers, squirrels, bobcats, and coyotes) is statewide. Gray fox, nutria, and armadillos range over the eastern two-thirds of the State; and porcupines are seen west of the balcones escarpment. A few beaver live in the Post Oak Belt, Pine Woods, the Rio Grande Valley, and the Edwards Plateau. A few black bear and puma, or mountain lion, still roam the mountainous areas of the Trans-Pecos region. Game animals and fish are found in each physiographic province of Texas as follows:

Gulf Coast Plains: white-tailed deer, turkey, bobwhite quail, gray squirrel, channel and blue catfish, largemouth and white bass, black and white crappie, muskrats, alligators, ducks, geese, cranes, many species of saltwater fish, javelina, whitewinged and mourning doves, and a few pronghorn antelope.

Central Plains: white-tailed deer, mourning doves, quail, squirrels, catfish, bass, and crappie.

Great Plains: white-tailed deer, turkey, squirrels, mourning doves, quail, catfish, bass, crappie, javelina, pronghorn antelope, mule deer, scaled quail, and bobwhite quail.

Cordilleran Plateau: mule deer, pronghorn antelope, javelina, scaled quail, catfish, and bass.

Some of the wildlife that once thrived in Texas no longer flourish here. As a result, many of these creatures are now considered endangered, including nine species of birds, five species of mammals, five species of fish, and several species of reptiles and amphibians. Already extinct to Texas are the gray wolf, bison (except in captivity), greater prairie chicken, passenger pigeon, and possibly the ivory-billed woodpecker.

ECONOMIC RESOURCES

Texas' economy depends primarily on the State's natural resources. Texas' natural wealth includes large mineral deposits, especially natural gas and oil; millions of acres of fertile soils, thick forests, and grasses; and a plentiful supply of fish and game. Goods produced in Texas are composed of about one-fourth mineral products, one-sixth agricultural products, and slightly less than three-fifths manufactured products. Some of the chief sectors of Texas' economy (including agribusiness, industry, transportation, and recreation) are treated briefly in the discussions that follow.

INDUSTRY

In 1969, manufacturing accounted for 58 percent of the total goods produced in Texas, over $22.2 billion, and in 1970, Texas ranked eighth in the United States in manufacturing. Texas' three most important manufacturing industries (in manufacturing output), as well as the fastest growing in 1970, were, in order, the chemical industry, transportation equipment, and petroleum refining.

AGRIBUSINESS

Agribusiness, a combination of agriculture and business that includes all phases of agriculture, adds more than $7.3 billion yearly to the Texas economy. This $7.3 billion includes an estimated $2.1 billion from manufacturing and supplying essentials needed for the production of crops and livestock, cash receipts averaging $1.8 billion for livestock, poultry, and their products; $1.1 billion for crops; and $2.3 billion for manufacturing, processing, and other steps in distributing agricultural commodities to consumers. Texas ranks consistently high among the states in producing agricultural commodities, a position that Texas should continue to hold as the State meets its increasing role in supplying agricultural products not only for the United States but for other nations as well.

MINERALS

The total value of Texas minerals exceeded $6 billion for the first time in 1970. Each year during the 1960's a new peak was reached in mineral values. Texas leads all states in the total value of mineral production and in the production of crude petroleum, natural gas, natural gas liquids, and magnesium. Texas also has the world's largest petrochemical industry.

RECREATION

Recreation's impact on the Texas economy has increased steadily in recent years and today its contribution is an enormous one. While the total contribution is difficult to measure with any degree of precision, it is easy to visualize the magnitude considering total expenditures for recreation equipment, including camping, boating, fishing, and hunting equipment, recreational vehicles, etc., expenditures for food, lodging, travel, etc. The total investments for camping, boating, and hunting equipment in 1969 as estimated from data collected in the 1968-1969 Texas Household Demand Survey was $906 million. Expenditures on picnicking trips amounted to $42 million, boating $64 million, camping $168 million, and fishing $168 million. It was also estimated that $223 million was spent yearly on vacations, while expenditures on all types of trips amounted to approximately $3 billion. On recreational and non-recreational trips to Texas in 1970, out-of-state visitors spent about $1.5 billion. These figures demonstrate the tremendous importance of recreation to the economy of Texas, an importance that should increase with projected increases in recreation demand.

This section has briefly described the history of Texas, the characteristics of the Texas population, those natural resources in the State which may provide recreational opportunities, and the State's economy. The many cultures found in Texas indicate that current and future outdoor recreation demands will encompass a wide range of recreational activities. Increases in the total population in the State should cause increases in outdoor recreation demands even if participation intensities continue at current levels. Changes in population characteristics, such as rural to urban migrations and increases in income and educational levels, will cause demands to intensify for some activities and at the same time remove the population further from the basic recreational resources. All of these factors will affect the supply of natural resources and man-made facilities needed to meet increasing and changing outdoor recreation demands of the people of Texas and those who visit Texas to participate in outdoor recreation activities.

Chapter 3

WHAT TEXAS HAS—OUTDOOR RECREATION OPPORTUNITIES

As indicated in the previous chapter, very dramatic social changes have been made in recent decades in Texas. More rapid changes are expected during the 1970's and during future decades in terms of population growth and dispersion, and changing social and economic patterns. As a result of these changes, the use of the State's resources for recreation has increased significantly. This trend is expected to continue into the future as the factors influencing recreation behavior continue to change.

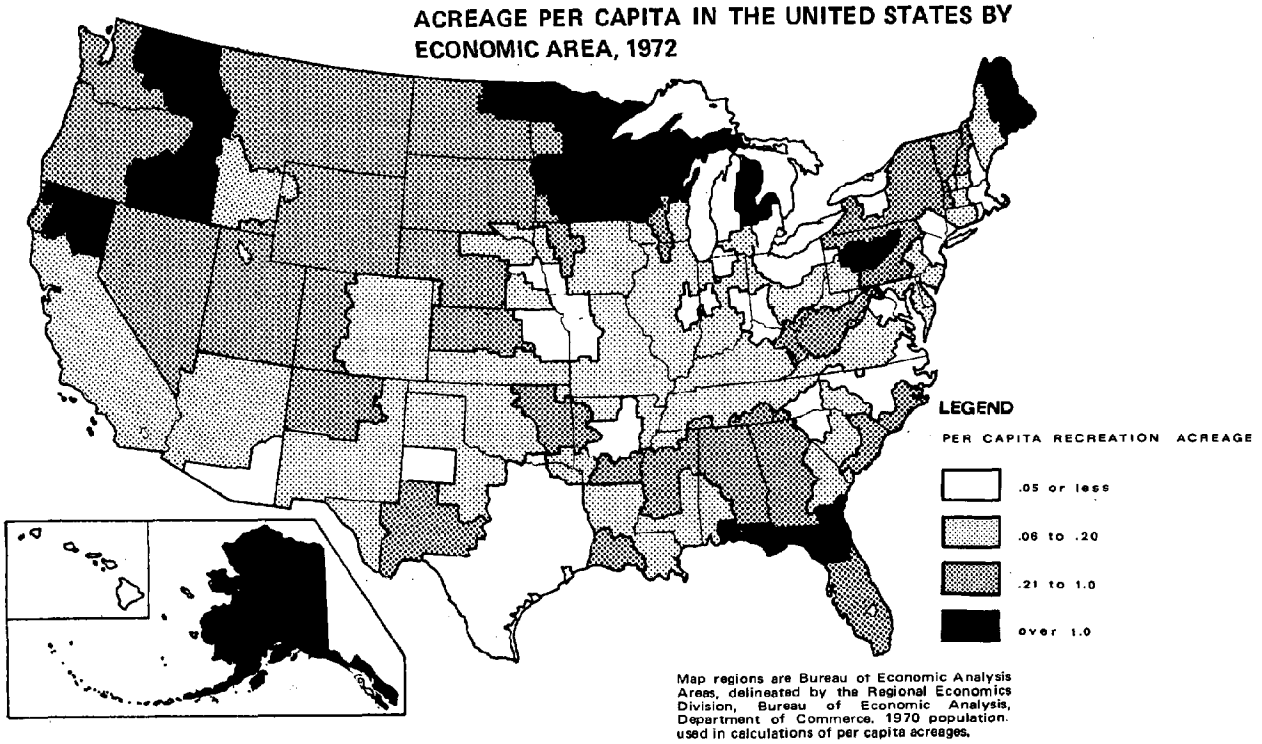
The purposes of this chapter are to compare Texas with other states, to more specifically summarize the designated public use recreation resources of the State, and, in general, furnish an overview of the available recreational opportunities provided through Texas' lands, waters, and facilities devoted to recreational use by the various public and private recreation suppliers in the State.

A NATIONAL COMPARISON

In December of 1973, the Bureau of Outdoor Recreation, U.S. Department of the Interior completed publication of the National Outdoor Recreation Plan titled **Outdoor Recreation A Legacy for America**. The national analysis of the public recreation supply of state and locally administered lands devoted to recreation within the United States, as depicted in the adapted Figure II, indicates that there are .05 recreation acres, or less, per person for the most densely populated, southeastern one-half of Texas. By comparing that section of the State with other states, Texas has the largest total area so designated in the United States. By including federally administered recreation lands in the relationships depicted in Figure 3-1, no significant changes in per capita land acres occur within the economic districts of Texas, with the possible exception of the areas which include the Padre Island National Seashore and the Big Thicket National Biological Preserve.

Texas per capita recreation acreages are shown in Figure 3-2 by the 37 Texas Outdoor Recreation Analytical Planning Regions (Figure 3-3 depicts regional populations and relative recreation and land acreages). As Figure 3-2 indicates, only three analytical regions in the State have more than 1.0 acre of recreation land per person. In contrast, seventeen regions have .05 acres or less per

FIGURE 3-1. STATE AND LOCAL PARK AND RECREATION ACREAGE PER CAPITA IN THE UNITED STATES BY ECONOMIC AREA, 1972



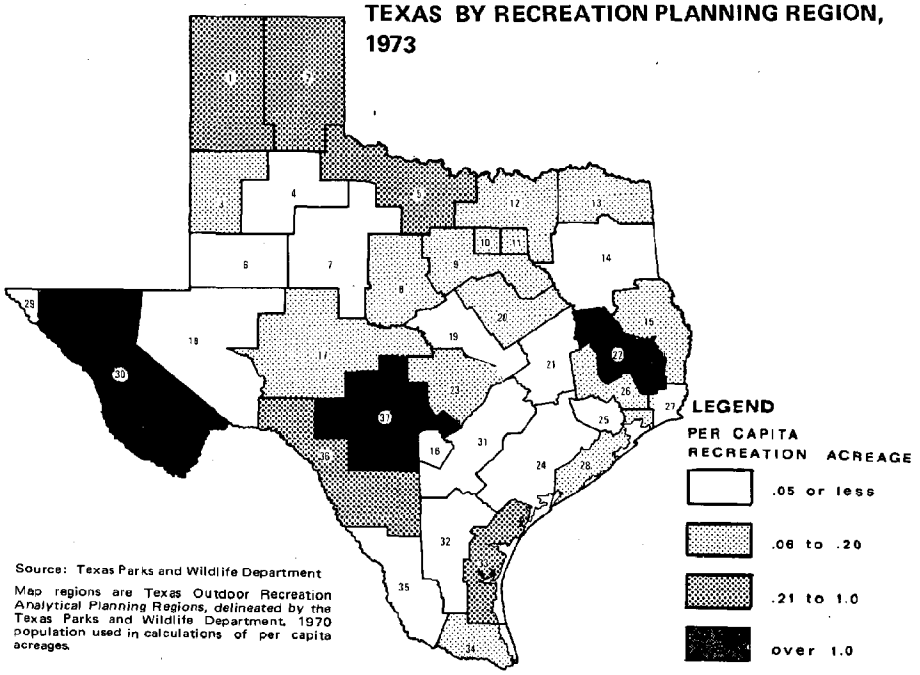
SOURCE: Adapted from **Outdoor Recreation--A Legacy for America.** Bureau of Outdoor Recreation, U. S. Department of Interior. (Washington, D. C., U. S. GPO, 1973) p. 15.

person, twelve regions have between .06 and .20 acres per person, and five regions have between .21 and 1.0 acres per person.

As clearly indicated by Figure 3-1 , public recreation lands in Texas are in relatively short supply compared to other states. Although strong emphasis, yielding significant results, has been placed on outdoor recreation in the past decade, Texas still ranks far below most of the 49 other states with respect to publicly administered recreation lands.

Also documented in the National Plan, national shoreline ownership is presented in Figure 3-4 for comparing the Texas Gulf Coast with nationwide shoreline resources by administration. Since water resources, especially beach and shoreline areas, are prime

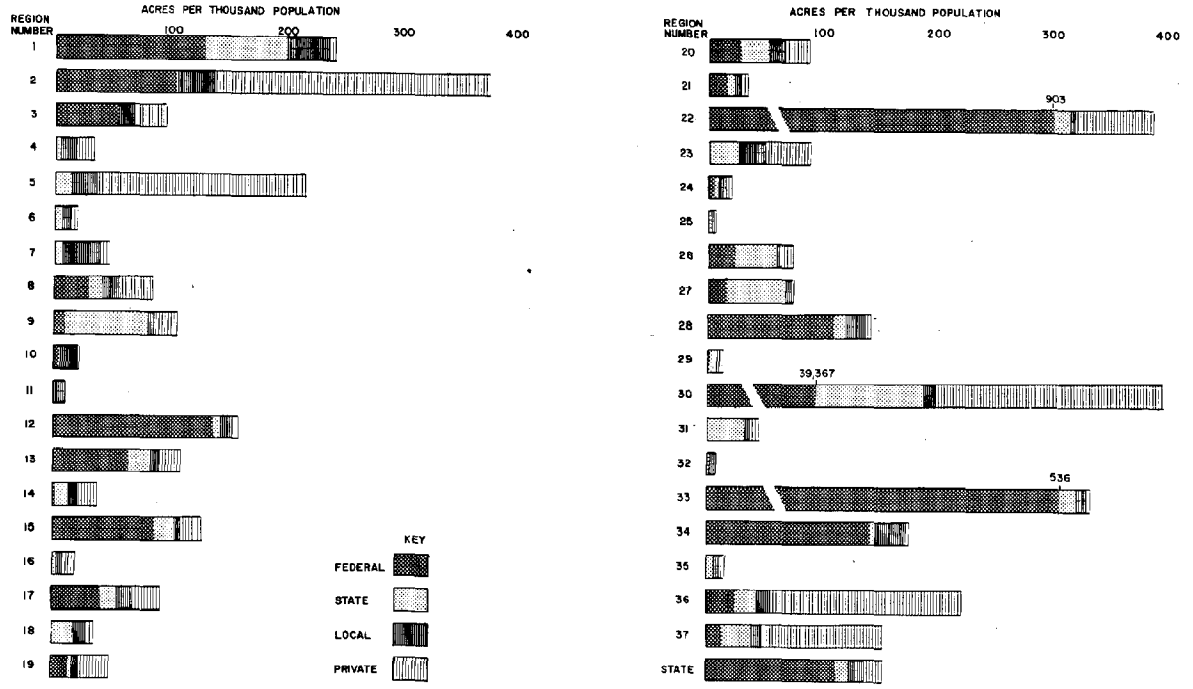
FIGURE 3-2. PARK AND RECREATION ACREAGE IN TEXAS BY RECREATION PLANNING REGION, 1973



Source: Texas Parks and Wildlife Department

Map regions are Texas Outdoor Recreation *Analytical Planning Regions, delineated* by the Texas Parks and Wildlife Department. 1970 population used in calculations of per capita acreages.

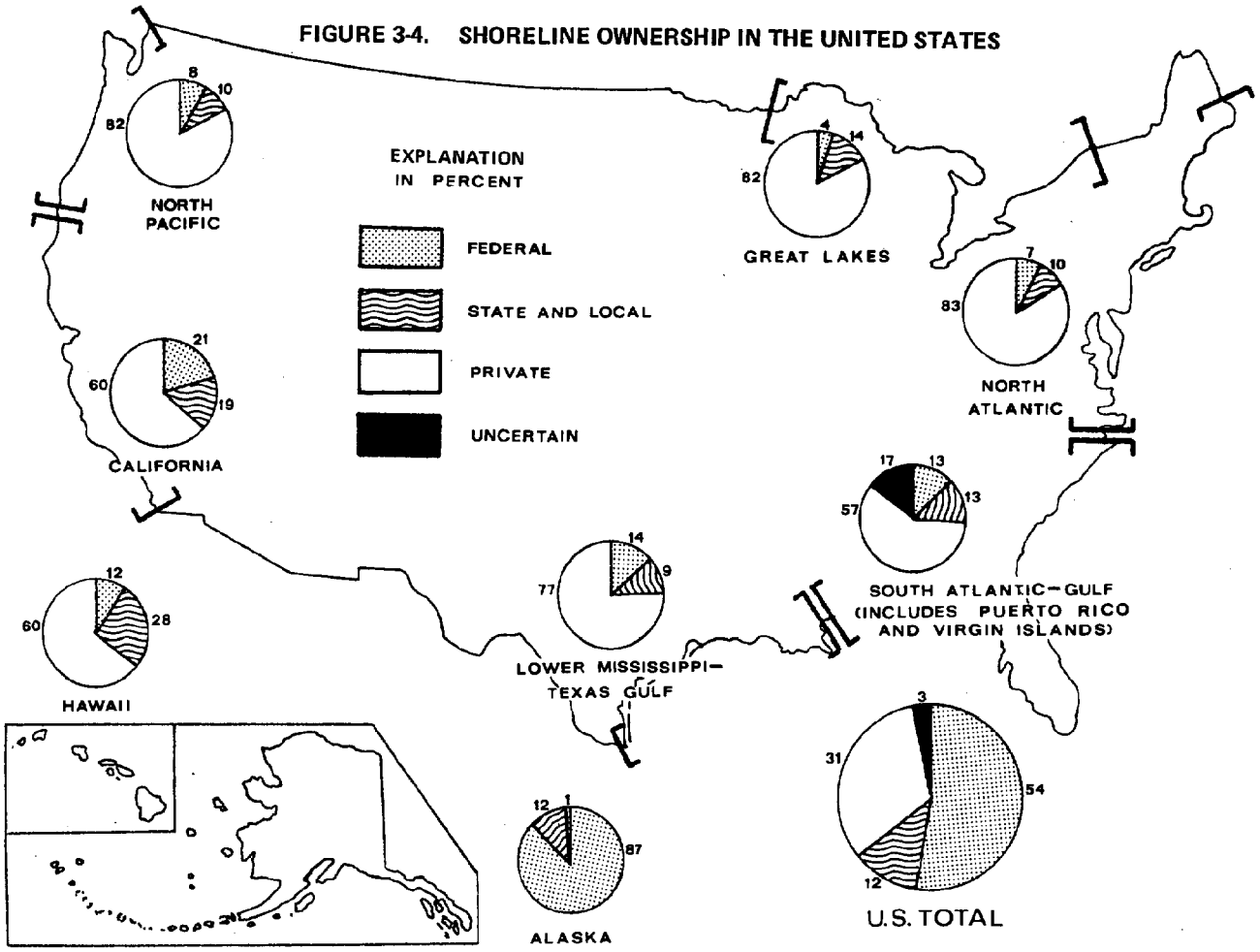
FIGURE 3-3. PARK AND RECREATION ACREAGE PER CAPITA IN TEXAS BY ADMINISTRATION BY RECREATION PLANNING REGION, 1973



SOURCE: Regional population figures were obtained from the Rural Volume, Pts. II and III. Regional Recreation land acres per thousand were calculated by dividing Regional Recreation land acres (obtained from the Regional Summary *Volume Table* "Summary of Park and Recreation Lands, Waters, and Facilities by area and Administration") by the regional population figures in thousands.

SOURCE: Texas Parks and Wildlife Department and U.S. Bureau of the Census, 1970 population.

FIGURE 3-4. SHORELINE OWNERSHIP IN THE UNITED STATES



SOURCE: Adapted from **Outdoor Recreation--A Legacy for America.** Bureau of Outdoor Recreation, U. S. Department of the Interior. (Washington, D. C., U. S. GPO, 1973) p. 34.

TABLE 3-1. CONTINENTAL UNITED STATES AND TEXAS SHORELINE BY TYPE, OWNERSHIP, AND DEVELOPMENT STATUS[1]

	TOTAL SHORELINE	RECREATION SHORELINE[3]	TYPE OF RECREATION SHORELINE			OWNERSHIP OF RECREATION SHORELINE			RECREATION DEVELOPMENT STATUS
						Public		Private	
			Beach	Bluff	Marsh	Recreation Areas	Restricted Areas		
U. S.[2]	59,157	24,724	4,350	11,160	6,214	1,209	581	19,934	.....
TEXAS	2,264[4]	1,081	301	421	359	58	92	931	very low

Sources U. S. Outdoor Recreation Resources Review Commission, **National Recreation Survey** "ORRRC Study Report 4, Shoreline Recreation Resources of the United States." (Washington, D. C., U. S. GPO, January, 1962) PP. 11-12, and the Texas Parks and Wildlife Department, 1973.

1 All figures are estimations expressed in miles.

2 Includes the shorelines of the 48 continental states on the Atlantic Ocean, Gulf of Mexico, Pacific Ocean, and Great Lakes. Does not include Hawaiian and Alaskan shorelines.

3 Shoreline is defined as the line of intersection of a stated water surface with the land. Recreation shoreline must meet three criteria: (1) the existence of a marine climate and environment, (2) the existence of an expanse of view of at least 5 miles over water to the horizon from somewhere on the shore, and (3) location on some water boundary of the U. S. (water bodies lying entirely within the U. S. boundaries are not included).

4 Consists of approximately 1,874 miles of bayshore and 390 miles of gulfshore.

recreation resources, it is significant to note that Texas has 2,264 miles (See Table 3-1) of shoreline approximately 57 percent of which are available for recreational development of various kinds and by different levels of administration. These figures compare with 59,157 miles (not including the States of Alaska and Hawaii), the nationwide total number of available shoreline miles, only 42 percent of which might be developed. Thus, the Texas Gulf Coast possesses a large portion of the Nation's remaining coastal lands which are presently undeveloped and suitable for recreation development.

Further comparisons of Texas with the Nation provide additional insight to the state's recreation situation. For example, Texas with its large land area and highly contrasted environments, has no state or nationally designated wilderness areas. At this time, Texas, with its 13,000 miles in major rivers alone, and 80,000 miles of rivers, creeks, streams, and bayous combined, has no state or nationally designated wild and scenic rivers. Although, sections of the Texas portion of the Rio Grande (Big Bend National Park region) are being considered and are presently under national study, a section of the Guadalupe River is being considered for future national study, and some 2,700 miles of rivers have been identified in a state analysis as having the greatest potential for inclusion into a state waterways system. There are no designated trails included in the National Scenic Trails System in Texas at present. One trail (already in existence), the 100 mile Long Star Hiking Trail administered by the U.S. Forest Service, has been suggested for inclusion in the National Recreation Trails System. Two trails in the state are included in the National Recreation Trails System, the two and one-half mile Cargill Long Park Trail within the city of Longview and the two and one-half mile Greer Island Nature Trail within the city of Fort Worth. Thirty-two already existing public and private trails in Texas have been identified as having potential for inclusion in a statewide system of recreation trails. In addition to the recreation trails, the Texas Highway Department, which maintains 70,000 miles of quality highways and 1,100 roadside parks safety rest areas, and scenic turnouts in the State, has designated 10 travel trails widely distributed across the State, along which are points of scenic, historic, and recreational interest.

SUPPLY OF OUTDOOR RECREATION RESOURCES IN TEXAS

The key to satisfying the future demands for outdoor recreation opportunities in Texas rests with the actions of entities at all levels of government that have either primary, secondary, or support responsibilities in supplying outdoor recreation. The private sector, although directed by economic stimuli as opposed to assigned responsibility, can also make significant contributions in providing more recreation opportunities in Texas.

OUTDOOR RECREATION SUPPLIERS IN TEXAS

For purposes of the **Texas Outdoor Recreation Plan,** a recreation supplier has been considered a primary or secondary supplier or a supporting entity depending on the statutory authorities of the agency, or entrepreneurial policy provisions regarding recreation.

PRIMARY SUPPLIERS

Entities including the National Park Service, the Texas Parks and Wildlife Department, and the local Recreation and Parks Departments (including park boards and commissions) whose primary responsibilities consist of providing resources and programs for public recreation are considered primary recreation suppliers. Also, most private recreation entrepreneurs may be classified as primary suppliers since they directly provide recreation resources and services.

SECONDARY SUPPLIERS

Secondary suppliers may directly provide recreational resources, services, programs, and support, but as a by-product, or as a supplementary responsibility, to the primary goal or authority of the entity. At the federal level, the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, the U.S. Forest Service, and the Bureau of Reclamation have been considered in the **Plan** as secondary suppliers although these agencies administer and directly provide a majority of the publicly administered parks and recreational areas in the rural environments of the State. At the state level, secondary suppliers include the Texas Forest Service, the Texas Highway Department, and certain of the Texas river authorities and water districts. These agencies administer land and water resources for other ends as a primary responsibility before providing recreational resources; although the resources are essentially the same, they are used somewhat differently. Counties and municipalities, at the local level, may be considered secondary suppliers when not having parks and recreation departments as such, but by actually providing recreation resources as a secondary responsibility of such other local departments as roads, streets, highways, public works, county commissioner courts, city/county landscape or horticulture, maintenance, etc. Quasi-public organizations are often considered secondary suppliers; however, since facilities administered by these entities, e.g., boy scouts, church camps, summer camps, etc., are usually not open to the general public, they are not presented in the data described in the **Plan** grants-in-aid, education, public relations, or other forms of support which enable primary or secondary suppliers to provide more effectively the actual

resources and programs. Although these entities do not actually administer the resources for recreation, many recreation projects would not have been made available to the public without their help.

SUPPORTING ENTITIES

At the federal level, supporting facilities include the Bureau of Outdoor Recreation, USDI; the Extension Service, USDA; the Soil Conservation Service, USDA; the General Services Administration; the Farmers Home Administration; USDA; the Water Rights Council; the Department of Housing and Urban Development; the Department of Health, Education, and Welfare; the Department of Transportation; and others. State level entities include the Governor's Office, Division of Planning Coordination; the Governor's Office of Information Services; the Interagency Council on Natural Resources and the Environment; the Texas Agricultural Extension Service; the Texas Historical Commission; the Texas Tourist Development Agency; the Universities in the State with courses and/or degrees related to recreation; the Texas Water Development Board; and the Texas State Soil Conservation Board. Regional and local entities include the Regional Councils of Governments and Regional Planning Commissions, and many non-profit and private organizations which help others provide the park and recreation resources and programs needed to help satisfy the State's recreation resource requirements.

The above mentioned entities, in many cases, initiate actions on behalf of primary or secondary suppliers to acquire or administer lands and/or waters which the assisting agency provides the supplier through long term lease arrangements or through out-right conveyance to the final supplier. Since the technical assistance agencies or entities generally have no legal impetus to actually administer recreation resources on their own—specifically to provide recreational opportunities—their authorities to help others often come from a federal or state funding program, a planning assistance and coordination program, a conservation program, or from an educational or technical assistance program. Supporting entities provide catalytic functions between the resources and the supplying entities by encouraging planning, acquisition, development, operation, use, and maintenance of the resources for the purposes of public recreational activities.

SUPPLY OF PARKS, RECREATION AREAS, AND RECREATION LANDS

In order to effectively assess present and future requirements for recreation resources in Texas, an inventory of existing designated recreation resources has been developed, updated, and maintained by the Texas Parks and Wildlife Department since 1965. The tremendous public pressures for increased recreation opportunities in the past few decades has generated an accelerating growth rate in the number of parks, recreation areas, and recreation facilities being developed in Texas, insuring that the task of updating supply statistics is not a simple one. The Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Recreation Facilities comprises numerous empirical surveys and compilations of the actual numbers, areal quantities, and qualities ascribed scientifically to existing designated recreational resources in the state, by individual park or recreational area for all administrations, public and private.

Urban recreation pursuits have been found to be substantially different from those recreation activities pursued in the rural areas. Therefore, a separate analysis of the recreation resources in each of the two environments was conducted. In addition, the Texas Gulf Coast provides resources which vary significantly with the rest of the state's resources and has been analyzed within the urban/rural context as well as separately to provide additional insight to the problems unique to the coast.

As shown in Table 3-2, there were estimated to be 4,504 parks and recreation areas in Texas in 1973. In the urban areas there were 2,742 parks. Rural areas had 1,762.

Within the boundaries of all parks and recreation areas in the state there were 1,725,917 acres of recreation land area, 62,524 acres in urban environments and 1,663,360 acres in rural environments. Of this area only 3.6 percent is in an urban environment. With respect to the State's population, each acre of urban park land is shared by 179 persons and

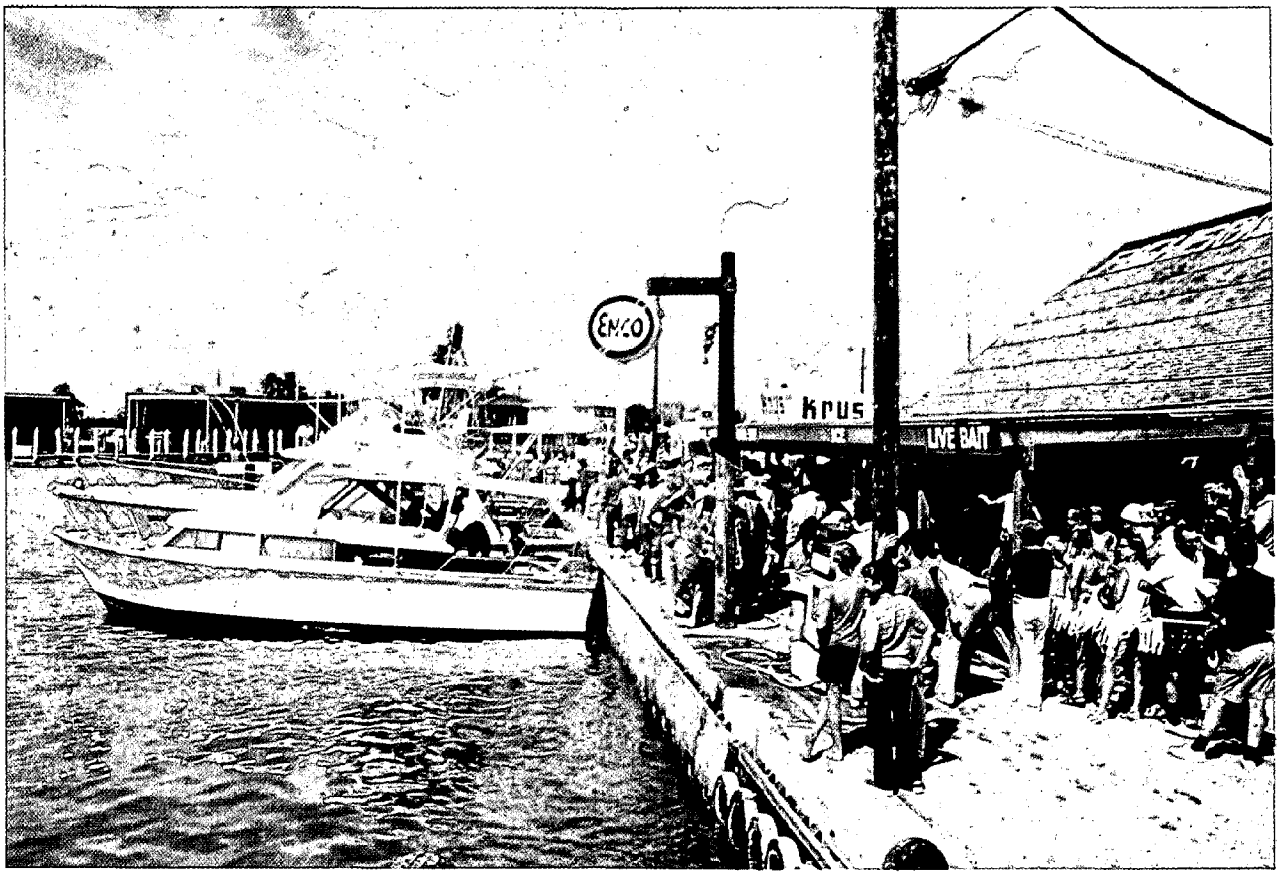
TABLE 3-2. PARKS, RECREATION AREAS, AND RECREATION LANDS IN TEXAS, 1973

	Urban	Percent of State Total	Rural	Percent of State Total	Gulf Coast[1]	Percent of State Total	State[1] Totals
Number of Parks	2,742	60.8	1,762	39.2	246	5.5	4,504
Land Acres	62,524	3.6	1,663,360	96.4	293,070	17.0	1,725,884
Acres Developed	43,621	24.9	131,348	75.1	15,810	9.0	174,969
Acres Undeveloped	18,903	1.2	1,532,012	98.8	277,261	17.8	1,550,915
Water Acres[2]	50,741	4.4	1,108,576	95.6			1,159,317

Source: Texas Parks and Wildlife Department

[1]Gulf Coast land acres are composed of those acres of designated recreation lands associated with salt water, i.e., gulf, bay, marsh, no inland waters are are included; Gulf Coast acreages are not reflected as such in State Totals, since urban and rural totals are inclusive of Gulf Coast figures. Some percentages have been rounded.

[2]State Total does not include saltwater.



Privately-Owned Marina. In 1973, Texas had a total of 4,504 public and privately owned recreation areas open to the general public. (Photo by Bill Reaves, Texas Parks & Wildlife Department)

each park is shared by 4,083 persons. By contrast, each acre of rural recreation land is shared by 7 persons and each park by 6,355 persons.

Parks in Texas are administered by all levels of public administration—federal, state, and local—and by the private sector. Table 3-3 shows a percentage breakdown of the number of rural parks by administration. Since by far the majority of urban parks are administered by the municipalities, an administrative breakdown for urban parks is not shown. The county governments and private enterprises supply the remaining percentages of the urban parks. Private enterprises, however, account for over 51 percent of the number of rural parks and on the Gulf Coast the private sector accounts for 67 percent. Also, on the Gulf Coast, county governments, accounting for the largest number of public parks, provide approximately 18 percent of the total number of Gulf parks.

Within the 17 county Gulf Coast area there were 246 parks associated with salt water recreation. The majority of the Coastal parks were in rural environments. A total of 293,070 acres of land were devoted to coastal parks and recreation areas.

DEVELOPMENT STATUS OF RECREATION LANDS

It is significant to note that, as shown in Table 3-2 and Table 3-3, much of the land area devoted to recreation in the State is undeveloped with recreation facilities. A limited portion of the undeveloped recreation land, however, is suitable for further development. As might be expected, however, the urban recreation areas are highly developed already, with 70 percent of the land area containing recreation facilities of some type. Only 8 percent of the rural lands are developed facilities, and slightly over 17 percent of the designated recreation lands on the Coast are developed.

Land suitable for recreation development has increased in value for other uses as well, especially near urban areas and areas near recreational water. Private home developers have found that lands suitable for recreation are the most highly desired for homesites. Therefore, we find in Texas a growing real estate market featuring some of the most attractive resources for public recreation. Thus, availability and access to these resources by the public, because of

TABLE 3-3. PARKS AND RECREATION LANDS, WATERS AND FACILITIES IN TEXAS BY AREA OF LOCATION AND ADMINISTRATION, 1973

EXISTING AREAS AND FACILITIES	RURAL AREAS											URBAN AREAS[1]	STATEWIDE TOTAL
	FEDERAL				STATE			LOCAL		PRIVATE ENTER-PRISE	TOTAL		
	Corps	NPS	USFS	USFWS	TPWD	RA	Other	County	Municipal				
Number of Parks	211	15	32	10	80	23	15	214	252	910	1,762	2,742	4,504
Inland	209	14	32	5	71	23	15	195	251	810	1,625	2,633	4,258
Saltwater Associated	2	1	0	5	9	0	0	19	1	100	137	109	246
Total Park & Recreation Land Acres	85,357	1,045,283	8,995	154,623	87,218	16,633	10,428	22,930	47,670	184,223	1,663,360	62,524	1,725,884
Developed	34,823	2,655	669	9,647	22,295	2,867	7,782	7,763	15,352	27,495	131,348	43,621	174,969
Inland	34,651	855	669	935	22,230	2,867	7,782	5,219	15,347	27,119	117,675	41,485	159,159
Saltwater Associated	172	1,800	0	8,712	65	0	0	2,544	5	376	13,674	2,136	15,810
Undeveloped	50,534	1,042,628	8,326	144,976	64,923	13,766	2,646	15,167	32,318	156,728	1,532,012	18,903	1,550,915
Inland	50,534	910,510	8,326	25,814	41,287	13,766	2,646	14,437	32,309	156,592	1,256,221	17,433	1,273,654
Saltwater Associated	0	132,118	0	119,162	23,636	0	0	730	9	136	275,791	1,470	277,261
Hunting Land Acres	---	---	---	---	---	---	---	---	---	---	65,246,000	---	65,246,000
Inland	74,000	30,000	769,000	311,000	321,000	0	0	0	0	63,366,000	64,871,000	---	64,871,000
Marsh, Saltwater Associated	---	---	---	---	---	---	---	---	---	---	375,000	---	375,000
Total Recreation Water Surface Acres	---	---	---	---	---	---	---	---	---	---	---	---	5,051,000
Freshwater Lakes[2]	---	---	---	---	---	---	---	---	---	---	1,108,000	51,000	1,159,000
Saltwater Bays	---	---	---	---	---	---	---	---	---	---	---	---	2,111,000
Campsites	3,905	515	837	120	3,819	744	127	1,356	1,143	6,949	19,515	1,739	21,254
Inland	3,905	315	837	120	3,819	744	127	797	1,143	6,793	18,600	---	---
Saltwater Associated	0	200	0	0	0	0	0	559	0	156	915	---	---
Playgrounds—Acres Devoted To	1	1	0	0	32	11	5	137	168	67	421	3,109	3,530
Golf Courses—Holes	0	0	0	0	72	0	0	156	459	842	1,529	1,064	2,593
Baseball/Softball—Fields	0	0	0	0	7	0	0	88	84	16	195	1,862	2,057
Picnic Tables	4,007	513	250	130	1,988	498	113	2,586	1,361	1,348	12,794	12,830	25,624
Inland	4,007	513	250	112	1,964	498	113	2,372	1,361	1,340	12,530	---	---
Saltwater Associated	0	0	0	18	24	0	0	214	0	8	264	---	---
Tennis Courts—Double	0	0	0	0	0	0	0	0	0	0	0	1,309	1,309
Basketball Courts—Full	0	0	0	0	0	0	0	0	0	0	0	609	609
Football/Soccer—Fields	0	0	0	0	0	0	0	0	0	0	0	287	287
Boat Ramps	299	9	18	3	35	20	7	59	94	437	981	55	1,036
Inland, Freshwater	297	9	18	3	32	20	7	46	93	362	887	---	---
Saltwater Associated	2	0	0	0	3	0	0	13	1	75	94	---	---
Boat Slips and Stalls	1,973	375	10	0	0	110	62	2	783	5,797	9,112	---	---
Inland, Freshwater	1,947	375	10	0	0	110	62	2	696	4,813	8,015	---	---
Saltwater Associated	26	0	0	0	0	0	0	0	87	984	1,097	---	---
Fishing Facilities—Linear Yards Yards	20,646	1,250	30	0	5,906	355	62	5,454	2,321	11,790	47,814	1,321	49,135
Inland, Freshwater (Piers, Barges, Marinas)	18,648	1,250	30	0	1,401	355	62	509	2,321	6,219	30,795	---	---
Saltwater Associated (Piers and Jetties)	1,998	0	0	0	4,505	0	0	4,945	0	5,571	17,019	---	---
Swimming—Sq. Yds. of Pools	6,344	0	0	0	11,830	308	250	10,665	19,860	73,553	122,810	281,520	404,330
Swimming—Sq. Yds. Designated Areas	239,032	33,320	48,064	0	165,864	12,320	4,000	10,511	59,960	137,370	710,441	1,641,907	2,352,348
Inland, Designated Freshwater	239,032	32,000	48,064	0	25,064	12,320	4,000	430	59,960	137,370	558,240	1,607,707	2,165,947
Saltwater Associated	0	1,320	0	0	140,800	0	0	10,081	0	0	152,201	34,200	186,401
Bicycle Trails—Miles	0	14	0	0	3	0	0	1	0	0	18	97	115
Horseback Riding Trails—Miles	0	23	0	0	10	0	0	9	11	192	245	58	303
Combined, Walk, Hike, Nature Study Trails—Miles	0	250	105	15	67	0	5	15	73	10	540	204	744
Inland	0	172	105	8	67	0	5	15	73	10	455	---	---
Saltwater Associated	0	78	0	7	0	0	0	0	0	0	85	---	---

Note: Corps—U.S. Army Corps of Engineers, NPS—National Park Service, USFS—United States Forest Service, USFWS—United States Fish and Wildlife Service, TPWD—Texas Parks and Wildlife Department, RA—Texas River Authorities, Other (State)—Texas Forest and/or Special Water Districts. Dashed lines indicate not applicable or inland and saltwater associated figures were not separated.

[1]Publicly administered recreation lands and facilities only.

[2]Primarily lakes and reservoirs over 5,000 acre-feet capacity.

intense competition, is decreasing rapidly.

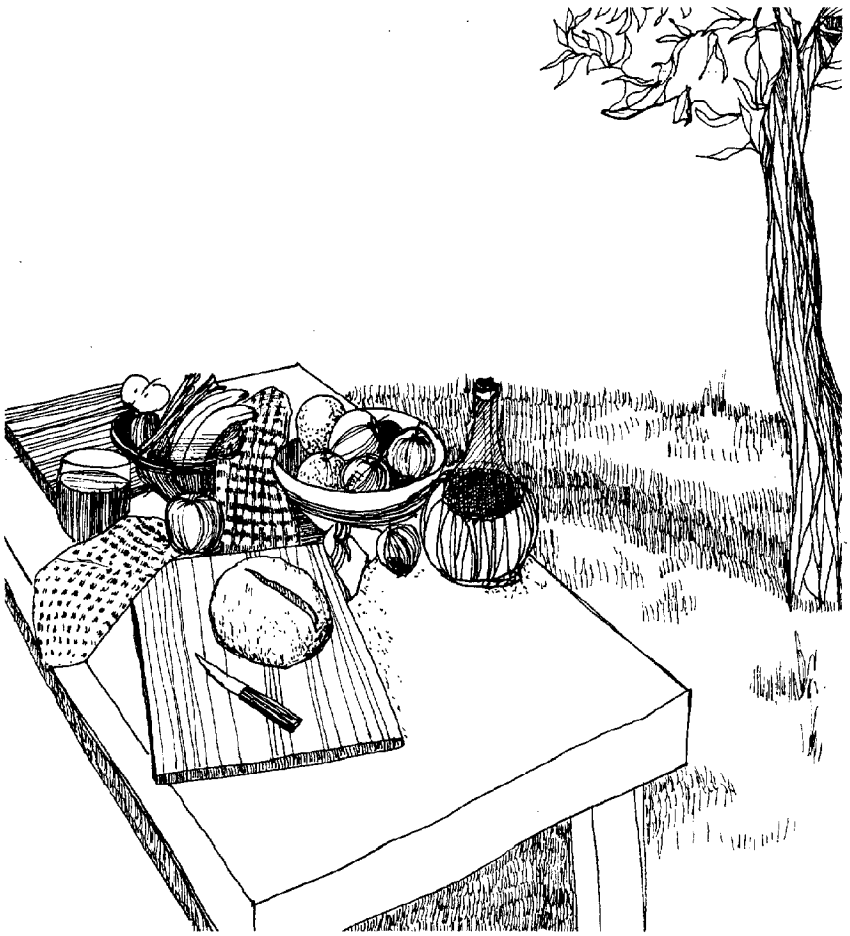
Since there are very few recreation lands left in urban areas for development, and since there is a certain precedent for leaving open space in recreational areas, administrators of urban recreation in the state are closely limited to their own innovations and to high prices for acquisition and development. Rural administrators do have a slight comparative advantage in that their land acquisition costs are somewhat lower, but scarce, or limited, public monies for acquisition and development of recreation lands places them in a similar position.

SUPPLY OF SELECTED OUTDOOR RECREATION FACILITIES

Rural, public and private, urban, and statewide tabulations of selected facilities are summarized in Table 3-3. These totals express all known, designated outdoor recreational facilities in Texas which are generally open to the public. As mentioned earlier, the Texas Highway Department does provide approximately 1,100 additional roadside parks, scenic turnouts, and safety rest areas, and also administers the Texas Travel Trails. Roadside parks in Texas generally have varying amenities ranging from waste receptacles and picnic tables only, to large, beautifully landscaped rest areas with sanitary facilities, dump stations, water and electricity, multiple picnic tables, large parking areas, barbeque grills, and interpretive displays.

The state also has numerous culturally oriented facilities, such as museums and historic and archeological sites. These resources, while not used intensively for outdoor recreation, do provide many hours of diversified, passive leisure activities for a significant segment of the population.

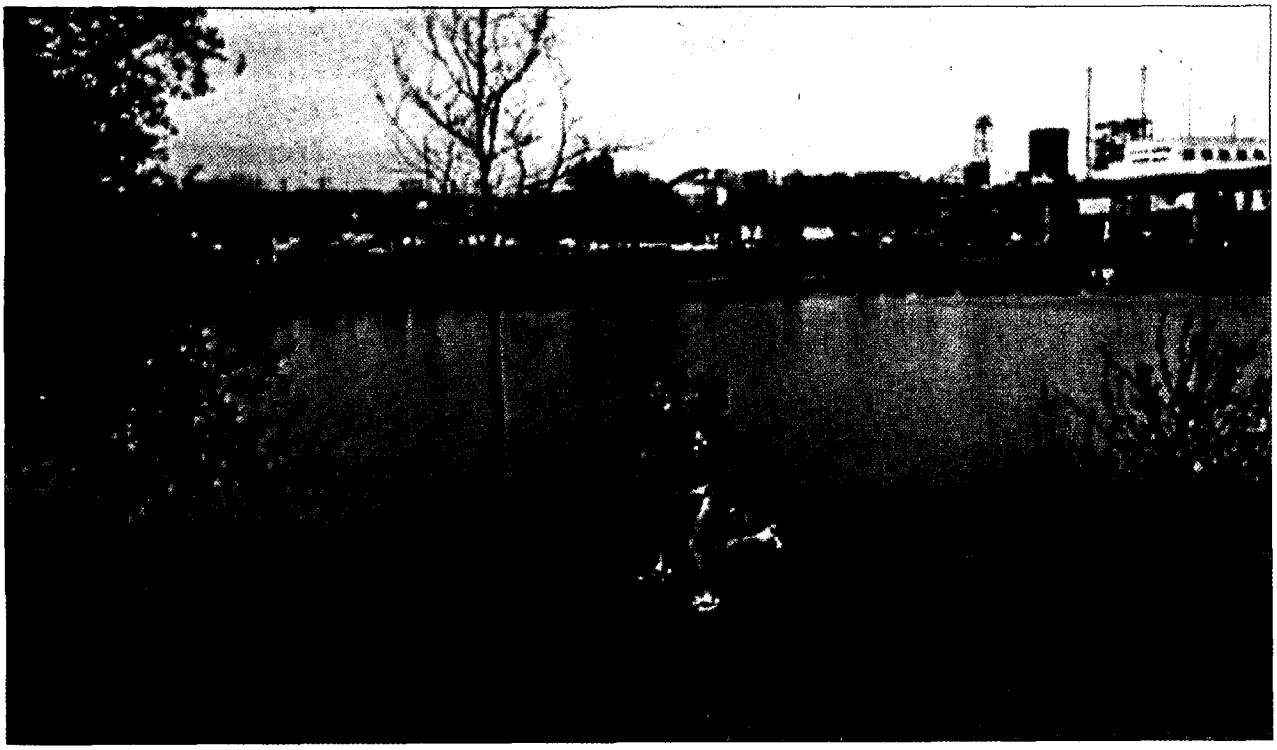
The private recreation suppliers in the state provide a more diversified array of facilities than are generally found in the public sector. The majority of the private enterprises are in the rural areas and they offer such specialized activities as: sport shooting, dude ranches, resorts (of various kinds), equestrian enterprises as well as the more traditional—boating (marinas, launch ramps, slips and stalls, gasoline, etc.), fishing (piers, tackle, bait, and fish cleaning, guideboats, etc.), campgrounds, picnic grounds, swimming pools, golf courses, and entertainment enterprises. Regional attractions are provided by such amusement centers as Six Flags over Texas at Arlington, Astroworld with the Astrodome at Houston, Sea-Arama Marineworld at Galveston, and others.



FISH AND WILDLIFE RESOURCES

Some of the most important recreation resources in Texas are the many species of fish and wildlife which inhabit the state. Intensified efforts have been made by public and private entities in recent years to conserve these natural, and to a large extent, recreational, resources. The U.S. Fish and Wildlife Service, U.S. Department of Interior, administers 10 areas in Texas which comprise some 154,343 acres in National Wildlife Refuges. The Texas Parks and Wildlife Department administers 13 fish hatcheries, 12 wildlife management areas, 2 waterfowl refuges, and 7 scientific areas. Combined, these state administered areas comprise some 207,361 acres of land devoted to the conservation of fish and wildlife resources. Only limited recreation is allowed on these areas and normally activities are passive in deference to the wildlife. Some fishing and hunting are allowed, but are closely regulated and monitored. In addition, there are several areas in the state for which no complete information is available at

COASTAL ZONE
INFORMATION CENTER



Jogging Along an Urban Walking and Bike Trail. In 1971 there was a total of 301 miles of walking, bicycling and nature trails in the urban areas of the State. (Photo by Rolfe Mandel, Texas Parks and Wildlife Department)

this time regarding wildlife areas managed by sportsmen's groups, private corporations, and private individuals. Some 67,286,119 acres of lands are estimated to be available for hunting at different seasons during each year; however, the majority of those lands are used primarily for other purposes such as timber management, farming, and ranching and were not considered as designated recreation lands.

CULTURAL AND HISTORIC RESOURCES

The Texas Historical Commission has developed, with the support of the Office of Archeology and Historic Preservation, the National Parks Service, USDI, the Comprehensive Statewide Historic Preservation Plan for Texas. Identification and preservation of the state's prehistoric and historic cultural heritage in the form of historic districts and sites, buildings, structures, and objects significant to American History, architecture, archeology, and culture are the prime goals of the plan. Registration of cultural heritage sites, districts, and objects provides a measure of protection from destruction or loss. By utilizing an inventory of historic resources and a plan for their continued use and preservation, all public and private planning entities may protect these valuable state resources.

National Register nominations for Texas by the National Register Programs Department are expected to exceed 1,000 by 1976. Presently, there are 217 accepted on the National Register and approximately 10 are nominated, i.e., proposed for inclusion the National Register of Historic Sites, maintained by the Office of the National Register of Historic Places, within the National Park Service, the USDI. Another 24 sites have been approved as National Historic Landmarks, also under the National Park Service. Of the 217 accepted places in Texas 150 are historic properties, 57 are archeological sites, and 18 comprise historic districts. In some historic districts there are historical and/or archeological sites which are reflected in the previous figures.

The comprehensive statewide inventory of historic resources represented only part of a process of identification. Approximately 4,600 historic resources have been identified, located, surveyed, and recorded from which the above mentioned National Register nominations have evolved.

Additionally, the Texas Historical Commission administers the historical markers program. By August 4, 1974,

the committee listed 5,779 state-approved historical markers which designated and described landmarks generally of local significance, but in many cases holding interest for those persons living outside local communities.

On the National Registry of Natural Landmarks, Texas has 10 resources recognized as meeting the national criteria and objectives of the Natural Landmarks Program. To be accepted, a site, in addition to its national significance, must possess exceptional value or quality in illustrating or interpreting our national natural heritage and must be an essentially unspoiled example of natural history. These sites parallel the national significance of the sites registered on the National Register of Historic Places at which an event or era in human history occurred. In addition to the 10 approved sites, 7 more have been recommended for approval and several more are yet to be studied by the National Park Service.

The **Texas Museums Directory** revised edition 1974, lists 311 existing museums which are "organized and permanent non-profit institutions, essentially educational or aesthetic in purpose, which exhibit objects with intrinsic value to science, art, or culture, and are open to the public." As these resources most often occur in or near urban areas, they are considered generally urban resources for purposes of recreation analyses.

Presently, in the state there are very few prehistoric and historic parks and sites which are designated as nationally significant or of statewide significance. Under the auspices of the National Park Service in Texas, there are four designated areas: The Fort Davis National Historic Site, the Alibates Flint Quarries and Texas Panhandle Cultures National Monument, the Lyndon B. Johnson National Historic Site, and the Chamizal National Memorial. The Texas Parks and Wildlife Department administers 24 State Historic Parks and Historic Sites which provide opportunities to discover still other facets of the state's cultural history.

Goliad State Historic Park near Goliad. This replica of the Mission Nuestra Senora del Espiritu Santo de Zuniga, originally established in 1722, is one of many historic sites in Texas. (Photo by Bill Reaves, Texas Parks and Wildlife Department)

Chapter 4

RECREATION DEMANDS FACING TEXAS

INTRODUCTION

As previously discussed, Texas possesses a broad and varied natural and man-made resource base with vast potential for the provision of many forms of outdoor recreation opportunities. This is particularly the case in the rural areas of the state. In the urban areas of the State, many of these resources are available only in the undeveloped urban fringes.

In addition, Texas has undergone marked demographic and socio-economic changes in a relatively short span of years. Along with these changes, the demands for outdoor recreation have grown steadily and increased the pressures on Texas' recreation resources, pressures which are predicted to increase as demand continues to grow.

Why and what causes Texans to recreate is one of the first questions that must be answered in attempting to develop a viable plan for the provision of outdoor recreation opportunities for the State. It has been found that participation in outdoor recreation activities is affected by a large variety of factors, some of which are more important than others. Generally, the most important factors include four major groups: demographic, socio-economic, physical, and descriptive. (See Figure 4-1.) Demographic factors include population size and the size of the city of residence. Generally, the greater a population, the greater the recreation demand. Participation rates, especially for certain activities such as hunting for example, tend to vary greatly depending on the size of the city in which one resides. Socio-economic factors include age of household head, family size, household income, and miscellaneous others. The age of the household head can be a factor determining both the amount and types of activities a household might pursue. Family size has often been shown as a significant factor in the amount of outdoor recreation a household pursues. Normally, as a household's income increases, larger amounts of disposable income become available for leisure and recreational pursuits. Physical factors include the availability of facilities, natural resources, and environmental characteristics and quality. The availability of a facility or resource is directly dependent upon access and distance, and generally speaking, the tendency of recreationists to participate at given recreation sites decreases as the distance to the site increases. Attractive, scenic, and unpolluted natural environments are also important factors to recreationists. Descriptive factors are made up of investment in recreation equipment by a household, participation in various outdoor activities, preferences for various activities, and hours per week spent in outdoor recreation by a household; and they indicate the general tendency of a household to participate in outdoor recreation activities.

Many of the factors shown above are, of course, interrelated, and they are not the only ones affecting demand. These, however, were consistently found to have the strongest effects and consequently, were utilized along with a large number of other factors to project demand for the various recreation activities which were determined to have statewide significance.

CURRENT AND PROJECTED RECREATION DEMAND

Total outdoor recreation participation in Texas, which reflects demand, totaled approximately 538 million days in 1968/1970 (Figure 4-2). Between 1968/1970 and 1980 the total

FIGURE 4-1. MAJOR FACTORS AFFECTING RECREATION DEMAND

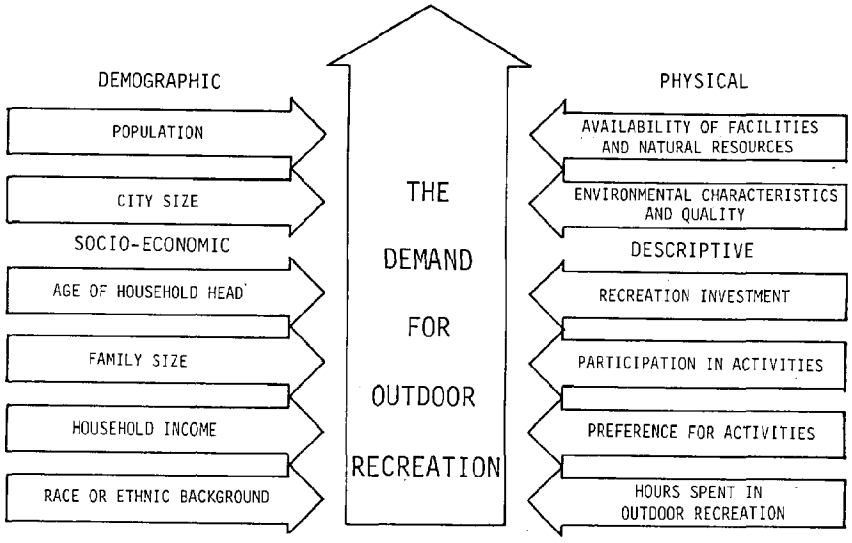
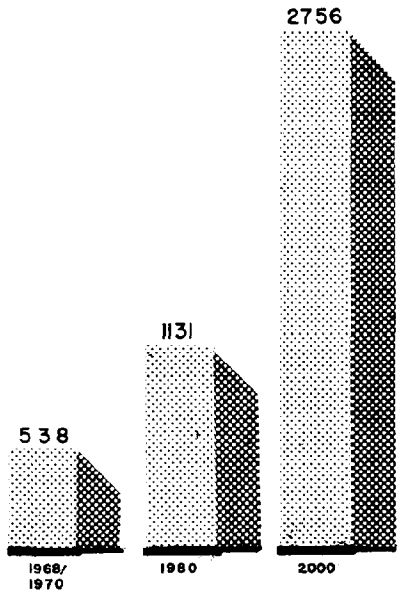


FIGURE 4-2. TOTAL RECREATION PARTICIPATION IN TEXAS, 1968/1970–2000 (MILLIONS OF ANNUAL PARTICIPATION DAYS)



recreation demand in Texas is expected to more than double, reaching 1.13 billion days, or an increase of 110 percent. From 1980 to 2000, demand is projected to continue to grow at outstanding rates, placing more pressure on facilities and areas that, in many cases, are overcrowded now. By 2000, the demand for outdoor recreation is projected to reach approximately 2.75 billion days. This amounts to an increase of 144 percent over the projected 1980 total, and 412 percent over the figure for 1968/1970. As indicated by these trends, more people are expected to recreate and they will recreate more than at any time before.

To further illustrate the patterns of recreation that were found to exist in Texas, demand is discussed in the following section in terms of its various components of urban demand, including metropolitan areas, cities, and towns; rural demand, including out-of-state; and total, or combined urban and rural. In addition, demand is treated in terms of activities and distribution by analytical region, geographic region, and the use of the State's recreation lands and water resources.

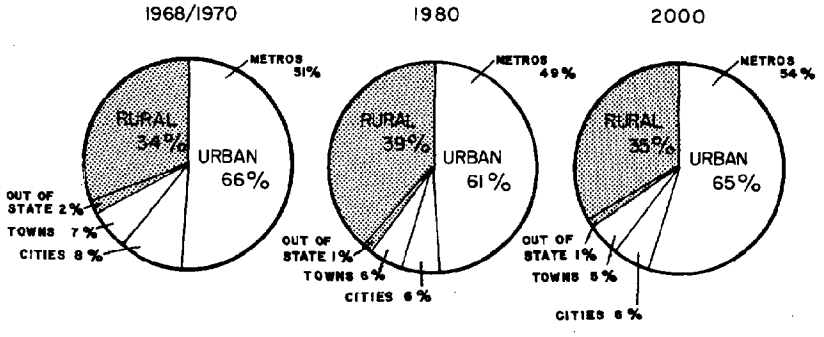
COMPONENTS OF TOTAL RECREATION DEMAND

The total participation in Texas in 1968/1970 occurred predominantly in the urban areas of the state as can be seen from Figure 4-3. This is not surprising to discover, since some 80 percent of the State's population now reside in urban areas. In addition, this urban participation occurred overwhelmingly in the metropolitan areas.

The percentage of participation in Texas (Figure 4-3), while it should fluctuate, is expected to change very little over time. Participation occurring in the large metropolitan areas of the State, account for approximately 50 percent of the demand in all areas, and approximately 80 percent of the demand in urban areas. It is in these metropolitan areas where some of the more crucial recreation problems originate. Residents, who daily face traffic congestion, noise, pollution, and innumerable daily tensions, seek some kind of healthy release for these frustrations and anxieties. Recreation can and does provide such a release. Metropolitan residents seek recreation in their own urban parks, important because of their accessibility, and in rural parks (state parks, national parks, Corps parks, etc.), which provide a quality recreational experience and fulfill the need to escape the cities.

While in the urban areas the most difficult recreation problems are in the State's 24 metropolitan areas, within the largest metropolitan areas, the problems are even more acute. Of the metropolitan areas of Texas, it is the four largest—Dallas, Fort Worth, San Antonio, and Houston (Regions 10, 11, 16, and 25, respectively)—which consistently account for a majority of the total participation taking place in the urban areas. In 1968/1970, these four metros were responsible for 56 percent of the total urban participation. In the rural areas of Texas, residents of these four areas accounted for 32 percent of the total rural participation, and of the total participation in Texas, both rural and urban, 36 percent was attributed to residents of these four metropolitan areas. This clearly points out the need to focus close attention on the recreational requirements of residents of the large metropolitan areas, with regard to both rural and urban environments.

FIGURE 4-3. PERCENT OF TOTAL RECREATION PARTICIPATION IN TEXAS BY LOCATION, 1968/1970–2000



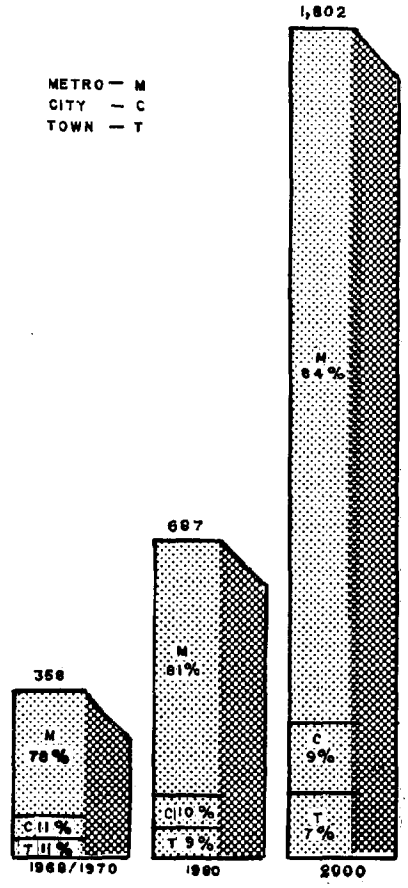
That portion of the demand taking place in cities and towns together makes up 15 percent of the total. Furthermore, projections indicate that while the demands taking place in these urban areas will increase substantially in the future, the rates of increase will be lower than in the metropolitan areas. Consequently, the proportion of the total will decline to 11 percent by the year 2000. However, the recreation needs of the cities and towns of Texas are as important as those of the metropolitan areas and equal consideration should be given them as to the metros.

Following metropolitan areas, participation taking place in the rural areas forms the next largest segment of total demand in Texas with nearly 40 percent for all projection years. In the rural areas too, there are problems in providing adequate recreation for the people of Texas. Rapid, unplanned urban growth can quickly obliterate highly desirable rural natural and scenic areas ideally suited for recreation as well as destroy wildlife habitats. The location of population concentrations with respect to natural regions often creates extreme environmental and recreation pressure on those natural regions, such as along the Texas Gulf Coast. Texas has relatively few large public land holdings and many of those it does have are located far from the majority of the State's populations, e.g., Big Bend and Guadalupe Mountains National Parks.

RECREATION PARTICIPATION IN THE URBAN AREAS

In 1968/1970 the total recreation participation taking place in the urban areas of Texas amounted to 358 million days (See Figure 4-4). This total includes all participation occurring in metropolitan areas, cities, and towns and includes all major urban activities. By 1980, this total is projected to increase to 687 million days for a 92 percent increase. In 2000, urban recreation participation will have risen to 1,802 million activity days, an increase of 162 percent over 1980 and 403 percent over 1968/1970.

FIGURE 4-4.
TOTAL RECREATION PARTICIPATION IN THE URBAN AREAS OF TEXAS, 1968/1970–2000
(MILLIONS OF ANNUAL PARTICIPATION DAYS)



RECREATION PARTICIPATION IN THE RURAL AREAS

Overall participation occurring in the rural areas in 1968/1970 totalled nearly 180 million days and by 1980 is projected to reach 444 million days, or an increase of 147 percent. This total is expected to reach 954 million days in the year 2000. This amounts to a 430 percent increase over 1968/1970. (See Figure 4-5)

OUT-OF-STATE VISITORS

Demand for outdoor recreation taking place in Texas by residents of other states for the four activities in which suitable data was available amounted to 2 percent of the Texas total in 1968/1970. Out-of-State demand is expected to continue to increase in the future. By the year 2000, participation is expected to increase 62 percent over the 1968/1970 level. Among the top states in terms of recreation participation in Texas were Louisiana, California, Oklahoma, Florida, Illinois, Missouri, Kansas, and New Mexico (See Figure 4-6). While there is substantial recreation participation in the urban areas of Texas by out-of-state visitors, the amount occurring in urban parks was found to be relatively insignificant for the recreation activities dealt with in this plan, and, therefore, was not considered in the analyses of urban recreation.

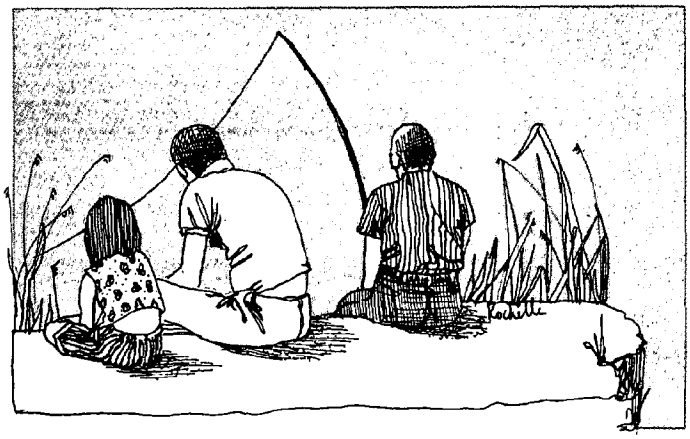
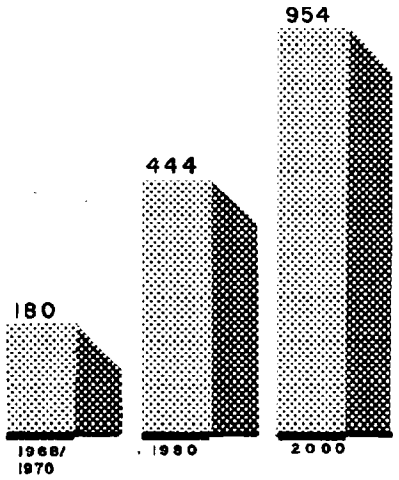


FIGURE 4-5.
TOTAL RECREATION PARTICIPATION IN THE RURAL AREAS OF TEXAS, 1968/1970–2000 (MILLIONS OF ANNUAL PARTICIPATION DAYS)



RECREATION DEMAND BY ACTIVITY

A comparison of the respective magnitudes of the major outdoor recreation activities, both urban and rural, projected for future years can be made from Figure 4-7.

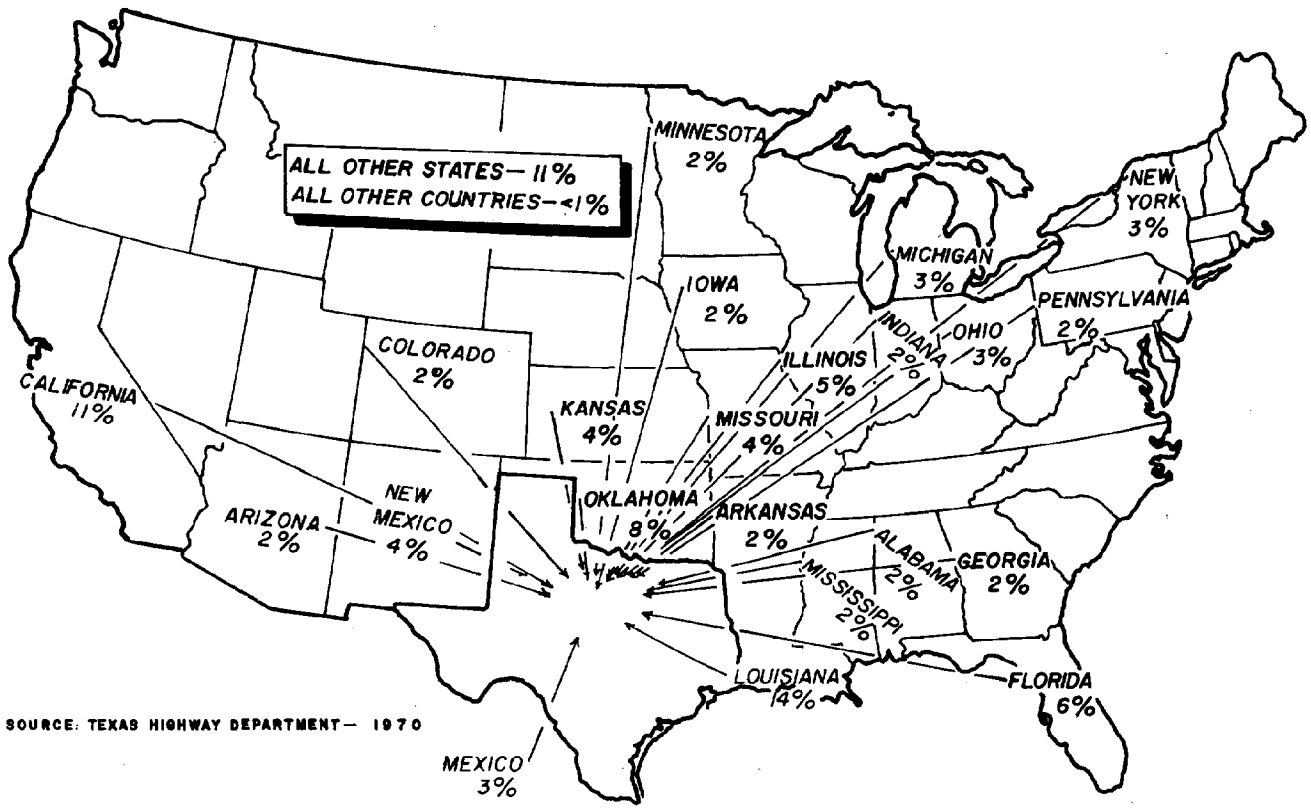
RECREATION PARTICIPATION IN THE URBAN AREAS

With the exception of surfing, which stays the same, all urban activities are expected to increase in participation between 1968/1970 and 2000. The five most popular activities taking place in urban areas in terms of days of participation in 1968/1970 included swimming, driving for pleasure, bicycling, walking for pleasure, and child's play. With only a few changes in the order, these same activities will still make up the top five in 2000. For the most part, these five activities also rank as the top five activities over the three time periods for each of the respective categories of metropolitan areas, cities, and towns.

RECREATION PARTICIPATION IN THE RURAL AREAS

Participation in rural outdoor recreation activities indicate that the five most popular activities were fishing, camping, swimming, picnicking, and boating in 1968/1970. Some changes in the rankings will be reflected in the year 2000. A strong growth rate predicted for picnicking is expected to place this activity in the number one position by the year 2000, superseding fishing for the first time, as fishing drops to second place. Among other changes, boating will move up to third place and camping will drop to fifth and swimming will move to fourth place.

FIGURE 4-6. ORIGINS OF RECREATIONAL VISITORS TO TEXAS, 1970 (PERCENT OF TOTAL VISITORS)

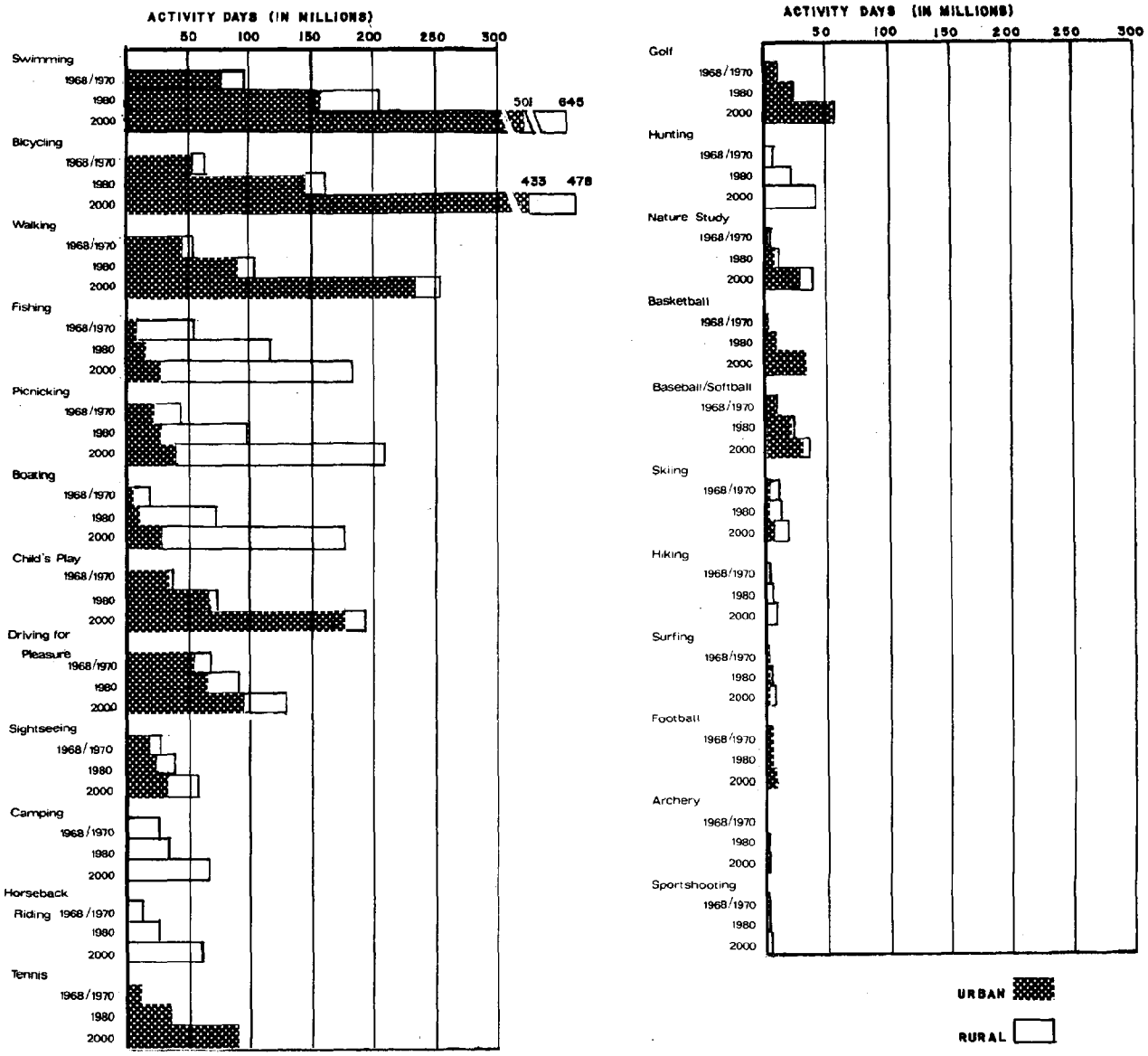


SOURCE: TEXAS HIGHWAY DEPARTMENT— 1970

Child's Play—A universal Recreational activity. Participation in child's play in the urban areas is projected to increase by 87 percent between 1970 and 1980. (Photo by Melanie Shearer, Texas Parks & Wildlife Department)

Fishing—One of Texas' Favorite Recreational Activities. Between 1970 and 1980, overall demand for fishing opportunities is expected to increase over 93 percent. (Photo by Jim Whitcomb, Texas Parks & Wildlife Department)

FIGURE 4-7. TOTAL RECREATION PARTICIPATION IN TEXAS BY ACTIVITY AND LOCATION, 1968/1970–2000



TOTAL RECREATION PARTICIPATION IN TEXAS

In 1968/1970, the top five activities in terms of total participation, both urban and rural combined, reveal that the top five activities included swimming, driving for pleasure, bicycling, fishing, and walking for pleasure, respectively. By 2000 driving and fishing will have dropped from the five most popular activities in Texas and picnicking and child's play will will appear among these top five.

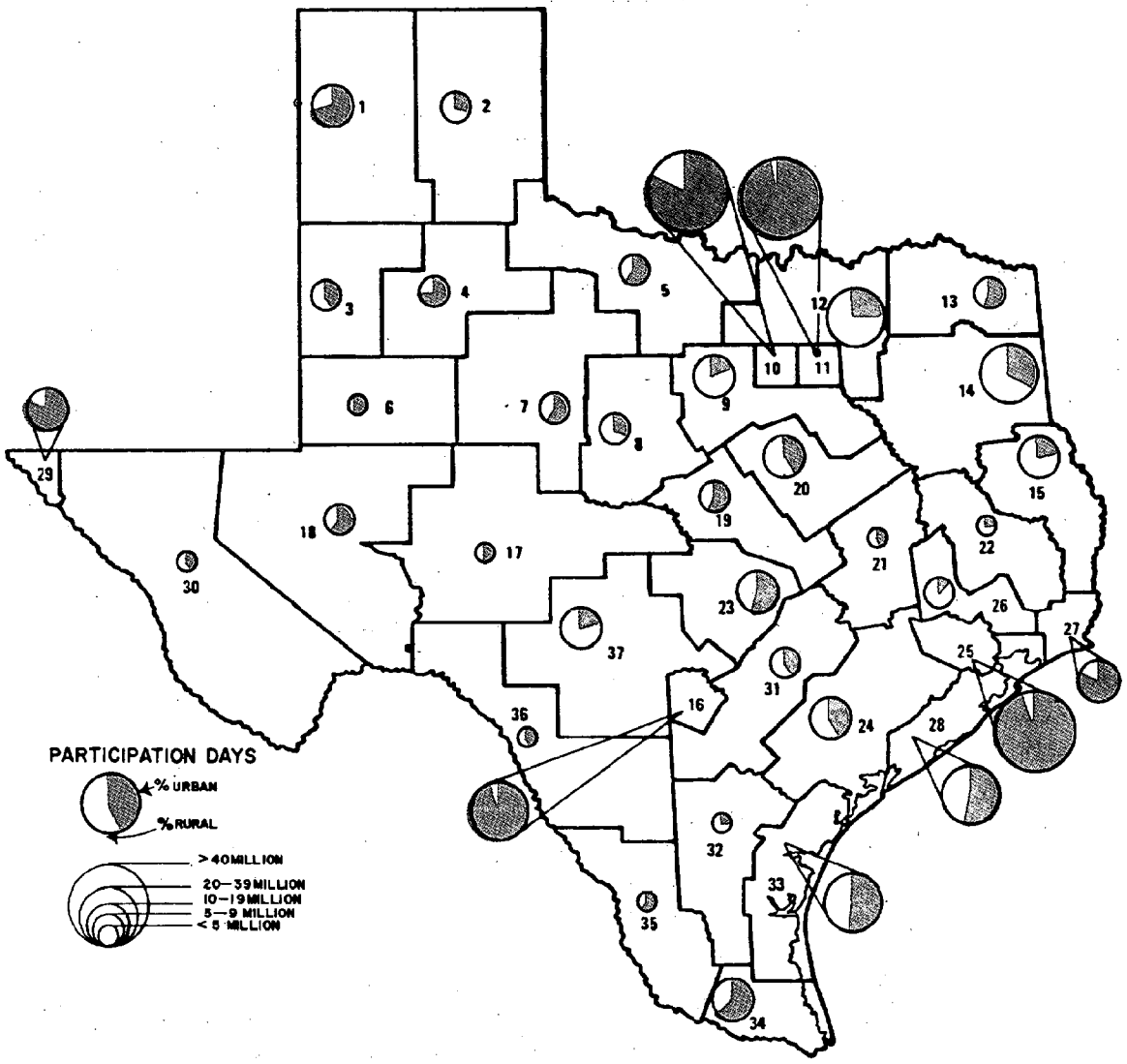
GEOGRAPHIC DISTRIBUTION OF RECREATION DEMAND

The following paragraphs discuss demand in terms of various types of destinations where the participation takes place. Typically, a recreationist will travel from some point, usually his home or origin, to another point, or destination, to participate in some activity. The amount of participation in the activity taking place at this destination, then, is termed destination demand.

DISTRIBUTION BY PLANNING REGIONS

Total recreation participation that occurred in 1968/1970 within each of the 37 analytical planning regions of Texas is shown in Figure 4-8. From

FIGURE 4-8. TOTAL RECREATION PARTICIPATION IN TEXAS BY PLANNING REGION AND LOCATION, 1968/1970



this, one can discern how participation varies across the state. By far, the four largest metropolitan areas receive the largest amount of total participation (urban and rural), with Houston (Region 25) ranked first, followed by Dallas, Fort Worth, and San Antonio (Regions 11, 10, and 16), respectively. It is also evident that the overwhelming majority of the participation in these regions is urban, because rural land is scarce and becoming more scarce in these four regions. Another metropolitan area and largely urban region, Region 29, the El Paso area, ranks ninth in total participation, although rural and urban participation are more evenly distributed

Following the first four metropolitan areas, other top-ranking regions and their ranks are Region 14, fifth; Regions 33 and 28 tied for sixth; Region 12, eighth; and Regions 23 and 29 tied for ninth. Two things should be noted with regard to these regions. First, most are near, or immediately adjacent to, one of the four large metropolitan areas, and all contain metropolitan areas themselves. Second, all contain one or more natural resources important for recreation, e.g., piney woods, lakes, hill country, streams, gulf coast beaches, etc. Region 12 is extremely popular with Fort Worth and Dallas residents because of the large number of lakes there. Region 14 is visited by large numbers of Dallasites seeking the regions lakes and forests. Region 23 visitors come from all over Texas for the hill country and highland lakes. Many Houstonians as well as residents of Region 28 are drawn here by the gulf coast beaches. Padre Island is extremely popular with San Antonians and, of course, residents of Corpus Christi.

Other regions of the state also draw recreationists in various amounts,

again depending primarily upon natural resources in the region and distance from population centers. Curiously, Region 30, with two national parks and magnificent scenery, has the least amount of recreation of any region in the State. However, Region 30 is, except for El Paso and Midland-Odessa, at least a days' drive from the major population centers of the State, making it generally out of consideration for weekend trips. Moreover, water in Region 30 is quite scarce, and water, particularly lakes, forms the natural resource base for a wide variety of activities.

Still other regions are expected to assume a much greater importance from a recreation standpoint. They, too, possess valuable natural resources, but have not yet been developed. Therefore, special concern should be focused on these regions with regard to planning. These include Regions 15, 22, 26, 27, 24, 9, 20, and 37.

DISTRIBUTION BY MAJOR GEOGRAPHIC REGIONS

The major geographic areas of Texas are generally considered to be the gulf coast, the piney woods of East Texas, the hill country of Central Texas, and the mountains of West Texas. A fifth area, while not actually a geographic area, can be described for illustrative purposes as the North Texas Lakes Area. Combined, these regions make up 76% of the population of Texas, and account for only 43% of the total square miles of land, but 80% of all outdoor recreation in Texas takes place within these 5 geographic areas (See Figure 4-9).

The single geographic area accounting for the greatest amount of recreation participation is the Gulf Coast with 156 million days, or 36 percent of the total participation in Texas. This area includes Regions 24, 25, 27, 28, 33 and 34. This area also possesses the characteristics of large population concentrations of people living within easy reach of a public resource.

Second is the North Texas lake district with 140 million days, or 33 percent of the total participation in Texas. This area combines easy accessibility to a resource, i.e., lakes, and a huge population concentration. The Hill Country and Piney Woods account for 61 million or 14 percent and 55 million days or 13 percent, respectively, while the mountains account for about 4 percent, or 17 million days, again reflecting the relative inaccessibility of this region.

DISTRIBUTION BY LAND AND WATER RESOURCES

The following discussion considers participation taking place on land and various types of water bodies. This type information can be a valuable planning tool for recreation because it highlights the importance of different resources with regard to recreation participation, and indicates where demand is taking place now and where it is likely to take place in the future.

Figure 4-10 shows urban, rural, and total participation by land and water, and further breaks water participation into more detailed categories. The majority of total participation, 57 percent, takes place on land. Many activities are limited to land, but some activities, such as picnicking, can take place away from, near, or even on the water. Thus it is perhaps surprising to find that such a large proportion, 43 percent, of total participation takes place in the immediate vicinity of some type of water body. The State's most popular activity, swimming, is of course a water-oriented activity. People enjoy being in or near water. It is pleasing to look at, it is cooling, and it provides the basis for a great variety of activities, many more than would be possible without the presence of water. It has been found that recreationists tend to participate in certain activities in conjunction with certain other activities. For instance, camping, picnicking, swimming, boating, fishing, and skiing are activities that are quite often found in various combinations with one another. A great deal of participation in such activities, or activity "packages," takes place on Texas' large reservoirs and lakes. Over 13 percent of the total participation in Texas and over 31 percent of the water participation took place on lakes above 250 surface acres in size in 1968/1970. Pools accounted for over 9 percent of the total participation, reflecting the high popularity of swimming. The gulf coast, even with limited accessibility for large segments of the State's population, ranks third among water environments with 6 percent. Small lakes, between 10 and 250 surface acres in size, accounted for nearly 5 percent of Texas' total participation, and 5 percent took place on rivers and streams. Ponds or stock tanks less than 10 surface acres in size made up 2 percent of the total participation. In some areas of the State, a surprisingly large amount of swimming and fishing took place in such ponds, particularly among rural residents and people participating on

FIGURE 4-9. TOTAL RECREATION PARTICIPATION IN TEXAS BY MAJOR GEOGRAPHIC REGION AND LOCATION, 1968/1970

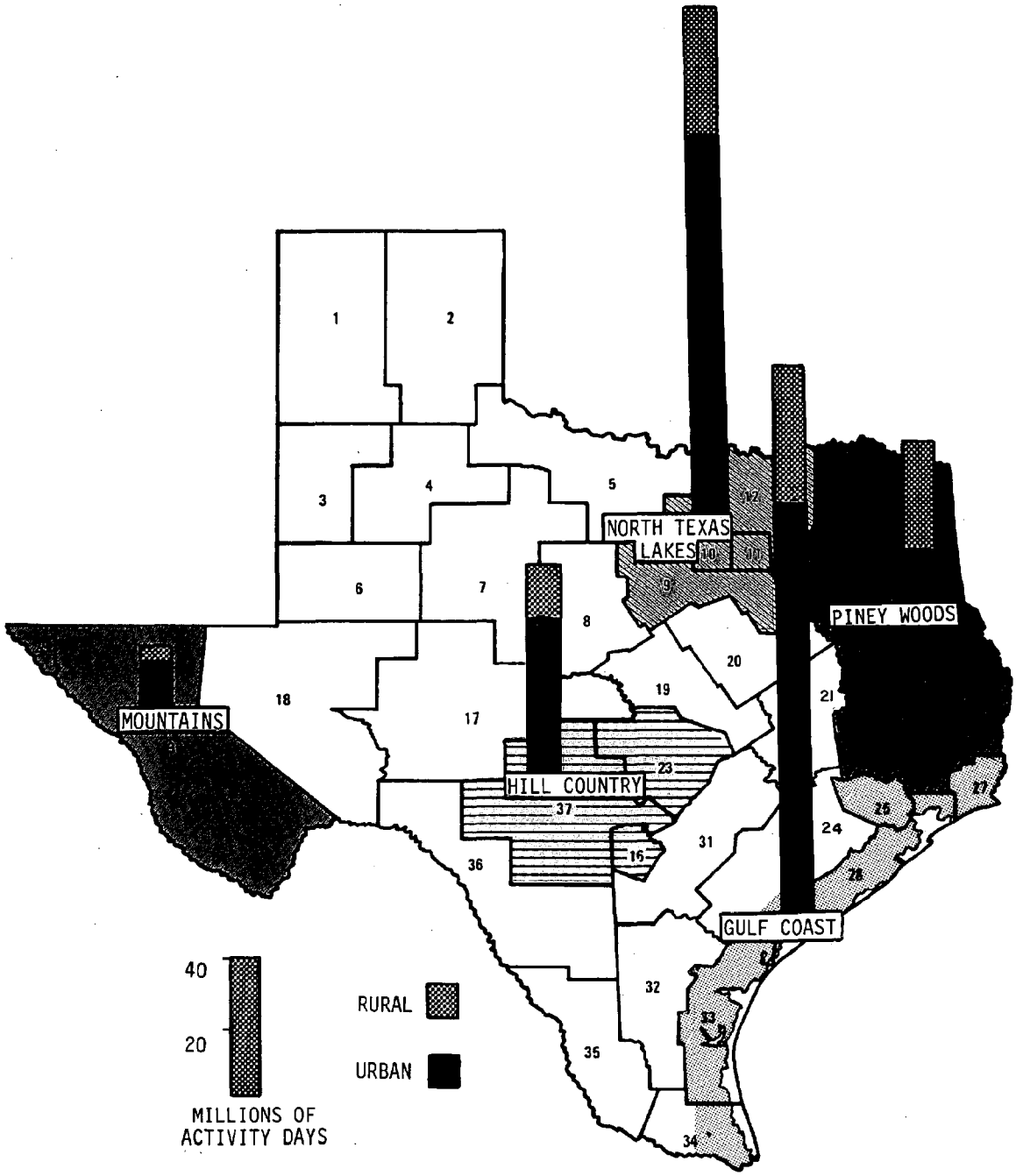
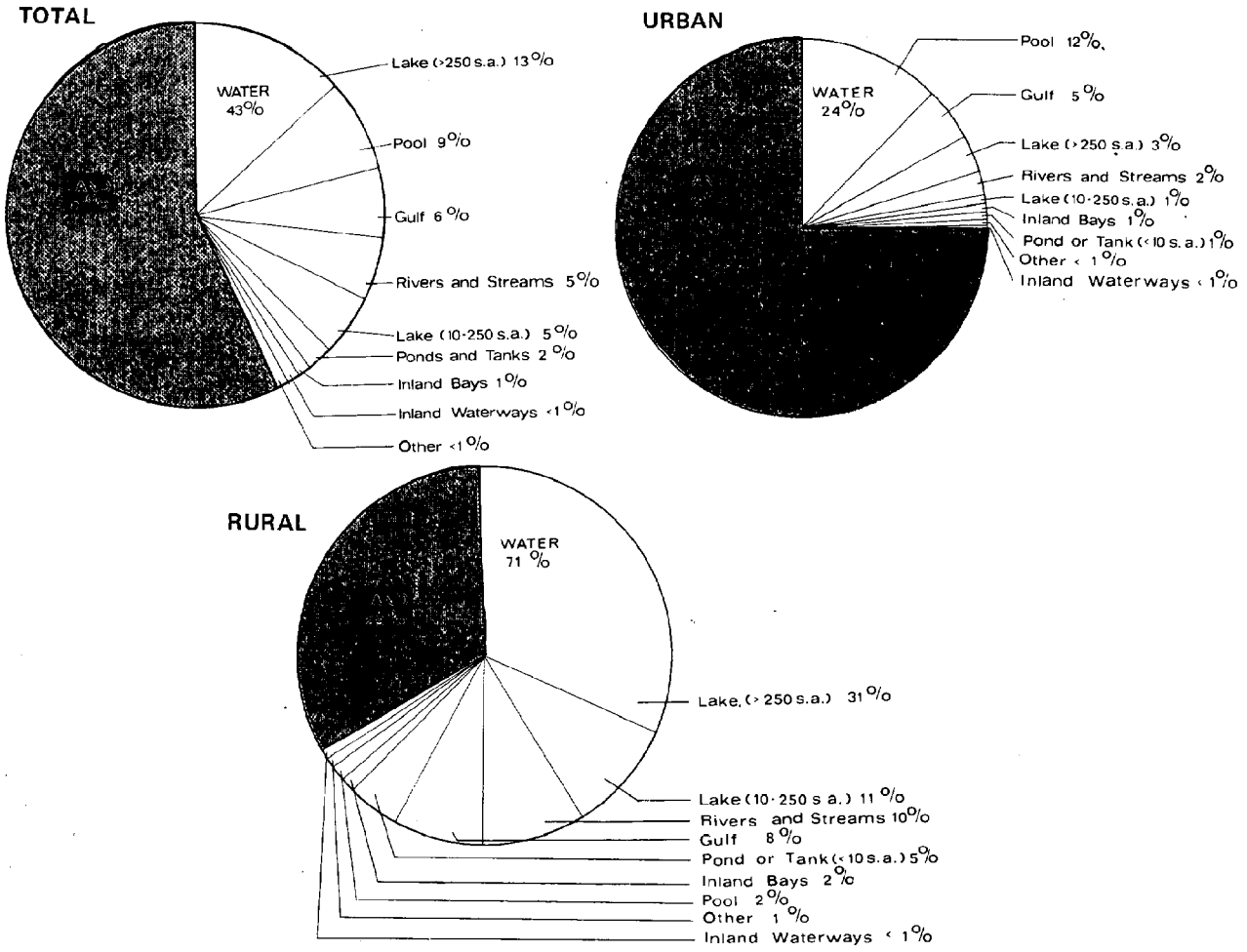


FIGURE 4-10.

TOTAL RECREATION PARTICIPATION IN TEXAS BY LAND AND WATER RESOURCES UTILIZED AND LOCATION, 1968/1960



their own land. Inland bays made up 1 percent of all Texas participation, and inland waterways and other each accounted for less than 1 percent.

Urban and rural comparisons provide some interesting contrasts. Clearly, urban participation weighs heavily toward land participation, while pools form the largest segment of water participation. Rural participation, on the other hand, is predominantly water-oriented, with the largest segment being lakes of over 250 surface acres in size. These breakdowns probably represent the availability of these resources as well as preferences. Urban recreation water is very limited, while the majority of Texas lakes are located in rural settings. Under urban participation, the relatively large percentage for pools, 12 percent, to some extent reflects the popularity of swimming in urban areas. Inasmuch as rural recreational water is generally accessible to the majority of the State's population, the large proportion for water, 71 percent, probably reflects preference more than availability. Rural participation at lakes of varying sizes is a very important segment, comprising 42 percent of the total rural participation.

Analysis of current and projected demand from different perspectives—rural, urban, out-of-state, by activity, analytical region, geographic region, type of resource, etc.—is imperative because of the insights it provides with regard to recreation planning. Such analysis provides managers and planners with information on the amount and patterns of outdoor recreation in Texas. This enables them to do a better job of fulfilling the needs and desires of the citizens of Texas, and, at the same time, ensure careful planning for the future use of Texas' resources, both land and water.

Chapter 5

WHAT TEXAS NEEDS - ADDITIONAL RECREATION RESOURCES

INTRODUCTION

Due to the increasing demand being placed on the State's existing outdoor recreation resources, many parks and recreation lands, waters, and facilities are presently inadequate to provide the types of recreation opportunities required to adequately satisfy the recreational demands of the people of Texas and visitors to the State.

To provide adequate recreation opportunities in a state as large and diverse as Texas will require the provision of significant quantities of resources in addition to the existing supply. Since outdoor recreation is characterized by a broad array of personal interest and preferences of recreationists, resources providing these opportunities are also of a varied nature.

These resources basically include land, water, and developed recreation facilities. Lands may include mountains, forests, plains, hills, wilderness, shorelines, or beaches or simply urban open space acres. Water may range from the coastal gulf and bay waters to freshwater lakes, rivers and streams, or small ponds and stock tanks. Recreation facilities may vary similarly from the most primitive campsite in a remote area to an intensely developed urban regional amusement center, such as Six Flags Over Texas.

Other resources may include natural, historical, and archeological sites and areas that possess significant ecological, historic, or cultural and social values. These plus other resources serve to provide the recreation opportunities presently being sought out by recreationists in Texas today and are expected to continue into the future.

CURRENT AND PROJECTED RESOURCE REQUIREMENTS

Estimates of the requirements for selected recreation resources are provided in the discussions presented below. The requirements represent the quantities and general locations of additional resources that should be made available between 1968/1970 and the year 2000 to provide adequate levels of recreation opportunities with respect to expected demands. These resources include acres of developed recreation lands, surface acres of recreational water, and the additional units of selected outdoor recreation facilities.

DEVELOPED RECREATION LANDS

The following discussion describes developed recreation land requirements for the entire State, for the urban areas, and for the rural areas. It does not touch upon other types of land needed, such as open space, natural areas, wilderness, etc., although they are important. These latter categories of land requirements are considered in Chapter 6 of this volume.

In interpreting the requirements for additional developed recreation lands, it should be pointed out that a number of alternatives are available for providing these lands. Among these alternatives is the further development of existing sub-optimally developed recreation lands, use of publicly regulated lands for recreation purposes, and the outright acquisition and development of lands for recreation purposes.

STATEWIDE DEVELOPED LAND REQUIREMENTS

It is estimated that an additional 74,000 acres of developed recreation lands should have been available to meet the recreation demands in Texas during 1968/1970 and represents an increase of 42 percent over the existing 175,000 acres of developed lands. With the projected increases in demands, the need for additional developed recreation lands is expected to total 211,000 acres by 1980 and to total 540,000 acres by the year 2000. These estimates represent increases of 121 percent over present levels of supply by 1980 and 308 percent by 2000. (See Figure 5-1.)

COMPONENTS OF STATEWIDE DEVELOPED RECREATION LAND REQUIREMENTS

Of the total requirement for additional developed recreation lands in 1968/1970, 36 percent is urban, while 64 percent is in rural areas of Texas.

Inadequate Recreational Opportunities.
Inadequate or poorly-located recreation areas often leave local residents to make the most of vacant lots and other idle tracts of land in the neighborhood. (Photo by Texas Department of Public Welfare)

were estimated at 23,000 acres (85 percent of all urban land needs), while cities will need 1,900 acres, and towns 2,000 acres in addition to their present lands. Total urban recreation land requirements are expected to increase to 62,000 acres by 1980, and to 188,000 acres by 2000, increases of approximately 142 and 432 percent over thy existing developed lands, respectively. By the year 2000 the metropolitan areas will require an additional 164,000 acres, the cities 14,000 acres, and towns 11,000 acres over existing recreation lands.

In addition to the metropolitan areas, cities, and towns requirements discussed above, there are 2,555 small communities (less than 2,500 population) in Texas. These communities are often quite diverse in the composition of their citizens, depending on the socio-economic characteristics and geographic location. Provisions for recreation must be made for these people, too, but due to the diverse nature of such communities, precise standards are difficult to gauge. Therefore, it is felt that the types of recreation land needed are best determined by the citizens of small communities themselves. However, a benchmark of 25 acres of land for both developed facilities and open space acreage for small communities has been established.

Rural Requirements

Rural developed land requirements in 1968/1970 were estimated at over 46,000 acres. By 1980, this requirement is projected to grow to nearly 140,000 acres, an increase of more than 114 percent above present supplies. By 2000, a total of 351,000 acres will be required, an increase of 267 percent above existing developed land acreages. (See Figure 5-1.)

GEOGRAPHIC DISTRIBUTION OF RECREATION LAND REQUIREMENTS

The following section describes resource requirements for developed recreation land in terms of geographic distribution of where these additional land resources are needed. Distribution is of much importance in recreation planning because resources should be developed, so far as is feasible, with the objective of satisfying demand, and this demand, as has been demonstrated, varies greatly across the State.

Planning Regions

Figure 5-3 depicts combined urban and rural developed recreation land requirements for 1968/1970 for each of the 37 analytical planning regions of Texas. As can be seen, the majority of urban and rural land acres estimated necessary for additional development occur in the eastern, north central, and southern regions, and in the central coastal area.

(See Figure 5-2.) The larger requirement for rural lands is due to the fact that many activities pursued in the rural areas require larger amounts of land and open space than urban activities. However, urban recreation lands are very important. Urban lands are costly, and urban recreation planners must optimize the use of available recreation land. One might surmise that, since the greater proportion of participation is urban, urban land needs are greater proportionally than rural needs, and thus, it would be more efficient to concentrate on providing urban recreation lands at the expense of rural land. However, some rural activities cannot easily occur in urban environments, such as camping or hunting. In addition, rural participation often adds other dimensions to recreation which are less likely to be found in urban recreation, such as natural beauty, solitude, and tranquility.

Urban Requirements

In 1968/1970 it was estimated that approximately 27,000 acres of developed recreational lands were needed in the urban areas of Texas in addition to the acres of developed lands presently available. (See Figure 5-1.) Metropolitan area requirements

FIGURE 5-1. DEVELOPED RECREATION LAND REQUIREMENTS IN TEXAS, 1968/1970–2000 (000's of acres)

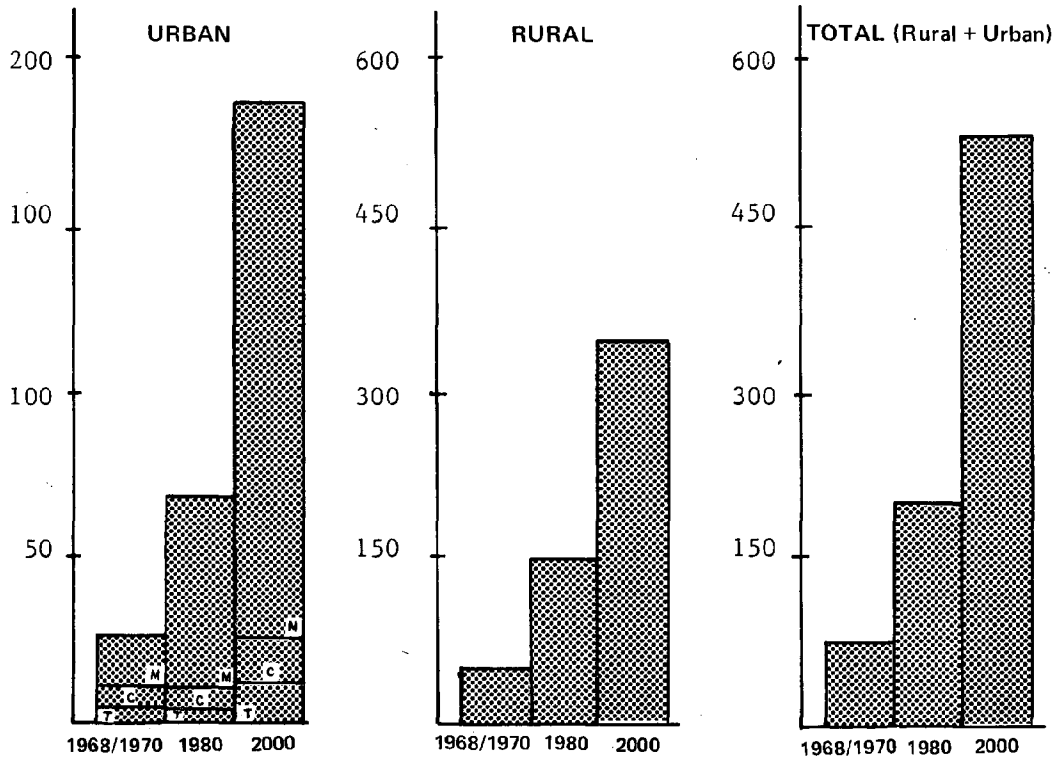
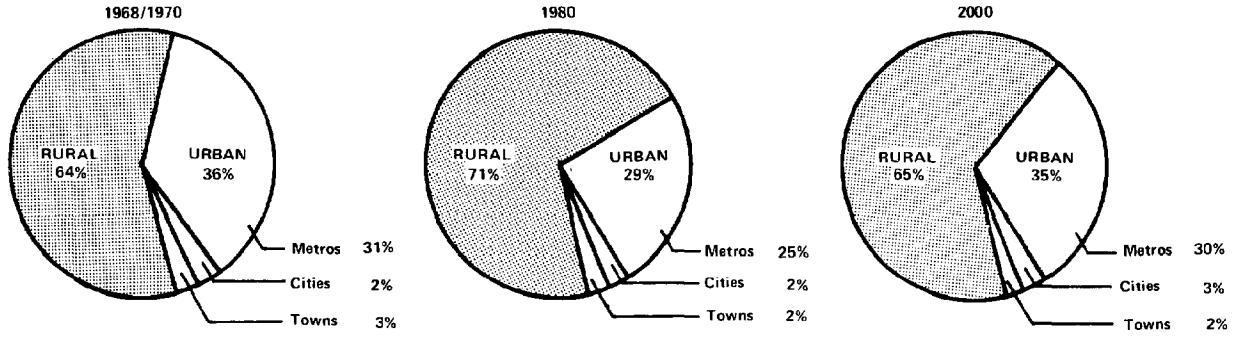


FIGURE 5-2. PERCENT OF DEVELOPED RECREATION LAND REQUIREMENTS IN TEXAS BY LOCATION, 1968/1970–2000



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Among the 37 regions, those 10 with the largest total land acre deficits for 1968/1970 include regions 11, 14, 25, 33, 28, 12, 10, 15, 24, and 2. These regions generally contain either large metropolitan areas or important natural resources for recreation, or both. By 1980, with changes in demand throughout the State, it is expected that there will be some shifts among the top ten regions. Region 33 will become first, followed by 11, 25, 12, 28, 14, 10, 15, 9, and 24, respectively. Due to further increases in demand, additional shifts among the top ten regions are expected by 2000, when Region 11 is expected to assume first place followed by Regions 25, 33, 12, 28, 14, 10, 15, 9, and 24, respectively.

In some regions, particularly in the future, recreation land requirements may amount to a significant portion of the entire area of the region, such as in Region 11, where, by 2000, it is expected that recreation land needs will amount to approximately 11 percent of the acreage in Region 11. **Such land needs may not be feasible to provide, in view of rapid urbanization, high land costs in certain areas, and many other factors. Nevertheless, two conclusions can be drawn from this information. First, if current attitudes of recreationists prevail, it is imperative that the acquisition of recreation land be accorded a high priority everywhere. Second, since all**

FIGURE 5-3. DEVELOPED RECREATION LAND REQUIREMENTS BY PLANNING REGION, 1968/1970–1980

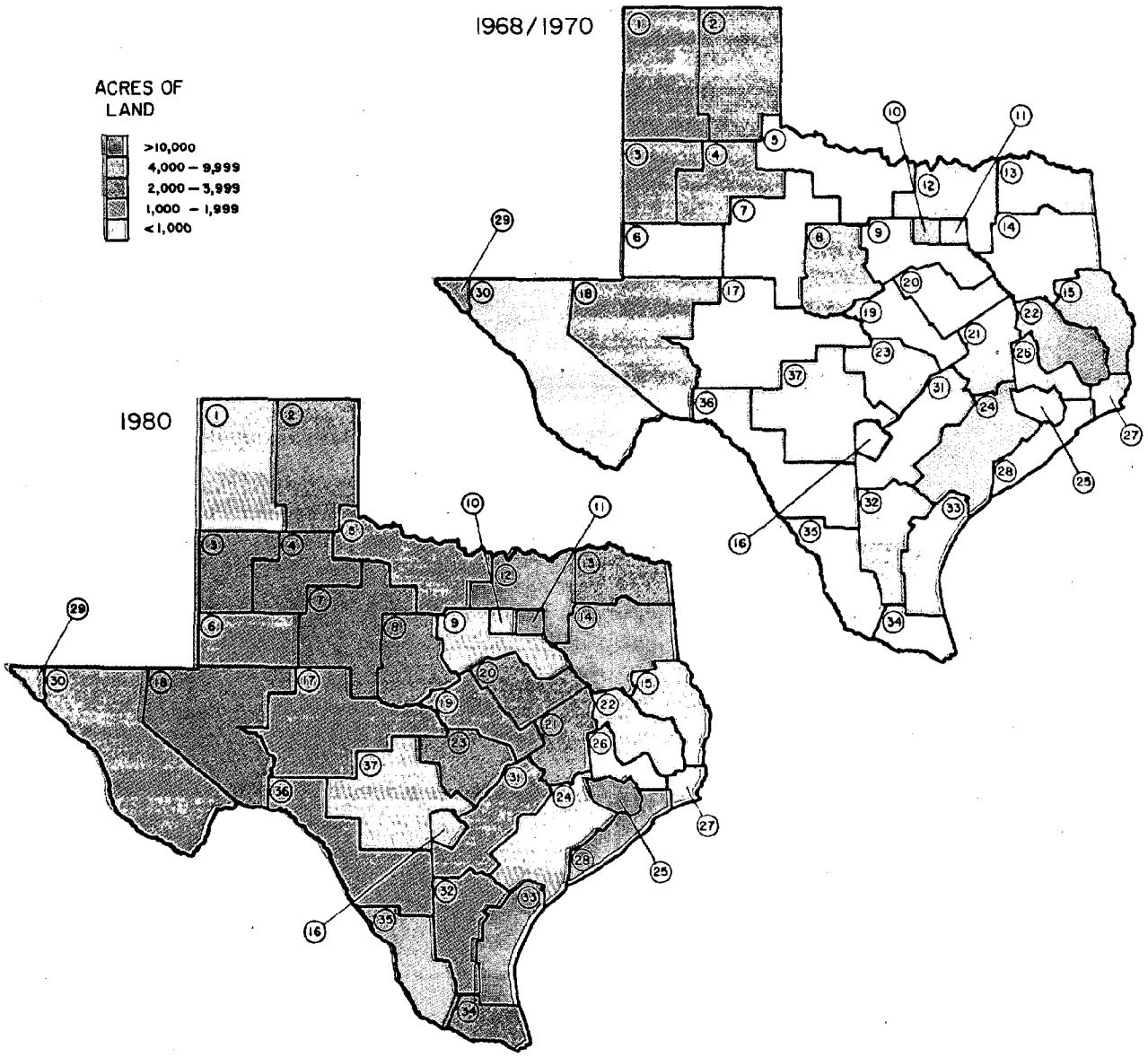


FIGURE 5-4.

DEVELOPED RECREATION LAND REQUIREMENTS BY MAJOR GEOGRAPHIC REGION AND LOCATION, 1968/1970–1980

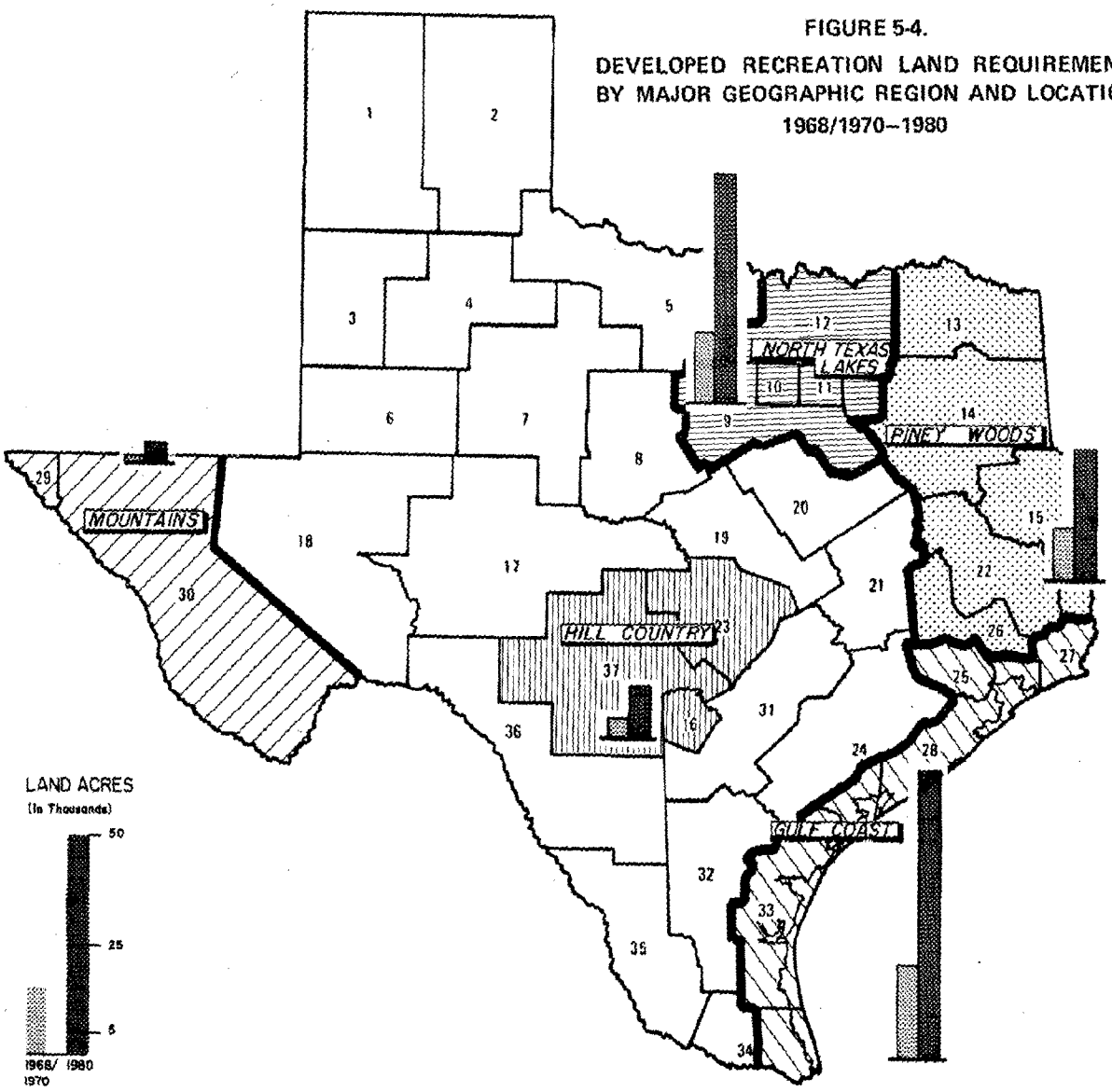
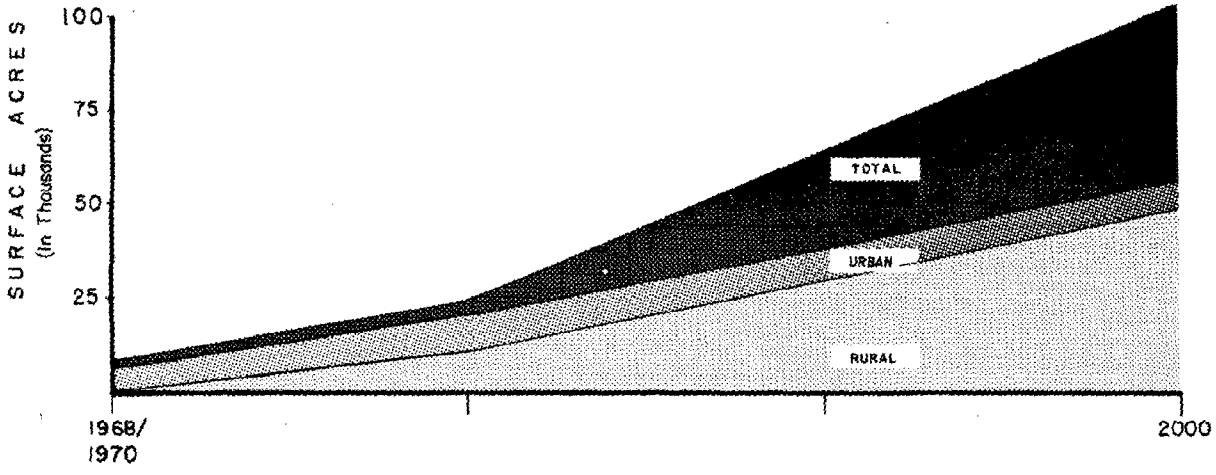


FIGURE 5-5.

RECREATIONAL LAKE AND RESERVOIR REQUIREMENTS, 1968/1970–2000



the recreation land actually needed will probably not be provided within a given region, the needs of the people will have to be met in other nearby regions.

Major Geographic Regions

Presenting the developed recreation land requirements of the State in terms of commonly known natural regions generally reflected the historical popularity and attraction of these areas, as did the demand for recreation in these regions. Of the land needed in 1968/1970, the five major geographic regions accounted for 80 percent of the total state estimated land requirements as shown in Figure 5-4 The geographic region accounting for the largest number of additional developed land acres needed was the Gulf Coast with 23,000 acres, or about 31 percent of the State's total requirement. The North Texas Lakes Area ranks second with 17,000 acres, or about 22 percent, the Piney Woods region ranks third with 13,000 acres, 18 percent, and the Hill Country and the Mountains rank fourth and fifth, with 4,500 and 1,800 acres, or 6 percent and 2 percent, respectively. While the acreages will increase, these percentage breakdowns are projected to remain approximately the same through 1980.

RECREATIONAL WATER

Water is an important recreation resource not only because of the number and popularity of activities which take place directly on or in the water but also for the activities which are indirectly related to water such as camping and picnicking. The presence of water resources adjacent to an area for an activity such as camping enhances the area and makes it more pleasant. As previously discussed, 43 percent of the total recreation participation that occurred in Texas in 1968 was related to some type of water resource. In the urban areas, where suitable recreation water resources are infrequent, 24 percent of the participation was water related. However, in the rural areas over 70 percent of the recreation participation was related to or occurred within close proximity to water resources.

Given the importance of water to recreation, planning for the development of additional water resources in Texas must consider the recreation demands for water oriented opportunities. Regardless of the primary purpose for developing a reservoir or lake, whether for municipal water supply, industrial water supply, or flood control, recreationists consistently seek access to these resources and the opportunities they provide.

For purposes of the **Texas Outdoor Recreation Plan,** estimates of the additional water resources required to satisfy current and future recreation demand pertain only to freshwater lakes and reservoirs and consider only the demands for surface water suitable for boating, skiing, and boat fishing. In the process of developing these estimates a number of decisions were made concerning resource potentials as they related to the feasibility of developing additional freshwater resources. This was particularly the case in the arid regions of the State. Consequently, these decisions are reflected in resource requirement estimates presented below.

STATEWIDE RECREATION WATER REQUIREMENTS

With a present supply of 1,159,317 surface acres of freshwater lakes and reservoirs, the requirement for additional surface acres of recreation water is expected to grow moderately between 1968/1970 and 1980 as shown in Figure 5-5. Between 1980 and 2000 the requirements are expected to increase more rapidly. In terms of additional surface acres needed, it was estimated that an additional 6,700 surface acres were needed in 1968/1970 over the present supply. This represents an increase of approximately 0.6 percent. By 1980, this requirement will increase to 24,000 acres, an increase of 2.1 percent over existing supply. Between 1980 and 2000, an 8.9 percent increase over the present supply will be needed. This represents the addition of approximately 103,000 surface acres within those areas of the State where additional water development is needed and feasible.

COMPONENTS OF STATEWIDE RECREATION WATER REQUIREMENTS

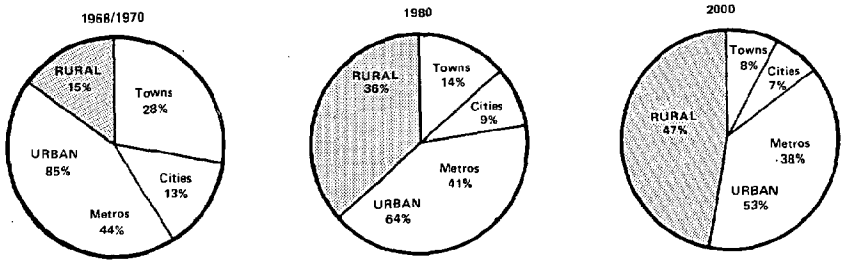
In 1968/1970 requirements for additional recreation water were found

Water—An Important Recreation Resource. Much of the outdoor recreation in Texas is water related. (Photo by Texas Parks & Wildlife Department)

to exist in both the rural and urban areas of the State, but the majority of the additional water was needed in the urban areas (See Figure 5-6). This relationship can be attributed to some extent to the fact that most of the lakes and reservoirs in the State are presently located in rural areas.

However, by 1980 the requirements for additional rural water resources will increase to 36 percent of the State's total requirement as opposed to only 15 percent in 1968/1970. By 2000, 47 percent of the total State recreation water requirement of 103,000 surface acres will be needed in the rural areas with the remaining 53 percent needed in the urban areas.

FIGURE 5-6.
PERCENT OF RECREATIONAL LAKE AND RESERVOIR REQUIREMENTS BY LOCATION, 1968/1970–2000



Urban Requirements

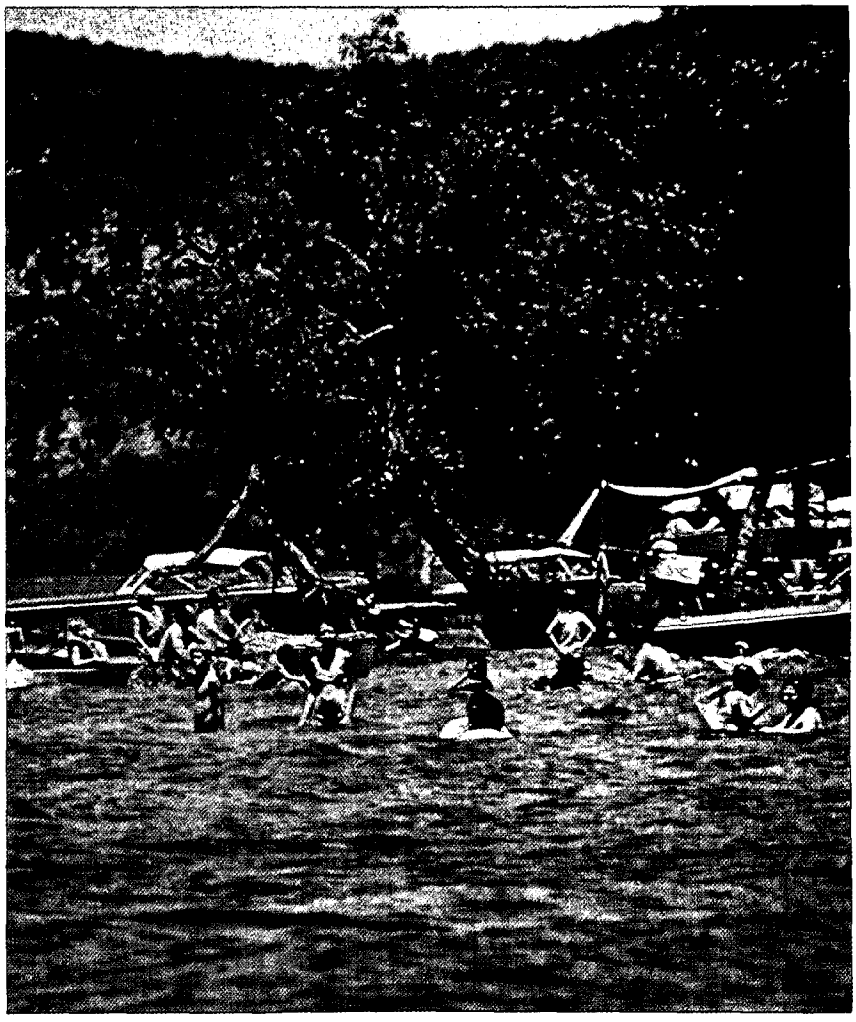
With an existing supply of 50,741 surface acres of lakes and reservoirs, additional requirements for the urban areas were estimated to be approximately 5,700 surface acres in 1968/1970. Of the total state requirement, approximately 44 percent was determined to be needed in the metropolitan areas, 13 percent in the cities, and 28 percent in the towns of the State (See Figure 5-6). By 1980, total urban requirements will increase to over 15,000 surface acres, an increase of 30 percent over the existing supply. By the year 2000, an additional 54,000 acres will be needed. This represents a 107 percent increase over the 50,741 surface acres presently available. In 1980, metropolitan area requirements are projected to be 41 percent of the total state requirement, while cities and towns will account for approximately 9 and 14 percent, respectively. Metro area requirements will have increased to 39,000 surface acres by the year 2000, 38 percent of the total statewide requirement. Cities and towns water requirements are expected to amount to 7,000 and 8,000 acres, or 7 percent and 8 percent of the statewide requirements, respectively.

In providing the estimated requirements for water in the urban areas of the State, feasibility problems may be encountered by water development agencies. This may be particularly the case in securing lands with water development potential within a reasonable cost range. Consequently, development in rural areas in close proximity to metropolitan areas, cities, or towns may be a reasonable alternative to providing the opportunities needed by the urban areas as well as providing additional rural recreation opportunitiess.

Analysis of requirements for the many small communities in Texas was attempted but a lack of accurate data for all communities was encountered. In addition, early information indicated that the cost of providing water resources for small communities would dictate that not all communities will be able to have opportunities. Nevertheless, outdoor recreation planning at every level, where it concerns the needs of small towns, must take every effort to consider the needs of these communities.

Rural Requirements

With a present supply of 1,108,576 surface acres, the requirements for recreation water in the rural areas of Texas are expected to grow rapidly from a requirement of 992 surface acres in 1968/1970 to approximately 9,000 surface acres in 1980 for those areas of the state where additional



Recreation on Lake Austin, an Urban Reservoir. By 2000 statewide recreation requirements for urban oriented lakes and reservoirs are projected to increase to over 54,000 surface acres, an increase of 107 percent over the supply in 1970. (Photo by Texas Parks & Wildlife Department)

water development is considered feasible. The rapidly growing popularity of water sports, in particular boating, will increase rural requirements in certain areas of the State to nearly 49,000 surface acres by 2000. This represents a 4 percent increase over the present surface acres available in the rural areas of the State.

GEOGRAPHIC DISTRIBUTION OF REQUIREMENTS

In order to effectively plan for satisfying the future recreation demands for water resources in the state, particularly in a state the size of Texas, it is necessary to determine as accurately as possible where additional emphasis should be placed in meeting these demands. The following discusses water surface acre requirements in those geographic areas of the state where additional waters are estimated to be needed at the present time as well as in the future, and where additional water resource development is feasible.

Planning Regions

Total water resource requirements for 1968/1970 for the 37 analytical regions are shown in Figure 5-7. All of the regional requirements were in urban areas except for Region 24 which had a requirement for 992 surface acres in the rural areas. The requirements were relatively small. Region 24 stands out with the largest requirements, nearly 1,200 acres. Region 16 urban areas ranked second with 900 surface acres, followed by Region 12 urban areas with 600 acres, Region 33 with 346 acres, and Region 27 with 345 acres. All remaining regions had relatively small requirements of approximately 300 surface acres or less.

FIGURE 5-7. RECREATIONAL LAKE AND RESERVOIR REQUIREMENTS BY PLANNING REGION

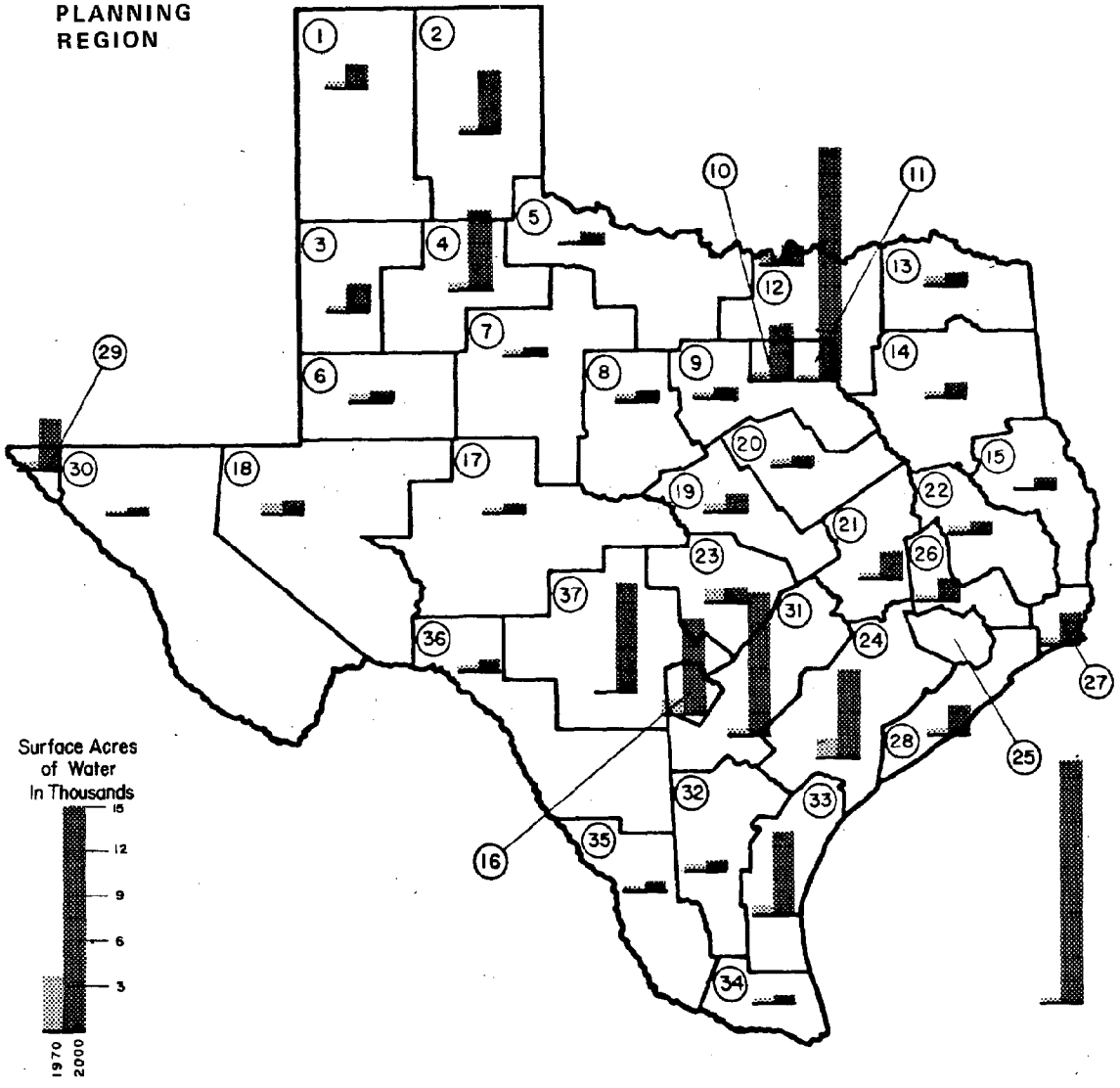
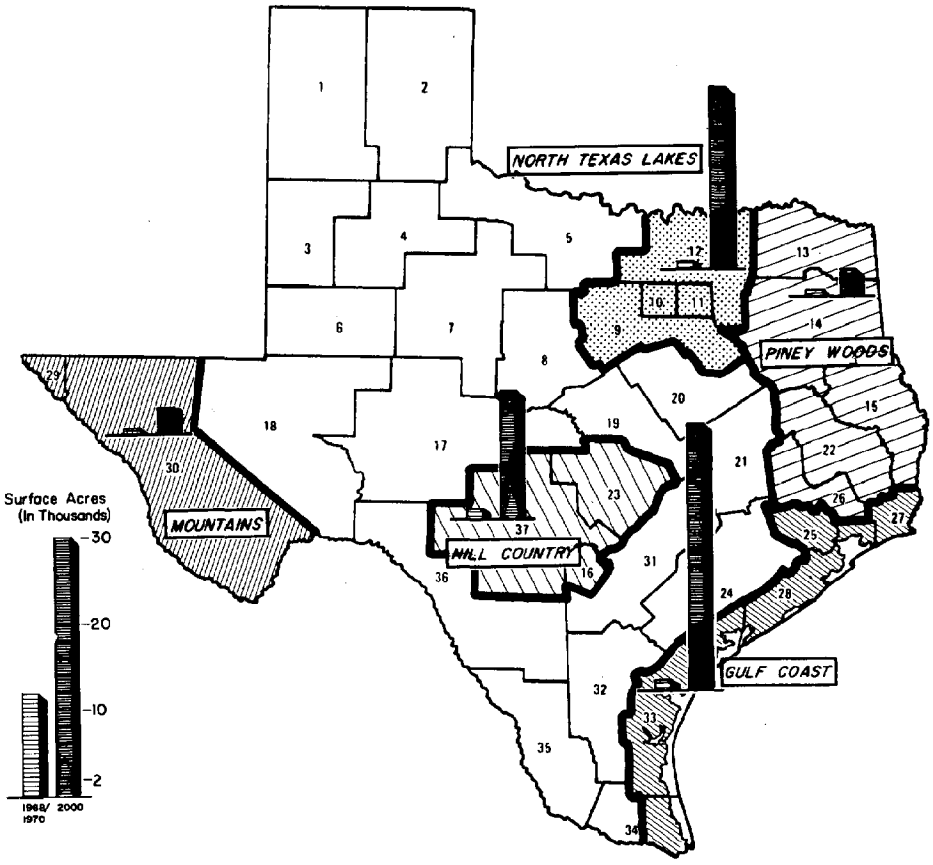


FIGURE 5-8.
RECREATIONAL LAKE AND RESERVOIR REQUIREMENTS BY MAJOR GEOGRAPHIC REGION, 1968/1970–2000



While there are currently low estimates of requirements for surface acres of recreational water, between 1980 and 2000 both urban and rural requirements are expected to grow at high rates in some areas as illustrated in Figure 5-7. This fact is extremely important in view of the extended time frames necessary for the development of such recreational water. Studies must be conducted, written and studied, funds must be provided, lands must be purchased, etc. Most of these processes are set in motion now, and adequate recreational waters for the public for the rest of the century will hopefully be provided for the State as a whole. However, due to the various factors that dictate the location of new reservoirs, the spatial distribution of these reservoirs in relation to the population will be less than ideal in many instances. Consequently, recreationists in the arid regions of the State may be forced to continue to travel long distances to participate in water oriented recreation activities.

Major Geographic Regions

Of the total requirements for additional surface acres of recreational water that were estimated for 1968/1970, 58 percent was needed in the five major geographic regions of Texas (See Figure 5-8). The largest, the Gulf Coast, was 1,189 surface acres, or 18 percent, followed by the North Texas Lakes District with 1,036 surface acres, or 15 percent, the Hill Country with 15 percent, and the Piney Woods and Mountains each with 5 percent. The importance of the five geographic regions with regard to the proportion of total state requirements attributed to them is expected to increase between 1968/1970 and 2000. By 2000, these five regions will account for 72 percent of the State's recreational water acreage requirements.

RECREATION FACILITIES

In addition to developed recreation lands and recreation water, facility requirements were developed to delineate the number and types of facilities needed to meet the demand

for specific activities. These requirements represent facilities that need to be provided in addition to existing supplies in order to satisfy projected demand.

Estimates of additional facility requirements were determined for 17 types of recreational facilities. Some of these facilities are confined to rural areas, others only to urban environments, and some are found in both areas.* Urban and rural recreation facilities are shown below.

Rural Facilities

Campsites
Playground Acres
Golf Holes
Baseball/Softball Fields
Hunting Acres
Picnic Tables
Boat Ramps
Boat Slips and Stalls
Fishing Piers, Barges, Marinas—Linear Yards
Swimming Pools—Square Yards
Designated Swimming Areas—Square Yards
Bicycle Trail Miles
Horseback Riding Trail Miles
Walking, Hiking, Nature Study Trail Miles

Urban Facilities

Tennis Courts
Playground Acres
Golf Holes
Baseball/Softball Fields
Basketball Courts
Picnic Tables
Boat Ramps
Football/Soccer—Fields
Swimming Pools—Square Yards
Bicycle Trail Miles
Walking, Hiking, and Nature Study Trail Miles

STATEWIDE FACILITY REQUIREMENTS

Figure 5-9 shows the projected requirements for all types of recreation facilities for the State and the rural and urban areas of the State.* As of 1968/1970, the larger statewide requirements estimated to exist were for campsites, piers, barges, and marinas, picnic tables, square yards of pools and designated swimming areas, boat slips and stalls, tennis courts, and miles of trails. Over the entire period from 1968/1970 to 2000, the fastest growing requirements are expected to occur for playgrounds, basketball courts, picnic tables, boat slips and stalls, and swimming pools, with at least a 100 percent increase in all requirements during this period. Total statewide requirements for almost all types of facilities can be expected to at least double by the end of the century over the existing supplies.

COMPONENTS OF STATEWIDE FACILITY REQUIREMENTS

Of the total requirements for all types of additional recreation facilities in Texas in 1968/1970, approximately 50 percent were needed in the urban areas with the remaining 50 percent needed in the rural areas. While the specific types of facilities needed will vary considerably in the urban areas as opposed to the rural areas, both areas of the State had similar overall facility deficits. (See Figure 5-10.)

By 1980 this relationship is expected to change somewhat with 43 percent of the State's total facility requirement occurring in the urban areas, with the rural areas accounting for 57 percent. However, by the year 2000, with continued urban population growth as well as increases in the demands for recreation opportunities located in the urban areas, the urban areas are expected to account for 54 percent and the rural areas 46 percent of the State's recreation overall facility requirements.

Urban Requirements

Those facilities expected to have the fastest growing requirements in urban areas include playgrounds, basketball courts, swimming pools, baseball fields, and tennis courts. All urban facility requirements are expected to at least double between 1968/1970 and 2000.

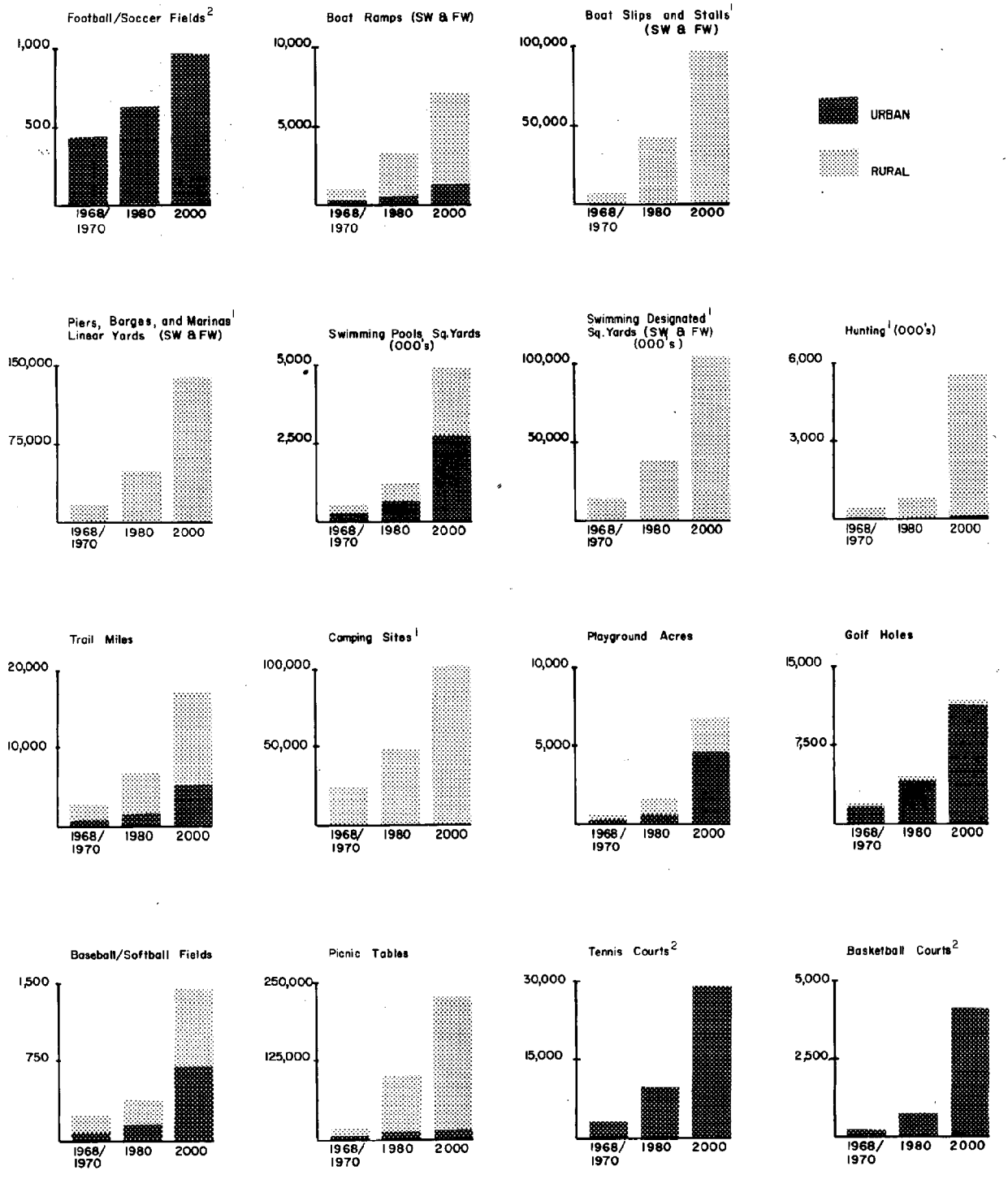
By far, the urban facility requirements are much larger for metropolitan areas than for cities or towns. For every type of urban facility, metropolitan requirements exceed those of the cities by at least tenfold for most facilities. Requirements of cities and towns are fairly close in the number of facilities required.

Rural Requirements

The fastest growing requirements for rural areas will be picnic tables, playground acres, boat slips and stalls, boat ramps, and piers, barges, and marinas, a 90 percent projected increase by 2000. Of particular importance to rural facility requirements are activities that occur in conjunction with one another, or in "packages," such as camping and fishing or boating and fishing. While the primary purpose of a trip may be fishing, camping and picnicking may also take place on the trip as secondary activities. Therefore, it is important that facilities for a variety of related activities be provided so as to satisfy the demand for the most prevalent types of activity combinations for a particular recreational site. In addition, the appropriate support facilities and services, such as grills, restrooms, garbage cans, running water, etc., should be provided.

*Note: The fact that a facility requirement was not computed for either an urban or rural area does not mean that the activity does not occur in that type of environment, but simply that the demand is so small that it is considered insignificant for statewide resource considerations.

FIGURE 5-9. RECREATION FACILITY REQUIREMENTS IN TEXAS, 1968/1970–2000



1. Not calculated for Urban areas.
2. Not calculated for Rural areas.

GEOGRAPHIC DISTRIBUTION OF RECREATION FACILITY REQUIREMENTS

The following paragraphs discuss the distribution of facility requirements throughout the State in terms of the various regions of destinations.

Planning Regions

Requirements for the different types of recreational facilities vary greatly over the 37 regions. In terms of numbers and types of facilities, overall comparisons indicate certain regions with greater requirements than others. Regions with the largest facility requirements in 1968/1970 were the metropolitan regions and/or those regions possessing highly desirable natural resources. These regions include Regions 10, 11, 12, 14, 15, 16, 22, 25, 33, and 37. Furthermore, it is expected that for the years 1980 and 2000 these 10 regions will still be among the regions with the largest facility requirements.(See Figure 5-11.)

Major Geographic Regions

Recreation facility requirements for the major geographic regions reflect the demands for recreation in these regions, as did the resource requirements for recreation land. The greatest overall requirement in terms of deficit opportunity days for all types of facilities in 1968/1970 existed in the Gulf Coast region, which shows a total deficit of 47 million activity-days. This was followed by the North Texas Lakes Area with a deficit of 38 million activity-days. Next followed, in order, the Piney Woods, Hill Country, and mountain regions. (See Figure 5-12.)

For the years 1980 and 2000, the overall ranking for geographic regions are not expected to change significantly, except that the North Texas Lakes will clearly surpass the Gulf Coast and move to first place in terms of requiring more types and numbers of facilities in order to satisfy the large projected demands.

Urban Swimming Pool. Overall requirements for swimming facilities in urban areas are projected to increase by almost 135 percent between 1970 and 1980. (Photo by Texas Parks & Wildlife Department)

FIGURE 5-10. PERCENT OF RECREATION FACILITY REQUIREMENTS BY LOCATION, 1968/1970–2000

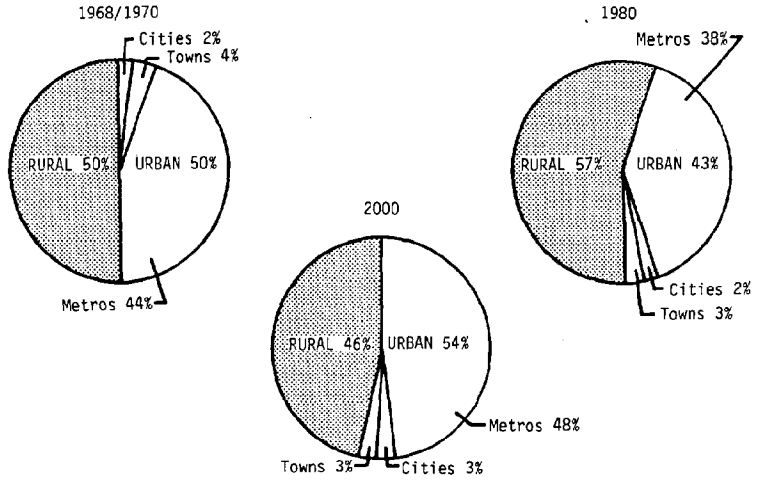


FIGURE 5-11. RECREATION FACILITY REQUIREMENTS BY PLANNING REGION, 1968/1970–1980

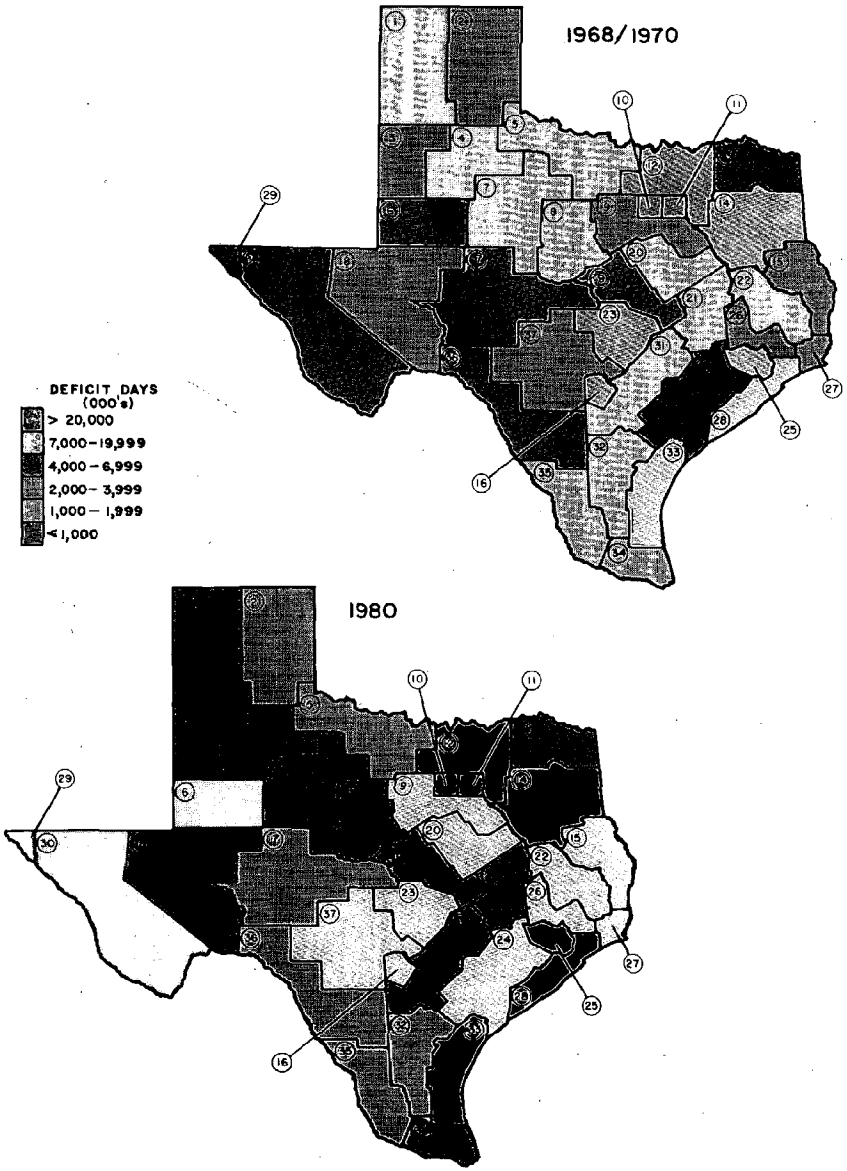
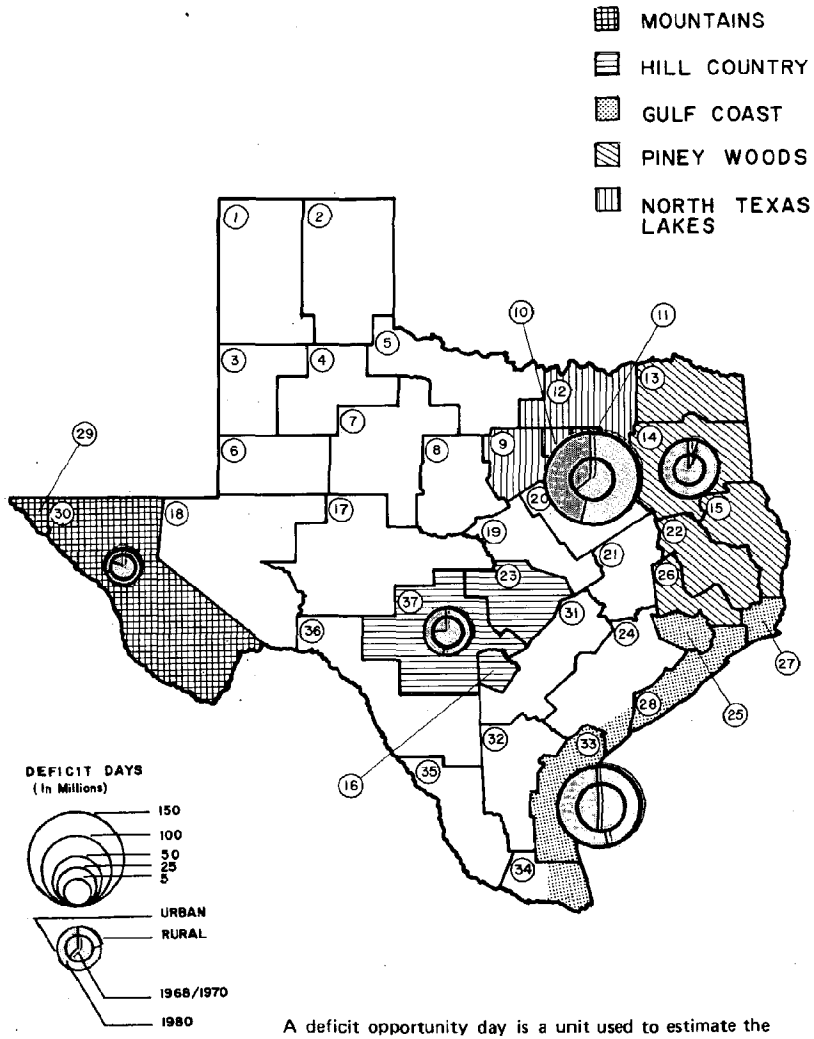


FIGURE 5-12. RECREATION FACILITY REQUIREMENTS BY MAJOR GEOGRAPHIC REGION, 1968/1970–1980



A deficit opportunity day is a unit used to estimate the facilities needed to satisfy recreation demand when demand exceeds the present supply of recreation facilities.

Chapter 6

RECREATION PROBLEMS AND SPECIAL CONSIDERATIONS

INTRODUCTION

Within the sections that follow are analyses of areas of consideration which could not or were not quantified for presentation. However, their importance in achieving the objectives of the **Texas Outdoor Recreation Plan** merit their full consideration in the effort to provide needed recreation opportunities to meet existing and projected demand through the year 2000. These special areas of consideration include recreation resources, recreation programs, outdoor recreation planning, coordination of plans and programs, recreation funding, parks and recreation departments and personnel, socio-economic factors, trails, and hunting.

RECREATION RESOURCES

STATE OWNED LANDS

Agencies of the State of Texas hold title to significant, although relatively small portions of land in the State. Most of the lands are devoted to the primary functions of the title holding agency, e.g., lands administered by the Texas Forest Service are lands which provide timber, forest research opportunities, and an environment for other functions related to sound forest management and conservation. The State's many river authorities, conservation and reclamation districts, and special water districts utilize lands in their charge to support such services as electricity, water supply, and secondarily, recreation.

A major consideration regarding state owned lands is the problem of optimizing their use. Presently, there is no statewide inventory of state lands. There is no agency with the responsibility of maintaining up-to-date files on all state land ownership. Little is known regarding the variety of uses the State puts its lands to. Also, lands which receive little or no use at all are not widely known. A thorough and complete inventory of all state lands could aid the provision of recreational opportunities by identifying current uses and, more importantly, uses which are compatible with various recreational activities. The implementation of multiple use programs on state owned lands could significantly expand their value as a resource to the people of Texas. Efforts such as the Governor's Interagency Council on Natural Resources and the Environment's (ICNRE) approach to establishing an "interagency" natural resources information system can eventually provide a repository of just such information.

COASTAL RESOURCES

The Texas coastal region, with its many beaches and estuaries, is one of the State's and the Nation's most valuable recreation resources. Consequently, there is considerable

A Prize String of Speckeled Trout. Special management efforts and cooperation involving all levels of government and private enterprise are needed to conserve the unique and valuable recreational resources of the Texas Gulf Coast. (Photo by Leroy Williamson, Texas Parks & Wildlife Department)

Scenic Area in East Texas. A region-by-region statewide inventory of natural areas would help to conserve Texas' diverse array of recreational resources and would help to prepare and plan for the population growth and development expected in Texas in years to come. (Photo by Jim Whitcomb, Texas Parks & Wildlife Department)

state concern for the natural resources of this area. Furthermore, because of the potential this area holds, it has been identified as one of the most important recreational resources which will be needed to provide recreational opportunities for Texans and out-of-state visitors. The unique land contrasts of this area together with its increasing development for different types of uses make the coastal region a prime candidate for even greater recreational demands. Special problem areas include overlapping economic and social issues which must be dealt with in planning for the provision of adequate coastal outdoor recreation opportunities. Conflicts will continue to arise when different public and private concerns seek to use the land on or near the same coastal resources. Examples of these conflict areas include the use of coastal lands for spoil deposition, alteration of freshwater inflows into bay systems. Large scale shoreline and offshore development, artificial reefs, and superports. These and other difficult questions regarding the utilization of coastal resources have produced a keener awareness of the need for increased emphasis on research and education programs for achieving a better balance between conservation measures and overall development of the resources. At the present time, a new program has been launched to evaluate the State's position for the management of the entire coastal zone. The Coastal Zone Management Program, administered by the General Land Office, is currently in the process of developing a mechanism for a balanced approach to land use and development in the coastal environment. Through interagency cooperation and coordination, the results of this program should produce information useful in the development of solutions to problems of meeting expected coastal recreation resource and facility requirements. These problems include resource carrying capacity, activity and resource substitutability, and critical natural and cultural areas.

SIGNIFICANT NATURAL AREAS

Natural areas are areas or sites which, because of the scenic beauty, rarity, recreational value, uniqueness, ecological importance, or cultural value, should be protected for posterity. Many such areas across the State are being destroyed every year due to a number of inter-relatedfactors. These include a lack of information which identifies these areas, the lack of an entity with adequate funds to acquire and/or hold such areas, inadequate legislation, and the absence of positive incentives to encourage the protection of such areas.

The unique natural areas of Texas should be considered and taken into account with a view toward their conservation when planning developments, highways, parks, recreation areas, and other construction projects. To this end, a survey of approximately 750 areas was conducted by the Texas Natural Areas Survey, a group of over 100 concerned citizens. The study resulted in a listing of 70 rural and 30 urban natural areas, their location, and the priority order in which it was felt they should be protected. These lists were published in **Outdoor Recreation in the Rural Areas of Texas** and **Outdoor Recreation in the Urban Areas of Texas.** These 100 areas of Texas that should be saved are by no means the only ones that are unique or worthy of protection, but are simply the areas considered to be of the highest quality. It is important that a program of identifying such areas be on a continuing statewide basis so that more unique areas, some of which may be unidentified at this time, can be reported.

STATE AND NATIONAL HISTORICAL SITES

Texas' 267,000 square miles, replete with the evidence of thousands of years of prehistoric and historic changes since man first arrived here, is becoming smaller and smaller in terms of remaining areas, sites, and objects which reflect our cultural heritage. As we urbanize and expand our cities to reflect present and future needs, we tend to forget how we arrived at our existing state. Properly preserved and imaginatively interpreted, our archaeological and historic sites and areas and historic structures could become some of the State's most treasured recreational resources.

An inventory (and assessment) of the known existing archaeological and historic sites and objects of importance to the State and Nation has been only partially completed. With identification, location, survey, and recording of these currently significant historic resources, the Texas Historical Commission, with the sanction of the National Park Service has labelled the resources toward which the Texas Historical Preservation Plan is directed.

However, realization of the Historical Preservation Plan is hampered by several problems. One in particular is the small amount of funding available from the federal level through the National Park Service's Office of Archaeological and Historical Preservation. In addition, historic buildings of merit are often found, ironically, in areas of urban decline. Continued degradation of these areas can be expected if the resources cannot be restored to improve the economic aspects of the surroundings, i.e., through re-evaluation of the tax base, conversion to business uses, tourism, etc. Another problem centers around the fact that there are no tax reliefs for historic structures in Texas. Scarce monies for preservation and high land costs present further discouragement. Finally, archaeological and historic sites, unprotected by law and physical restraints, are subject to public vandalism and degradation.

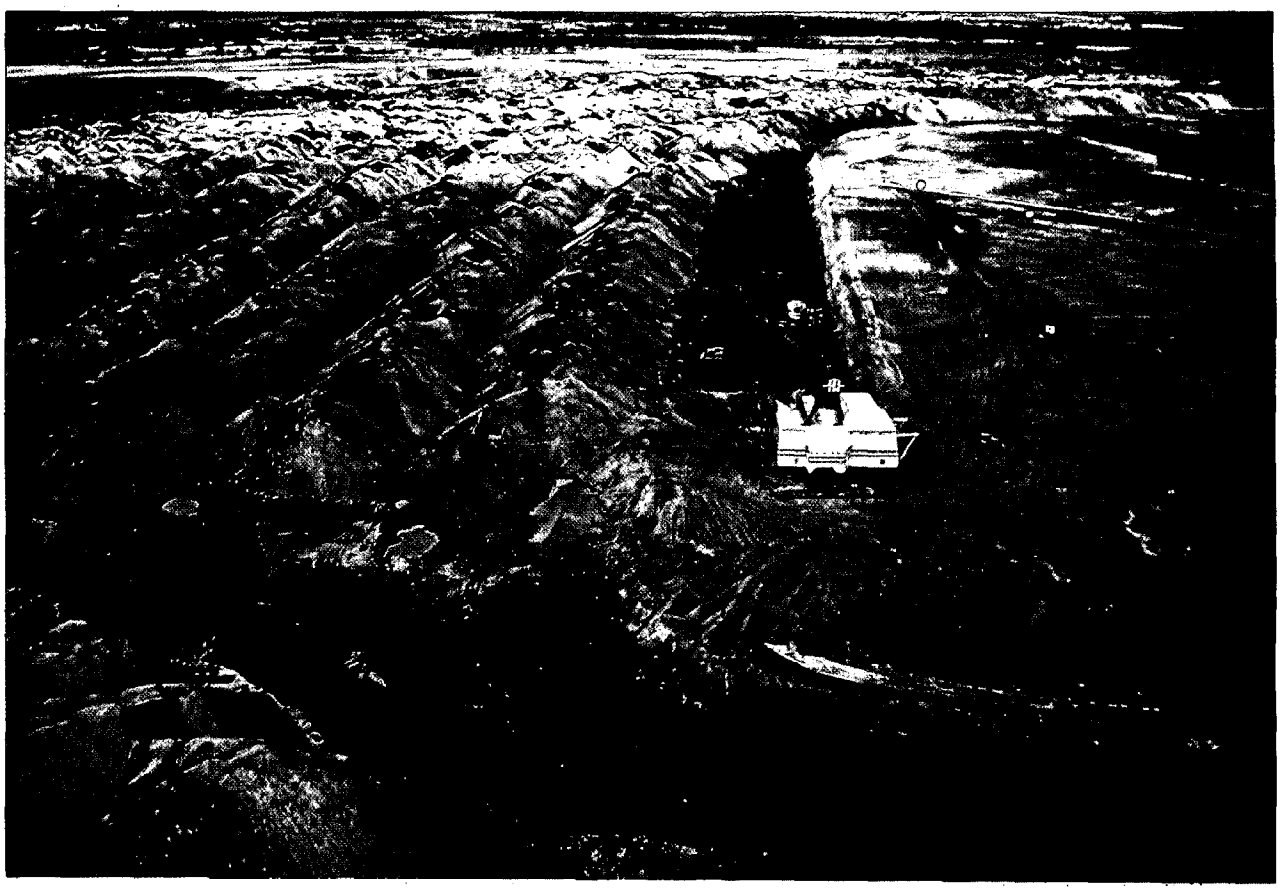
NATIONAL NATURAL LANDMARKS

Special criteria dictate which Texas landmarks are to be included on the National Registry of Natural Landmarks. Presently, only ten landmarks of natural history have been accepted and recognized for their nationally significant attributes in the State. Currently, although the Texas Parks and Wildlife Department has authority to administer such a program, there is no centralized state program to submit landmarks to the National Park Service for consideration within their system of natural history themes: Landforms of the Present, Geological History of the Earth, Land Ecosystems, and Aquatic Ecosystems. Since preservation of these sites is contingent on an application for registration being filed by the owner of the site, a program for encouraging voluntary owner applications would be highly desirable. Texas' natural heritage, in the form of state or nationally significant natural areas, with competent interpretation and with adequate design consideration given to protecting the resources, could become very important recreational resources. There is evidence for this by the good attendance at several natural areas presently available for the public. This importance is also evident where certain areas of the State depend on these attractions to contribute to local economies.

SURFACE MINED LANDS

Statistics provided by the United States Department of the Interior, Bureau of Mines, indicate that in Texas, from 1930 to 1971, approximately 80,000 acres of land had been disturbed by various mining activities. This overall Texas mining area figure has increased on an average of 2,500 acres per year and is expected to increase even more rapidly in the near future. The current energy shortages have had significant influence on the type of minerals sought and on other related types of surface mining activities.

An example of this change is the recent shift in Texas mining activities from predominantly sand and gravel excavations to more coal and lignite mining. Previous figures indicated annual coal mining rates around 800 acres per year. Now figures are closer to 2,000 acres per year and are expected to climb even higher. Because of the sizable coal and lignite reserves, as well as the significant dependence on sand and gravel mining operations now in existence in the State, Texas should experience increasing emphasis on mining projects in the future.



Lignite Stripmining Operation in East Texas. Stripmining operations should identify and protect sensitive recreation resources prior to mining and should also consider local recreation needs in determining what uses are to be made of reclaimed stripmined lands. (Photo by Martin T. Fulfer, Texas Parks & Wildlife Department)

As the overall tempo of mining in general steps up considerably, and especially as the mining of those energy related resources increases, so will the concerns for potential assets and liabilities associated with these interests. With the increased mining activities in Texas, strong possibilities for additional outdoor recreation opportunities have also come along. Reclamation policies and techniques concerning mined areas could provide a substantial and unique opportunity for development of much needed recreation and park areas. Where previous high costs of land and development prohibited recreation use or development, new alternatives may now exist through the use of reclaimed mining lands. Reclamation of some of these areas could not only provide badly needed recreation space, but could also result in an increase in value for adjacent lands. Many possibilities exist for changing mined lands, which sometimes appear to have no value to society, into useful resources.

However, before a program taking advantage of these possibilities can be successfully implemented to any great extent, there will need to be improvements in incentives regarding rehabilitation of mined lands. In this regard, an interim mining committee was set up by a joint House-Senate resolution of the State Legislature in 1973. The committee was established to review the current coal mining operations in the State and is expected to come forth with recommendations pertaining to the future management of these lands.

FLOOD PLAINS

Periodically inundated regions bordering natural or man-made water courses are generally incompatible with development of structures. They are, however, often excellent resources for low intensity recreational uses, e.g., linear parks, trails, greenbelts, nature study areas, etc.

In the past, industry and transportation have accounted for the majority of development in flood plains in Texas. But recently, with more rapidly growing populations, flood plains have been pre-empted for residential dwellings. With the increases in development of second homes (vacation homes or cabins) and the concurrent rise in popularity of subdivision developments, flood plains

are being severely encroached upon. Flood plain developments can result in serious types of problems, i.e., severe erosion, stream siltation, possibilities of sewage pollutants; toxic run-off from fertilizers, soaps, pesticides; flood damages; and loss of human lives due to drownings.

About 30 percent of all outdoor recreation participation in the State could be considered flood plain related with about 4 percent associated with rivers alone. The potential for using flood plains for low-intensity public recreation use is great. Encouraging the use of flood plains where practical and compatible for community, district, and regional parks, recreation areas, and open space purposes is highly prefereable to encouraging other more intensive uses.

The National Flood Insurance Act of 1968, as amended, makes federally subsidized insurance monies available only in municipalities or areas where land use controls are implemented to restrict further developments in flood prone areas.[1] As of September 30, 1974, according to the Texas National Flood Insurance Program Office in Dallas, there were 4,776 communities in the United States which have agreed to adopt the necessary controls restricting flood plain development under the federal insurance program. Texas accounted for 210 of the total number of communities, or 4 percent, as of July 31, 1974, with over 37,000 policies in effect, covering over $734 million in Texas' existing commerical, industrial, and residential developments

WILDERNESS

Generally, a wilderness area is a natural, wild, and undeveloped area so designated and managed to preserve these characteristics. In the United States, there are over 11 million acres in the National Wilderness Preservation System, nearly all of which are located in the western United States. Texas currently has no wilderness area of any kind although proposals have been made to designate portions of the Big Bend and Guadalupe Mountains National Parks as wilderness areas. The objective of wilderness areas is to preserve portions of the natural landscape in their pristine state as much as possible. Wilderness areas prohibit most types of development and facilities, prohibit the use of mechanized transportation, and forbid economic uses such as livestock grazing, timber cutting, mineral extraction, etc. The values of wilderness lay not in exploiting it, but preserving it as it is for what it is. The benefits of wilderness are many with perhaps the most obvious being recreation. Wilderness areas provide a high quality recreational experience for activities such as hiking, fishing, horseback riding, camping, backpacking, nature study, and canoeing or floating. Less obvious, are emotional, or psychological, benefits. A great many people seek wilderness experiences for spiritual well-being, solitude, escape from noisy, polluted, congested, and artificial urban environments, tranquility, and natural, scenic beauty that wilderness provides. Finally, there are educational and scientific values in wilderness preservation. Wilderness areas can and do provide habitats for endangered species or plants and animals, whose normal habitats have been greatly reduced by encroaching civilization.

Unfortunately, providing wilderness areas for Texas would likely prove to be quite difficult. Whereas, in the western states, wilderness areas are designated from existing public lands, Texas has few public lands. Areas of "pure" wilderness must be fairly large if the quality of a wilderness setting is to be preserved. Areas of West Texas could qualify, such as the national parks which have already been proposed. However, most of the land would have to be acquired and the acquisition of the land could only be at an enormous cost.

A reasonable compromise would be to consider the establishment of semi–or quasi-wilderness areas and pocket wilderness areas. Such areas would fall somewhere in the large area between pure wilderness and mass, intensive recreation sites. Their purpose would be to convey a semblance of pure wilderness, although they would not possess all the characteristics of a true wilderness.

FRESHWATER LAKES AND RESERVOIRS

The provision of water for the activities of boating, fishing, and skiing involves numerous problems different than the provision of opportunities for any other kind of recreational resource. Freshwater reservoirs and streams are relatively scarce in the Panhandle and western half of Texas. With few exceptions, the major rivers and reservoirs are located in the eastern half of the state. For the western parts of Texas, the few existing water resources are heavily used, plus the fact that recreationists are travelling vast distances for other recreational waters. Panhandle residents rely heavily on a few lakes nearby, and the residents of El Paso must travel to New Mexico to enjoy lake recreation.

In addition, the provision of recreational water is nearly always inextricably tied to a series of other benefits, such as irrigation, water supplies, flood control, etc., and many times, the recreation opportunities are a minor portion of the total benefits which may accrue from a proposed reservoir project. Generally, decisions to provide additional water supplies have far-reaching ramifications for the residents and economy of the area, and perhaps of even the entire State. Therefore, water projects are sometimes, and in recent years, often, highly controversial. The net result is that whether or not a given region or

[1] S. 1495, H.R. 6524, 93rd Congress, 1st Session (1973).

area will receive more water for recreation will very likely be determined by considerations other than recreation, unless recreational benefits are given a much higher priority in the future than in the past.

In many instances, problems of the lack of recreational water could be alleviated or eliminated through better access. Limited access to beaches, freshwater lakes, rivers and streams due to a general statewide lack of adjacent public lands severely hinders utilization of such resources to the fullest. The provision of additional facilities can help overcome these access problems. Boat ramps, for example, are important to meeting recreation demand because they provide public access to water for boating, fishing, and water skiing.

Texas has one additional problem of major consequence to the future provision of additional recreational waters and adjacent land areas. First, recreational opportunities at lakes and reservoirs in Texas are primarily the result of the provision of man-made resources, rather than naturally-occurring lakes. As a result, almost all new water resources, are very costly. Second, many of the reservoirs in Texas have been constructed and are managed by the U.S. Army Corps of Engineers. Generally these resources have been constructed with considerable amounts of public lands surrounding the projects. These lands have often been set aside for fish and wildlife management and recreational areas. In this scheme, recreational areas adjacent to reservoirs were provided at the time of reservoir completion. Now, however, the provision of additional recreation areas at existing and any new reservoirs that may be constructed is in a much more tenuous position. With the passage of P.L. 89-72, the Federal Water Project Recreation Act, all federal water projects authorized by Congress after 1965 require state or local 50 percent cost-sharing and full-time management of recreational areas at federal water projects. This aspect of the law is of great concern to the Corps of Engineers, the State, and other entities due to the ever-increasing inability of agencies such as the Texas Parks and Wildlife Department, river authorities, water districts, and local governments to assume cost and management responsibilities for areas at existing or new federal water projects currently being planned. Moreover, the most desirable lands associated with existing water resources are generally developed first, so that remaining land reserves are inferior from a recreational standpoint. A lack of action on the part of all state and local governments to adjust to these problems will most certainly reduce the proportion of recreation opportunities provided by federal water projects in the future.

Fishing Along One of the State's Waterways. Assuring unimpeded public access to the Texas waterways, reservoirs, and beaches is one of the State's major recreational problems. (Photo by Leroy Williamson, Texas Parks & Wildlife Department)

RIVERS AND STREAMS

The rivers and streams of Texas amount to some 3,700 in number and

total 80,000 miles, of which over 13,000 miles are classified as major waterways. It is these major waterways which form another great potential recreational resource for Texas. The waterways of Texas are as diverse and unique as the land through which they flow—from the dark, slow moving, vegetation enshrouded rivers of East Texas to the crisp, roaring waters of the Hill Country to the wild, rugged, and remote rivers of far West Texas. Texas waterways are some of the prime areas that have retained much of their natural character. Even where development exists, the high banks or vegetation often screen man-made structures so that the recreationist can still experience primitive nature. One can experience a feeling of remoteness, even wilderness, in floating a waterway because much of Texas' waterways still remain undeveloped. In addition to scenic and recreational benefits, there are other reasons for conserving and protecting Texas' waterways. Texas streams play a major role in supporting fish and wildlife and in sustaining entire ecological systems.

Many rivers are well known to Texas fishermen, boaters, swimmers, campers, and canoeists, but the demand for recreation on rivers and streams often remains unsatisfied for three reasons: a) access is limited and Texas waterways have not been developed to readily accommodate recreational use, b) opposition to the recreational use of waterways by landowners whose property could be jeopardized by large numbers of recreationists passing near their land, c) confusion and misunderstanding on the part of both landowners and recreationists as to the definition of a public waterway and subsequent conflicts over individual rights. This confusion is fostered by ambiguous and confused water laws. These circumstances point out a great need for effective planning to increase the utilization of Texas waterways and maintain a quality recreational experience, yet protect the property rights of individual landowners.

Accordingly, a Texas Parks and Wildlife Department study, **Texas Waterways**, completed in 1973 at the direction of the Texas Legislature, found that a statewide waterway system is a feasible concept for Texas and recommended sections of waterways for possible inclusion in a system of wild, scenic, and recreational waterways. The study pointed out the need for legislation to effect a Texas waterway system and further recommended the establishment of a waterway council to promote communication and cooperation between landowners and recreationists to the mutual benefit of both.

The study determined that the purchase of extensive land corridors along waterways is not economically feasible and is not generally necessary for the protection of the scenic qualities of the waterway. The enormous expense involved in obtaining land corridors along even a few waterways would genrally be prohibitive. This, coupled with the strong landownership ethic in Texas, indicates that complete public ownership of such corridors is an unpopular alternative and generally is considered infeasible.

However, the report does mention alternative protection methods, whereby lands along waterways remain in private ownership to the greatest extent possible, development along waterways is discouraged, conflicts arising from recreational use of waterways are reduced, and adequate access points, rest areas and small "pocket" campgrounds are developed. The study report does not expound upon these alternatives, but these basic ideas have been expanded into what is now being termed the "Cooperative Waterway" concept, which would involve three principal elements: 1) the retention of riparian lands in private ownership to the greatest extent possible; 2) the provision of small, one to five acre public use areas (pocket parks) at strategic intervals by public agencies and private entities; and 3) an education program to promote the spirit of cooperation among pocket park administrators, recreationists, and riparian landowners regarding the proper stewardship, or management, and use of the river and associated environment.

The cooperative concept for establishing waterways should prove to be a workable solution for waterway recreation associated problems. As individual waterway programs are implemented, the establishment of a statewide system of wild, scenic and recreational waterways for Texas would become a goal that should easily be attained.

STATE, REGIONAL, AND LOCAL RECREATION PROGRAMS

DIRECT PROGRAMS AND AUTHORITIES

Several direct programs and authorities for providing outdoor recreation opportunities are in effect for state and local governments in Texas. For example, the Texas Parks and Wildlife Department provides and operates the State Park System and has responsibility for management of the State's wildlife and fisheries program. River authorities, special districts, and local governments provide recreation areas at various locations within their jurisdicition. Table 6-1 presents a brief general overview of these and other outdoor recreation related responsibilities currently being provided by state, regional, and local governments.

As the table illustrates, the structure of state agency responsibilities and activities for outdoor recreation is fragmented, various functions being accomplished by different agencies.

In the area of state level authorities, several aspects of outdoor recreation have become evident. Currently, Texas state agencies have three basic

TABLE 6-1. SUMMARY OF GENERAL OUTDOOR RECREATION RESPONSIBILITIES AND ACTIVITIES—STATE, REGIONAL, AND LOCAL GOVERNMENTS

AGENCY	Provides Basic Recreation Opportunities	Planning and/or Technical Assistance	Provide or Administer Financial Assistance Grants/Loans	Resource Management	Regulation	Zoning Power	Research	Training	Advisory and Information
STATE									
Texas Parks and Wildlife Department	x	x	x	x	x		x	x	x
Texas Conservation Foundation			x[1]						
Texas River Authorities	x	x		x	x	x			
State Soil and Water Conservation Board			x						
Texas Forest Service	x	x		x					x
Texas Department of Community Affairs		x	x	x				x	x
Texas Water Development Board		x	x	x			x		x
Texas Water Rights Commission					x				
Texas Highway Department	x[2]	x					x		x
Texas Tourist Development Agency		x					x	x	x
Texas Historical Commission		x						x	
Texas Agricultural Extension Service		x					x	x	x
Texas Water Quality Board		x	x		x		x		
Governor's Office, Division of Planning Coordination		x	x						x
General Land Office		x		x	x		x		x
Universities	x	x					x	x	x
REGIONAL									
Regional Councils of Governments		x						x	x
LOCAL									
Counties	x	x		x	x	x[3]			
Municipalities	x	x		x	x	x			
Water Districts	x	x		x	x				
School Districts	x[4]								

[1]The Conservation Foundation is a charitable and non-profit foundation established to stimulate private contribution and gifts and to purchase property for the benefit of the Texas state system of parks, refuges, and scientific and recreation areas.

[2]Only Safety Roadside Rest Areas

[3]Cameron, Val Verde, and Willacy Counties only

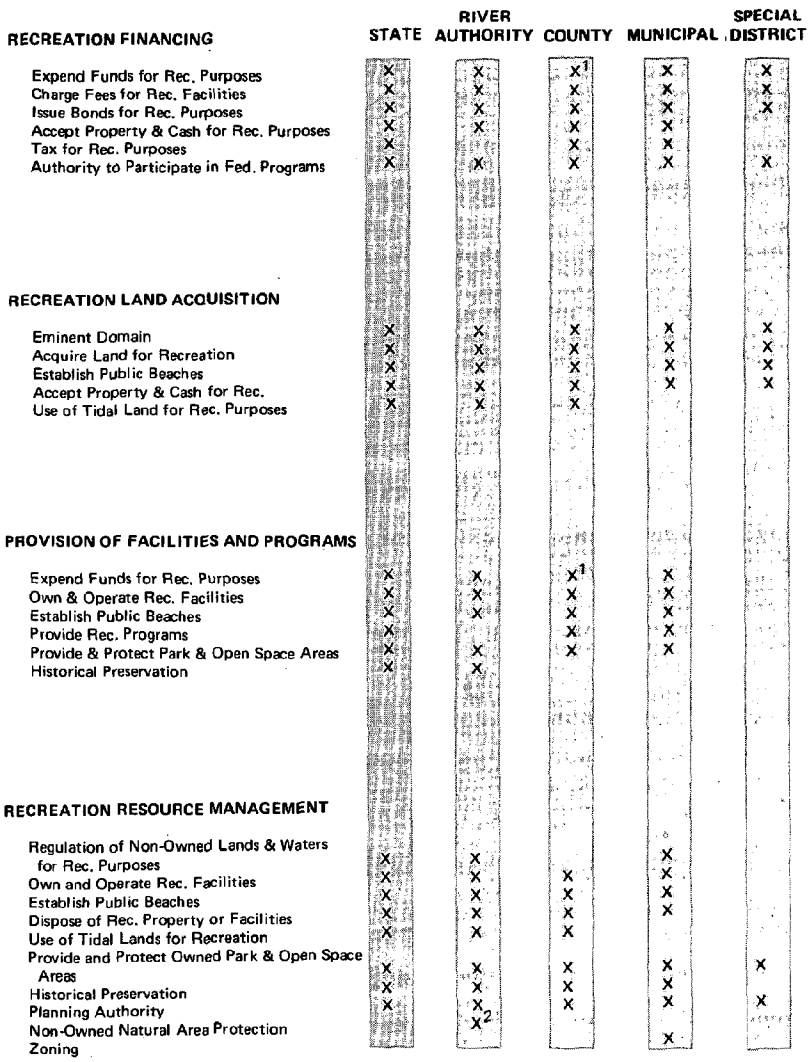
[4]Facilities necessary for support of educational activities

methods with which to manage recreation resources (other than fish and wildlife)—fee simple acquisition of specific areas, negotiation of long-term leases of specific areas, or acceptance of donations of areas. Regulatory powers are generally limited to management of water quality, air quality, limiting the use of State owned lands which are under lease, and regulation of surface water appropriation.

A situation evident when State level programs and authorities are reviewed is that Texas has no specific legislative authorities or programs for any type of official recreational waterway or trails networks. Usage of trail and waterway resources is occurring and increasing. The same situation exists for publicly owned islands in inland waterways and along the Coast.

Further definition of roles and responsibilities is possible when specific legislative acts pertaining to State or local government are reviewed. Table 6-2 illustrates a general outline of more specific recreational authorities and direction which govern outdoor recreation activity in Texas. Of significant note in developing the table was the fact that legislation governing municipal, county, special districts, and river authority outdoor recreation activity is extremely diverse in nature. For example, Legislative Acts are found ranging from statutes which relate to a specific county or district to those which provide authority statewide. The basic powers and authorities necessary for all local government outdoor recreation activity are available if used. However,

TABLE 6-2. SUMMARY OF SPECIFIC OUTDOOR RECREATION LEGISLATIVE RESPONSIBILITIES AND AUTHORITIES—STATE AND LOCAL GOVERNMENTS



*Note: Caution should be exercised in citing materials and information contained in the table. Specific legislative acts regarding recreational responsibilities and authorities for State agencies and local political subdivisions is extremely diverse and varied. The material contained in the table is intended as general guidance. Questions regarding individual agencies or political subdivision responsibilities and authorities should be carefully researched when determining allowable recreational actions.

1. Counties of less than 80,000 population are prohibited from spending more than $15,000 per year for operations, maintenance, and construction within county parks unless a bond issue has been approved by the citizens of the subject county. (Art. 6079b, V.A.C.S. as amended)

2. River authorities have powers to regulate the use of surface waters under their control. Questions related to resource management authorities for lands should be carefully researched.

the weak and often times vague nature and large number of these statutes may inhibit some local entities from functioning in the recreation areas.

One recent specific piece of legislation, Art. 6079b, V.T.C.S., as amended, has been found to be hindering many counties in providing additional recreational opportunities. The law states that counties with populations of 80,000 or less are prohibited from spending more than $15,000 per year for operation, maintenance, and construction within county parks unless a bond issue has been approved by the citizen's of the subject county. Funding at this level is wholly inadequate for most county park programs. A possible solution to this problem would be to lift the bond requirement and allow a county to conduct a referendum as to whether to establish an on-going county park program.

One other aspect of local government powers is also evident. With the exception of Cameron, Willacy, and Val Verde counties, county governments have no zoning powers. This aspect of county legislative authority is particularly significant, in light of the fact that areas with high recreation potential, such as flood plain areas and other high quality potential recreation resources, which are sensitive to development pressures and costly to the government, cannot be managed without fee. simple acquisition of land or other costly methods.

INDIRECT PROGRAMS

Indirect programs are those activities provided by federal and state government to encourage and assist local governments and the private sector in the provision of necessary outdoor recreation areas and facilities in Texas. Major concerns of the State in considering these programs are centered around the various limitations certain programs may place on the creation of recreational areas

and facilities. At the federal level, provisions of the Federal Water Projects Act (P.L. 89-72) require that recreational facilities at Federal Water Projects be developed only with local or state political subdivisions providing 50 percent cost-sharing for the development of facilities and full-time management, e.g., Soil Conservation Service programs require that local political subdivision sponsors supply 50 percent of the cost of approved Resource Conservation and Development project measures for recreational development associated with water resources. In Texas, with some municipalities, counties, special districts, and river authorities often limited in their abilities to raise local matching funds for recreational projects, the objectives of federal programs often cannot be fulfilled. Demands for financial assistance from programs such as the Land and Water Conservation Fund, the State boat ramps, buoy and markers, and Beach Cleaning Funds are such that available funds are becoming exhausted each year.

TECHNICAL ASSISTANCE

Technical assistance in recreation planning and development is available from a wide array of federal and state agencies. These programs range from the extensive assistance available from university extension services to specific aid available from an agency concerned with the management of a particular resource. However, despite the relative wealth and range of information services available to governmental entities, delivery capabilities are often limited by funding levels and policy constraints. As a result, local utilization of many of these types of services is not as extensive as might be desireable.

OUTDOOR RECREATION PLANNING

Currently much of the outdoor recreation planning that occurs in Texas is extremely diversified in its approach to problem solutions, ranging from statewide efforts to special efforts for one particular problem in an individual community. Exceedingly common are the wide variations in planning techniques being used by various public and private entities. The variety of planning techniques is of concern to the state, due to the potential conflicts that may arise in joint federal, state, local planning. More specific concerns are outlined below.

OUTDOOR RECREATION INFORMATION CONCERNS

There are certain types of outdoor recreation supply, demand, and resource requirements information that are absolutely necessary for all levels of government to meet their responsibilities in providing outdoor recreation opportunities. This would suggest a need for joint data collection efforts, information sharing, standardized terms and units of measure, and other cooperative efforts. The State has been aware of this situation and has conducted surveys in order to determine what local, regional, state, and federal opinions are in regard to updating the

On-Site Recreation Interview. Obtaining adequate information on the attitudes and preferences of recreationists for specific activities, inventory data on recreation facilities, and demographic characteristics of the population are basic to sound recreation planning. (Photo by John Blair, Texas Parks and Wildlife Department)

Texas Outdoor Recreation Plan and maintaining a state clearinghouse. Results of these surveys are contained in **Outdoor Recreation Activities**, and **A Statewide Recreation Information System**, both volumes of this Plan. Results of the surveys reveal that in Texas the existing systems for collecting, distributing, and using outdoor recreation information are not formalized; in general uncoordinated; and often provide results which are less than desirable.

A requisite to a viable and particularly an equitable plan for meeting the requirements for recreation opportunities in Texas is the establishment of a common set of standardized planning factors, terminology, and measurement units with which to measure and plan for meeting recreation needs. Reviews of federal, state, council of government and municipal entity planning documents published over the last several years have revealed a lack of common approach to recreation planning, and this has been noted in earlier versions of the **Texas Outdoor Recreation Plan.** This lack of a common set of planning factors will continue to hinder decision-making aimed at a reasonable and rational distributions of recreation resources around the State. As a result, much plan development work has been accomplished for use in this edition of the Plan, and should offer a much better basis for accurately determining outdoor recreation needs in the future. However, the State must rely on cooperation and coordination to achieve widespread use of the **Texas Outdoor Recreation Plan** and increased utilization by all levels of government will require varying periods of time.

RESEARCH AND EDUCATION

The foundation for much of the future planning of outdoor recreation opportunities in Texas lie in the effectiveness and results of outdoor recreation research and educational efforts conducted throughout the State and Nation. Currently, much of the pure research and educational efforts in Texas are conducted by Texas A&M and Texas Tech Universities, as well as the Texas Agriculture Experiment Station and various other colleges and universities in the State, as well as several federal agencies.

Significant concern relates to the relatively small amount of research and educational efforts taking place at the local government level in the State. Most of the larger urban areas of the State, with some exceptions, are not or cannot expend the funds or effort necessary to conduct detailed research into localized recreational situations. Several councils of governments are at various stages in the development of research into regional recreation problems, but they too are often limited in effort due to a lack of funds or staff.

To date, little is known concerning the effects of air, water, and noise quality as it impacts upon the recreationist. Too, little is known regarding the effects of public sector-private enterprise competition, the preferences for Texans as to natural and undeveloped areas as opposed to highly developed recreational areas, and the changing patterns of expenditures by recreationists.

Many other factors need research. Educational programs relating to the environment, land use, and the economic value of recreation need strengthening, and these problems may be expected to increase as the population of the State and Nation increase. Additional pressures for qualified recreational personnel can be foreseen and the coordination of research and educational efforts will become more critical as the demand for recreational opportunities and resulting long range decisions become increasingly necessary.

COORDINATION OF PLANS AND PROGRAMS

Coordinating the provision of additional outdoor recreation opportunities in Texas will require cooperation. Without cooperation, no plan, regardless of quality, detail, or intentions, will be effective. Cooperation and coordination must come in the development of the **Texas Outdoor Recreation Plan**, in the development of other plans, and in the implementation of these plans. At the current time, the coordination of recreational plans and programs in Texas is formally accomplished via operation of State Clearinghouse review procedure established by the Governor's Budget and Planning Office, and federal regulation (O.M.B. Circular A-95). Procedures necessary for the operation of the State Clearinghouse are under the management of the Governor's Office, Division of Planning Coordination, and involve each of the 24 regional councils in the State, various state agencies, and entities of the federal government. At the current time, no formal clearinghouse mechanism for state funded projects is in operation, although much informal cooperation often takes place. A review to enforce coordination of state-funded programs has been proposed by the Interagency Council on Natural Resources and the Environment and various committees of the council are working toward development of better coordination and establishment of a Natural Resources Information System.

However, several aspects of the coordination of plans and programs for recreation are of concern to the State. First, the delivery systems for several grants-in-aid programs provided by the federal government are very diverse. Several programs are delivered directly to local governments from federal officers throughout the State, and bypass state level agencies. This concern is not new to public entities, nor can it be immediately rectified. Another noteworthy concern is the

fact that the administration of several of the federal and state recreation grants-in-aid programs are spread through various state agencies. For example, recreation impacting programs initiated by the Federal Water Resources Act, the Land and Water Conservation Fund Act, and the Rural Development Act are administered by three separate state agencies.

RECREATION FUNDING

Funding for additional outdoor recreation areas and facilities is and will continue to be a major area of concern for Texas. Various federal agencies have reported that funds are not available for the implementation of recreational opportunities that have been planned at existing and future federal areas. Many of the state river authorities report no funds are available. Local political subdivisions report "lack of funds" as a primary concern. Councils of government indicate local political subdivisions cannot match the local share of federal and state grants-in-aid programs. Then, too, experience of state and federal level agencies indicates that often public and private entities have been aware of federal or state grant-in-aid sources but unfamiliar or incapable of dealing with administrative procedures to utilize federal and state funds.

The availability of adequate funding is also judged somewhat of a problem for the provision of recreation opportunities by the private sector. With often large capital expenditures involved, financing of developments is likely to be judged extremely risky by lending institutions. In addition, proper planning for private recreation enterprises is a complex task often requiring a large and diverse amount of data and information regarding the market situation. Consequently, the costs of adequate planning can be prohibitive to prospective private enterprises. For the private entrepreneur generally lacking in necessary expertise, in-depth planning is something only the largest operations can afford.

In summary, the status of funding for the provision of additional recreational opportunities in Texas is generally characterized by many of the same problems which face other ares of the United States—a lower priority for recreational requirements. The requirement for recreation is present, increasing, recognized, and in many cases plans for areas and facilities are completed, awaiting the financial means with which to implement the plans.

LOCAL PARKS AND RECREATION DEPARTMENTS AND PERSONNEL

The occurrence and provision of formal organizations charged with the responsibility to plan, manage, and provide recreational opportunities within local government areas and jurisdictions in Texas is of extreme importance to recreation in Texas. These organizations, when staffed with personnel trained in parks and recreation management and related fields, can ensure and provide the local government activity necessary for the adequate provision of localized recreation opportunities and provide immeasurable benefit to state and federal outdoor recreation activities. Unfortunately, the number of formal local government parks and recreation organizations in Texas is not as widespread as is judged necessary for solution of the problems facing many local governments. The Texas Municipal League reports 1,055 municipalities as incorporated by the state. One hundred thirty-eight of these municipalities, or 13% are reported as having 191 parks and recreation personnel while only 38 municipalities report the establishment of parks and recreation departments. The 254 county governments in Texas provide less organization in this area than municipalities. Approximately 33% of the counties in Texas provide county owned and administered parks and recreation areas, (only 7 of 17 on the Gulf Coast), while less than 10% are estimated to provide officially designated parks and recreation departments. Other counties have established parks boards or committees to advise county commissioners and judges on recreational matters. However, the overall percentage of county government provision of official organizations is relatively small, and many counties which provide recreational opportunities do so through the utilization of county employees who perform many other services. Other local organizations providing parks and recreation departments include River Authorities and Special Water Districts. Of the 19 organizations listed as River Authorities or authorities with similar responsibilities, it is reported that between 6 to 10 of these organizations provide full time recreational staff members. The numberous special districts throughout the State provide very few recreation personnel.

The state has recognized the essential requirement for the education and training of parks and recreation personnel by establishing college degree programs for recreation and related fields at several of its colleges and universities. Notably, Texas Tech, Texas A & M, and Stephen F. Austin State University are currently graduating significant numbers of students ready for entry into professional careers in parks and recreation management. However, preliminary reports from these institutions pertaining to the placement of recent graduates from the university recreation and parks programs reveal that approximately 50% of the graduates are finding employment outside Texas, and that 10 to 20% of those individuals who find employment out of the state do so as a result of a feeling that "better" opportunities are presented to them outside the state, or that pay scales are not as good in Texas as elsewhere. This situation is of concern to the State, especially due to the nationally-known

high quality and caliber of the graduates of these programs.

SOCIO-ECONOMIC FACTORS

In conducting this update of the **Texas Outdoor Recreation Plan**, extensive data regarding the socio-economic characteristics of outdoor recreationists in Texas was collected for utilization in preparing participation estimates for various outdoor recreation activities on a regional basis. In compiling this information, certain socio-economic characteristics of the population stand out vividly, and detailed presentations of this information are presented in the Plan volume entitled "Outdoor Recreation Activities", which should be consulted for reference by the user interested in socio-economic information. However, some of the more significant findings are presented below.

RACE

The Household Demand Survey and the On-Site Demand Survey conducted for this Plan update point up a significant statistic concerning the ethnic background of rural park users. The Household Demand Survey revealed that less than 43 percent of Mexican-American and Black households participated in recreation in rural outdoor recreational areas. Additionally, of this percentage of households that did enjoy recreating at rural recreation areas, the households participated at about half the rate of Anglo households. This lower participation on the part of Mexican-American and Black households was even more dramatically illustrated by the On-Site Demand Survey where the sample indicated that roughly four percent of park users were Mexican-Americans and one percent were Black. As of this writing, no explanation as to the lower rates of participation is evident. However, this apparent lack of use of rural recreation facilities by such a significant portion of the Texas Citizenery is a problem that merits continued and further investigation.

AGE

Analysis of the survey data also revealed that older Texans, particularly those 65 and older, evidenced reduced household rates of participation and a low percentage of households participating when compared with other "age of household head" categories. This general trend of decreasing participation with increasing age is consistent with the results of other regional and even national participation surveys. However, literature has also shown instances of high rates of participation on the part of older persons when provided with suitable opportunity to pursue certain recreation activities. This suggests that a decline in participation on the part of the older people may have a good deal to do with inadequate opportunity and not, as might be thought by some, solely due to decreasing physical ability. With current national projections indicating a rather significant shift in national average age of the population, supported by lower birth rates, the provision of adequate and properly designed opportunities for older population groups will increase in importance. Texas has long had legislation pertaining to architectural barriers in all publicly financed constructions designed to minimize negative efforts of architectural design upon the aged and handicapped segments of the population. The provision and enforcement of this statute has provided immeasurable assistance in encouraging proper design of public structures and will continue to contribute in the future. However, the design of recreational areas with facilities for activities more suited to older populations is at optimum levels in the state.

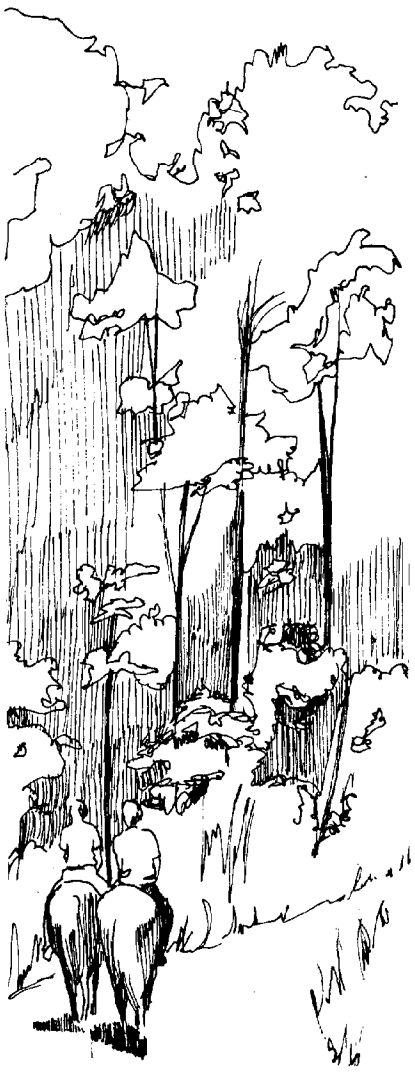
DISADVANTAGED

The terms disadvantaged or handicapped persons include a great number and broad range of men, women, and children who are afflicted with varying degrees of physical, mental, or emotional disabilities. In addition, persons faced with particular types of disability (physical or mental), are often faced with problems related to their disability which limit their ability to enjoy outdoor recreational pursuits. Certainly then, the vast number of people which fall within the categories of disadvantaged or handicapped must be recognized and considered with regard to their special problems which limit their opportunity to participate in outdoor recreation activities.

The **TORP** Household Demand Survey revealed that approximately 30 percent of the respondents felt that some member of their household was prevented from outdoor recreation participation because of general health problems. Further explanation and detail concerning the population of disadvantaged groups in the State and the relevance of their problems to outdoor recreation planning was specifically discussed in certain volumes. Problems related to the disadvantaged were included in volumes such as **Outdoor Recreation in the Urban Areas of Texas, Outdoor Recreation in the Rural Areas of Texas,** and **Outdoor Recreation Activities.**

OTHER

Several other classes of socio-economic characteristics of outdoor recreation in Texas are explored in greater detail in the volume entitled **Outdoor Recreation Activities,** which may prove of value to the interested reader and recreation professional. Analyses of such socio-economic characteristics as distance travelled information, household size, household income, household education levels, and others are presented for additional reference. All socio-economic characteristics are represented in estimates of regional



outdoor recreation participation and resource requirements presented in the Plan volumes entitled **Outdoor Recreation in the Urban Areas of Texas, Outdoor Recreation in the Rural Areas of Texas,** and **Outdoor Recreation on the Texas Gulf Coast.** A detailed explanation of the utilization of socio-economic characteristics in developing participation estimates and resource requirements is presented in the volume entitled **Techniques of Analysis.**

TRAILS

Until recently, trails activities have been given minor importance in outdoor recreation planning in Texas. Primary emphasis has been placed upon the provision of facilities for activities such as swimming and camping, and relatively few public entities which provide outdoor recreation facilities have placed emphasis on trail development. The combination of a statewide scarcity of public lands available for recreation, and major demands in the past for recreation facilities other than trails, largely account for the lack of trail development in Texas.

In addition, the participation in trails activities and the demand for additional trail facilities are rapidly increasing. The popularity of all trail related activities has been steadily increasing over the past few years, a trend which is expected to continue for many years to come. People are seeking opportunities to escape to less-crowded areas where they can walk, hike, bicycle, ride horseback and generally enjoy nature in a pristine state.

A Texas Parks and Wildlife Department report, **Texas Trailways,** at the direction of the Texas Legislature, was published in February, 1975. The study report states that a statewide trails system established by the designation and incorporation of existing trails from both the public and private sectors would be a desirable course of action for the State of Texas. Regional Trail Systems, composed of trails within specified physiographic regions, would encourage local and regional participation in the program. A program such as this would be directed in its early stages, not at providing across-the-state trails where large land acquisitions would be necessary and where some sections would be only rarely utilized, but at promoting high quality scenic, historic, recreation, and expedition trails where they would most benefit and be accessible to the recreationists.

The report envisions the creation of trails councils as a means of getting more public involvement in trails programs. A "Trails Council" is an organized group of persons who are concerned with the establishment, protection, and promotion of trails within a specified area of interest to the council. A non-funded statewide trails council could be appointed to open the lines of communication among all interested parties involved in the development of trails, to coordinate trails at the state level, and to serve in an advisory capacity to a trail system administrator. Regional trails councils, drawn along the same physiographic boundaries as the Regional Trail Systems, could coordinate trail activities on a regional basis to insure that the needs, demands and desires of each region are met. Individual local trails councils can generate support at the grassroots, providing trails for that specific locality. Once local trails councils are actively established, the local councils form regional councils, which in turn support a statewide trails council. In this manner, a balanced system of trails is established.

Texas Trailways concludes with an action program which if implemented should insure the orderly establishment and development of a statewide system of trails in Texas. Some of the more important recommendations include: 1) the establishment of a Texas Trails Council composed of representatives from various levels of government, private citizens, private enterprise and user groups; 2) the Texas Trails Council hosting a Texas Trail Symposium for the purpose of setting up short-term goals and long-range objectives for promoting the development of trails in Texas; 3) passage of legislation granting the Texas Parks and Wildlife Department the authority to coordinate the development of a statewide system of trails; and 4) the incorporation of existing trails into a statewide trails system.

Recreation for Handicapped Persons. Where feasible, outdoor recreation areas and facilities should be designated and located to encourage use by handicapped individuals. (Photo by The Texas Rehabilitation Commission)

HUNTING

Historically, hunting has been part of the life-style of many Texas residents. This was due to the necessity of providing food supplies and the control of predatory animals. Today hunting has diminished as a necessity but has become increasingly popular as an outdoor recreation activity.

Compared to most outdoor recreation activities taking place in Texas, hunting is rather unique. It takes place chiefly in the fall of the year, whereas the peak participation for virtually all other activities is in the summer, and is still almost completely dominated by male participants. Hunting is the one activity most heavily dependent upon private enterprise and private lands to provide recreation opportunities. In 1968 over 82 percent of the hunting taking place in Texas occurred on private lands with only 18 percent on public lands. Due to the unique nature of hunting, special attention must be given this activity in order to determine the most appropriate actions to be taken in providing adequate hunting opportunities in the State.

HUNTING OPPORTUNITIES AVAILABLE

It is estimated that there were approximately 65 million acres of land available for hunting in Texas in 1968, of which slightly less than half, or 31 million acres, was leased for a fee. Of the total estimated acres of hunting lands in Texas, only about 1.2 million acres, or less than 2 percent, are public lands. The major suppliers of Texas' public hunting lands are the U.S. Forest Service, the U.S. Fish and Wildlife service, and the Texas Parks and Wildlife Department. The overwhelming majority of hunting lands, about 64 million acres, or 98 percent, are furnished by the private sector, chiefly in farms and ranches. Analytical regions with the greatest amount of hunting land are chiefly undeveloped agricultural areas, such as Regions 30, 2, 37, 17, 1, 36, 35, 32, and 18.

THE DEMAND FOR HUNTING

In 1968, the demand for hunting in Texas totalled over 9 million activity-days. If adequate hunting lands can be made available it is projected that hunting participation will reach 21 million days by 1980, an increase of 133 percent, and in 2000, it is estimated that a total of 38 million days will take place, an increase of 322 percent over 1968. Regions where the greatest demand for hunting is expected to occur include Regions 37, 8, 17, 22, 14, 26, 18, 30, 36, 24, 9, and 33. (See Figure 6-1.)

ADDITIONAL HUNTING OPPORTUNITIES NEEDED

Based on comparisons of current and future demands with the hunting lands currently available, it was estimated that over 700,000 acres of additional hunting lands will need to be made available in Texas by 1980 if present utilization rates of existing hunting lands remain unchanged. By the year 2000, an additional 5.5 million acres will be needed above the present supply of 65 million acres. These additional lands will be needed in localized areas, primarily in relatively close proximity to several of the major metropolitan areas of the State. Many areas of the State have more than adequate supplies of hunting lands but are relatively long distances from the

Bird Hunting in East Texas. Better management and increased protection of wildlife habitats is needed if traditional forms of hunting are to be available to future generations of Texans. (Photo by Martin T. Fulfer, Texas Parks & Wildlife Department)

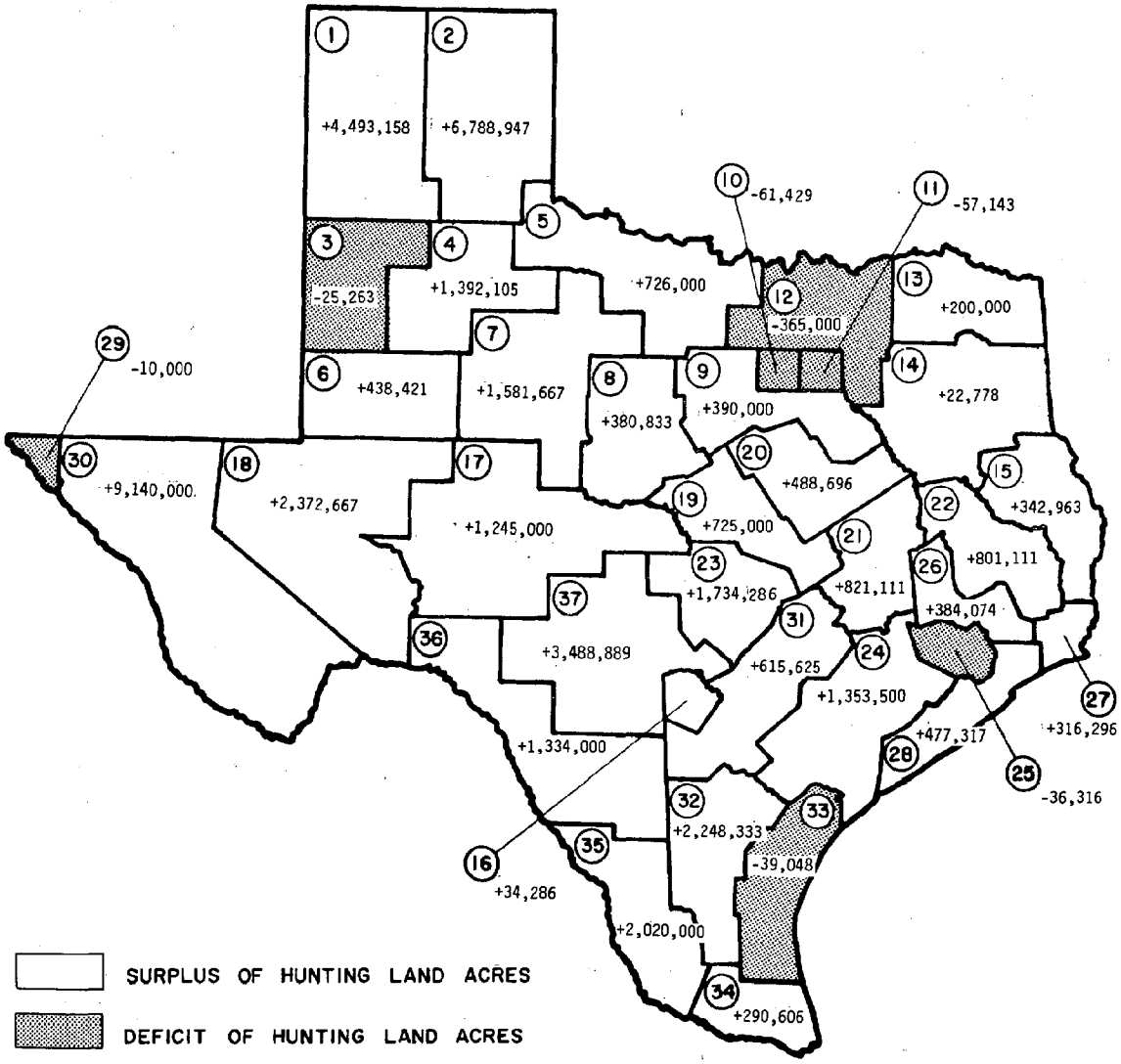
major population centers where the greatest number of hunters reside. Among the 37 regions delineated in Texas for recreation planning purposes, the regions expected to need additional hunting opportunities in 1980 are Regions 3, 10, 11, 12, 25, 29, and 33. (See Figure 6-1.) Between 1980 and 2000, several other regions are expected to need additional hunting lands. These include Regions 8, 9, 13, 14, 17, and 36.

Several of the regions expected to need additional hunting opportunities are single county, highly urbanized regions. These include Regions 10 (Fort Worth Metropolitan Area), 11 (Dallas Metropolitan Area), 25 (Houston Metropolitan Area), and 29 (El Paso Metropolitan Area). Satisfying the demands for hunting opportunities cannot be totally accomplished within these regions due to the concentrations of population and the continued growth expected. Consequently, additional lands will need to be made available in adjacent regions or in regions within reasonable driving distances from the metropolitan areas. For example, Figure 6-1 shows that Region 25 (Houston Metropolitan Area) is expected to need over 36,000 acres of additional hunting lands by 1980. However, adjacent regions possess ample supplies of hunting lands and could meet the needs of the residents of the metropolitan area. On the other hand, there are significant problems to be faced in meeting the demand for hunting land in Regions 10, and 11, since some of the surrounding regions also indicate expected deficits of hunting opportunities.

PROBLEM AREAS

A number of special problems exist with regard to providing adequate hunting opportunities in Texas. Foremost among these problems is the lack of access to private lands suitable for hunting, the high costs, restrictive leasing practices of private landowners, crowded conditions on public hunting lands, less than optimum distributions of wildlife and lands available for hunting, low harvest rates, and the critical loss of high quality wildlife habitat in certain areas of the State from competing land uses. While these are not all the problems associated with hunting in Texas, they are some of the most significant, and alleviation of these problems would make the most effective contributions toward providing more adequate hunting opportunities for Texans.

FIGURE 6.1 REQUIREMENTS FOR ADDITIONAL HUNTING LANDS BY PLANNING REGIONS, 1980



Chapter 7

RECOMMENDATIONS AND PRIORITIES

A critical element in any planning effort is the development of conclusions and recommendations which arise from the analysis of various factors chosen as necessary for the solution of problems. In the State outdoor recreation planning effort, the State must present recommendations and priorities to guide the provision and development of outdoor recreation opportunities throughout the State. These recommendations are directed to the needs of the people and are presented in terms of requirements for recreation lands, waters, and facilities throughout the State. As a result of these requirements, the following information is designed to provide state-level guidance to federal, state, regional, local and the private entities in the directions outdoor recreation development should take between 1975 and 1980.

USE OF THE STATE PLAN

- Various volumes of the **Texas Outdoor Recreation Plan** present regional information regarding the characteristics and estimated requirements for additional outdoor recreation opportunities in Texas. Regional information presented in the **Regional Summary** volume, supplemented by regional information presented in the Plan volumes entitled **Outdoor Recreation in the Urban Areas of Texas, Outdoor Recreation in the Rural Areas of Texas,** and **Outdoor Recreation on the Texas Gulf Coast** should be used as a guide for all entities in planning and developing additional opportunities.
- This volume of the Plan, **State Summary,** should be utilized as reference for guidance in matters pertaining to outdoor recreation in general. All entities should assure that their individualized plans are in keeping with the guidance of the Plan, to include reference to pertinent plan material and estimates. Additional reference material pertaining to the development of recommendations in this volume for outdoor recreation activities, techniques of analysis, recreation facility standards, recreationally based environmental concerns, recreation information, and interaction between the public and private sectors is contained in Plan volumes entitled **Outdoor Recreation Activities, Techniques of Analysis, A Regional Environmental Analysis, A Statewide Recreation Information System,** and **The Role of the Public and Private Sectors.**

GENERAL GUIDELINES

In the planning and provision of outdoor recreation opportunities throughout Texas, the following basic guidelines should be followed:

- Local units of government, either urban or rural, should provide basic outdoor recreation opportunities where capable. Higher levels of government should assist when local capabilities are limited, non-existent, or of a sufficiently higher government level interest.
- Regional agencies, such as Councils of Governments, Economic Development Districts, Resource Conservation and Development Project Areas, and other regional entities should provide regional planning and development structure, organization, and guidance to coordiante the development of all outdoor recreation opportunities in their respective regions or districts, regardless of project sponsor.
- Federal and State agencies should continue to identify state and nationally significant resources and assist all local and regional governments, each other, and the private sector in identifying and managing recreation resources throughout Texas. Individual federal and state agencies should insure that their respective programs and projects give proper consideration to recreation resources in the planning, development, and execution of their responsibilities.
- All entities, public and private, with plans, policies, programs, and projects which may have impact upon the recreation resources of a given geographic area should, at the earliest opportunity, coordinate and signify their intent by identifying their plans and programs to respective interests with a responsibility in the affected geographic area. Protection of recreation resources and the esthetics of the recreational environment in both designated and undesignated recreation areas is also a major concern of this Plan. Private enterprises and all responsible regulatory agencies and agencies sponsoring various types of development projects such as transportation, airports, power generation, pipelines and urban-industrial expansion

should carefully identify, consider, and otherwise take into account both direct and indirect effects likely to have an impact on recreation resources. Particular attention should be directed to such effects that could result in the loss or deterioration of natural areas, potential parksites, wildlife habitats, stream corridors and other land resources of local, regional, state or national concern, and air, water, visual and noise pollution in or near existing or potential recreation areas or resources.

- Private enterprise should supplement the basic supply of outdoor recreation opportunities in both urban and rural settings by providing services supportive of the basic outdoor recreation facilities and hunting opportunities where needed in cooperation with pertinent public agencies in a given setting.

More detailed recommendations designed to complement these guidelines are presented below.

GENERAL PRIORITIES AND RECOMMENDATIONS

The state outdoor recreation planning program in Texas has been in operation for less than a decade, and throughout its history it has become increasingly evident that the numbers and magnitude of problems in planning outdoor recreation on a statewide basis are vast. The very complexity, and the demands for outdoor recreation opportunities, repeatedly emphasize the necessity for statewide and other government-level comprehensive planning. Additionally, these problems are not limited to outdoor recreation. State plans for many functional areas are being prepared throughout state government—plans for water development, solid waste, pollution control, transportation, and health—to but name a few. In keeping with these other planning efforts, this section describes recommendations to guide various public and private entities in meeting their responsibilities for outdoor recreation.

Planning Coordination at the Local Level. Recreation planning is most effective when coordinated with other types of functional planning through the comprehensive planning process. (Photo by Planning Department, City of Austin)

Although many obstacles stand in the path of the governmental and private sectors of Texas in their efforts to meet the huge growing demand for outdoor recreation, the obstacles can largely be removed; the outdoor recreation demands of Texas residents and visitors to the State can, in most part, be satisfied. But to accomplish this tremendous task, all agencies, organizations, and individuals having an outdoor recreation purpose in the State must come to recognize and emphasize these purposes and judiciously assume their responsibilities to overcome the outdoor recreation problems existing within their area of influence.

It is highly unlikely that any particular sector, either governmental or private, shall ever attain the status of hvaing a surplus of funds available to meet its own responsibilities. Therefore, one entity cannot assume the responsibilities of another and still fulfill its own duties. Neither is it always possible for any one entity to satisfy all the outdoor recreation needs generated by persons recreating within its area of jurisdiction since physical or ecological resources, such as mountains, seashores, lakes, or forests, etc. may pose specialized problems.

Thus, all suppliers of outdoor recreation resources, in order to satisfy the State's outdoor recreation requirements, must fulfill varying roles by assuming the responsibility of providing opportunities for certain types of outdoor recreation areas and facilities for activities associated with these types of areas. In this manner, optimum opportunities in a specific geographic area may be provided, and the State as a whole will present optimum opportunities for all people.

The results of analyses presented in various volumes of the plan have brought to light several general aspects of outdoor recreation in Texas. These range from specific recreation facility deficits throughout the State to broad concerns of a statewide nature. The following material is presented as general guidance for all federal, state, regional, local, and private sector entities in planning, designing, and providing additional outdoor recreation opportunities in Texas. For further detail, users are referred to the various volumes of the plan, whose material has been utilized in developing this information:

The increased utilization of such recreational resources as shorelines, beaches, floodplains, wetlands, unique natural areas, islands, rivers and streams, historic properties, and mined lands shold be considered by all levels of government in seeking to provide additional recreational opportunities.

Large deficits in recreation lands are estimated to exist throughout the State, and agencies and organizations at all levels of government should take steps to assure that adequate recreation lands are made available. Funding levels should be increased at all levels of government, but especially at the local level. The State should explore ways and means of assisting local governments in this area.

Funding for all organizations and development of additional outdoor recreation areas and facilities in Texas is, and will continue to be, a major area of concern for Texas. Various problems face the State, intensified by recent federal actions eliminating some funding sources and restricting the use of others. However, the availability of local government funds is judged as one of the most pressing problems. State and federal agencies are encouraged to identify and maximize sources of matching funds to assist in the provision of additional outdoor recreation opportunities. Local governments should emphasize and increase the availability of local funds for recreation, through such means as bond issues, Capital Improvement programs, and utilization of revenue sharing programs. Local governments are also encouraged to obtain and utilize local voluntary assistance from qualified individuals and/or groups in providing additional recreation opportunities so that available recreation funds may be maximized.

This voluntary assistance could be used for data collection, park planning, park development, park maintenance, and even developing and conducting recreation programs.

All people should have adequate opportunities to participate in outdoor recreation activity in Texas, regardless of age, sex, race, creed, or physical disadvantages. All entities in the public sector should identify and assure that all segments of the population within their jurisdiction and responsibilities are afforded equal opportunities, particularly by considering such recreational area design factors as are compatible with the capabilities and desires of the aged and disadvantaged.

The State of Texas should implement a Texas Waterway System. Figure 7-1 indicates the location of waterways which the Texas Parks and Wildlife Department, in a feasibility study conducted by direction of the Legislature, lists as those which have been identified as having potential for inclusion in such a system.

The State of Texas should establish a Texas Trailways System. Existing trails identified as having potential for inclusion in such a system were determined in a study conducted by the Texas Parks and Wildlife Department at the direction of the Legislature, and are presented in Table 7-1.

Land access to public recreational waters in Texas should be increased. Texas has many lakes, reservoirs, rivers and streams, and miles of bay and Gulf frontage. However, existing public recreation areas adjacent to many of these waters are crowded, while the waters themselves are under utilized.

FIGURE 7-1. POTENTIAL WATERWAYS FOR A TEXAS SYSTEM

WILD WATERWAYS

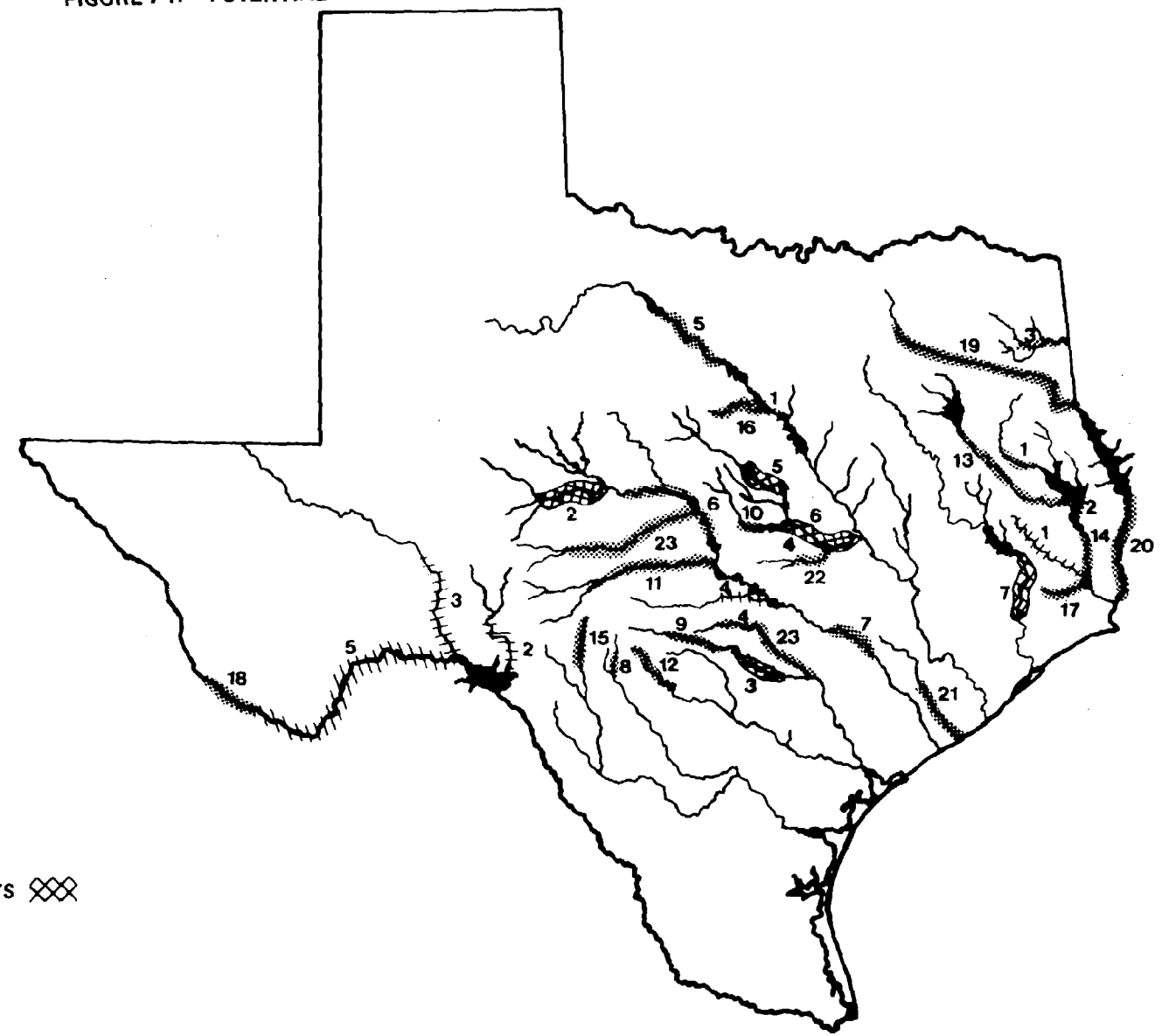
1. Big Sandy and Village Creek
2. Devils River
3. Pecos River
4. Pedernales River
5. Rio Grande

SCENIC WATERWAYS

1. Angelina River
2. Angelina River
3. Big Cypress Bayou
4. Blanco River
5. Brazos River
6. Colorado River
7. Colorado River
8. Frio River
9. Guadalupe River
10. Lampasas River
11. Llano River
12. Medina River
13. Neches River
14. Neches River
15. Nueces River
16. Paluxy River
17. Pine Island River
18. Rio Grande
19. Sabine River
20. Sabine River
21. San Bernard River
22. San Gabriel River
23. San Marcos River
24. San Saba River

RECREATIONAL WATERWAYS

1. Brazos River
2. Concho River
3. Guadalupe River
4. Lampasas River
5. Leon River
6. Little River
7. Trinity River

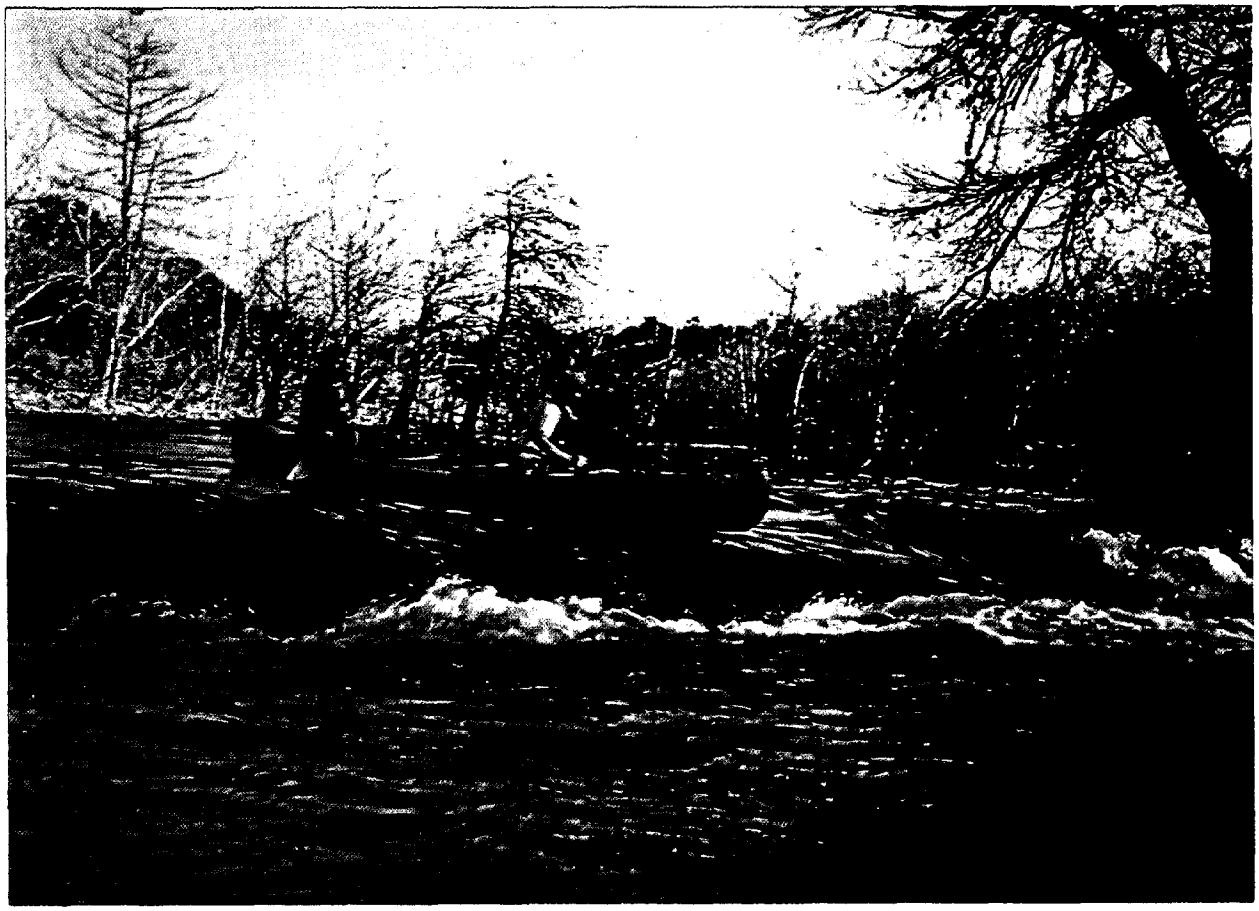


SOURCE: Texas Waterways, A feasibility report on a system of wild, scenic, and recreational waterways in Texas.

TABLE 7-1. POTENTIAL TRAILS FOR A TEXAS SYSTEM

REGIONAL TRAIL SYSTEM	NAME OF TRAIL	ADMINISTERING AGENCY	LENGTH (MILES)	POTENTIAL CLASSIFICATION
HILL COUNTRY TRAILS	McAllister Park Trail	City of San Antonio	4.0	Scenic
	Town Lake Walk and Bikeway	City of Austin	9.75	Recreational
	Schertz City Park Trail	City of Schertz	1.0	Recreational
	LBJ State Park Nature Trail	Texas Parks & Wildlife Dept.	1.2	Recreational
	Missions of San Antonio Trail	City of San Antonio	13.5	Historic
	Pedernales Falls State Park Hiking Trail	Texas Parks & Wildlife Dept.	7.0	Scenic
	Paseo del Rio	City of San Antonio	2.0	Recreational
MOUNTAINS TRAILS	Davis Mountains State Park Trail	Texas Parks & Wildlife Dept.	4.0	Recreational
	Guadalupe Mountains McKittrick Canyon Trail	National Park Service	20.0	Scenic
	Fort Davis National Historic Site Trail	National Park Service	2.79	Historic
	Big Bend Outer Mountain Loop Trail	National Park Service	33.0	Expedition
VALLEY TRAILS	Bentsen-Rio Grande Valley Singing Chapparal Trail	Texas Parks & Wildlife Dept.	1.5	Recreational
	Santa Anna National Wildlife Refuge Nature Trails	U. S. Fish and Wildlife Service	14.8	Scenic
COASTAL TRAILS	Galveston Island State Park Trail	Texas Parks & Wildlife Dept.	2.5	Recreational
	Padre Island National Seashore Grasslands Trail	National Park Service	0.7	Scenic
	Aransas National Wildlife Refuge Nature Trails	U. S. Fish and Wildlife Service	5.5	Scenic
	Buffalo Bayou Hike & Bike Trail	City of Houston	4.7	Recreational
POST OAK BELT TRAILS	Palmetto State Park Palmetto Nature Trail	Texas Parks & Wildlife Dept.	1.0	Scenic
	* Somerville Trailway	Texas Parks & Wildlife Dept.	23.9	Expedition
FOREST TRAILS	Cargill Long Park Trail	City of Longview	5.75	Recreational
	Mission Tejas State Park Tejas Timber Trail	Texas Parks & Wildlife Dept.	0.5	Recreational
	Atlanta State Park Trail	Texas Parks & Wildlife Dept.	2.4	Recreational
	Daingerfield State Park Trail	Texas Parks & Wildlife Dept.	2.5	Recreational
	Caddo Lake State Park Caddo Forest Trail	Texas Parks & Wildlife Dept.	0.75	Scenic
	Old Tram Hiking Trail	U. S. Forest Service	3.6	Scenic
	Old River Trail	Texas Forestry Association	1.5	Scenic
	New Birmingham Trail	City of Rusk	2.5	Historic
	Moscow Trail	Texas Forestry Association	2.0	Scenic
	Lone Star Hiking Trail	U. S. Forest Service	100.0	Expedition
PRAIRIE TRAILS	Benbrook Trail	U. S. Army Corps of Engineers	7.3	Recreational
	Fort Worth Trinity River Hike and Bike Trail	City of Fort Worth	7.0	Recreational
	Wilderness Way Trail	Dallas Museum of Natural History	3.0	Scenic
	Greer Island Nature Trail	City of Fort Worth	3.0	Scenic
	Meridian State Park Bosque Hiking Trail	Texas Parks & Wildlife Dept.	3.4	Scenic
	Lake Texoma Hiking Trail	U. S. Army Corps of Engineers	15.0	Expedition
PLAINS TRAILS	Pampa Central Park Trail	City of Pampa	1.5	Recreational
	Lake Meredith Plum Creek Nature Trail	National Park Service	2.0	Scenic

* Under construction



The Guadalupe—One of Texas' Many Beautiful Waterways. Establishment of a statewide system of wild, scenic and recreational waterways is one of the major recommendations in the **Texas Outdoor Recreation Plan.** (Photo by Reagan Bradshaw, Texas Parks and Wildlife Department)

Access problems are of particular concern along the Texas Gulf Coast. All entities should make special efforts to provide more access to these recreational water resources.

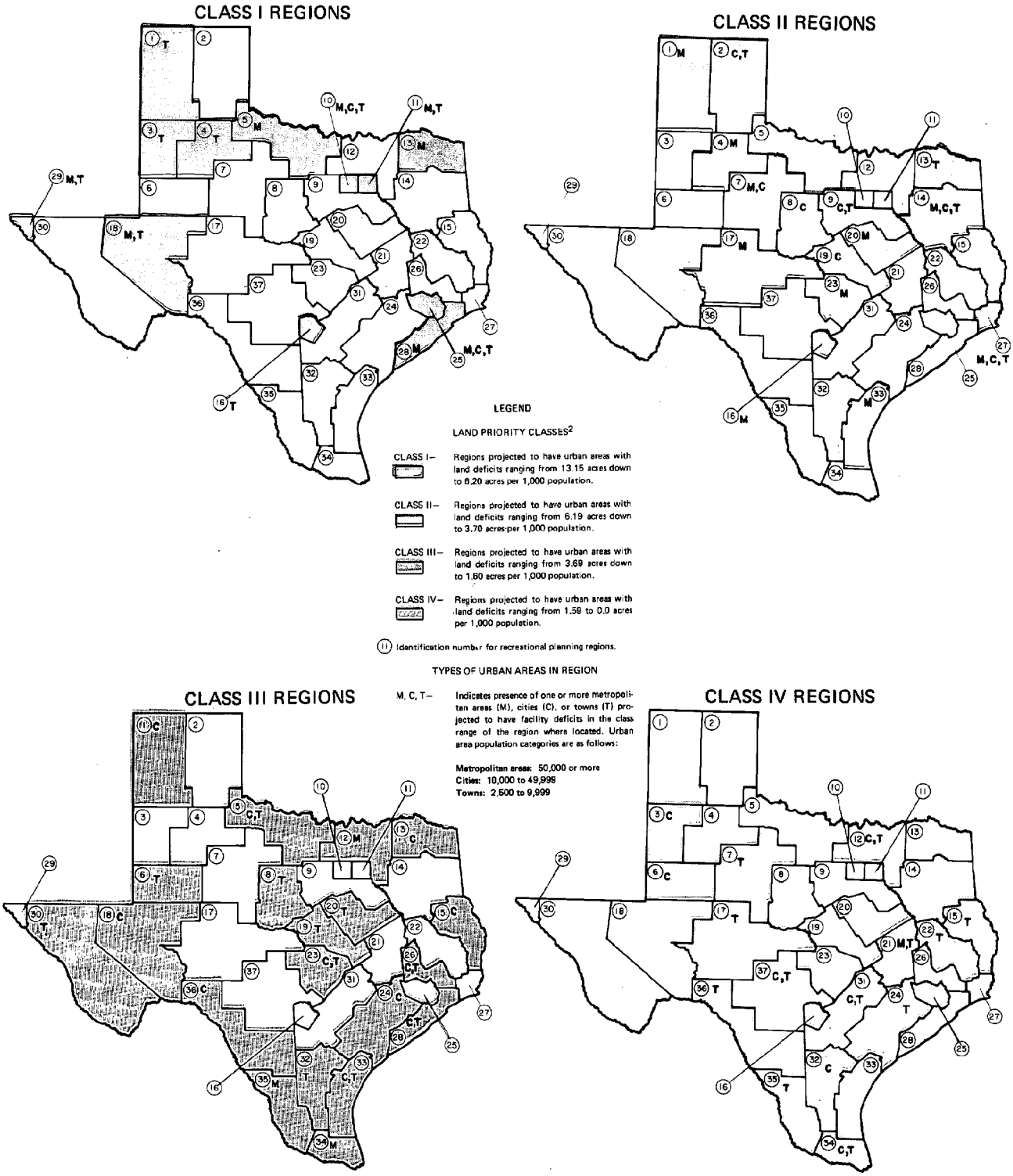
The current efforts of federal, state, regional, and local entities regarding the collection and maintenance of various types of information needed to determine outdoor recreational supply and demand should be strengthened. Although federal and state level agencies are currently engaged in these activities, many regional and local entities are not active, especially regarding estimates of recreational demand. Any efforts by regional and local entities in this area will be of great benefit to the State in providing additional facilities. Possible options which should be considered in encouraging further activity in this area are the publication of recreation directories and standardized maps based on recreation resource inventories, and the creation of statewide systems for monitoring demand on a relatively continuous basis.

Hunting activity in Texas is characterized by individual hunter use of privately owned lands. Landowners, often unaware of the demand and economic potential represented by wildlife populations, are not providing as many opportunities as possible. All entities with responsibilities and interests in this area are encouraged to evaluate this problem in considering individual outdoor recreation projects, plans, and other activities. Efforts by federal and state agencies should be made to increase public hunting lands and game management areas. Consultation with state and federal wildlife specialists is encouraged by the state in all matters pertaining to hunting.

SPECIFIC RECOMMENDATIONS FOR RECREATION LANDS, WATERS, AND FACILITIES

As further guidance in providing recreational opportunities needed between 1975 and 1980, all responsible entities should be cognizant of the State's overall recreation requirements, as well as the geographical differences in these requirements.

FIGURE 7-2. URBAN AREAS—RECOMMENDED PRIORITIES FOR ADDITIONAL DEVELOPED RECREATION LANDS BY PLANNING REGION, 1975–1980



[1]Land requirements include only those acres needed for developing recreational facilities. Land requirements for open space are not included.

[2]The priority classes shown are intended for general guidance only. For more specific information refer to the voume of the plan entitled **Regional Summary, Outdoor Recreation in the Urban Areas of Texas** and **Outdoor Recreation on the Texas Gulf Coast.**

To provide adequate recreational opportunities many difficulties such as geographic limitations of responsibilities, diversity of responsibilities and a multiplicity of funding programs must be overcome. Even considering these and many other problems, public and private recreation suppliers, guided by the general recommendations in this volume, and with reference to additional volumes of the Plan, will be better able to ascertain priorities for their individual program efforts and assist in increasing the recreation opportunities in Texas. Recommended geographic priorities for additional developed recreation lands and facilities are presented in Figures 7-2 through 7-7. Figures 7-2, 7-3, and 7-4 present recommended priority classes for the provision of additional developed recreational lands in the urban and rural areas of the State and saltwater associated lands on the Gulf Coast. Figures 7-5, 7-6, and 7-7 present similar regional priorities for additional recreational facilities. Additional recommendations concerning the development of recreational lands, waters, and facilities of a more general nature are also presented in the following discussions.

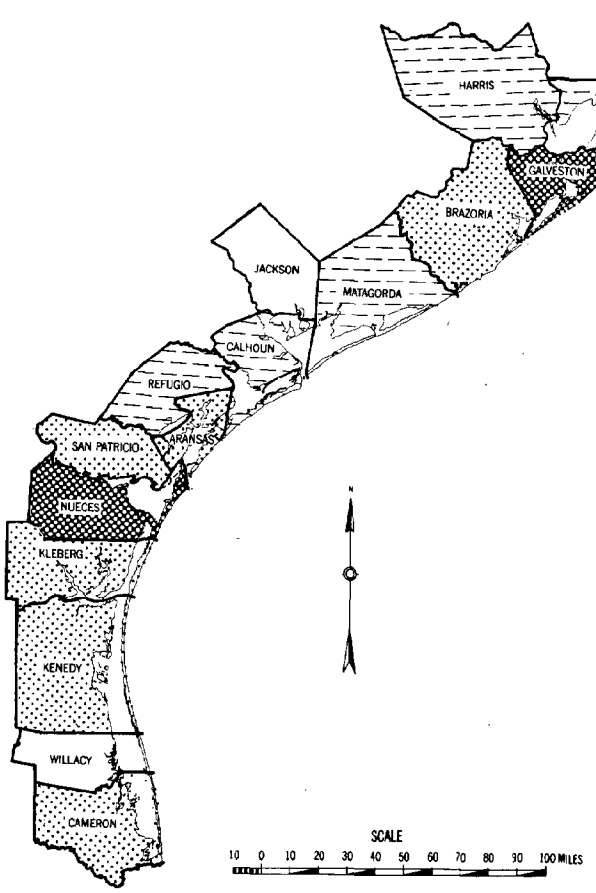
LANDS

Any additional recreation lands which are planned to be developed or acquired should be supported by individual and localized project area analyses. This will insure that additional lands are provided where intra-regional deficits exist. However, Figures 7-2, 7-3, and 7-4 present recommended priority classes which may be followed in determining areas of the State in which federal, state, regional, and local agencies should concentrate their efforts to improve recreational opportunities. Priority class designations indicate those regions where existing or acquired recreational lands should be developed with recreational facilities, based on regional urban, rural, and Gulf Coast saltwater-associated land acres estimated necessary to provide for additional recreational facilities. Priority Class I through IV designations were developed by estimating total urban, rural, and Gulf Coast saltwater-associated land acres necessary for each region, and then breaking the regions into priority classes with similar land acre requirements. For example, Priority Class I regions are those where the largest numerical acre requirements have been found to exist, while Priority Class IV regions, though requirements exist, are not as large as Class I, II, or III regions.

The provision of additional outdoor recreation lands, regardless of priority class, should be guided by the following general recommendations:

- Additional designated recreation lands should be adjacent to existing water resources (fresh and saltwater) of all types where possible. In addition, the spatial distribution of existing outdoor recreation opportunities with relation to population locations within various areas of the State is less than optimum in many cases. All entities are encouraged to consider this problem in planning new recreation lands, and utilize the various regional analyses presented in the volumes **Outdoor Recreation in the Urban Areas of Texas, Outdoor Recreation in the Rural Areas of Texas** and **Outdoor Recreation on the Texas Gulf Coast** volumes as a guide. In providing additional lands, the following additional recommendations are offered:
  - Local governments who have not done so should immediately prepare and continuously maintain comprehensive master recreational plans for their respective jurisdictions, in order to determine 5 year acquisition and development schedules for recreational opportunities. Facility standards for urban and rural settings are presented in the volume **Techniques of Analysis** and are recommended for use in estimating additional land requirements.
  - As an aid in providing additional lands for recreational opportunities, at reduced cost, the following alternatives should be investigated before fee simple acquisition of additional lands is sought:
    - Utilization of existing recreational lands not optimally developed at the present time.
    - Utilization of various types of currently non-recreational public lands for recreational purposes.
    - Consideration, designation, and utilization of existing resources such as flood plains, shorelines, islands, rights-of-way, and other publicly regulated land areas, particularly in and near urban settings.
  - High priority for the acquisition, utilization, designation, and development of land resources for recreational purposes should be directed to the following, as well as to those regions indicated as high in priority:
    1.) Urban areas with steady to increasing

FIGURE 7-3. GULF COAST—RECOMMENDED PRIORITIES FOR ADDITIONAL DEVELOPED RECREATION LANDS[1] ASSOCIATED WITH SALTWATER[2] BY COUNTY, 1975–1980



LEGEND

LAND PRIORITY CLASSES[3]

CLASS I— Counties projected to have land deficits ranging from 10,700 acres down to 5,000 areas.

CLASS II— Counties projected to have land deficits ranging from 4,999 acres down to 1,000 acres.

CLASS III— Counties projected to have land deficits ranging from 999 acres down to 100 acres.

CLASS IV— Counties projected to have land deficits ranging from 99 acres down to 4 acres.

[1]Land requirements include only those acres needed for developing recreational facilities. Land requirements for open space are not included.

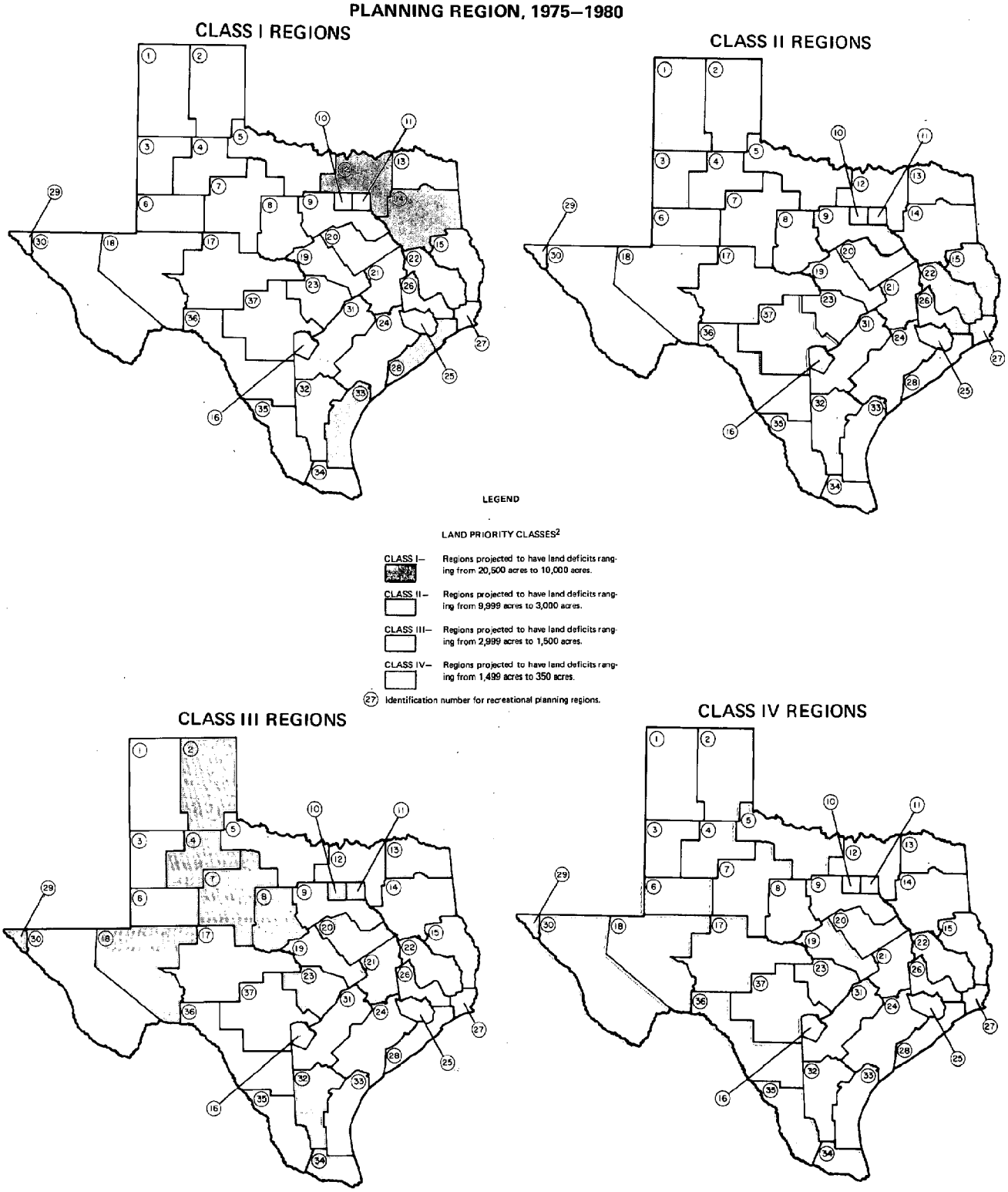
[2]In calculating developed land priorities for the Gulf Coast counties, only saltwater associated needs were included. Also, no distinction was made between rural and urban areas in establishing priorities.

[3]The priority classes shown are intended for general guidance only. For specific information refer to the plan volumes entitled **Outdoor Recreation on the Texas Gulf Coast, and Regional Summary.**

populations where little or no recreational opportunities exist at the current time. Priority lands for utilization as recreation areas should be areas of suitable natural characteristics, preferably adjacent to water bodies of good recreational quality and potential. Priorities should be directed first toward the metropolitan areas of the State.

- Land areas adjacent to saltwater along the Gulf Coast.
- Land areas which will provide desirable basic recreational opportunities at historic and archeological features, shorelines, and islands.
- Lands which will provide recreational opportunities complementary to those waterways identified as having potential for inclusion in a statewide waterway system, as well as lands with potential for inclusion in a statewide trails system. Priority for the provision of such lands should be given

FIGURE 7-4. RURAL AREAS–RECOMMENDED PRIORITIES FOR ADDITIONAL DEVELOPED RECREATION LANDS BY PLANNING REGION, 1975–1980



[1]The priority classes shown are intended for general guidance only. For more specific information refer to the volumes of the plan entitled **Regional Summary, Outdoor Recreation in the Urban Areas of Texas** and **Outdoor Recreation on the Texas Gulf Coast.**

[2]A deficit opportunity day is a unit used to estimate the facilities needed to satisfy recreation demand when demand exceeds the present supply of recreation facilities.

to lands, within one-half day's drive of metropolitan areas, where feasible.

- The continued development of urban areas with inadequate allocation of land to recreation and open space needs at the neighborhood-community level is a serious recreation problem in Texas. The prevailing urban development approach is perpetuating urban sprawl, depriving residents of recreational opportunities and is creating recreational deficits that are difficult and very costly to correct after the urban development process is complete. Local governments should develop and/or adopt recreational open space and facility standards, and through appropriate means such as development taxes, take steps to assure that adequate lands are identified and allocated to public recreation prior to subdivision development. Prior identification of key recreational resources such as scenic areas that are to be set aside is a key element in implementing such a program and in assuring the conservation of high quality recreation areas.

Recreational Open Space. Failure to identify and set aside quality recreation lands and resources prior to urban development results in a loss of recreational opportunities and is very difficult and costly to correct. (Photo by Frank Aguilar, Texas Parks & Wildlife Department)

- Hunting activity in Texas is generally characterized by individual hunter use of privately owned lands. Landowners, often not fully aware of the recreation demand and consequent economic potential represented by wildlife populations, are not providing as many opportunities as are possible. This is resulting in high costs to hunters as a result of the limited supply. All entities with responsibilities and interests in this area are encouraged to evaluate this problem in considering individual outdoor recreation projects, plans, and other activities.

- Various types of unique natural areas, and historic and archeological sites exist throughout the State, many of which are unidentified at the current time. Although not all areas can be of national, state, or regional concern, all entities in the public and private sector are encouraged to identify and consider proper management of these unique areas and sites in various planning and development endeavors. Current priorities should be directed to the further evaluation and possible creation as parks of the

30 urban and 70 rural significant natural areas listed in the volumes of the Plan entitled **Regional Summary, Outdoor Recreation in the Urban Areas of Texas**, and **Outdoor Recreation in the Rural Areas of Texas.**

LAKES AND RESERVOIRS

From a broad statewide perspective, the current supply of freshwater lake and reservoir surface acres in Texas is generally adequate for meeting the demands for boating, fishing, and skiing. However, the regional distribution of these resources in many instances is less than ideal. For example, estimates of additional surface acre requirements indicate that many of the urban areas of the State, particularly in the larger metropolitan areas, should be provided with additional surface acres of lakes and reservoirs to optimally meet the recreation demand of urban residents. On the other hand, most of the rural areas of the State generally have sufficient surface acreages of water to satisfy the wants and desires of recreationists from all origins. As a result, the State is faced with a paradoxical situation—the supply of recreational lakes and reservoir waters is not located where it should be to optimally provide for the boating, fishing, and skiing demands of the population. In the future, this situation is expected to become more of a problem as the requirements for additional surface acres increase. Water resource agencies should consider the estimates in the **Regional Summary** volume in determining recreational priorities for the location of new lakes and reservoirs.

Development of additional lakes and reservoirs is stimulated by projected agricultural, industrial, and municipal water needs and flood control purposes. While certain of these projects can provide needed recreational opportunities, in other respects they can have severe detrimental impacts on wildlife habitats, unique stream-oriented recreation and freshwater inflows needed to sustain coastal estuaries. Full assessment of environmental impacts of all such projects is recommended in order to avert unnecessary loss of recreation resources. Also, a complete assessment of the productive efficiencies of various water uses, especially consumptive uses, is recommended in order to better define priorities for water projects and to more acurately determine the real costs and benefits of additional reservoirs and water transfer projects.

The problem of land access to existing water resources in the State has been previously discussed, all responsible entities should insure that adequate recreational areas are provided at existing and planned reservoirs in the State with priorities directed to the larger rapidly growing urban regions and the Gulf Coast. Also, water resource agencies, in conducting their operations, should also take into account those rivers and streams which have been previously identified as having potentials for inclusion in a state waterway system. In summary, water resource agencies operating in the State should take into account the above recommendations and factors in assessing the need for individual reservoirs or larger water development efforts.

FACILITIES

The development of recommended priorities for providing additional facilities to support various outdoor recreation activities in Texas is a very difficult task. The wide variety of recreational facility deficits projected to occur between 1975 and 1980 complicates the statewide analysis. Because projected requirements vary greatly across the State, it is recommended that all public and private sector entities consult the individual regional analyses in the volumes of the Plan entitled **Regional Summary, Outdoor Recreation in the Urban Areas of Texas, Outdoor Recreation in the Rural Areas of Texas**, and **Outdoor Recreation on the Texas Gulf Coast** for guidance in providing additional facilities. These analyses should be considered by all public and private entities when seeking guidance in determining requirements for additional outdoor recreation facilities. However, for purposes of extremely general guidance, Table 7-2 indicates the top 5 types of facility deficits in the urban

TABLE 7-2. MAJOR REQUIREMENTS FOR ADDITIONAL RECREATION FACILITIES BY LOCATION, 1975–1980

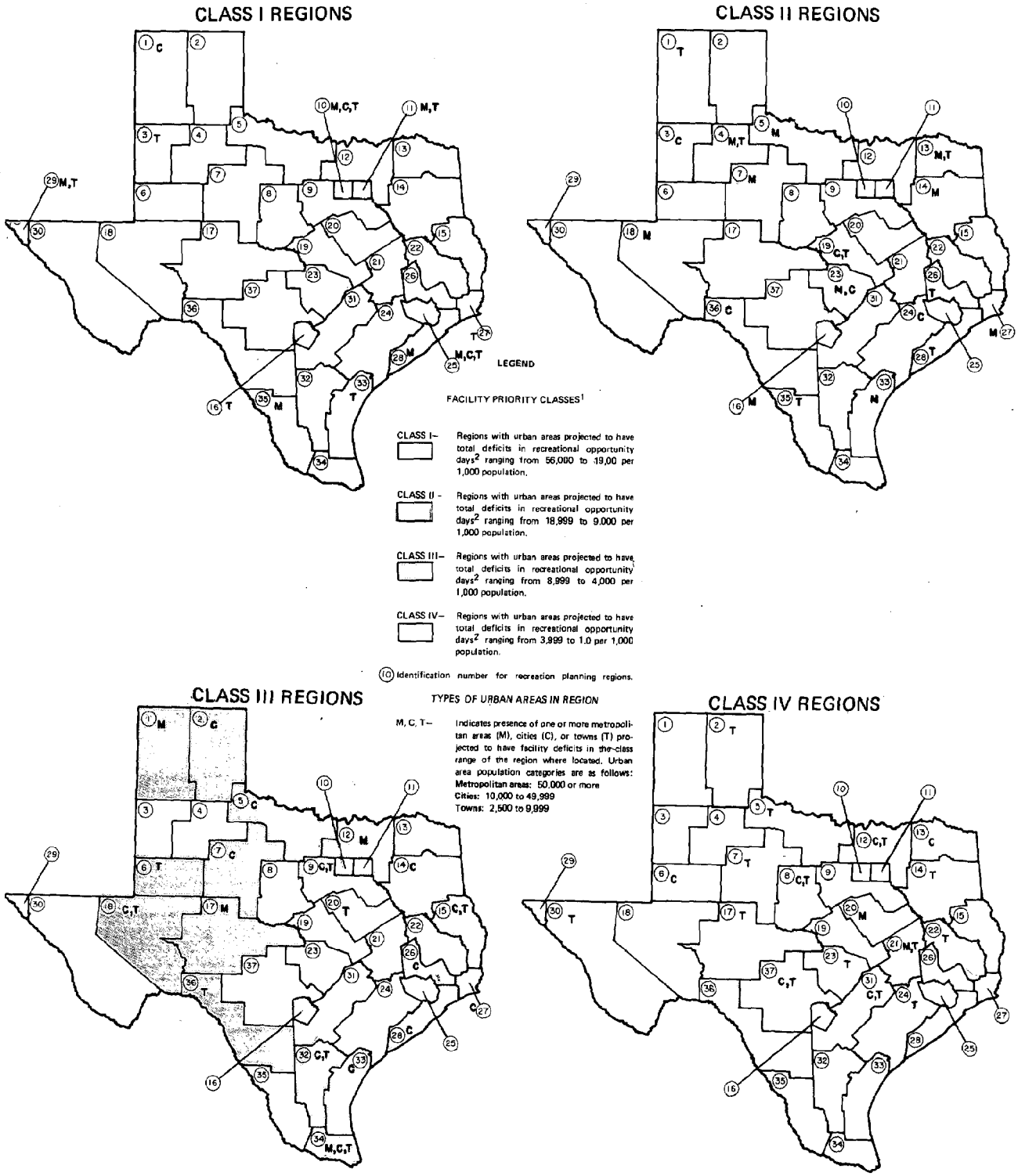
In Urban Areas
Swimming facilities, Tennis courts, Playgrounds, Golf courses, and Picnic tables
In Rural Areas
Boat Launch areas, Picnic units, Campsites, Designated freshwater swimming areas, and Horseback riding trails
Along Gulf Coast Waters
Designated swimming areas, Picnic tables, Boat launch areas, Campsites, and Fishing facilities

and rural areas of the State. As clearly indicated, the rankings of these facilities vary widely, depending upon the urban and rural location of the facilities.

In addition to considering the priorities in developing the most needed types of recreational facilities, the geographic dispersion of needed facilities should also be considered by all entities, especially those federal, state, and private entities which have statewide responsibilities and capabilities. The volumes of the Plan mentioned in reference to recreation land priorities should again be consulted in determining the specific types of recreation facilities that should be developed in the rural and urban portions of the 37 planning regions. However, to provide guidance in determining regions of the State in which efforts to provide additional facilities should be strengthened, Figures 7-5, 7-6, and 7-7 indicate general regional priority classes for the provision of additional facilities. These priority classes were developed by estimating total deficit days of opportunity for all facilities combined in each of the regions. Regional rankings were determined by examining the array of combined deficits which occurred within the 86 urban and 37 rural groupings in the 37 regions. Class designations were assigned where similar overall facility deficits were determined.

As was the case with the land priority classes, Class I regions are those regions in the urban and rural areas where the combined deficits for all outdoor recreation facilities are greatest. Class II, III, and IV areas are those which have increasingly lower deficits of all types of facilities. It should be noted that the Priority Class IV regions do require additional facilities, only less so in terms of overall facilities deficits than Class I, II, and III regions.

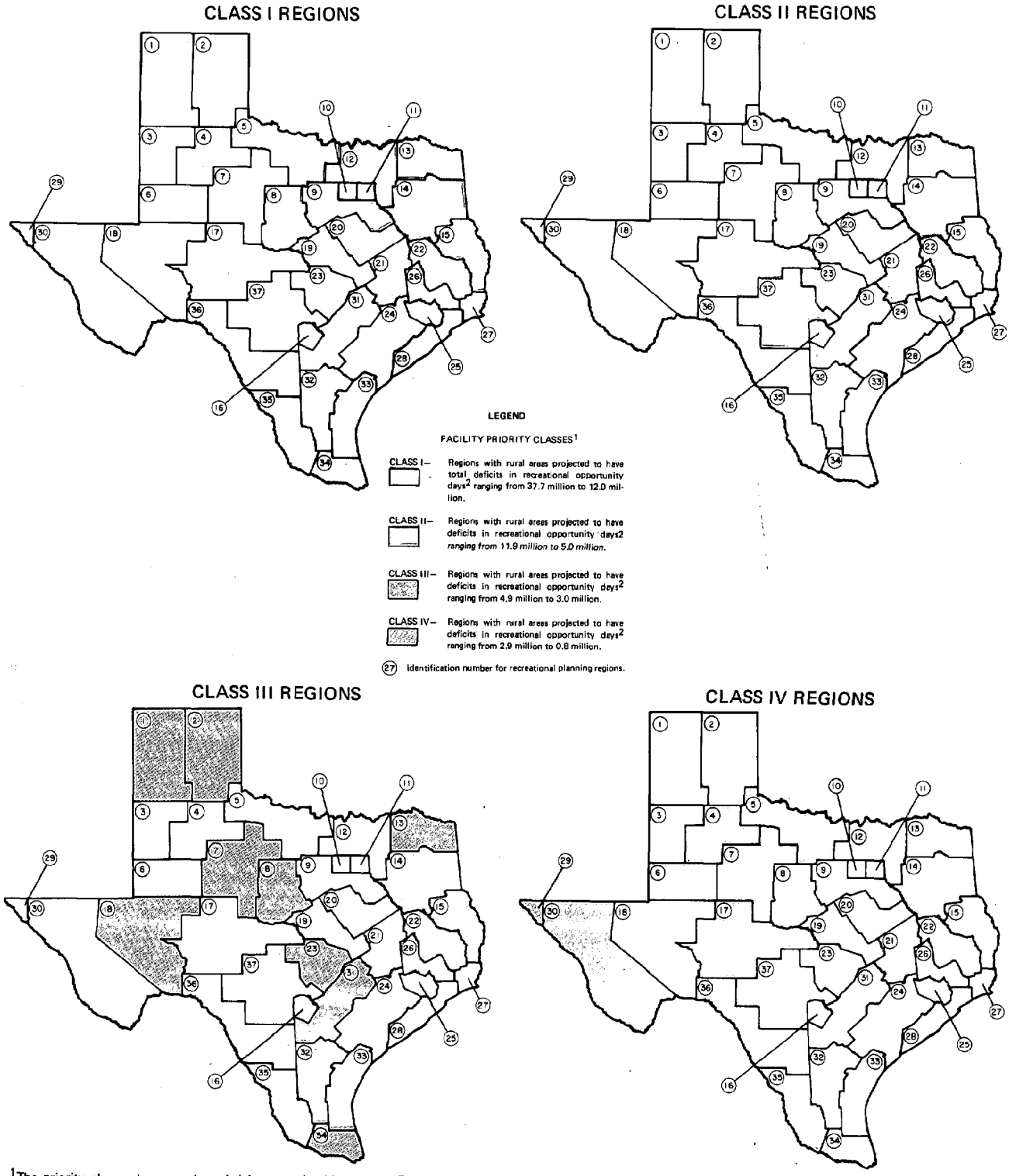
FIGURE 7-5. URBAN AREAS—RECOMMENDED PRIORITIES FOR ADDITIONAL RECREATION FACILITIES BY PLANNING REGION, 1975–1980



[1]The priority classes shown are intended for general guidance only. For more specific information refer to the volumes of the plan entitled **Regional Summary, Outdoor Recreation in the Urban Areas of Texas** and **Outdoor Recreation on the Texas Gulf Coast.**

[2]A deficit opportunity day is a unit used to estimate the facilities needed to satisfy recreation demand when demand exceeds the present supply of recreation facilities.

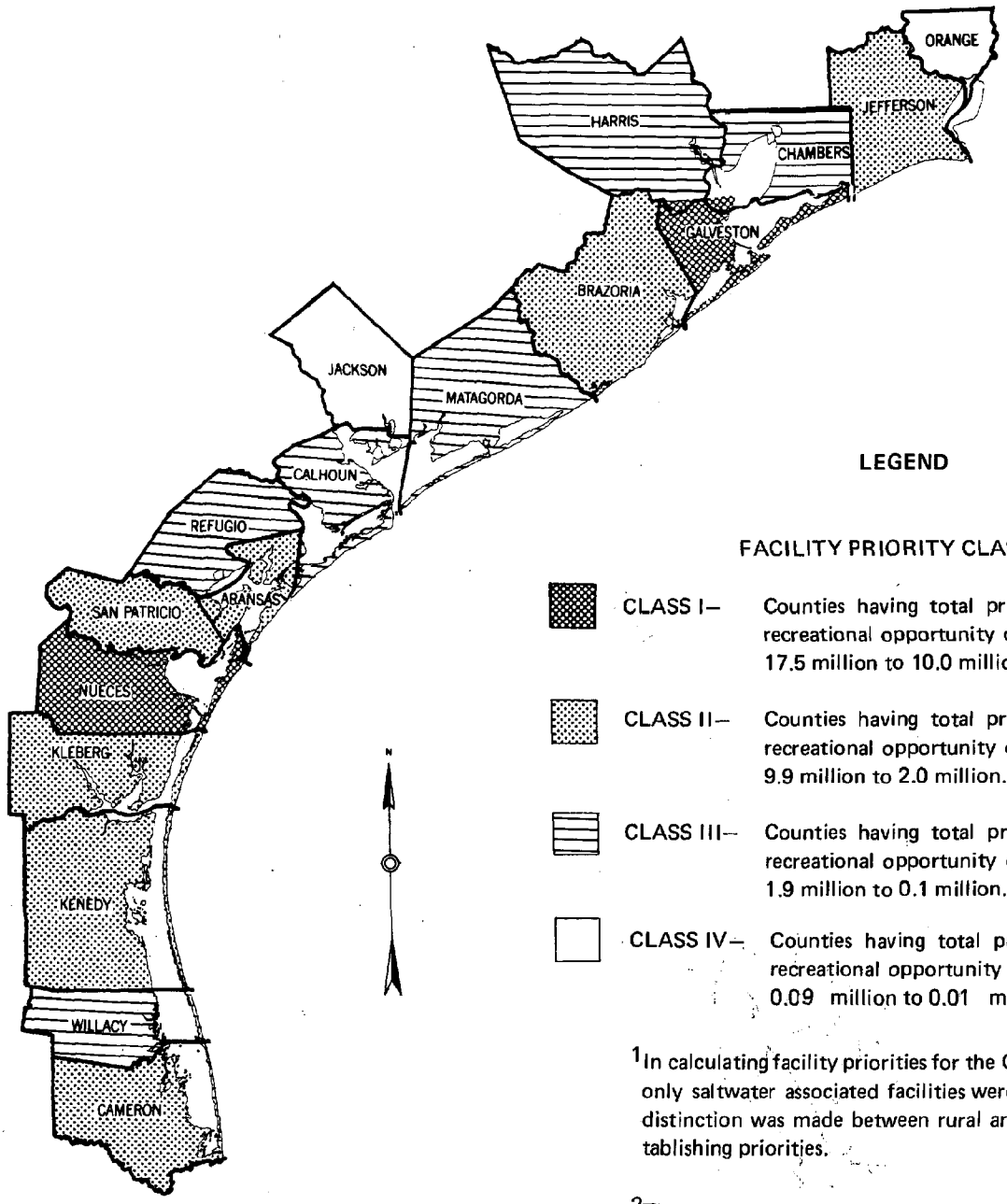
FIGURE 7-6. RURAL AREAS—RECOMMENDED PRIORITIES FOR ADDITIONAL RECREATION FACILITIES BY PLANNING REGION, 1975–1980



[1]The priority classes shown are intended for general guidance only. For more specific information refer to the volumes of the plan entitled **Regional Summary, Outdoor Recreation in the Urban Areas of Texas, Outdoor Recreation in the Rural Areas of Texas,** and **Outdoor Recreation on the Texas Gulf Coast.**

[2]A deficit opportunity day is a unit used to estimate the facilities needed to satisfy recreation demand when demand exceeds the present supply of recreation facilities.

FIGURE 7-7. GULF COAST—RECOMMENDED PRIORITIES FOR ADDITIONAL RECREATION FACILITIES ASSOCIATED WITH SALTWATER[1] BY COUNTY, 1975–1980



LEGEND

FACILITY PRIORITY CLASSES[2]

CLASS I— Counties having total projected deficits in recreational opportunity days[3] ranging from 17.5 million to 10.0 million.

CLASS II— Counties having total projected deficits in recreational opportunity days[3] ranging from 9.9 million to 2.0 million.

CLASS III— Counties having total projected deficits in recreational opportunity days[3] ranging from 1.9 million to 0.1 million.

CLASS IV— Counties having total projected deficits in recreational opportunity days[3] ranging from 0.09 million to 0.01 million.

[1]In calculating facility priorities for the Gulf Coast counties, only saltwater associated facilities were included. Also, no distinction was made between rural and urban areas in establishing priorities.

[2]The priority classes shown are intended for general guidance only. For more specific information refer to the volumes entitled **Outdoor Recreation on the Texas Gulf Coast,** and **Regional Summary.**

[3]A deficit opportunity day is a unit used to estimate the facilities needed to satisfy recreation demand when demand exceeds the present supply of recreation facilities.

Chapter 8

RECOMMENDED RESPONSIBILITIES

Responsibilities currently assumed in the field of outdoor recreation are, for the most part, the result of federal and state legislation and by policies and positions formulated through years of experience by professionals in the field. There are others, however, which have been brought about through the transfer of responsibilities among recreation suppliers. Various reasons have brought about these transfers of responsibility, such as (1) the donation and acceptance of lands by one supplier which in reality would be the responsibility of another supplier, or agency, (2) the refusal of one supplier to accept its clearly delineated *responsibility*, thus requiring another supplier to provide recreation as one of its secondary purposes, or (3) one supplier assuming responsibilities that are a responsibility of another supplier before said supplier can assume its responsibility. In some cases, a result of these actions has been either a degeneration of the quality of outdoor recreation opportunities available or a void where outdoor recreation opportunities should be provided. This is mostly due to the inability of a supplier to accept the responsibility of others and still meet its own primary responsibility.

As a means to guide the general provision of additional recreational opportunities between 1975-1980, Table 8-1 presents a statewide overview for recommended responsibilities for recreation land and facility development in terms of the percentages of the State's total 1980 requirements that should be provided by the State's major suppliers. The information presented is general in nature, and financial capabilities of individual federal, state, and local entities may not allow fulfillment of all recommended responsibilities which have been developed as a result of joint meetings among the major recreational suppliers operating in Texas. All current and potential public and private entities with responsibilities and interests in outdoor recreation in Texas should also consult the **Regional Summary** Volume for more detailed information regarding recommended regional responsibilities and suggested priorities. Individual regional summaries in the volume present recommended acreage and facilities responsibilities for various federal, state, local, and private entities in each region.

In addition to the recommended responsibilities for developed recreation land and facility requirements, further guidance oriented toward the planning, development, conservation, and management of the State's recreation resources by federal, state, regional, local, and private entities is presented in the following sections.

RECOMMENDED FEDERAL RESPONSIBILITIES

In general, the outdoor recreation responsibility of the federal government in Texas should be to assure that the people of Texas and visitors to the State have ample opportunity to utilize and enjoy the outdoor recreational resources under the administration of the federal government. When seeking specific recreational action in Texas, federal agencies such as the National Park Service, U.S. Army Corps of Engineers, and U.S. Forest Service should continue or expand the provision of opportunities when possible, according to criteria and estimates as presented in the volumes of this plan.

In the administration of multi-use land and water resources having interstate, state, or regional recreation significance, the federal government should solicit appropriate state or local government agencies (depending upon

TABLE 8-1.

RECOMMENDED RESPONSIBILITIES FOR PROVIDING DEVELOPED RECREATION LANDS AND FACILITIES IN THE RURAL AND URBAN AREAS BY ADMINISTRATION 1975–1980[1]

DEVELOPED RECREATION LANDS AND FACILITIES	RURAL AREAS											URBAN AREAS			
	1980 Rural Resource Requirements	FEDERAL				STATE			LOCAL	PRIVATE SECTOR[2]	TOTAL	1980 Urban Resource Requirements	MUNICIPAL	PRIVATE SECTOR[2]	TOTAL
		Corps	NPS	USFS	Other	TPWD	RA[3]	Other	County						
Developed Recreation Land	149,609 acres	8%	3%	2%	1%	8%	11%	1%	31%	36%	100%	61,827 acres	73%	27%	100%
Inland	120,377 acres	10%	2%	2%	1%	8%	13%	1%	29%	35%	100%	---	---	---	---
Saltwater Associated	29,232 acres	0%	4%	0%	1%	6%	4%	0%	37%	48%	100%	---	---	---	---
Campsites	48,792 sites	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Inland	33,637 sites	13%	3%	3%	<1%	11%	13%	1%	20%	37%	100%	---	---	---	---
Saltwater Associated	15,155 sites	0%	1%	1%	2%	8%	3%	0%	25%	60%	100%	---	---	---	---
Playgrounds	568 acres	6%	1%	1%	0%	3%	7%	1%	61%	21%	100%	785 acres	90%	10%	100%
Golf Courses	40 holes	0%	0%	0%	0%	0%	0%	0%	20%	80%	100%	3,935 holes	62%	38%	100%
Baseball/Softball	187 fields	1%	0%	0%	0%	<1%	0%	0%	73%	26%	100%	166 fields	97%	3%	100%
Picnicking	81,518 tables	---	---	---	---	---	---	---	---	---	---	4,709 tables	90%	10%	100%
Inland	66,157 tables	10%	3%	2%	1%	8%	15%	1%	33%	28%	100%	---	---	---	---
Saltwater Associated	15,361 tables	0%	1%	0%	2%	3%	6%	0%	44%	44%	100%	---	---	---	---
Tennis	---	---	---	---	---	---	---	---	---	---	---	10,430 courts	60%	40%	100%
Basketball	---	---	---	---	---	---	---	---	---	---	---	840 courts	99%	1%	100%
Football	---	---	---	---	---	---	---	---	---	---	---	610 fields	100%	0%	100%
Boating Ramps	2,568 ramps[4]	---	---	---	---	---	---	---	---	---	---	415 ramps	---	---	---
Inland	2,339 ramps[4]	13%	2%	1%	1%	3%	14%	0%	22%	44%	100%	320 ramps	53%	47%	100%
Saltwater Associated	229 ramps[4]	0%	1%	0%	1%	5%	2%	0%	31%	60%	100%	95 ramps	81%	19%	100%
Boat Slips and Stalls	40,357 slips/stalls	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Inland	36,330 slips/stalls	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	---	---	---	---
Saltwater Associated	4,027 slips/stalls	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	---	---	---	---
Fishing Facilities	54,958 lin. yds.	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Inland (Piers, Barges, Marinas)	30,344 lin. yds.	13%	1%	4%	1%	7%	16%	1%	25%	33%	100%	---	---	---	---
Saltwater Associated (Piers and Jetties)	24,614 lin. yds.	1%	3%	0%	0%	11%	3%	0%	34%	48%	100%	---	---	---	---
Swimming Pools	699,344 sq. yds.	4%	<1%	<1%	0%	1%	3%	0%	30%	62%	100%	660,170 sq. yds.	70%	30%	100%
Swimming in Designated Areas	39,575,248 sq. yds.	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Inland	18,763,550 sq. yds.	20%	1%	1%	<1%	3%	13%	0%	26%	36%	100%	---	---	---	---
Saltwater Associated	20,811,698 sq. yds.	0%	0%	0%	1%	7%	<1%	0%	53%	39%	100%	---	---	---	---
Bicycle Trails	1,137 miles	5%	2%	2%	0%	6%	6%	0%	69%	10%	100%	616 miles	100%	<1%	100%
Horseback Riding Trails	1,990 miles	3%	1%	1%	0%	4%	4%	0%	11%	76%	100%	---	---	---	---
Combined Walk, Hike, and Nature Study Trails	1,684 miles	---	---	---	---	---	---	---	---	---	---	1,235 miles	91%	9%	100%
Inland	1,480 miles	11%	5%	2%	2%	18%	20%	<1%	28%	14%	100%	---	---	---	---
Saltwater Associated	204 miles	0%	55%	0%	1%	7%	0%	0%	31%	6%	100%	---	---	---	---

[1] The responsibility allocations presented are set forth as guidance for public agencies. Any agency could provide facilities and/or areas on a concession basis, if so desired.

[2] Includes private enterprises, quasi-public organizations, and private landowners. Saltwater associated responsibilities for the private sector are indicated to allow private enterprise opportunity, as is appropriate under the Texas Open Beach Act.

[3] Also includes water districts.

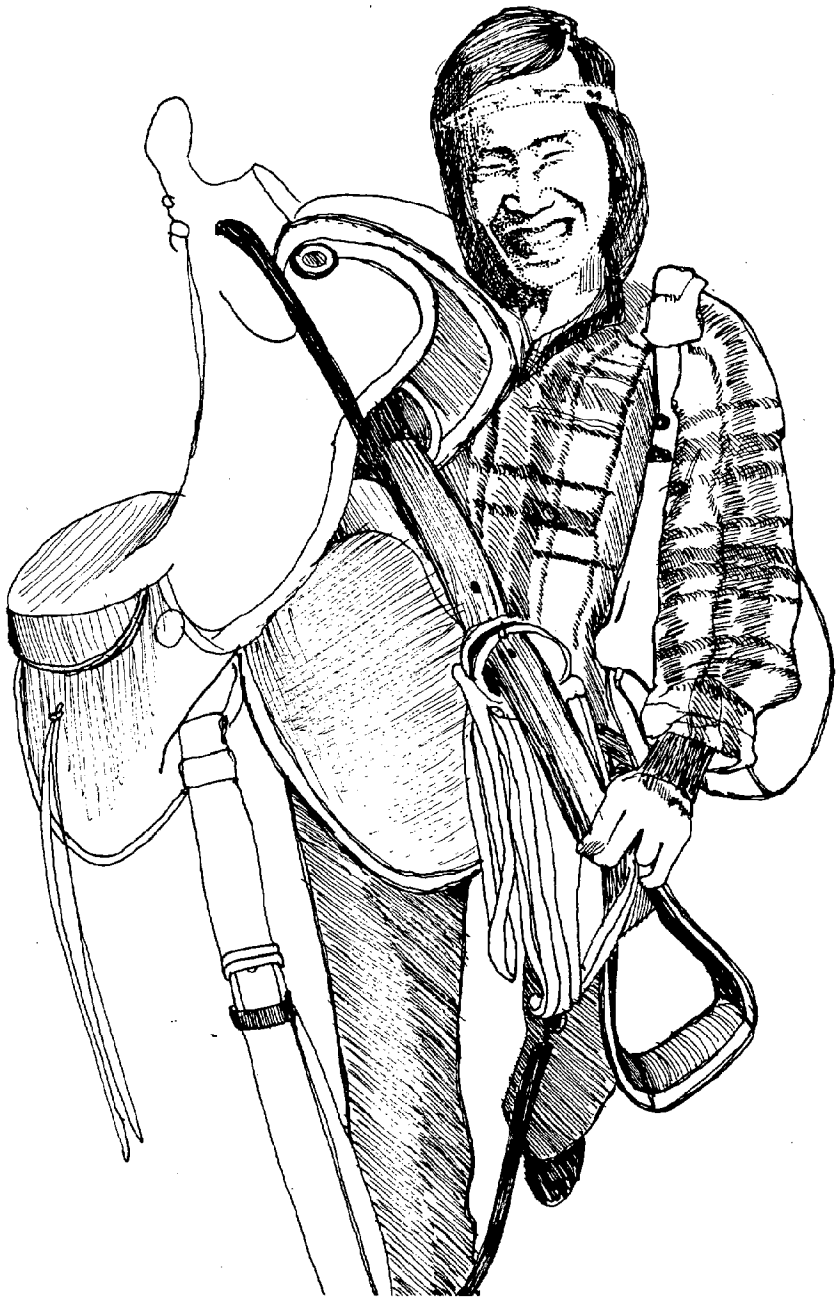
[4] Two lanes per ramp.

the resource's significance) to assume the development and administration of the recreational portions of the resources. When the construction of a federal multi-use land and water project is contemplated, state or local governments should be informed at the earliest time and should be encouraged and allowed to actively participate in the planning processes, as well as in the selection of areas which best fit their individual criteria and operational procedures. It is believed this procedure will result in greater participation by state and local entities in the development, as well as the subsequent operation and maintenance, of these resources.

Those resources of Texas which are under the administration of the federal government and which have significant recreational values to meet the priority needs of the State, but which are managed by the federal government for non-recreational purposes, should continually be examined by the appropriate federal agencies for possible conversion to recreational uses. The conversion of such areas should be accomplished by the federal government, or by appropriate state or local governmental units through agreements with the federal government. The initiation of any actions or programs by the federal government which could, in effect, withdraw prime public or private recreational lands of Texas from the recreational supply base should have prior approval of the State of Texas. If such action or program is in the best interest of the Nation, State, or local area and must be affected, provisions for replacement of the recreational resource, in kind if not in total quantity, should be made through cooperative agreements with the State of Texas or political subdivisions of the State. All plans and programs of the federal government within Texas, which would in any way affect the outdoor recreational development of Texas, should be keyed to meeting the priority needs of the State and should be coordinated either through the Bureau of Outdoor Recreation, U.S. Department of the Interior, or directly with the Governor's Budget and Planning Office. This coordination is essential in order for the State to stay abreast of progress achieved toward satisfying the outdoor recreation needs of Texas.

All outdoor recreation-oriented federal agencies operating within the State of Texas should become familiar with those aspects of the national outdoor recreation plan, **Outdoor Recreation-A Legacy for America,** which relate to federal government actions, and completely understand those actions necessary to adjust current operations and planning efforts to reflect the National plan. Interaction between the state and federal landholding agencies indicates that many of the agencies operating federal recreation or potential recreation areas in the State are willing to create, and in many cases, have plans for, recreational facilities throughout the State. However, one constant factor arises as

Scenic Pollution. Protecting Texas' recreation areas and resources from the adverse effects of noise, water, air and scenic pollution will require attention from private enterprise as well as the various recreational and regulatory agencies. (Photo by Texas Parks & Wildlife Department)



a deterrent—lack of funds to construct and provide for planned facilities.

In order to meet recommended responsibilities for federal landholding agencies in Texas between 1975-1980, it is estimated that the National Park Service should attempt to provide an additional 4,488 acres of developed recreational land on existing National Park and National Recreational Areas. The U.S. Army Corps of Engineers should provide approximately 11,969 acres adjacent to existing facilities and Corps of Engineers managed projects to be completed around 1980. The United States Fish and Wildlife Service should provide 786 acres in national wildlife refuges, and the U.S. Forest Service 2,992 acres in National Forests. Federal agencies should guide their activity by utilizing the recommended general priorities presented in this document. For geographic locations of additional opportunities, as well as regional responsibilities reference should be made to the **Regional Summary** Volume.

Additional federal efforts concerning the management of recreation resources in Texas should be to provide leadership for the State, its local governments, and the private sector. In accomplishing the objective, various federal agencies should demonstrate and publicize model methods of multiple-use of land and water resources on federally owned lands, and insure that adequate consideration and emphasis is given recreation resources in the administration and delivery of federal assistance programs. Strong positive incentives, such as less restricted financing and technical assistance to lower levels of government and the private sector, would aid immeasurably in the provision of additional local recreation areas in the State. Federal agencies should also strengthen recreation oriented technical assistance and informational programs, especially those which will aid in the increased usage of Multiple Use-Sustained Yield concepts. Activities such as topographic mapping, soil-use maps, Resource Conservation and Development Projects, especially in rapidly developing areas, should be accelerated. Further, a re-definition of flood hazard areas on the basis of the Standard Project Flood rather than the 100 year flood plain should be sought.

Another area of federal concern should be encouragement of federal agencies with regulatory responsibilities to continue and/or strengthen their policies and operations in a reasonable manner, as they relate to the management and/or protection of air and water and noise quality at existing and potential recreation areas.

As was mentioned previously, the lack of adequate funding is a major impediment to federal recreation suppliers, along with state and local

suppliers, with respect to providing and protecting recreation opportunities. Some of the areas in which federal agencies should seek additional funding from the United States Congress are as follows:

- Increase funding for the acquisition and restoration of historical structures.
- Increase funding for the construction of wastewater treatment systems.
- Increase the annual appropriations from the Land and Water Conservation Fund.

RECOMMENDED STATE RESPONSIBILITIES

In the provision of outdoor recreational opportunities for the use and enjoyment of the people of Texas and visitors to the State, the State of Texas should continue to acquire, develop, and maintain those recreational resources which have either natural, scenic, wilderness, scientific, historic, or recreational values significant on a statewide or multi-regional basis. For the benefit of future generations of Texans, the resources thus acquired should be carefully managed and developed in such a manner as to make optimum use of the natural characteristics of individual areas.

All state agencies having direct or indirect responsibility for the administration, planning, or financing of the State's water resources should strive to make certain that the resource areas within the scope of their responsibility are developed to their recreational potential in accordance with the outdoor recreation needs of the State. Particular attention will need to be increasingly directed to the publicly owned natural river, stream, and bayou corridors in the State, which have historically been overlooked as valuable recreation resources.

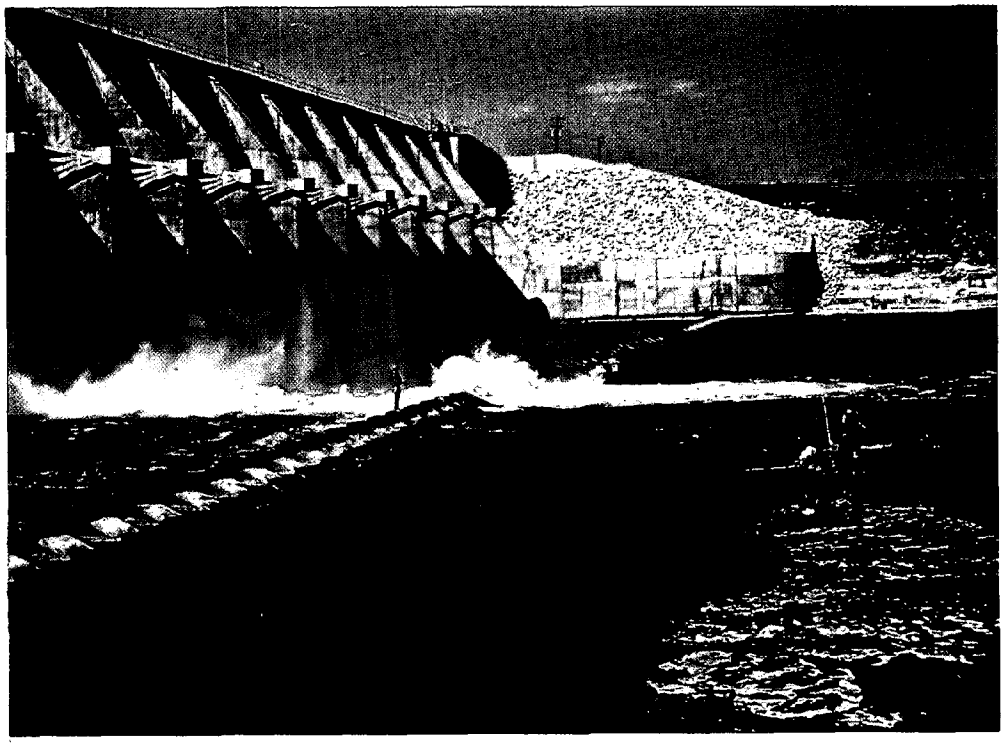
The respective state agencies should also give particular attention to the need for increased provision of adequate public access at existing and newly developing fresh and saltwater resource areas of the State and the protection of public use areas at these water resources. Proper development of these water-based public-use areas should be accomplished by the agencies themselves, in cooperation with other state agencies, or by local political subdivisions of the State, depending upon the significance of the resource and such arrangements as can be made to improving the public's access to water resources.

The State, in accomplishing its responsibilities, should use any funds made available to it in significant quantities for providing new recreational opportunities, and should be guided by the **TORP**. By doing so, the State, in meeting its share of the responsibilities by providing areas and facilities which meet the criteria and concepts associated with a first class state parks systems, can set an example for local governments and the private sector, and insure that funding opportunities are optimized.

As provided under Senate Bill 165, Acts of the 59th Legislature, Regular Session, 1965, the Texas Parks and Wildlife Department is "authorized and empowered to prepare, maintain, and keep up-to-date a Statewide Comprehensive Plan for the development of the outdoor recreation resources of the State of Texas..." In meeting its responsibility under this statute, the Texas Parks and Wildlife Department should continue and initiate, through cooperative efforts, those studies necessary to develop acceptable solutions for the many outdoor recreation problems confronting the State. Many of these studies should, as appropriate and feasible, be coordinated with other agencies of the State, political subdivisions of the State, and quasi-public organizations, and private individuals. Concerned colleges and universities of the State are encouraged to consult and cooperate with the Parks and Wildlife Department in completing basic outdoor recreation studies related to the use and management of outdoor recreation resources, the economics of outdoor recreation, and the preferences for outdoor recreation, to name but a few. Much data is currently being collected by a number of agencies, institutions, regional planning commissions or councils of governments, cities, and other entities interested in outdoor recreation. Only through an awareness of the studies and the assimilation in and distribution from a common data bank can duplications be avoided. The Parks and Wildlife Department should be informed during the formative stages of studies to determine if cooperative efforts in both manpower and funds might be achieved. Greater coordination obtained during the formulative stage of a study can determine if a cooperative effort in both manpower and funds might be achieved and greater efficiency obtained. Only through such harmonious and concentrated effort can the outdoor recreation problems of the State be efficiently solved.

Other considerations for the improved conservation, management and provision of additional quality recreational opportunities are as follows:

- Consider the feasibility of expanding trail opportunities through the use of utility and transportation corridors planned for abandonment, to include retention of these corridors in public ownership.
- Strengthen efforts directed to the completion of comprehensive inventories and analyses of lakes to more definitely identify those with high recreation, natural, and fish and wildlife values.



De Cordova Bend Dam Across the Brazos near Granbury. Planning for additional reservoirs in Texas should carefully weigh benefits to water consumptive land uses and flat water recreation against losses of irreplaceable stream-related resources, wildlife habitats, reduced estuarine productivity and consequent commercial and recreation-related economic losses. (Photo by Frank Aguilar, Texas Parks & Wildlife Department)

- Undertake inventories and consider establishing adequate public access and management of all state-owned islands which are found to have high recreation or wildlife values.

- Estimate the carrying capacities of recreational management units under State administration.

- Increase the determination of the possibilities for recreational utilization of State and local public lands not currently used for recreational purposes.

- Examine the feasibility of establishing more favorable tax situations for lands dedicated to private parks, recreational areas, or open space uses.

- Continue, and where possible, strengthen efforts to increase hunting opportunities in the State by various means, such as encouraging and providing technical assistance to private land owners in the areas of wildlife and financial management, encouraging expansion of the leasing system in the State, promoting programs which would open additional private lands for hunting at no cost, making efforts to increase publicly administered hunting lands and wildlife management areas, and continuing to explore new ideas and innovations which may increase hunting opportunities.

Of concern to outdoor recreationists in Texas are the effects of Public Law 89-72, the Federal Water Projects Recreation Act. Provisions of the Act require the participation of state or local government in the development of recreational areas at any federal water project authorized after 1965. The U.S. Army Corps of Engineers and Bureau of Reclamation report that federal water projects now underway in the State will have little or no recreation areas set aside due to a lack of state or local government participation in assuming management responsibilities for large recreational areas. This is reportedly caused by a lack of state or local funds or an actual unwillingness to participate. Although the state and local governments may charge fees at such areas as a means with which to operate them, there are strong indications that Texans will not have much opportunity for recreational experiences at federal water projects unless greatly increased responsibility for recreation areas is assumed by the state and its local governments. Some of the problems associated with this situation are a lack of ability and/or funds on the part of entities such as the Texas Parks and Wildlife Department, River Authorities, Special Districts, counties, and municipalities to commit themselves to involvement in a particular project 5 to 10 years prior to its construction. The Texas Legislature should consider and develop measures which will encourage the United States Congress to amend P.L. 89-72, in order to remedy this growing problem for outdoor recreation in the State.

Other responsibilities the various state agencies should increasingly emphasize are the encouragement of sound resource management practices among public and private entities through various agency programs, continued efforts to enforce and/or strengthen regulatory actions in areas of air and water quality at existing and potential recreation areas. Also, continued actions to insure that the recreation resource potentials of public-owned lands are adequately evaluated, and, where feasible, development of management systems for the recreational use of these lands.

Increased demands for water for agricultural production, urban growth, and other developments, is a problem of statewide significance in terms of the impact of water development projects on wildlife habitats and estuarine environments. Federal water projects require extensive analysis and subsequent mitigation of wildlife habitat losses. At the current time, there is no state or local entity which has powers of mitigation of wildlife losses for state-financed water projects. The State should consider methods which will allow or require wildlife losses to be more adequately considered in the planning and provision of state-financed water projects. Great opportunities for additional hunting lands, recreation areas, and wildlife management could result from such efforts.

In addition to the general state responsibilities discussed above, a number of specific recommendations are presented in the volume entitled, **A Regional Environmental Analysis**. These recommendations relate primarily to those measures needed to identify, conserve and/or provide better management of the State's recreation resource base. Reference should be made to this volume for findings leading to these recommendations, their purpose, and the nature of the problems they seek to resolve. Paraphrased recommendations from this volume include:

- That primary and secondary recreation agencies continue and/or initiate, as necessary, coordinated statewide identification and mapping of significant recreation resources such as natural areas, wildlife habitats, wetlands, archeological-historical resources, water access points and existing recreation areas so as to facilitate better consideration of these resources in decision-making and planning.

- That recreation-related technical assistance be provided to the regional councils of government.

- That standardized base map scales be adopted for all official planning purposes.

- That official and more timely updates and projections of demographic data be obtained and provided to all planning organizations.

- That the mapping of soils, resource capability units, and flood-hazard areas be continued and expedited.

- That more intensive collection of surface water data be initiated well in advance of urban development to improve planning decisions.

- That recent amendments to the Texas Water Code be implemented to develop information needed to allocate adequate freshwater inflow to the estuaries.

- That efforts be continued to identify public-owned portions of stream beds.

- That efforts to inventory, map and consolidate public free school lands be continued and completed and that recreational

opportunities and public access be identified and improved on these lands.

- That efforts be initiated to explore ways and means of providing increased monitoring of the bacteriological quality of the State's recreational waterways, as an aid in notifying recreationists and planners as to the acceptability of waterways for water contact recreation.

- That research regarding the effects of noise and air pollution on recreationists be increased, with a goal to establishing state standards and guidelines regarding acceptable limits.

- That more effective means of conserving wetlands and natural areas be determined.

- That the overall comprehensive planning process be strengthened and better defined at the state and lower levels.

- That continued liason and recreational planning coordination be maintained or strengthened between the State and the Regional Councils of Government.

- That efforts be initiated to inform and educate decision-makers and the general public about estuarine and other wildlife habitat needs.

- That adequate implementation powers be provided regional 208 Area-Wide wastewater management authorities.

- That efforts to prevent or reduce water pollution from urban runoff be continued.

- That those effluent discharges be prevented that would significantly affect waterways needed to meet present and future recreation demands.

- That closer agency coordination and liason be maintained on air quality matters affecting recreation.

- That potential industrial locations be inventoried statewide and classified in terms of probable environmental impact.

- That the economic and living environments of small town-rural areas be improved to minimize the costly migration of people to large urban regions.

REGIONAL PLANNING COUNCIL RESPONSIBILITIES

Currently, there are 24 regional councils and planning commissions in Texas. In view of the size of the State of Texas, these voluntary associations of local governments continue to have great potential to aid in conserving and managing recreation resources within their jurisdictional areas.

Under current statutory authorities and interpretations, the outdoor recreation responsibilities of the councils should continue to be one of planning, plan implementation, coordinating, and monitoring outdoor recreation development, provision of technical services, and identifying regionally-related outdoor recreation problems and priorities for action.

Additional responsibilities of the councils should be to provide assistance in the development and coordination of various federal, state, and local programs of regional significance. Open space and recreation elements of comprehensive regional plans constitute a very useful mechanism to achieve a centralized regional overview and more effective management of recreation resources. As an adjunct to such plans, each council is urged to employ qualified recreation and wildlife personnel as interdisciplinary staff members to help develop and implement all elements of regional plans, provide increased capabilities for local government assistance, and to better coordinate the interaction of federal, state, local, and private sector activities.

RIVER AUTHORITY AND SPECIAL DISTRICT RESPONSIBILITIES

River Authorities and Special Districts are unique entities in state government, being agencies with limited regional responsibilities regarding the utilization of water in various portions of the State's River Basins. At the current time, some of these entities are providing recreation areas at various locations throughout the State. Although these entities have broad statutory powers for the provision of recreational opportunities, several have indicated that funds are not available to provide more recreational areas. Most of the River Authorities and Special Districts have little or no taxing powers, and revenues for their operation are often derived from the sale of bonds, water, and electric power. As a result, the ability of many of these agencies to provide funds for the provision of recreational areas is extremely limited, even for participating in state or federal cost-sharing programs.

Due to the local and regional significance of outdoor recreation resources administered by Special Districts of Texas, the primary responsibility of these governmental entities is to ensure that the maximum potential recreational use of their resources is available to the public. The full development of these resources should be accomplished by the districts themselves according to the outdoor recreation needs of the State, the region, and/or the local area. When adequate development of these resources cannot be accomplished by the districts, appropriate local governments or the state government (depending upon the significance of the area) should be solicited and encouraged to provide adequate development of the resources.

COUNTY RESPONSIBILITIES

It is evident from the critical problems isolated in this Plan that many county governments in Texas must assume a much larger role in providing outdoor recreational opportunities if the needs of Texas are to be satisfied. The following responsibilities are recommended for Texas county governments to help meet the outdoor recreation needs of the State. Most of the recommendations are adapted from "The National Policy for County Parks and Recreation" in a publication entitled **County Parks and Recreation—A Basis for Action**, published jointly by the National Association of Counties Research Foundation and National Recreation Association, Inc. (1964). Many of these recommendations were developed and agreed upon by a majority of the county governments which are memebers of the National Association of Counties.

- The special role of the county is to acquire, develop, and maintain parks and to administer public recreation programs that will serve the needs of communities broader than the local neighborhood or municipality, but less than statewide or national in scope.

- In addition, the county should plan and coordinate local neighborhood and community facilities with the cooperation of the cities, and other intracounty units, and should itself cooperate in regional, state, and federal planning and cooperative activities.

- Where there is no existing unit of local government except the county to provide needed local neighborhood or municipal facilities and programs, the county should provide such facilities and programs, utilizing county services districts, local assessments and other methods by which those benefitted will pay the cost. Coordination with local boards of education should include the park-school concept of building park sites adjacent to schools.

- Counties are urged to employ a parks and recreation director and staff qualified by education and experience to administer, implement, manage and assist in planning the park and recreation program. In addition, they should fully utilize the wide range of technical services that are available through various state and federal departments and the several national park, recreation, and conservation organizations.

- Parks and recreation should be an integral element of all county land use planning and zoning. As an aid in determining compatible land uses, zoning and/or development standards, consideration should be given to the identification and mapping of lands best suited for agricultural, industrial, commercial, residential, and other private land development. Such measures should embrace not only areas to be acquired for county park or recreation systems, but also to preserve open space, protect scenic values, establish compatible recreation uses in development-sensitive areas, and otherwise enhance recreational opportunities in private developments.

- In the adoption of basinwide watershed management and flood prevention plans, counties should make sure such plans have considered non-structural alternatives for flood control. Counties should protect existing

- park and recreation areas against both public and private encroachment, and should yield such areas for other purposes only upon the condition that areas lost are replaced by others of comparable value which serve the same population.

- Counties should cooperate with and support in every way possible the efforts of private businesses and of charitable, service and civic organizations to acquire and appropriately manage recreation and park sites which serve public needs.

- In addition, counties with a population of less than 80,000 are encouraged to seek easing of statutory restrictions imposed by Article 6079b, V.T.C.S., as amended. The law prohibits counties in this class from spending more than $15,000 annually for the operation, maintenance, and construction of county parks unless a bond issue has been approved by the citizens of the subject county.

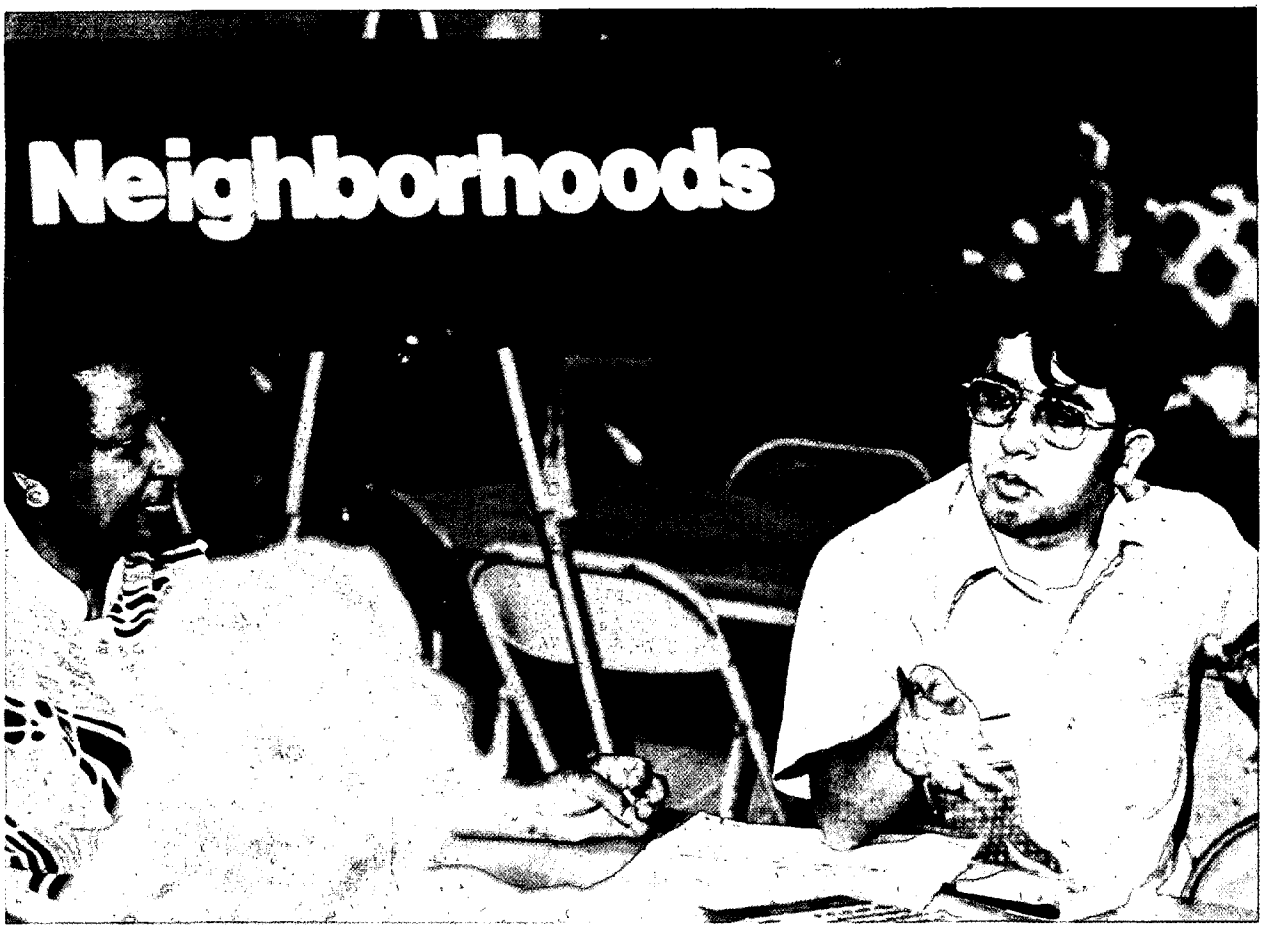
Learning About the Out-of-Doors. Recreationists of all ages should have adequate opportunities to experience and learn about the natural processes and systems that maintain and support our environment. (Photo by Texas Parks and Wildlife Department)

MUNICIPAL RESPONSIBILITIES

Municipal governments should acquire, develop, and maintain a balanced system of parks and recreation areas designed to meet the local needs of their citizens. A municipal park system usually consists of well distributed playgrounds, playfields, neighborhood parks, large recreational parks, and large and small scenic areas, as well as environmental corridors. Acreage standards for determining the amount of land and distribution of such for each type of park have long been established and tested. Standards should be adopted and applied by all urban areas in Texas, regardless of size and location, and adapted to the localized special requirements through local or regional recreation demand studies. The development of an urban area's open spaces should primarily be based upon local recreation demand investigations by local administrators. Particular attention in demand studies should be given to the possible need of facilities for participation in the non-traditional forms of urban recreation, such as horseback riding, hiking, nature study, walking for pleasure, driving for pleasure, etc.

To assure proper development of a municipality's park and recreation program, the major municipalities of Texas should employ a qualified park and recreation director and support such director with adequate staff and finances. Those municipalities of the State unable to employ professional park and recreation personnel should urge their county government to employ such personnel and make their services available to all municipalities within the county.

Municipal governments in Texas should develop long-range park and recreation plans based on broad-based citizen formulated goals and



Local Citizens Involved in the Planning Process. Broad-based citizen input in the formulation of recreational goals and objectives should guide recreation planning at the local level. (Photo by Planning Department, City of Austin)

objectives. These park and recreation plans should be coordinated and integrated with other functional plans at the municipal, county, and regional levels. Like the counties, municipalities should consider in their planning efforts such concerns as compatible recreation uses in development-sensitive areas, identification and mapping of lands best suited for recreation along with agricultural, industrial, commercial, residential, and other uses, and insure that non-structural alternatives of flood control have been considered prior to the adoption of basin-wide watershed management and flood control plans. Through the Regional Planning Commission or Council of Governments, inter-city or inter-county problems can be solved. The regional plans should likewise be coordinated with the State so that the full scope of outdoor recreation opportunity is available to the citizens of the community. Municipal governments administering water resources areas should make every effort to provide adequate access to the areas. Where the development of such a resource would obviously serve the citizens of more than one urban area, and thereby become the responsibility of several, the municipalities affected should coordinate their efforts in the development of an area or seek development of the area through cooperation with the county or other appropriate entities.

It should be the purpose of all municipal governments to ensure that

adequate open-spaces are available for the use of all its citizens, to preserve the natural beauty of these spaces, and to staunchly protect the open spaces from any public or private encroachment.

SUGGESTED MINIMUM FACILITIES FOR SMALL COMMUNITIES

Every community, regardless of size, should have certain basic park and recreation facilities to offer its residents. Needs must be recognized and deficits eliminated by planning and developing the facilities necessary to adequately serve the community's population. In Texas, small communities (those local urban areas with population of 200-2,499 inhabitants) vary in many ways. Due to the hundreds of municipalities of this size in the State, their varied resources, age composition of the citizenry, and other factors,each community must analyze its own particular situation and determine the types of recreational areas and facilities it requires.

In 1969, the Texas Outdoor Recreation Inventory of Parks, Recreation Areas, and Facilities indicated that only 122, or twelve percent, of the State's 985 small communities had some type of publicly administered park or recreation area. This indicates the degree to which the State's small communities are lacking even the most basic public outdoor recreation opportunities. All public entities with the capabilities to assist in achieving necessary improved small community opportunities should take note of those areas within their jurisdiction which have little or no facilities and assist where feasible.

As general guidance for improving small community opportunities in Texas, suggested mimimum facilities, based on analyses of statewide average outdoor recreation participation information for small communities of 2,500 or less population, indicate that a community of 2,500 inhabitants should have a minimum of 25 acres set aside as park and recreation areas, including developed and open space areas; a multi-purpose basketball-doubles tennis court, except in cases of unusually high participation in any one of these activities; a combination baseball/softball-football/soccer field, except in cases where participation would indicate more; 3 individual permanent picnic units or a group picnic shelter; approximately ¼ of an acre of land set aside for child's play activity; a minimum of 184 square yards of swimming pool area; and approximately 0.3 miles of developed combination hike, bike, walk, and nature study trail. In addition to the basic facilities, necessary support items such as fencing, portable benches, barbecue pits, trash receptacles, parking area, bathhouse for swimming pool, etc., should be provided. The interested reader should consult the Plan volume entitled **Outdoor Recreation in the Urban Areas of Texas, Part I: An Overview,** for more detail regarding suggested small community opportunities.

The facility units recommended are suggestions as to the possible types and units of facilities, and more or less units may be required for an individual community. Local demands in conjuction with the local financial situation should be carefully analyzed in each community. Economical yet durable facilities and equipment should always be utilized to maximize the use of the community's recreation dollar.

Among the factors that should be considered by small communities in planning and developing park and recreation areas are: 1) the extent of facility use which is coming from outside the community—by rural inhabitants of the area when the community serves as a focal point for a large rural area; by residents of surrounding communities; and by travellers who have reason to utilize community facilities, 2) the extent to which the local school district can provide recreational games and sports opportunities, and 3) the extent of privately owned and/or operated facilities, but open to the public such as golf courses, swimming areas, and/or camping areas, that are being provided.

PRIVATE SECTOR RESPONSIBILITIES

While considering the role of the private sector in meeting outdoor recreation needs, it must be kept in mind that the rights, liabilities, and interest of the private sector are quite apart from those of government. Most private outdoor recreation areas are established to return a profit to the owners, or are otherwise established to serve only special segments of the public, i.e., those persons belonging to certain organizations, or in certain age groups, or with certain economic abilities. Government areas, by contrast, are established to serve all segments of the population, regardless of social or economic standing and are not necessarily designed to show a profit. Thus, the need for the private sector to receive a reasonable return on its investment and to manage its lands in the best interests of the owner must be recognized.

Although additional study is being given to the functions, capabilities, and responsibilities of private outdoor recreation enterprises in Texas, the current recommended role of the private sector in meeting Texas outdoor recreation needs is as follows:

- to provide quality service establishments at or near government and private outdoor recreation areas, for the sale of sporting supplies, groceries, gasoline, food, etc.
- to provide special services for the public, such as scenic tour guide operations, and fishing guide operations.

- to provide special outdoor recreational facilities for the public, such as dude or guest ranches, public lakeside cabins, oceanside resorts, boat launching and storage facilities, youth summer camps, rental boats and horses, etc.
- to provide the general public with opportunities to visit and enjoy those unique natural features of the State under private ownership, and to develop and manage those features in such a manner that the quality and uniqueness of the features are protected.
- to provide ample public access to the State's water resources that are owned by government and surrounded by private lands, and in addition, to provide access (under agreeable or profitable conditions) to the privately-owned water resources in the State.
- to assist government in the management, development, and preservation of Texas' outdoor recreation resources; in the study of special outdoor recreation problems; and in the collection and dissemination of outdoor recreation information—all of which would benefit the outdoor recreation seeking public, as well as the private sector.
- to realize that the natural beauty of any recreational area, along with the services provided, is one of the prime attractions for recreationists and this aspect of the enterprise must be protected.
- to coordinate its major outdoor recreational developments with those of the government, so that the outdoor recreation opportunities offered by both sectors are harmonious and complementary.
- to identify and conserve the recreation resources of private lands.
- to produce sound resource management with the aid of technical services provided by state and federal governments.
- to utilize the services of qualified wildlife and recreation personnel in the development of its lands, especially if a change in the present use of the lands is contemplated.
- to coordinate any planned change of the use of its lands with appropriate local, state, and federal entities.
- to increase the adoption of policies by financial lending institutions which encourage that recreational resources and environmental matters be adequately considered and coordinated in regard to the financing of projects such as industrial and urban development.

RECOMMENDED LEGISLATION

State, regional, local, and private agencies with responsibilities and authorities for providing, managing, or regulating outdoor recreation resources in Texas derive their authorities and operations from laws and statutes enacted by the Texas Legislature. Some of the recommendations previously presented will require legislative action in order to be effectively implemented.

In order to allow improved capabilities in providing additional outdoor recreation opportunities and conserving and protecting the State's recreation resources, state and local agencies with recreation responsibilities should encourage the Texas State Legislature to consider, but not be limited to, the following recommendations.

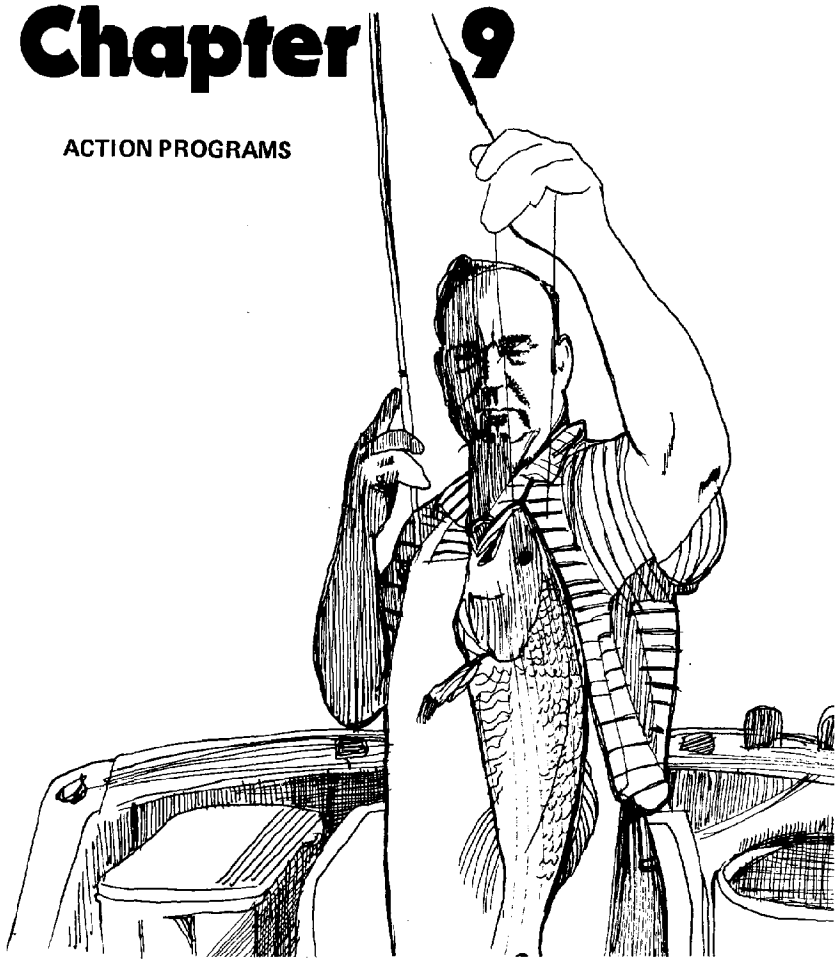
- Ease the current restrictions placed on counties by Article 6079b, V.A.C.S., as amended. The law states that counties with populations of less than 80,000 are prohibited from spending more than $15,000 per year for operation, maintenance, and construction within county parks unless a bond issue has been approved by the citizens of the subject county.
- Add increased annual revenues to the State's Boat Ramps, Buoy and Marker, and Beach Cleaning Programs. Currently, program funds are usually exhausted each year, with suitable and necessary locations not receiving assistance.
- Seek to establish a state program of financial assistance to local governments to assist them in providing additional recreational opportunities through direct actions or participation in federal grant-in-aid programs.
- Encourage or require the reclamation of surface mined lands for recreational purposes where appropriate.
- Clarify and define state and/or local entity responsibilities for enforcement of the Texas Open Beaches Act.
- Increase county authorities and/or responsibilities for the management of potential recreational resources through such methods as zoning or other appropriate measures.
- Encourage the establishment of a statewide system of wild, scenic and recreational waterways as reported in **Texas Waterways,** compiled by the Texas Parks and Wildlife Department at the direction of the Legislature.
- Seek to establish a statewide system of recreational trails as proposed in the report, **Texas Trailways,** compiled by the Texas Parks and Wildlife Department at the direction of the Legislature.
- Strengthen the coordinating authority of the Governor's Office so as to assure appropriate coordination between plans and programs at the state level.

The Texas Legislature. The source for the recreational responsibilities and authorities of state agencies, river authorities, local governments and special districts is the Texas Legislature. (Photo by House Media Service)

- Provide positive incentives, such as financial assistance, to encourage local recreation planning and to achieve a balanced allocation of land resources to recreation in rapidly developing areas.
- Encourage or require watershed and flood prevention plans to consider non-structural means of flood control in developing urban areas.
- Consider the codification of existing legislation relating to recreational use of the State's surface waters.
- Consider the designation of a state agency to inventory all public-owned lands in Texas.
- Encourage or require that surplus public-owned lands be considered for recreation use before disposal.
- Seek to establish a clearinghouse in the Governor's Office for recreation and other resource-related research and data collection programs.
- Pursue ways and means to adequately staff and fund the Texas Conservation Foundation.
- Consider the designation and funding of an appropriate agency to inventory the State's natural areas.
- Consider providing tax or other positive incentives to protect natural areas.
- Consider the funding of a study to explore and recommend means of conserving wetlands.
- Seek measure to ensure a higher priority in the allocation of freshwater to coastal estuaries.
- Provide the Historical Commission sufficient authority and funding to protect historic landmarks.
- Encourage or require the mitigation or in-kind replacement of wildlife habitat losses incurred as a result of state or local public-funded flood-control water projects.
- Consider requiring environmental impact assessments of state or local public-funded projects.
- Consider the provision of funding and staff to monitor the bacteriological quality of the State's waters for water-contact recreation.
- Encourage the control of noise sources and noise generating land uses.
- Seek to effectively prevent littering of the State's recreation resources resulting from discarded disposable containers.

Chapter 9

ACTION PROGRAMS



The foregoing sections of this document have addressed many aspects of outdoor recreation in Texas, highlighting the more significant aspects of the supply, demand, and resource requirements for additional outdoor recreation lands, facilities, and waters. Now the State must act to provide additional opportunities. However, estimated outdoor recreation requirements for the State are large and extremely diversified. As a result of these factors, the information presented below is designed to provide all entities in the public and private sectors knowledge and information related to the more significant actions the State proposes to undertake in the area of outdoor recreation from 1975 to 1980. However, new situations will present themselves, offering new opportunities for the state to take steps to implement stronger and/or new programs, all of which will be guided by information presented in various volumes of the Plan and subsequent documents. However, the Texas Parks and Wildlife Department, as the state agency with primary responsibility for outdoor recreation in Texas, will need a great deal of assistance and cooperation if significant advances are to be made.

DIRECT PROGRAM ACTIONS

The phrase "direct programs" is meant to include those actions designed to provide actual outdoor recreation opportunities. The administration of these programs is the major impact on outdoor recreation in Texas.

In order to alleviate some of the outdoor recreation requirements identified throughout the **Texas Outdoor Recreation Plan**, the State will undertake the following actions:

- Continue the planned provision of specific new opportunities for outdoor recreation in the State, as indicated in the APPENDIX.

- Seek increased annual funding levels for the State Buoy and Markers and Boat Ramp Programs. Accessibility to surface water has been pointed out as a major problem throughout the course of the Plan update. Increased levels of boating demand projected by **TORP** data will mean that boating safety and access will become more critical.

- Seek increased annual funding to allow additional local government participation in the State Beach Cleaning Program. Improved transportation routes and access to the Gulf Coast have increased already heavy outdoor recreation participation on gulf beaches and waters. Expansion of this program will allow local governments to better manage their valuable recreation resource.

- Continued provision of fish for stocking streams, lakes, or ponds, to meet increasing public demand as illustrated by estimates of participation present in the **TORP**.

- Continue to obligate State Park Bond Funds for the acquisition and development of parks in the state system. These actions will be guided by the various volumes of the Plan, as appropriate.

- Continue to utilize special funds for the acquisition and development of state parks received from a portion of the state tax on cigarettes. Utilization of these funds will be guided by estimates and priorities presented in this

volume. User preferences and participation information as presented in the Plan volume entitled **Outdoor Recreation Activities** will also be used as a guide in the development of state parks areas.

- Continued trapping and transplanting of surplus wildlife species into various areas of the state, as feasible, to help meet estimated hunting demand as illustrated in the **TORP**.

- Examine the feasibility of providing the necessary funding to the Texas Conservation Foundation to enable it to function as a more effective organization.

- Encourage the establishment of a statewide system of wild, scenic, and recreational waterways as reported in **Texas Waterways** compiled by the Texas Parks and Wildlife Department at the direction of the Legislature.

- Continue the planned acquisition and development of 13 historic sites and structures throughout the State at an estimated cost of $1,700,000.

- Continue efforts to provide improved fishing opportunities in the coastal areas through such measures as artificial reef construction to improve fish habitats.

- Continue to enforce and regulate existing laws and regulations pertaining to water and air quality in the coastal regions of Texas.

- Take action to establish a statewide system of recreational trails as proposed in the report, **Texas Trailways**, compiled by the Texas Parks and Wildlife Department at the direction of the legislature.

RESOURCE ALLOCATION AND MANAGEMENT ACTIONS

The State will undertake various actions related to the allocation and management of recreation resources. Initially, these actions will consist of the following:

- Continued removal of rough fish from the public waters of Texas when it is determined that such species exist in numbers detrimental to the propagation and preservation of game fish.

- Continued efforts for eradication of noxious vegetation from the waters of the State.

- Encourage the employment and utilization of qualified wildlife and recreational personnel in regional and local government structures to insure that recreation resources are adequately considered in the planning process.

- Increase efforts to encourage the utilization, for recreational purposes, of such resources as flood-prone areas, waterways, watersheds, and other areas of quality recreational potential.

- Determine the feasibility of establishing multiple-use resource management policies for state-owned lands.

- Where feasible, encourage proper placement of air and water pollution sources to avoid locations upstream, upwind, or adjacent to existing recreation areas and known state significant natural areas.

TECHNICAL ASSISTANCE PROGRAM ACTIONS

Outdoor recreation technical assistance programs offered to the public and private sector through various state agency programs and operations are of high value in speeding the provision of high quality, well-designed outdoor recreation areas. Estimates of resource requirements and requests for assistance indicate that the State should continue to provide these services and selected state agencies will:

- Continue to provide technical assistance to various governments and the private sector.

- Compile, maintain, and publish a catalog of state outdoor recreation technical assistance programs and services as an aid to all levels of government and the private sector.

- Determine the feasibility of establishing a program to evaluate the comprehensiveness and effectiveness of outdoor recreation technical services programs throughout the State.

- Encourage all governments and private entities to publicize those programs of outdoor recreation technical assistance under their respective jurisdictions to insure public, private, and local government awareness of such programs.

- Encourage all entities in the private sector to seek out technical services offered by various agencies in the development of individual recreational enterprises, especially in the urban areas.

- Provide technical assistance to federal, state, regional, and local governmental agencies, and private entities in their efforts to develop the recreational potential of public waterways and establish elements of a statewide trail system.

- Make Texas Parks and Wildlife Department staff available to work with recreation planning entities and recreation research institutions to further refine the standards and modeling efforts developed for the **TORP**.

PLANNING PROGRAM ACTIONS

Planning for outdoor recreation in Texas must continue to be heavily emphasized. Over 1.7 million acres of land in Texas is reported as being administered by public agencies. The population of the State is highly urbanized, mobile, and expanding, and the natural resources and climate encourage high rates of participation in a wide variety of outdoor recreation activities. Both actual and estimated trends of participation indicate that pressures for future outdoor recreation opportunities will increase as dramatically in the next ten to fifteen years as in the past decade. Outdoor recreation related retail and wholesale sales, outdoor recreation industries, and participation in various areas of the State have increased significantly. In order to continue support of statewide outdoor recreation planning and thereby provide adequate opportunities for future Texans and their visitors, the State will:

- Continue to provide and maintain the **Texas Outdoor Recreation Plan**, directed to the needs of the people and giving special attention to the demand, supply, needs, policies, responsibilities, recommendations, priorities, and implementation of the Plan. Table 9-1 outlines basic Plan update features estimated to be necessary at this time.

- Continue specialized investigations to isolate critical wildlife, fish, and other recreation resource management problems and needs. These actions would include but not be limited to:

  - Encouragement of local government and private entity actions to identify and eliminate the problems.

  - Continued efforts to identify and map existing wildlife habitats and vegetation formations by dominant species.

  - Continued participation in current federal efforts directed to the identification and mapping of flood-prone areas and dissemination of information pertaining thereto.

  - Continued improvement and enforcement of wildlife and fishery management laws, regulations, and practices, to include the application and development of sound wildlife and fisheries management activities, hunter and water safety programs, and public information dissemination efforts.

- Strengthen the existing data base in relation to the state's significant natural areas.

- Seek to classify and map, by type, all designated public and private sector recreation areas.

- Encourage the inventory and evaluation of the recreation potential of all public free school lands and encourage all levels of governments to initiate similar actions on public lands.

- Encourage local governments to identify known areas of current outdoor recreation activity, such as fishing areas, powered and non-powered boating areas, hunting areas, scenic areas, etc.,

TABLE 9.1 EXPECTED TIME FRAME FOR UPDATING THE TEXAS OUTDOOR RECREATION PLAN DATA BASE

Time Periods	Work Elements
Fall 1975 to Summer 1977	Establish monitoring systems
Winter 1976	Initiate design of supply (inventory) update
Spring 1976 to Summer 1977	Update supply
Summer 1976	Initiate update of the **Texas Outdoor Recreation Plan**
Fall 1976 to Summer 1977	Update appropriate model parameters
Fall 1976 to Spring 1978	Develop new demand projections, resource requirements, and priorities
Spring 1980	Complete update of the **Texas Outdoor Recreation Plan**

for use in local planning and policies development.

- Seek the timely completion of efforts to identify, map, and evaluate soils with priority attention directed to the larger growing urban areas of the State.

- Encourage the development of information pertaining to projected urban-industrial growth as an aid in resolving potential recreation resource-development conflicts.

- Continue further refinement of state policies, recommendations, and mechanisms for insuring proper emphasis of outdoor recreation related planning factors in various programs throughout the State. Specifically to:

  - Encourage coordinated outdoor recreation, wildlife, and open space planning efforts by all federal, state, regional, local, and private entities via:

    - Conferences and meetings with federal, state, regional, local, and private entities.

    - Participation of state-level staff in technical and advisory capacities for various federal, state, regional, local, and private sector planning efforts.

    - Efforts seeking the establishment of state-administered funds as incentive for emphasis of regional and local government outdoor recreation planning.

  - Continue and expand the operation of the recently formed Texas Outdoor Recreation Task Force as a vehicle for federal, state, and regional outdoor recreation planning coordination and interplay.

- Provide continued planning activity further clarifying the characterisitics of water-oriented outdoor recreation in Texas.

- Continue planning for the provision of adequate air travel access to rural recreational areas in Texas.

- Continue activity regarding the preservation, restoration, and management of historical areas in the State.

- Continue planning efforts to further refine and guide the development, management, and operations of the tourism industry in Texas.

ACTIONS TO INFLUENCE RESEARCH, EDUCATION, AND INFORMATION PROGRAMS

Properly directed research, education, and information programs can greatly aid the future provision and utilization of outdoor recreation opportunities in Texas. Currently, there is little activity regarding centralized state-level guidance in this area. Initially, the State will examine the feasibility of preparing an updated compilation of programs for state and federally funded outdoor recreation related educational, research, and information programs. In addition, the State will:

- Encourage all levels of government and the private sector to compile similar listings for their respective areas of responsibility.

- Encourage all levels of government and the private sector to coordinate programs of research and education with the Bureau of Outdoor Recreation, the Governor's Office, Division of Planning Coordination, and the Texas Parks and Wildlife Department.

- Seek to publish and distribute a directory of recreation areas in Texas.

- Develop, publish, and distribute a catalog of available information from the State's outdoor recreation data base. Included will be explanations of the State's capability for providing special request analysis of the data to various users.

- Encourage all planning entities and recreation research institutions to review and adopt the facility standards developed for use in the **TORP**.

- Seek establishment of systems for monitoring outdoor recreation demand, on a relatively continuous basis, among various recreation resource managing entities.

- Seek increased activity relative to the monitoring and posting of public waters found unfit for water contact outdoor recreation activity.

- Conduct continued research regarding freshwater inflow requirements of the coastal estuaries.

- Continue efforts to clarify the rights and responsibilities of individual landowners and the public with regard to the recreational utilization of the public waters of the State.

- Support research efforts directed to identifying the effects of noise on recreational activity.

- Support research directed to the definition of levels of critical air pollution components that can be tolerated in recreation areas.

ACTIONS TO INFLUENCE GOVERNMENTAL ACTIONS

Intergovernmental coordination of various programs and efforts related to outdoor recreation is extremely complex in Texas due to the multiplicity of programs, jurisdictions, funding sources, and responsibilities inherent in government structure and venue. Adding to these complexities, outdoor recreation is a very diversified field, impacting and being impacted upon by many other fields of endeavor. This requires considerable coordination in the outdoor recreation field now and is likely to require even more in the future. To aid in providing greater coordination of outdoor recreation programs, the State will undertake the following actions:

- Increase the general knowledge and recognition of the **Texas Outdoor Recreation Plan** as the State's official guide for the provision of outdoor recreation opportunities.

- Encourage all entities in the public and private sectors to adopt and utilize the recreation facility standards presented in the **TORP** or, if feasible, locally determined standards using the same methodology.

- Increase encouragement, advice, and active participation in efforts of coordination of the outdoor recreation programs, projects, and plans of agencies, interests, and other entities throughout the State.

- Increase the communication of outdoor recreation policies, recommendations, and needs illustrated in the State Plan via official channels of review and comment, informal comment, meetings, and other methods.

- Continuously evaluate existing mechanisms of coordination for opportunities to increase the efficiency of coordination and the general level of coordination in outdoor recreation in Texas

FINANCIAL ASSISTANCE PROGRAM ACTIONS

The administration of federal and state financial assistance to local governments and the private sector for the provision of additional outdoor recreation opportunities is one of the cornerstones of outdoor recreation activity in Texas today. In light of the estimates of the additional opportunities required in order to meet the growing demand in the State, financial assistance programs will become more important in the future. Estimates of acquisition and development plans from various government entities throughout Texas indicate that not nearly enough opportunities will be provided to meet these growing demands without additional incentives and assistance. In many cases, local and regional government officials cite "lack of funds" as a major problem facing them with respect to providing adequate recreation opportunities. Selected state agencies will support actions that:

- Increase knowledge, awareness, and utilization of federal, state, and private entity programs of outdoor recreation assistance by local government and the private sector.

- Encourage quality private sector outdoor recreation enterprise investment.

- Seek an expansion of state funded programs of financial or technical assistance to local governments.

- Alter the allocation of annual Land and Water Conservation Fund appropriations afforded the State's local political subdivisions from 50% to 70% at this time, subject to an annual reveiw of supply and demand relationships.

- Utilize that portion of Land and Water Conservation Fund monies previously set aside for development maintenance of the State Plan for the support of state and local political subdivision acquisition and development projects.

- Encourage accelerated local government recreational funding assistance activity by federal agencies such as that provided by U.S. Department of Agriculture, Soil Conservation Service Resource Conservation and Development and Small Watershed programs, Economic Development Administration programs, U.S. Army Corps of Engineers programs, U.S. Fish and Wildlife Service programs, Federal Highway Administration programs, National Park Service Historic Sites Preservation programs, Rural Development Act programs, and Community Housing and Development Act of 1974 programs.

OPERATION OF THE LAND AND WATER CONSERVATION FUND PROGRAM

In September 1964, the Congress of the United States approved the Land and Water Conservation Fund Act of 1965, Public Law 88-578 (78 Stat. 897). The act established a Land and Water Conservation Fund from which Congress may currently appropriate $300 million annually to assist the

National Park Service, U.S. Forest Service, U.S. Fish and Wildlife Service, and the states in the acquisition and development of public outdoor recreation areas and facilities. States may allocate annual apportionments they receive under the Program to their local political subdivisions and other non-federal public agencies. The operation of the Fund became effective January 1, 1965. The Bureau of Outdoor Recreation, U.S. Department of the Interior, was designated to administer the provisions of the Fund which deal with state and local activity.

Revenue for the Land and Water Conservation Fund is currently derived from (1) revenues appropriated from federal royalities on off shore oil and gas leases, (2) net proceeds from sales of surplus federal real property, and (3) existing federal tax on motorboat fuels. Currently, 60% of annual appropriations from the Fund amount specified by Congress are available to the states as grants-in-aid, subject to amendment by Congress. That portion of each annual appropriation available to states is allocated to the various states based on formulas which consider a state's population and need. The Secretary of the Interior determines need according to terms set forth in the Federal Act. All grants-in-aid made in a particular state are then derived from the state's apportioned share of the Fund. Grants-in-aid projects in a state, which can be state of local political subdivision sponsored, may not exceed 50% of the cost of planning, acquisition, or development of approved projects.

A comprehensive statewide outdoor recreation plan, prepared by the state and found adequate by the Director of the Bureau of Ootdoor Recreation for purposes of the Federal Act, is prerequisite to a state's eligibility to receive benefits from the Fund. Thus, one purpose of the **Texas Outdoor Recreation Plan** is to qualify Texas for assistance under the Land and Water Conservation Fund program. All outdoor recreation projects financed by the Fund must be in accord with the **TORP**, and meet all other requirements of the program and act.

In April 1965, the 59th Texas Legislature, sitting in Regular Session, passed Senate Bill 165 enabling the State of Texas to participate in the Federal Land and Water Conservation Fund program. The statute designated the Texas Parks and Wildlife Department as the state agency to cooperate with the Federal Government in the administration of the Program at the state level. Other provisions of the statute can be found at the beginning of this volume under "Legal Authority." The discussions below outline certain basic procedures and information the Texas Parks and Wildlife Department will employ in the administration of the Land and Water Conservation Fund program in Texas. A state manual explaining more detailed procedures for obtaining assistance under the Program has been compiled by the Texas Parks and Wildlife Department and is made available to all interested persons.

GENERAL ADMINISTRATION OF THE LAND AND WATER CONSERVATION FUND

In considering project applications from local political subdivisions for the acquisition and development of outdoor recreation areas and facilities in Texas, the Texas Parks and Wildlife Department will adhere to the following general procedures in meeting the purposes of the Land and Water Conservation Fund Act of 1965 (P.L. 88-578, as amended):

- The Outdoor Recreation Grants-in-Aid Manual of the U.S. Department of Interior, Bureau of Outdoor Recreation, March 1974 edition, as revised, will govern general methods of assistance and operation of the Land and Water Conservation Fund program.

- Seventy percent of each year's annual apportionment to the State should be utilized for local political subdivision assistance based upon current supply and demand relationships. Thirty percent should be utilized for State Park System assistance. The percent of allocation of funds may be revised annually to reflect more current situations.

- Recommendations for the award of grants-in-aid assistance to local political subdivisions should be forwarded to the Bureau of Outdoor Recreation for consideration twice during the year.

- Disbursement of funds for local political subdivision projects should remain flexible. Past experience in administration of the Program indicates that not all projects will be fundable, due to a lack of funds. Also current Bureau of Outdoor Recreation guidelines regarding the utilization of Contingency Funds has recently changed. In the past, Contingency Funds could have been awarded for projects considered to be emergency in nature. Now, a state's annual allocation must be totally obligated before Contingency Funds may be granted.

- It is the interest of the State to utilize every available dollar the Federal Government will approve, as in the past. Any state is entitled to receive up to a maximum of 7% of the total national annual appropriation, although the apportionment procedure specified by the Bureau of Outdoor Recreation usually allows Texas approximately 3% of the national total. State experience with past projects indicates that nearly all projects submitted have some land acquisition and/or facilities development proposals which are worthy of funding, but not emergency in nature. Contingency Funds were requested only for such projects, and projects with less urgency were placed in lower priorities for allocation of the state's annual program. Now, however, with changed Contingency Fund procedures, the State will, of necessity, submit all projects it believes supportable, in order to make use of the Contingency Funds. As a result, funding priorities will be at the discretion of the Federal Government after the state's annual allocation has been exhausted.

DETERMINATION OF LAND AND WATER CONSERVATION FUND PROJECT RECOMMENDATIONS

In awarding 50% matching funds as grants-in-aid to political subdivision outdoor recreation acquisition and development projects in Texas, each project the Texas Parks and Wildlife Department considers for possible assistance will be evaluated in serveral ways. First, an analysis of local needs for the project will be conducted, based on estimated project service area analyses of supply-demand-needs calculations for the project acquisition and/or facilities proposals. Basic data for these analyses will be obtained for the appropriate volume of the **Texas Outdoor Recreation Plan**, supplemented by additional departmental, project applicant, area on-site inspection, and other information sources as may be available. Based on this analysis, recommendations for funding for all or parts of an individual project will be developed. Second, each project, with its attendant recommendations, will then be evaulated as to its potential for meeting overall state requirements. This evaluation will allow projects in a semiannual group to be placed in a ranking which will indicate each project's value in meeting overall state requirements. After the ranking has been completed, funding of projects will proceed in such a manner as to exhaust available funds. It is expected that not all projects in the ranking will receive fund support, and these projects, at the discretion of project sponsors, may be held for priority ranking evaluation and comparison with the subsequent group of projects submitted for the next semiannual review.

DETERMINATION OF LAND AND WATER CONSERVATION FUND PROJECT PRIORITIES

In determining individual Land and Water Conservation Fund project priority rankings, consideration will be given to the overall needs of the State of Texas as is illustrated by the project's individual merits and the purposes of the Land and Water Conservation Fund Act of 1965 (78 Stat. 897) as amended. In determining the rankings of individual projects in a semiannual review, the following information as it relates to an individual project will be considered in determining the project's priority:

- Higher priority will be given communities with stable or increasing populations (1960-70 census) which have little or no existing public urban outdoor recreation areas and facilities.

- In general, projects which provide opportunities for activities where there are none in rapidly urbanizing municipalities and counties will be given high priority.

- Higher priority will be given projects which will provide basic outdoor recreation opportunities along quality Gulf Coast, reservoir, estuary, river, stream, and flood plain frontages, in that order, with higher priority given those frontage projects which improve the spatial distribution of recreation areas to the population in a given geographic locale and the State as a whole.

- Higher priority will be given projects which will provide new and needed outdoor recreation opportunities in specific locales of those urban, Gulf Coast, and rural areas of the state which have been identified as being in Class I and II Geographic Lands, Waters, and Facilities Categories indicated in Figures 7-2 through 7-6 of the RECOMMENDATIONS AND PRIORITIES Section of this volume of the State Plan.

- Higher priority will be given those projects which are designed to provide more balanced mixes of outdoor recreation facilities in a given project locale, urban area, or rural area, rather than those which would, although necessary, provide additional facilities for one particular activity for which there are already existing recreational facilities.

- Higher priority will be given those projects which illustrate that the project sponsor(s) has given consideration to, and placed emphasis on, the idea that the completed project would provide:

  - Additional outdoor recreation opportunities for active rather than passive (to include spectator) activities.

  - Better basic service to the aged and disadvantaged.

  - Improved service to minority and/or low income geographic areas.

  - Recreational rather than engineering type facilities.

  - Better spatial distribution of existing areas and facilities within the geographic area of jurisdiction.

- Higher priority will be placed on projects which will allow the Department to allocate "seed" funds into the acquisition of those 30 urban and 70 rural significant natural areas identified in the Plan volumes entitled "Outdoor Recreation in the Urban Areas of Texas," "Outdoor Recreation in the Rural Areas of Texas," and "Outdoor Recreation on the Texas Gulf Coast," as a means of encouraging public management of these areas.

Appendix

STATE ACQUISITION AND DEVELOPMENT PROGRAM

PLANNED TO BE ACCOMPLISHED BY 1976

The information presented on the following pages lists the Texas State Acquisition and Development Program planned to be accomplished by 1976. Program actions listed are dependent on appropriate funding levels from local, state and federal sources. Program actions beyond 1976 have not been finalized, pending the results of various studies, legislative action, and budgeting processes which influence state agency operations and activities.

STATE ACQUISITION AND DEVELOPMENT PROGRAM
PLANNED TO BE ACCOMPLISHED BY 1976[1]

Action	Acquisition (A) or Development (D)	Location	Planning Region	Estimated Cost*
Provide 9.6 acres camping area (48 sites), 3.4 acres picnic area (17 tables), 1 acre playground, 1 mile nature trail, and support facilities.	D	Abilene State Recreation Park	Region 7	$ 250,000
Provide 8 acres of camping area (40 sites)	D	Balmorhea State Recreation Park	Region 18	$ 710,000
Install sprinkler system	D	Bastrop State Scenic Park	Region 31	$ 45,000
Acquire 590 acres, install 25 acres camping area (30 tables), 1 boat ramp, 1 acre playground, 3 miles of nature walking trail, and support facilities.	A & D	Bryan Beach State Park Site	Region 28	$ 2,009,480
Construct 9 acres camping area (45 sites), 8 acres picnic area (40 tables), 1,600 yards designated freshwater swimming area, 1 boat ramp, 1 acre playground, 2.3 miles of nature trail, 1 amphitheater (50 seats), 1 headquarters/visitor center.	D	Copper Breaks State Recreation Park	Region 5	$ 1,453,991
Provide 26.4 acres camping area (includes primitive) (132 sites), 19.2 acres picnic area (96 tables), 24,445 square yards designated freshwater swimming area, 124 yards fishing piers, 2 boat ramps, 4.5 acres playground, 5 miles of nature trails, and support facilities.	D	Fairfield Lake State Recreation Park	Region 20	$ 2,500,000
Provide 91 acres camping area (180 sites), playground area, 12 acres picnic area (60 tables), 80 yards of fishing piers, 1 boat ramp, 24 slips and stalls, 2 miles hiking trail, 1 headquarters building, 1 interpretive center, 1 concession area, and support facilities.	D	Galveston Island State Recreation Park	Region 28	$ 3,600,000
Develop .5 miles of hiking trail, 1 group shelter, 1 interpretive center, and support facilities.	D	Goliad State Historic Park	Region 24	$ 444,000
Provide 6.6 acres camping area (33 sites), 4.0 acres picnic area (20 tables), .5 acres of playground, .15 mile of walking trail, and support facilities.	D	Goose Island State Recreation Park	Region 33	$ 656,000
Develop 15.6 acres picnic area (72 tables), 5 miles of multi-use trails, 1 interpretive shelter, and support facilities.	D	Hueco Tanks State Historic Park	Region 29	$ 385,000
Install 9.6 acres camping area (48 sites), 4 acres of picnic area (20 tables), 300 yards of fishing pier, 27 slips and stalls, 1 acre playground, 1 headquarters building, 1 service building, and 1 concession area.	D	Lake Arrowhead State Recreation Park	Region 5	$ 733,000

Action	Acquisition (A) or Development (D)	Location	Planning Region	Estimated Cost*
Provide 50 acres camping area (75 sites), 5 acres picnic area (10 tables), 367 yards of fishing piers, .5 acres playground, 2 miles of motorized vehicle riding trail, 1 concession area, 20 screened shelters, and support facilities.	D	Lake Colorado City State Recreation Park	Region 7	$ 960,453
Develop 32 acres camping area (160 campsites), 13 acres picnic area (65 tables), 1 swimming pool, 2 boat ramps, 1.25 acres playground, 5 miles of horseback riding trail, 3 miles of hiking trail, 1 concession building, 1 service building, 1 headquarters building, and support facilities.	D	Lake Livingston State Recreation Park	Region 22	$ 3,950,000
Add 30.1 acres camping area (143 sites), 15.8 acres picnic area (79 tables), 1 boat ramp, 8 miles of hiking trail, 2 headquarters buildings, 2 service buildings, 4 park residences, 2 fish cleaning shelters, and support facilities.	D	Lake Somerville State Recreation Park	Region 21	$ 2,688,000
Provide 2 acres picnic area (15 tables), 2 acres of playground, swimming pool headquarters/pro shop, maintenance building, sewage treatment plant, parking areas and road, and support facilities.	D	Lockhart State Recreation Park	Region 31	$ 275,000
Develop 2 tennis courts, 1 baseball field, 1 group picnic area with shelter, interpretative trail units, sewage treatment plant, parking area, and necessary support facilities.	D	Lyndon B. Johnson State Historic Park	Region 37	$ 1,000,000
Develop 30 acres of camping area (150 sites), 25 acres picnic area (250 tables), .5 acres of playground, 3 trails units, and support facilities.	D	Sea Rim State Scenic Park	Region 27	$ 2,500,000
Develop 17 acres camping area (85 sites, 30 acres picnic area (150 tables), 3.5 acres of playground, 2 miles of nature trail, 3 miles of hiking trail, 1 service building, 1 headquarters building, 1 interpretive center, and support facilities.	D	McKinney Falls State Recreation Park	Region 23	$ 2,200,000
Develop additional 1.2 acres of camping area (6 sites).	D	Meridian State Recreation Park	Region 20	$ 134,000
Develop 50 acres of camping area (240 sites), 4 acres of picnic area (100 tables), 4 boat ramps, 4 lanes, and necessary support facilities.	D	Mustang Island State Recreation Park	Region 33	$ 1,500,000

Action	Acquisition (A) or Development (D)	Location	Planning Region	Estimated Cost*
Provide additional 8.2 acres of camping area, 4.9 acres picnic area, 1 boat ramp, 2 acres of playground, 5 acres of horseback riding area, .7 acres of hiking area, 10 lodge and/or cabin rooms, 1 visitor service center, park residences, 1 maintanance complex, headquarters building, and support facilities.	D	Possum Kingdom State Recreation Park	Region 9	$ 1,300,000
Acquire 5,000 acres and develop the area with approximately 1,000 acres camping (300-500 sites), 500 acres of picnic area (100 tables/20 group picnic), 5 trails units (1.15 miles of horseback trail, 1.15 miles of bicycle trail, 11.25 miles of nature trail, 11.25 miles of hiking trail, 11.25 miles of backpacking trail), self guiding trails for the disadvantaged, and necessary support areas and facilities.	A & D	Somerville Trailway (Somerville State Recreation Park)	Region 21	$ 1,000,000
Provide camping area (38 sites), 20 picnic tables, 1 multi-use court, and necessary support facilities.	D	Stephen F. Austin State Historic Park	Region 24	$ 118,000
Develop 50 acres of camping area (220 sites), 10 acres of picnic area (80 tables), 10,000 square yards of designated swimming area, 1 boat ramp, 1 acre of playground and support facilities.	D	Trinity River Authority Staley Park	Region 22	$ 600,000
Develop 50 acres of camping area (130 sites), 5 acres of picnic area (40 tables), 10,000 square yards of designated swimming area, 1 boat ramp, 1 acre of playground, and support facilities.	D	Trinity River Authority White Rock Park	Region 22	$ 400,000
Develop 10 acres of camping area (30 sites), 1 acre of picnic area (10 tables), and support facilities.	D	Trinity River Authority Blanchard Park	Region 22	$ 75,000
Develop 40 acres of camping area (50 sites), and 200 acres of picnic area (100 tables).	D	San Antonio River Authority Calaveras Lake Park	Region 16	$ 150,000
Develop 23 new campsites, 1 mile of nature trail, and support facilities, Renovate 9 existing campsites.	D	Lower Colorado River Authority Big Sandy Creek Park	Region 23	$ 89,941
Acquire and initiate development of 7 proposed state park areas.	A & D	Central, eastern, and panhandle areas of the State.	- - -	$ 9,865,874
Acquire 13 historic sites and structures	A	Throughout the State	- - -	$ 1,700,000
			TOTAL	$43,292,739

*Estimates of cost are based on existing price and rate structures and may be altered due to the availability of materials, price changes, and other factors. In addition, the operation and administration of state level government dictates and is dependent upon state biennial budgeting processes.

[1]Only those actions that are directly related to known sites are listed in this program. For brevity, additional planned state acquisition and development actions have been listed under the Direct Programs category of the State Actions Portion of this document.

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