OUTDOOR RECREATION...

Potential in East Texas
Summary and Implications

Outdoor recreation is big business in Texas and there are strong indications that it will become much larger in the future as recreational resources are developed, incomes rise and population continues to increase.

In 1960, Texans spent $383 million on hunting and fishing; this is more than double the amount spent on the same activities in 1955. Participation in these activities increased 50 percent or 800,000 in the 5-year period. Approximately 2.4 million, or 1 out of every 3 Texans 12 years old and over, hunted and fished in 1960. Population projections for the State show a population increase of 2,132,000 for the period 1960-70. These upward trends in expenditures, participation and population should continue well
into the future, and demand for all types of outdoor recreation should be up considerably from the 1960 level.

The 12-county study area designated East Texas Area XIII is strategically located for recreational use. It is within a 200-mile radius of nine Standard Metropolitan Statistical Areas in the State which account for more than 40 percent of the population of Texas and is less than 100 miles from the 1.5 million people living in nearby metropolitan areas. These population centers are areas where the average median family income per year was $5,225 in 1960, or $341 above the average for the State. In 1960 there were approximately 375,000 hunters and fishermen living less than 100 miles from Economic Area XIII. There should be sufficient population in nearby areas to support intensive development of outdoor recreation facilities in Economic Area XIII.

The resources of Economic Area XIII appear to be extremely well adapted for outdoor recreational use. Three-fourths of the area is forested and there are sufficient water supplies and lake sites to provide for a wide array of water-based recreational activities. There are many species of fish and game available to sportsmen, and with proper management the supply can be increased considerably.

One apparent disadvantage to the area is the relatively high combined temperature and humidity during the summer vacation months. This is primarily a disadvantage when considering vacation tourists and should not be a very important detraction for weekend users. This disadvantage is offset to a large degree by the pleasant spring and fall seasons and a mild winter.

It is difficult to determine what effect public developments in the area will have upon the demand for privately supplied recreation. In some types of recreation such as boating and water skiing, public developments will probably be utilized extensively. However, when multiple-activity enterprises are developed and managed carefully to suit consumer preferences and provide individual service, then these developments should compete favorably with public facilities.

The supply of farm-produced recreation in relation to the potential is very limited in this East Texas area encompassing more than 9,900 square miles of land and 20,600 acres of water. In 1961 farm producers supplied hunting, fishing, camping, swimming, boating and picnicking facilities to more than 10,000 users, with fishing accounting for nearly 90 percent of the use. However, less than $100,000 was invested in facilities and approximately $175,000 in lakes and ponds. Most of the operations supplied only a bare minimum in facilities with a corresponding low return on investment. Returns above specified costs ranged from no return to more than $7,000 per year.

Several factors should be considered by potential producers of outdoor recreation. Some of the more important considerations are the human factors involving management and enterprise selection, farm resources, liability risks, capital restrictions, location, demand and personal and community attitudes toward recreation.

Multiple-activity recreational enterprises should be especially well-suited for this area of East Texas. Small fishing lakes provide the base around which such activities as camping, fishing, picnicking, boating and swimming can be built. Fresh water fishing is very popular as indicated by 32 operators reporting that nearly 10,000 sportsmen fished in their lakes in 1961. Commercialized hunting, especially small game hunting, is now developing in the area and should be increasingly important in the future. This area should become a major supplier of outdoor recreation in Texas.
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Outdoor Recreation...

Potential in East Texas

Ivan W. Schmedemann, A. B. Wooten and W. D. Franklin*

Outdoor recreation is big business in Texas as well as in the nation and indications are that it will become much larger in the future. In Texas approximately 2.4 million, or one out of every three Texans 12 years old and over, engaged in some sport fishing and hunting in 1960. This is an increase of 800,000 participants in 5 years. Texas sportsmen spent $383 million on hunting and fishing in 1960, more than double the $165 million spent on the same activities in 1955 (1).

More specifically, answers to the following questions were sought:

1. What trends exist in Texas which give an indication of present and future demand for outdoor recreation?

2. Is there sufficient potential demand to justify the allocation of some resources into recreational uses in Economic Area XIII? (2) are suitable for developing profitable on-farm outdoor recreational enterprises.

This area is of minor importance from the standpoint of agricultural production. Lumber and oil production and related activities have provided the main sources of income to the people in the area in the past. Agriculture mainly has served to hold a supply of labor in the area for these activities. With the diminishing economic importance of lumber and oil in recent years, new resource uses are needed to provide additional sources of income. It is hypothesized that many landowners in the area have land and water resources that could be developed into profitable recreational uses, and that sufficient demand exists to utilize large quantities of recreational facilities.

The purpose of this study was to determine if the resources of East Texas Economic Area

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3. What resources does Economic Area XIII have that are suited for recreational use?

4. What types of private recreational facilities have been developed and what have been the returns?

5. What factors should be considered by potential recreation producers?

6. What types of recreational enterprises are suited for the area?

7. What sources of credit and technical assistance are available to landowners interested in recreation as an enterprise?

Recreation Trends

Population

One-third of all Texans 12 years old and older did some fishing and hunting in 1960. The number of these outdoor sportsmen has increased by more than 800,000 from the 1955 figure of 1,600,000. This represents a 50 percent increase in 5 years. During the period 1950-60, the number of Texans 12 years old and older increased nearly 1,152,000. Thus, part of the increased demand can be attributed to population growth; however, a large percentage of the increase can be classified as new participants in these sports. The projected population of Texas in April 1970 is estimated at 11,712,000. This represents an increase in population of 2,132,000 between 1960 and 1970. If the 1955-60 trend in hunting and fishing continues, the demand will be up considerably from the 1960 level.

Female participation in both sports in terms of percentages has increased more rapidly than male participation, Table 1. The female population of any group was in the 25-44-year-old class. Population and is expected to continue to do so in the future, with a projected sex ratio of 96.7 males per 100 females in 1970 as compared to 98.1 males per 100 females in 1960. However, in total numbers, more than twice as many males as females hunted and fished in Texas in 1960.

The lowest percentage increase in participation of any group was in the 25-44-year-old class. However, they constituted the largest group, accounting for more than one-third of all fishermen and hunters in 1960. For some reason(s), the increase in participation of this group has slowed somewhat in relation to other age groups. The cause is perhaps related to income, leisure time and prevailing attitudes. Another factor is that this group is undoubtedly bearing the major portion of the financial burden of those participants in the 12-17-year-old class. However, in looking at the percentage increase of 85 percent in the two preceding age groups it is reasonable to expect that this increase will be carried forward into the 25-44-year-old group and that this group will show a considerable increase in future years.

Activity in the 45-year and over age class has increased more than 70 percent during the 5-year period. This amounts to a significant increase in real numbers since this large group accounted for one-third of all hunters and fishermen in 1960; however, when the age group 45 and over is broken into two groups: 45 through 64 and 65 and over, the percentage of participants within the latter group was 13 percent lower than the percentage of participants in the 45-64 age group in 1960. This reduction can be expected because of the rather strenuous nature of these activities, but increases can be expected in total numbers as this group becomes a larger part of the total population.

In looking at the population patterns set forth, and the increase in participation in hunting and fishing, it is reasonable to expect a considerable increase in all outdoor recreational activities. The percentage of increases in participation was especially high in the lower age groups and it seems logical to expect that these increases will be carried forward into the older age classes in future years, especially with anticipated increases in income, leisure time and improved transportation facilities.

Table 1. Participation of Population, 12 Years Old and Over, in Hunting and Fishing, Texas, 1955 and 1960

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>1955</th>
<th>1960</th>
<th>Change 1955-60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hunters and fishermen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1,625</td>
<td>2,426</td>
<td>+49.3</td>
</tr>
<tr>
<td>Sex (18 years and over)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>981</td>
<td>1,320</td>
<td>+36.3</td>
</tr>
<tr>
<td>Female</td>
<td>429</td>
<td>708</td>
<td>+65.7</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-17 years</td>
<td>215</td>
<td>398</td>
<td>+85.1</td>
</tr>
<tr>
<td>18-24 years</td>
<td>171</td>
<td>319</td>
<td>+86.0</td>
</tr>
<tr>
<td>25-44 years</td>
<td>777</td>
<td>915</td>
<td>+77.7</td>
</tr>
<tr>
<td>45 years and over</td>
<td>462</td>
<td>795</td>
<td>+72.1</td>
</tr>
<tr>
<td>Fishermen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1,418</td>
<td>2,185</td>
<td>+54.1</td>
</tr>
<tr>
<td>Sex (18 years and over)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>815</td>
<td>1,133</td>
<td>+39.0</td>
</tr>
<tr>
<td>Female</td>
<td>421</td>
<td>671</td>
<td>+59.4</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-17 years</td>
<td>182</td>
<td>381</td>
<td>+109.3</td>
</tr>
<tr>
<td>18-24 years</td>
<td>140</td>
<td>292</td>
<td>+108.6</td>
</tr>
<tr>
<td>25-44 years</td>
<td>689</td>
<td>810</td>
<td>+17.6</td>
</tr>
<tr>
<td>45 years and over</td>
<td>407</td>
<td>702</td>
<td>+72.1</td>
</tr>
<tr>
<td>Hunters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>709</td>
<td>1,049</td>
<td>+48.0</td>
</tr>
<tr>
<td>Sex (18 years and over)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>555</td>
<td>762</td>
<td>+37.3</td>
</tr>
<tr>
<td>Female</td>
<td>52</td>
<td>100</td>
<td>+92.3</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-17 years</td>
<td>102</td>
<td>187</td>
<td>+83.3</td>
</tr>
<tr>
<td>18-24 years</td>
<td>90</td>
<td>158</td>
<td>+75.5</td>
</tr>
<tr>
<td>25-44 years</td>
<td>339</td>
<td>394</td>
<td>+16.2</td>
</tr>
<tr>
<td>45 years and over</td>
<td>178</td>
<td>310</td>
<td>+74.2</td>
</tr>
</tbody>
</table>

Source: Bureau of Census study prepared for Texas Game and Fish Commission, 1961.

*Percentages are of the total population, 12 years old and over, all others are percentages of total population within classes.

1Projected from a sample in terms of total population, 12 years old and over.
Time Spent Hunting and Fishing

Texans spent nearly 55 million man-days' hunting and fishing in 1960, and made over 47 million trips for this purpose. Forty million man-days were devoted to fishing and 15 million man-days to hunting. Fishing was more popular than hunting, accounting for nearly three-fourths of the time; fresh water fishing alone accounted for more than 60 percent of sportsmen's man-days spent in these activities. The percentage of the population, 12 years and older, doing some sport fishing increased from 23 percent in 1955 to 30 percent in 1960. Fresh water fishing caused an increase of 19 to 26 percent. Salt water fishing remained nearly constant at about 75 percent. Hunters accounted for 14 percent of the population in 1960, an increase of only 2 percent from 1955 (3).

Distance Traveled by Automobile for Hunting and Fishing

Texas fishermen and hunters traveled more than 2.5 billion miles in automobiles in 1960, Table 2. This represents an increase of 128 percent from 1955 to 1960. An average of 1,097 miles was traveled per sportsman. Seventy-three percent of the traveling was for fishing, with fresh water fishing alone accounting for one-half of the distance traveled. Hunters did slightly more than 25 percent of the traveling, with almost 60 percent of the total hunter travel done by small game hunters.

Types of Fishing Areas

In 1960 the most popular fresh water fishing areas in the State were man-made lakes. About 70 percent of all the fishing was done in these lakes, and large lakes carried nearly 50 percent of the total fishing load. Small man-made lakes and streams each accounted for about 22 percent of the use. The amount of fishing should increase as additional lakes are constructed, especially in those areas where large populations are within 1 to 2 hours' driving distance. The availability of recreational opportunities is an important factor in stimulating demand. Water-based recreational activities have become very popular in many mid-Western states where large reservoirs have recently been constructed. The use figures for lakes, rivers and streams are set forth in Table 3.

Expenditures for Hunting and Fishing

Sportsmen in Texas spent $383 million on hunting and fishing in 1960, a 132 percent increase over the $165 million spent for the same activities in 1955, Table 4. The average expenditure per sportsman was $158 in 1960 as compared with $102 in 1955.

Fishermen spent $285 million in 1960, an average of $130 per fisherman. This is an increase of $43 from the 1955 average. Hunter expenditures averaged $93 in 1960, an increase of $34 over the average for 1955, as indicated in

<table>
<thead>
<tr>
<th>Activity by sportsmen</th>
<th>Miles traveled by automobile for fishing and hunting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Automatically miles</td>
</tr>
<tr>
<td>Fishermen and hunters</td>
<td>1,168,706 miles</td>
</tr>
<tr>
<td>Fishermen</td>
<td>851,200 miles</td>
</tr>
<tr>
<td>Fresh water</td>
<td>621,206 miles</td>
</tr>
<tr>
<td>Salt water</td>
<td>229,394 miles</td>
</tr>
<tr>
<td>Hunters</td>
<td>317,507 miles</td>
</tr>
<tr>
<td>Waterfowl</td>
<td>27,352 miles</td>
</tr>
<tr>
<td>Small game</td>
<td>186,138 miles</td>
</tr>
<tr>
<td>Big game</td>
<td>104,017 miles</td>
</tr>
</tbody>
</table>

Source: Bureau of Census study prepared for Texas Game and Fish Commission, 1961.

Potential Demand for Outdoor Recreation

Profitable allocation of resources into recreational enterprises requires a large and continuous demand for the recreation produced. The increases in expenditures can be partially explained by population growth, increased income, rising prices, and credit financing of sporting equipment. The State's hunting and fishing resources have been continually developing during this period and in the case of hunting, a rather effective marketing system has emerged. However, even this system is not developed and intensive enough in many areas to move the available supply of deer into the hunter market. Another important factor is the apparent increased desire of the urbanized population for all types of outdoor recreation, of which hunting and fishing are important parts.

Table 2. Automobile Miles and Passenger Miles Traveled for Fishing and Hunting, Texas, 1960

<table>
<thead>
<tr>
<th>Types of Fresh Water Used by Fishermen, Texas, 1960</th>
<th>Fresh water fishers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,000 persons</td>
</tr>
<tr>
<td>Total</td>
<td>1,915</td>
</tr>
<tr>
<td>Man-made Lakes</td>
<td></td>
</tr>
<tr>
<td>Large</td>
<td>918</td>
</tr>
<tr>
<td>Small</td>
<td>421</td>
</tr>
<tr>
<td>Natural Lakes</td>
<td>145</td>
</tr>
<tr>
<td>Rivers and Streams</td>
<td>431</td>
</tr>
</tbody>
</table>

Source: Bureau of Census study prepared for Texas Game and Fish Commission, 1961.

1Projected from a sample in terms of total population.
2Generally farm ponds.

The median family income in Texas in 1960 was $4,884. This is an increase of 80 percent over the median family income of Texans in 1950, when it was $2,716. These figures have not been corrected for price changes.

Table 3.

<table>
<thead>
<tr>
<th>Types of Fishing Areas</th>
<th>Man-days fishing</th>
<th>Number</th>
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<tbody>
<tr>
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</table>

Table 4.

<table>
<thead>
<tr>
<th>Types of Fresh Water</th>
<th>Average number of miles</th>
</tr>
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<tbody>
<tr>
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</tbody>
</table>

Table 5.

<table>
<thead>
<tr>
<th>Types of Fishing Areas</th>
<th>Man-days fishing</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

Source: Bureau of Census study prepared for Texas Game and Fish Commission, 1961.

1Projected from a sample in terms of total population.
Table 4. Expenditures of Fishermen and Hunters by Expenditure Items, Texas, 1955 and 1960

<table>
<thead>
<tr>
<th>Expenditure items by type of sportsmen</th>
<th>Amount spent by fishermen and hunters</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,000 dollars 1955</td>
<td>1,000 dollars 1960</td>
</tr>
<tr>
<td><strong>Fishermen and hunters</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>165,054</td>
<td>382,769</td>
</tr>
<tr>
<td>Equipment total</td>
<td>58,898</td>
<td>198,436</td>
</tr>
<tr>
<td>Hunting and Fishing</td>
<td>28,740</td>
<td>72,223</td>
</tr>
<tr>
<td>Other 1</td>
<td>30,158</td>
<td>125,211</td>
</tr>
<tr>
<td>Trip</td>
<td>94,679</td>
<td>156,168</td>
</tr>
<tr>
<td>Licenses and leases</td>
<td>3,464</td>
<td>13,649</td>
</tr>
<tr>
<td>Other 2</td>
<td>8,013</td>
<td>14,519</td>
</tr>
<tr>
<td><strong>Fishermen</strong></td>
<td>122,019</td>
<td>285,027</td>
</tr>
<tr>
<td>Equipment total</td>
<td>39,861</td>
<td>144,345</td>
</tr>
<tr>
<td>Fishing</td>
<td>12,545</td>
<td>28,663</td>
</tr>
<tr>
<td>Other 3</td>
<td>27,316</td>
<td>115,683</td>
</tr>
<tr>
<td>Trips</td>
<td>80,033</td>
<td>130,286</td>
</tr>
<tr>
<td>Licenses and leases</td>
<td>1,506</td>
<td>5,353</td>
</tr>
<tr>
<td>Other 4</td>
<td>1,519</td>
<td>5,047</td>
</tr>
<tr>
<td><strong>Hunters</strong></td>
<td>42,135</td>
<td>97,747</td>
</tr>
<tr>
<td>Equipment total</td>
<td>19,037</td>
<td>54,094</td>
</tr>
<tr>
<td>Hunting</td>
<td>16,195</td>
<td>43,564</td>
</tr>
<tr>
<td>Other 5</td>
<td>2,842</td>
<td>10,531</td>
</tr>
<tr>
<td>Trips</td>
<td>14,646</td>
<td>25,881</td>
</tr>
<tr>
<td>Licenses and leases</td>
<td>1,958</td>
<td>8,297</td>
</tr>
<tr>
<td>Other 6</td>
<td>6,494</td>
<td>9,475</td>
</tr>
</tbody>
</table>

Source: Bureau of Census study prepared for Texas Game and Fish Commission, 1961.

'Projected from a sample in terms of total population.
'Cost of purchase of other equipment not limited by design to use in fishing and hunting, such as special clothing, cooking equipment, binoculars, tents and trailers.
'Cost of fishing and hunting magazines, general club dues, entrance fees for fishing or hunting on public lands, and costs not covered elsewhere.

This in turn requires large concentrations of population with an income sufficient to purchase consumer goods in large quantities above and beyond those goods which are classified as basic necessities.

In the aggregate, Economic Area XIII does not appear to have a large internal population with an above-average income which could support the intensive development of resources into recreational uses, even though the physical resources of the area are sufficient to produce large quantities of outdoor recreation. This is further substantiated by the population and income data appearing in Tables 6 and 7.

Table 6. Population of the State, Counties in Economic Area XIII, and Standard Metropolitan Statistical Areas Within 200 Miles of the Approximate Center of Economic Area XIII, Texas, 1950 and 1960

<table>
<thead>
<tr>
<th>Population areas</th>
<th>1950</th>
<th>1960</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>7,711,194</td>
<td>9,579,677</td>
<td>+24.2</td>
</tr>
<tr>
<td>Counties in Economic Area XIII:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Angelina</td>
<td>36,032</td>
<td>39,814</td>
<td>+10.5</td>
</tr>
<tr>
<td>Hardin</td>
<td>19,535</td>
<td>24,629</td>
<td>+21.8</td>
</tr>
<tr>
<td>Jasper</td>
<td>20,049</td>
<td>22,100</td>
<td>+10.3</td>
</tr>
<tr>
<td>Montgomery</td>
<td>24,054</td>
<td>26,839</td>
<td>+11.6</td>
</tr>
<tr>
<td>Newton</td>
<td>10,832</td>
<td>10,372</td>
<td>-4.3</td>
</tr>
<tr>
<td>Polk</td>
<td>16,194</td>
<td>13,861</td>
<td>-14.4</td>
</tr>
<tr>
<td>Sabine</td>
<td>8,568</td>
<td>7,302</td>
<td>-15.3</td>
</tr>
<tr>
<td>San Augustine</td>
<td>8,837</td>
<td>7,722</td>
<td>-13.5</td>
</tr>
<tr>
<td>San Jacinto</td>
<td>7,172</td>
<td>6,153</td>
<td>-14.3</td>
</tr>
<tr>
<td>Trinity</td>
<td>10,040</td>
<td>7,539</td>
<td>-24.9</td>
</tr>
<tr>
<td>Tyler</td>
<td>11,292</td>
<td>10,666</td>
<td>-5.5</td>
</tr>
<tr>
<td>Walker</td>
<td>20,163</td>
<td>21,475</td>
<td>+6.5</td>
</tr>
<tr>
<td>TOTAL</td>
<td>193,218</td>
<td>198,472</td>
<td>+2.7</td>
</tr>
</tbody>
</table>

| Standard Metropolitan Statistical Areas: | | | |
| Austin | 160,980 | 212,136 | +32.3  |
| Beaumont-Port Arthur | 235,650 | 306,016 | +30.0  |
| Dallas | 743,721 | 1,083,601 | +45.7  |
| Fort Worth | 392,613 | 573,215 | +46.5  |
| Galveston-Texas City | 113,066 | 140,364 | +24.2  |
| Houston | 806,701 | 1,243,158 | +54.1  |
| Texarkana (Tex-Ark) | 94,498 | 91,657 | -3.1   |
| Tyler | 74,701 | 86,350 | +15.6  |
| Waco | 130,194 | 150,091 | +15.2  |
| TOTAL | 2,729,124 | 3,886,388 | +41.8  |


Population

The population of the area has remained nearly static at 200,000 during the 1950-60 period while the total population of the State increased nearly 25 percent. Seven of the 12 counties actually lost population from 1950 to 1960; however, this trend was not unusual for those areas having predominately rural populations.

Income

The income situation improved somewhat for the area during the 1950-60 period but did not keep pace with the State as a whole. The average median family income for Texas in...
1960 was $4,884, but in Economic Area XIII it was less than $3,000.

When considered from the standpoint of population and income, Economic Area XIII does not have enough people within its boundaries to produce a demand sufficient to justify the development of a large commercial supply of outdoor recreation. However, the area is strategically located to nearby population centers and has the resources, in terms of land and water, to become a major supplier of outdoor recreation. Figure 1 illustrates its location in relation to the nine Standard Metropolitan Statistical Areas in the State that accounted for more than 40 percent of total population of Texas. These areas are where the median family income per year is $5,225 or $341 above the average for the State. During 1950-60, the population increase in these nine areas averaged more than 40 percent. Sixteen percent, or more than 15 million of the people in Texas live in two SMSA's located less than 100 miles from Economic Area XIII. Studies from other sections of the country have found that weekend users of recreation will generally drive for as long as 2 hours in one direction (5). Much of the above population is within an hour’s drive of the center of the area and should be counted in the demand potential.

With proper development of the area, vacationers should be attracted from anywhere within the 200-mile radius that includes the seven additional SMSA's and over 2 million more people.

One out of three Texans 12 years old and over did some hunting and fishing in 1960. Based on this data there are approximately 375,000 hunters and fishermen living in SMSA’s within a 100-mile radius of Economic Area XIII and nearly one million in the nine SMSA’s within the 200-mile radius shown in Figure 1. These figures give some indication of the aggregate demand for outdoor recreation; however, they do not explain what types and quantities of outdoor recreation are desired and the corresponding prices consumers are willing to pay.

**Resources of Economic Area XIII**

**Land and Water**

This area encompasses more than 9,900 square miles of land and 20,600 acres is water. The four major river basins in the area are the Trinity, Neches, San Jacinto and Sabine (6). The Sabine River is the eastern boundary between Texas and Louisiana. Soon there will be four large reservoirs in the area, each larger than 5,000 acres. The following structures either exist or are proposed: Livingston Reservoir, Dam “B” Reservoir, Sam Rayburn Reservoir, and Toledo Bend Reservoir (7). There are a large number of smaller lakes and streams throughout the area. Generally, an adequate supply of ground water is available for domestic use in most of the area, thus water supplies for recreation should not be a problem.

There are parts of four National Forests in the area, including over one-half million acres of land (8). Several well-developed public recreational sites are located in these forests. Some of these facilities were originally built in the 1930's and have been steadily improved since that time. The use of these recreational facilities in most cases has been heavy and many additional areas are being planned and developed for public use.

The entire 12-county area considered in this study lies within the pine-covered portion of Southeast Texas. The humid climate is favorable for rapid growth of the timber that covers most of the area. However, a decrease of 8 percent or 600,000 acres of forests in Southeast Texas is predicted by 1975 (9). Southeast Texas

### Table 7. Median Family Incomes of the State, Counties in Economic Area XIII, and Standard Metropolitan Statistical Areas Within 200 Miles of the Approximate Center of Economic Area XIII, Texas, 1950 and 1960

<table>
<thead>
<tr>
<th>Income areas by</th>
<th>Median family income</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>state, counties, and</td>
<td>1950</td>
<td>1960</td>
</tr>
<tr>
<td>SMSA's</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Angeline</td>
<td>2,309</td>
<td>4,245</td>
</tr>
<tr>
<td>Hardin</td>
<td>2,348</td>
<td>4,533</td>
</tr>
<tr>
<td>Jasper</td>
<td>1,733</td>
<td>3,485</td>
</tr>
<tr>
<td>Montgomery</td>
<td>1,863</td>
<td>3,724</td>
</tr>
<tr>
<td>Newton</td>
<td>1,463</td>
<td>2,548</td>
</tr>
<tr>
<td>Polk</td>
<td>1,844</td>
<td>2,806</td>
</tr>
<tr>
<td>Sabine</td>
<td>1,557</td>
<td>2,517</td>
</tr>
<tr>
<td>San Augustine</td>
<td>1,073</td>
<td>2,233</td>
</tr>
<tr>
<td>San Jacinto</td>
<td>1,054</td>
<td>1,737</td>
</tr>
<tr>
<td>Trinity</td>
<td>1,394</td>
<td>2,341</td>
</tr>
<tr>
<td>Tyler</td>
<td>1,684</td>
<td>2,694</td>
</tr>
<tr>
<td>Walker</td>
<td>1,579</td>
<td>2,787</td>
</tr>
<tr>
<td>Average of medians</td>
<td>1,641</td>
<td>2,970</td>
</tr>
<tr>
<td>Standard Metropolitan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statistical Areas:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Austin</td>
<td>2,933</td>
<td>5,082</td>
</tr>
<tr>
<td>Beaumont-Port Arthur</td>
<td>3,264</td>
<td>5,190</td>
</tr>
<tr>
<td>Dallas</td>
<td>3,433</td>
<td>5,925</td>
</tr>
<tr>
<td>Fort Worth</td>
<td>3,256</td>
<td>5,617</td>
</tr>
<tr>
<td>Galveston-Texas City</td>
<td>3,342</td>
<td>5,275</td>
</tr>
<tr>
<td>Houston</td>
<td>3,476</td>
<td>6,040</td>
</tr>
<tr>
<td>Texasarka (Tex-Ark)¹</td>
<td></td>
<td>3,817</td>
</tr>
<tr>
<td>Tyler</td>
<td></td>
<td>4,603</td>
</tr>
<tr>
<td>Waco</td>
<td>2,553</td>
<td>4,684</td>
</tr>
<tr>
<td>Average of medians</td>
<td>3,231</td>
<td>5,225</td>
</tr>
</tbody>
</table>


¹Not classed as a standard metropolitan statistical area in 1950.

in this case includes six counties in addition to those in Economic Area XIII. Most of the decline in forest acreage is due to condemnation for water reservoirs, highways, roads, utility lines, expansion of urbanized areas, and development of recreational areas. The forests of the area are predominately pine. Mixed forests of oak, gum, cypress, elm, ash and cottonwood occur along rivers and streams. The soils are sandy except in either small isolated prairies or river bottoms where heavier soils prevail.

In 1962, only 6 percent of the area was classified as cropland, 6 percent as grassland and 77 percent of the area was classified as forest.

Cotton, corn and forage crops dominate the cropping systems, and a small, widely-distributed acreage of peanuts and vegetables is produced. The trend in crop production has been sharply downward. Total cropland has decreased only 20 percent since 1930, but harvested cropland has decreased 66 percent. Most of the unharvested cropland is being converted to pasture. The de-
crease in the combined cotton and corn acreage has exceeded the decrease in harvested crops. The continuance of these trends is indicated by the fact that cotton acreage has been reduced by more than 50 percent since 1954. A complete description of land use is presented in Table 8.

Precipitation

The average annual precipitation of the area for the 5-year period 1958-62 was 50.65 inches, with a low in 1958 of 43.17 inches and a high of 57.88 inches in 1959. The two months with the lowest rainfall and a relatively low deviation from the mean were March and May, Figure 2. The greatest deviation from the mean occurred in July, September and October. June had the highest average monthly rainfall, 5.81 inches, for the 5-year period and September was second high with 5.69 inches. One of the more favorable periods for recreation, when considering rainfall, appears to be during March, April and May.

Temperature

One of the major disadvantages of this area for recreational development is the temperature of the summer months. The average temperature for July and August is above 80 degrees in the upper 70’s in June and September, Figure 3. This temperature, together with rather high relative humidity and somewhat high rainfall can produce a climate which is not very competitive in relation to many other areas of the country. Unfortunately for this area, the period when many families take vacations is during the summer months. In the fall and spring when climatic conditions in the area are quite good for outdoor recreation, there is considerable competition from other activities such as school and sports, making family participation rather difficult. These are good reasons why recreation developers should be looking toward Texans for their business; Texans need facilities which are not very competitive in relation to many other areas of the country. Unfortunately for this area, the period when many families take vacations is during the summer months. In the fall and spring when climatic conditions in the area are quite good for outdoor recreation, there is considerable competition from other activities such as school and sports, making family participation rather difficult. These are good reasons why recreation developers should be looking toward Texans for their business; Texans need facilities which are not very competitive in relation to many other areas of the country.

On-Farm Recreation in Economic Area XIII

Field Survey

A field survey was conducted by the Department of Agricultural Economics and Sociology, Texas A&M University, of all on-farm recreational enterprises located in Economic Area XIII in 1961. The purpose of this study was to determine to what extent farm resources were being devoted to recreation. Operators were located by consulting the Agricultural Extension Service, Conservation officers, Soil Conservation Service, and local sporting goods dealers. All of the 43 operators engaged in recreation in the area were interviewed; of this group only 32 provided schedules considered useable for this report. The remaining schedules were not included because sufficient data were not available for the enterprises.

Recreational Use of Land

Over 38,000 acres of land were, to some degree, under multiple use in agricultural and recreational enterprises in 1961, Table 9. Of the total acreage, 22,988 acres, or 60 percent, were utilized for hunting. This amount is high because hunting necessarily requires more space than many other recreational activities. The acreage on which fishing sites were located accounted for 7,263 or about 20 percent of the total. An additional 20 percent of the area was used for both hunting and fishing.

Number of Users

Although the number of acres devoted to hunting far exceeded those devoted to fishing, 87 percent or more than 10,000 annual users engaged in fishing, Table 10. Several factors explain this division of user participation. Fishing rights are much more accessible in the area and not as expensive as hunting rights. The quality of fishing in relation to competing areas is better than in hunting. Deer populations are not as large in this area as in some sections of the State, and therefore big game hunting for much of the area is not very important. Another important factor is the seasonality of hunting in relation to fishing. Fishing is possi-

Table 8. Land Use of Agricultural Acreage, and Acres of Federal Land, Urban and Water Areas in Economic Area XIII, Texas, 1958

<table>
<thead>
<tr>
<th>Land use</th>
<th>Amount of land in different uses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acres</td>
</tr>
<tr>
<td>Agricultural:</td>
<td></td>
</tr>
<tr>
<td>Cropland</td>
<td>397,000</td>
</tr>
<tr>
<td>Grassland</td>
<td>366,600</td>
</tr>
<tr>
<td>Forest</td>
<td>4,894,100</td>
</tr>
<tr>
<td>Other land</td>
<td></td>
</tr>
<tr>
<td>In farms</td>
<td>17,900</td>
</tr>
<tr>
<td>Not in farms</td>
<td>10,500</td>
</tr>
<tr>
<td>Non-Agricultural:</td>
<td></td>
</tr>
<tr>
<td>Federal land</td>
<td>501,700</td>
</tr>
<tr>
<td>Urban areas</td>
<td>120,100</td>
</tr>
<tr>
<td>Water areas</td>
<td>20,600</td>
</tr>
<tr>
<td>TOTAL</td>
<td>6,293,000</td>
</tr>
</tbody>
</table>


Table 9. Acres of Land Used for Hunting, Fishing and Other Recreation by 32 Operators in Economic Area XIII, Texas, 1961

<table>
<thead>
<tr>
<th>Recreational use</th>
<th>Land use for recreation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acres</td>
</tr>
<tr>
<td>Hunting</td>
<td>22,988</td>
</tr>
<tr>
<td>Fishing</td>
<td>7,263</td>
</tr>
<tr>
<td>Both</td>
<td>7,719</td>
</tr>
<tr>
<td>Other</td>
<td>160</td>
</tr>
<tr>
<td>TOTAL</td>
<td>38,130</td>
</tr>
</tbody>
</table>

Source: Survey data 12-county area.
ble during most of the year in this area, and also, is better adapted to family participation than hunting. Another fact is that there are considerably more fishermen than hunters in the State.

**Lease Arrangements**

An investigation of the leasing arrangements in the area indicates that in 1961 leasing of hunting rights had not developed to any degree, since none of the operators reported day-leasing contracts. Hunting leases encountered in this study were generally for 1 year and required little or no investment, preparation and management on the part of the landowner. As deer herds and other species of game increase in East Texas, and as the price of hunting rights increases in other hunting areas of the State due to increased user demand, landowners will probably have increasing opportunities to sell hunting rights in the area. The sale of hunting rights should become considerably more common in the near future as they account for a higher percentage of the landowners' income.
The sale of fishing rights was generally more accepted and widespread than those for hunting. Of the operators that indicated leasing arrangements, 12 leased by the day, 16 by the year and two leased for long-term periods exceeding one year. Table 11. Day-fishing typically sold for one dollar per day. Fishing, like hunting, has not realized its full potential on a day-lease basis and with additional development could become a more important producer of farm income.

**Investment in Recreational Facilities**

A summary of costs indicates that nearly $100,000 has been invested in commercial on-farm recreational facilities in the 12-county survey area. It can be seen in Table 12 that a large amount of the investment can be associated with some type of water-based recreation. With the exception of cabins and roads that can be used in either hunting or fishing, little investment has been made in support of hunting.

Of the $98,058 total reported cost of existing recreational facilities, costs for cabins, club houses and swimming pools are the largest items. These three items alone make up over 50 percent of reported construction costs. The majority of the reported investment is made in support of fishing. A wide range of facilities are needed to effectively utilize water-based recreation, whereas, very little investment, other than cabins and roads, is needed to support hunting activities.

Another major cost not included in the above is the cost of ponds and lakes. An extremely high variation of costs in relation to acre-feet of water existed due to differing physical characteristics of lake sites. Of 53 lakes, the size ranged from less than an acre-foot to 1,400 acre-feet. Table 13 indicates the number according to size. The construction cost of these lakes, totaling approximately 6,500 acre-feet, was estimated to be $175,000. This cost cannot be allocated entirely to recreation because a high percentage of the lakes were built primarily for other purposes, e.g., livestock water, irrigation and erosion control. The sale of fishing rights in many cases was of secondary importance.

**Gross Returns from Recreation**

Annual gross returns from all reported sources of recreation in the survey area were approximately $34,000. As indicated in Table 14, the largest single item of gross return was for fishing, which amounted to over $16,000. The second largest item was hunting with a return of slightly more than $15,000.
the records kept by the respondents interviewed, only a few carried actual net income amounts in ways suitable for aggregate calculation of income. Therefore, gross amounts are aggregated for the 12-county area and net returns are given for selected case studies where more detailed data were available.

In addition to the income produced by hunting and fishing, $2,500 was grossed from boats, motors, lots, cabins and camping facilities. Returns from club houses, swimming pools and some of the cabins were either not available or had not been in operation long enough to yield any revenue. Overall, the ratio of investment in facilities to gross returns from recreation is approximately three to one. Undoubtedly this ratio will be altered substantially as the facilities are reused more intensively, as future recreational development takes place and as a greater return is realized from the existing investment.

Costs and Returns from Case Studies

Nine operators were selected for the purpose of case study from the operations reviewed. These were selected on the basis of completeness of data pertaining to both costs and returns. Most of the operations had been in business long enough to accrue some returns on the recreational investment.

The range of investment was from $620 to $54,600 and, as indicated in Table 15, returns on the investment ranged from a small loss of $12 up to a return of $7,043. There was considerable variation among the returns in relation to the amount invested. At least part of this variation can be explained by differences in management, location, physical resources and availability of capital.

Table 13. Number and Size of Fishing Lakes Operated by 32 Suppliers of Recreation in Economic Area XIII, Texas, 1961

<table>
<thead>
<tr>
<th>Size of lakes</th>
<th>Lakes used for fishing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acre-feet</td>
<td>Number</td>
</tr>
<tr>
<td>0 - 9</td>
<td>9</td>
</tr>
<tr>
<td>10 - 24</td>
<td>6</td>
</tr>
<tr>
<td>35 - over</td>
<td>38</td>
</tr>
<tr>
<td>TOTAL</td>
<td>53</td>
</tr>
</tbody>
</table>

Source: Survey data 12-county area.

Table 14. Gross Returns From Recreational Facilities and Activities Supplied by 32 Operators in Economic Area XIII, Texas, 1961

<table>
<thead>
<tr>
<th>Item of recreation</th>
<th>Gross returns from recreation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dollars</td>
</tr>
<tr>
<td>Hunting</td>
<td>15,150</td>
</tr>
<tr>
<td>Fishing</td>
<td>16,269</td>
</tr>
<tr>
<td>Lots</td>
<td>960</td>
</tr>
<tr>
<td>Boats and Motors</td>
<td>938</td>
</tr>
<tr>
<td>Cabins</td>
<td>520</td>
</tr>
<tr>
<td>Camping</td>
<td>160</td>
</tr>
<tr>
<td>TOTAL</td>
<td>33,997</td>
</tr>
</tbody>
</table>

Source: Survey data 12-county area.

Table 15. Investment and Returns From Nine Case Studies of Recreational Enterprises in Economic Area XIII, Texas, 1961

<table>
<thead>
<tr>
<th>Number of case</th>
<th>Investment in enterprise</th>
<th>Return above specific costs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dollars</td>
<td>Dollars</td>
</tr>
<tr>
<td>1</td>
<td>7,600</td>
<td>-12</td>
</tr>
<tr>
<td>2</td>
<td>12,000</td>
<td>176</td>
</tr>
<tr>
<td>3</td>
<td>6,060</td>
<td>237</td>
</tr>
<tr>
<td>4</td>
<td>620</td>
<td>227</td>
</tr>
<tr>
<td>5</td>
<td>2,836</td>
<td>602</td>
</tr>
<tr>
<td>6</td>
<td>6,634</td>
<td>615</td>
</tr>
<tr>
<td>7</td>
<td>21,746</td>
<td>862</td>
</tr>
<tr>
<td>8</td>
<td>8,800</td>
<td>1,954</td>
</tr>
<tr>
<td>9</td>
<td>54,600</td>
<td>7,043</td>
</tr>
<tr>
<td>TOTAL</td>
<td>120,896</td>
<td>11,694</td>
</tr>
</tbody>
</table>

Source: Survey data 12-county area.

It should be noted at the outset that no deduction has been made for depreciation. The data available for various types of recreation facilities is insufficient for the development of depreciation schedules. No attempt was made to value the land because of multiple use and the rather large variation in land prices resulting both from many undefined factors and from long-term ownership of many of the farms. The full cost of the lakes has been entered under capital investment. Most of the lakes were built for multiple use, as previously indicated, and therefore the recreation enterprise should bear only its share of the cost. Another cost that does not appear is property taxes, which vary greatly according to counties and locations within counties.

Case Number One

This is an operation of approximately 160 acres. It is located on a farm-to-market road approximately 6 miles from the nearest town. A somewhat intensive farming operation is conducted in addition to the recreational enterprise. The farm has 60 dairy cows and 6,000 broilers as the main sources of agricultural income.

An investment, expense and income statement for the recreational enterprise follows:

Capital investment in enterprise:
Lake (30 surface acres)..............$4,500
Cabin (one—3 room).................3,000
Picnic table (1 concrete)...........60
Grill (1)..................................40
Total......................................$7,600
Annual Income:
Cabinet ($5.00 per night)..............$ 520
Total......................................$ 520
Annual expenses:
Cabinet.................................$ 150
Clearing............................... 40
Total......................................$ 190
Return above cash operating costs...$330
Interest on Investment at 4.5%........$342
Return above specified costs.........$ -12
Case Number Two

This is a beef cattle operation with approximately 40 head on 317 acres of land. The farm is located about one-half mile from the nearest town. The recreation operation is in a very good location because the farm is situated on a state highway.

An investment, expense and income statement for the recreational enterprise follows:

**Capital investment in enterprise:**
- Lake (15 surface acres) $1,000
- Lake (6 surface acres) $4,000
- Lake (30 surface acres) $7,000

**Total** $12,000

**Annual income:**
- Fishing ($0.50 per day) $1,080

**Total** $1,080

**Annual expenses:**
- Road (Gravel) $14
- Mowing levees 50
- Weed control, (lilies) 300

**Total** $364

**Return above cash operating costs** $716

**Interest on investment at 4.5%** $540

**Return above specified costs** $176

Case Number Three

This is a membership-type of recreational operation. In addition to the recreation from the lakes, the members may also hunt ducks in season. The operation consists of 136 acres of land located approximately one and one-half miles from the nearest town. The primary recreation engaged in by members is fishing. An investment, expense and income statement for the operation follows:

**Capital investment in enterprise:**
- Lake (35 surface acres) $6,000
- Picnic tables (3) 60

**Total** $6,060

**Annual income:**
- Membership fees $500
- Members maintenance 250

**Total** $750

**Annual expenses:**
- Road $75
- Clearing 100
- Water 75

**Total** $250

**Return above cash operating costs** $500

**Interest on investment at 4.5%** $273

**Return above specified costs** $227

Case Number Four

This operation consists of 77 acres of land located approximately 18 miles from the nearest town. The farming operation consists of 18 head of beef cattle and truck gardening. The recreational operation is located almost 4 miles off the farm-to-market road. It consists only of fishing and picnic sales. An investment, expense and income statement for the recreational operation follows:

**Capital investment in enterprise:**
- Lake (15 surface acres) $500
- Picnic tables (2 wooden 3 x 6 feet) 80
- Boats (2 wooden) 40

**Total** $620

**Annual income:**
- Fishing ($1.00 per day) $280

**Total** $280

**Annual Expenses:**
- Maintenance 25

**Total** $25

**Return above cash operating costs** $255

**Interest on investment at 4.5%** 28

**Return above specified costs** $227

Case Number Five

This is a beef cattle operation consisting of 267 acres located approximately 19 miles from the nearest town. It is over one mile off the farm-to-market road. Approximately 30 beef cows are maintained. No acreage is cultivated for crops. Owner states that additional picnic areas have been requested by patrons, indicating a somewhat unfulfilled demand. The recreation consists of fishing and picnic areas. An investment, expense and income statement connected with the recreation enterprise follows:

**Capital investment in enterprise:**
- Lake (15 surface acres) $2,700
- Picnic table (1) 10
- Grill (1) 6
- Boats (2 wooden) 120

**Total** $2,836

**Annual income:**
- Fishing ($1.00 per day) $720
- Boats ($1.00 per day) 120

**Total** $840

**Annual expenses:**
- Boat maintenance 10
- Lake fertilizer 100

**Total** $110

**Return above cash operating costs** $730

**Interest on investment at 4.5%** 128

**Return above specified costs** $622

Case Number Six

This is a small-scale beef operation consisting of a dozen beef cattle and about 310 acres of land. The operation is about 10 miles from the nearest town, and is approximately 4 miles off the farm-to-market road. It is a membership-type recreational operation consisting mainly of fishing, plus a small amount of hunting. A lighted picnic area is provided in conjunction with the lake. An investment, expense and income statement follows:

**Capital investment in enterprise:**
- Lake (15 surface acres) $6,000
- Picnic tables (3) 60

**Total** $6,060

**Annual income:**
- Membership fees $500
- Members maintenance 250

**Total** $750

**Annual expenses:**
- Road $75
- Clearing 100
- Water 75

**Total** $250

**Return above cash operating costs** $500

**Interest on investment at 4.5%** $273

**Return above specified costs** $227
come statement connected with the operation follows:

**Capital investment in enterprise:**
- Lake (40 surface acres) $6,000
- Picnic tables (5) 13
- Lighting 10
- Boats (4 aluminum) 471
- Cattle guard 140
- Total $6,634

**Annual income:**
- Membership fees ($25 per year) $500
- Hunting (dove and quail, $1 per day) 260
- Boats ($1.00 per day) 208
- Total $968

**Annual expenses:**
- Picnic tables (paint) $5
- Mowing 50
- Total $55
- Return above cash operating costs $913
- Interest on investment at 4.5% 298
- Total $615

**Case Number Seven**

This is a 333-acre operation located only about 3 miles from the nearest town on a farm-to-market road. The pasture acreage is used for a dairy operation. Users of the recreational facilities pay a membership fee in addition to other fees for cabins. The operation is well developed and apparently additional demand exists for these facilities as the operator states that he has many requests for more cabins. The operator plans considerable improvement in existing facilities. An investment, expense, and income statement covering the recreational aspect of the operation follows:

**Capital investment in enterprise:**
- Lakes (30 surface acres) $12,000
- (5 surface acres) $12,000
- Pier (24 feet) 50
- Cabin (1) $1,095
- Picnic tables (2 concrete) 36
- (3 wooden, 3½ x 6 feet) 30
- Clearing 200
- Water (well, pipe, pump, fixtures) 1,500
- Grills (5) 200
- Boats (2 aluminum, 7 wooden) 1,140
- Motors (2 electric, 3 gasoline) 495
- Club house 5,000
- Total $21,746

**Annual income:**
- Membership fees ($25 per year) $625
- Lots 960
- Cabin ($20.00 per month) 240
- Fishing ($1.00 per day) 30
- Total $1,840
- Return above cash operating costs $1,840
- Interest on investment at 4.5% 978
- Return above specified costs $862

**Case Number Eight**

This is a large beef cattle operation located about 14 miles from the nearest town. Approximately 500 beef cows graze more than 1,500 acres of land. Members pay an annual fee for use of the recreational facilities and day fishing is sold to the general public. The operation consists of a lake and picnic area. An investment, expense, and income statement covering the recreational enterprise follows:

**Capital investment in enterprise:**
- Lake (42 surface acres) $7,000
- Picnic tables (4 iron) 160
- Grills (4) 240
- Clearing 1,400
- Total $8,800

**Annual income:**
- Fishing ($1.00 per day) $550
- Membership fees ($50 per year) 2,000
- Total $2,550

**Annual expenses:**
- Fertilizer & maintenance $200
- Total $200
- Return above cash operating costs $2,350
- Interest on investment at 4.5% 396
- Return above specified costs $1,954

**Case Number Nine**

This is a beef cattle operation consisting of approximately 300 cows grazed on 1,800 acres of land. It is located 17 miles from the nearest town. There is a comprehensive membership fee that covers the right for members to fish, hunt, boat and use cabins. There are two very large lakes included in the recreational operation and cabins and boats are furnished. This enterprise has the largest investment and the largest income of the operations considered. An investment, expense, and income statement covering the recreational operation follows:

**Capital investment in enterprise:**
- Lake (70 surface acres) $27,000
- Lake (140 surface acres) 14,000
- Cabins (5) 13,000
- Boats (2 aluminum, 4 wooden) 600
- Total $54,600

**Annual income:**
- Membership fee ($100.00) includes:
  - Fishing
  - Hunting
  - Boating
  - Cabins
- Total $10,000

**Annual expenses:**
- Maintenance:
  - Lakes & cabins $480
  - Boats 20
- Total $500
- Return above cash operating costs $9,500
- Interest on investment at 4.5% 2,457
- Return above specified costs $7,043
From these case studies it is possible to visualize some of the investments in facilities that are required when developing a small lake for commercial recreation. However, most of the operations, at best, offer little more than a bare minimum of facilities. Expenses associated with these enterprises were generally low and most had not been in business long enough to accrue reasonable maintenance costs. Even with the relatively low expenses, most of the operations did not show a very high return on investment. These results are comparable to studies that have been done in other states.

Some Factors To Be Considered By Potential Recreation Suppliers

The natural resources found in this area of East Texas and their location with respect to large centers of population constitute important factors favoring the development of this area into a major supplier of outdoor recreation in Texas. As indicated by the preceding study, the development of recreational facilities is in an early stage and virtually no development has occurred in relation to the existing potential. This, of course, does not mean that all such enterprises will be successful and that the application of sound management principles will not be required. As recreational activities and facilities are developed in increasing quantities, so will competition increase and operating efficiency become increasingly important. It will undoubtedly be a long time before there is a surplus supply of outdoor recreation; however, individual situations will develop where producers find that they are unable to market what they have produced.

Before engaging in the recreation business, a farmer or rancher should review the following questions:

1. What are your managerial qualifications?

The human factor may be most important in the whole operation. The operator must be business oriented and must have an interest in dealing with the public. He probably should be some combination of a successful farmer, motel operator, general businessman and sportsman. These managerial qualities may not be found in all farmers that have resources suitable for recreational use.

Some types of recreational enterprises are going to require long hours, especially on weekends when most people have an opportunity to engage in recreation. Many operations are going to depend on family labor and the whole family should be fully aware of what is involved. In many cases, recreation will be only one enterprise in the farming operation and therefore will require the re-allocation of farm resources. This adjustment in resources may result in a reduced net income in the short run, and this should be considered in planning. It should also be noted that the returns from existing recreational enterprises in the area are relatively low and that considerable managerial ability will be required to operate a profitable recreation business.

2. What do you know about the various types of farm-supplied recreation?

In this business the supplier not only has to worry about production but in most cases must deal directly with the consumer without the assistance of a marketing agency. Before investing heavily in some phase of recreation the prospective operator should make sure that he understands all of the ramifications of such an undertaking. For example, if an enterprise involving a combination of such activities as camping, swimming, picnicking, fishing and boating were being considered, certainly the farmer would do well to take an extended camping-fishing trip. This would provide actual experience as a participant and readily point out some of the problems and needs of the outdoorsmen. From the production side, it will illustrate the resources required in terms of management, labor, land and capital.

3. What is your capital position?

In many cases the farmer will want to develop his facilities gradually, gaining experience over time. However, plans for a fully developed operation should be laid out at the beginning; these of course can be altered as the need arises. The operator should know if he can obtain sufficient financing for expansion that will permit him to develop his resources to a profitable operating level. Credit restrictions can be severe enough to preclude the efficient utilization of resources.

4. What are the physical resources of your farm or ranch?

Sufficient acreage should be available to support any sustained activities and to justify investment in facilities. Water is a very important resource. The quantity and type, of course, will depend on the type of recreation. However, there is considerable evidence that people strongly prefer water-based activities.

Trees and cover provide a great amount of aesthetic value to an area plus providing shade and privacy for outdoor users. Certain types of vegetation can provide food and shelter for many species of game; however, because a farm has beautiful trees does not provide any assurance that there will be an abundance of game for hunting. The quantity of game will depend not only on management practices of the individual landowner, but also on the management practices used in the area. This is especially true in the case of deer.

5. Are you aware of the liability risks incurred when, for a fee, you transfer part of your property rights for recreational use?

Regular farm liability insurance, in most cases, does not cover people who have paid a fee
to use recreational facilities. The operator should consult his attorney and insurance agent to ensure adequate insurance coverage and to determine what can be done to limit liability. Insurance protection on some types of recreational activities is quite expensive and might cause the operator to exclude certain types of activities from the operation (11). Liability risks are a very important aspect of any recreational business and should not be overlooked by landowners.

6. Where is your farm located in relation to potential buyers of recreation?

Location is a very critical factor. A development located near a major highway where people unfamiliar with the area can quickly locate it has a definite advantage over operations situated in hard-to-find areas with poor roads. It is assumed that much of the business in this area will come from weekend users that live within a maximum of 2-hours driving distance. These people like to get to the recreation areas as quickly as possible. Moreover, the return trip is probably even more important, in that if the negative experience of a long difficult drive is too great there is little chance for frequent return visits. For day use, for example picnics, a 30 to 60-minute drive is considered to be about the maximum time users will travel en route to facilities.

7. What is the attitude of the community toward recreation development and toward the people that come to buy the recreation?

Local residents can be very helpful in advertising facilities and directing visitors to the various developments. Local businesses in turn stand to benefit from selling supplies and various services to the non-residents, all of which tends to benefit the local economy. However, in some localities the attitudes of local residents toward visitors may tend to discourage “strangers” from using an area for recreation.

The local chamber of commerce, civic groups and other interested groups and individuals can do much to present a desirable image to visitors and also to explain the economic and social benefits to be derived by the residents of the community from new recreational enterprises that utilize valuable community and private resources.

Types of Recreation

Several types of recreational enterprises appear to be suited for this area of East Texas when considered from the standpoint of available land and water resources and their proximity to the potential demands of the nearby centers of population.

Not all outdoor recreational activities and supporting facilities are discussed in this section; only those which appear to have the greatest potential from the standpoint of resources and demand and for which some data were available are included. Others having an undetermined potential are vacation farms, minnow production, float trips, summer camps, working ranches and nature trails.

Based on recreation trends in the State, all types of hunting and fishing activities should be in strong demand, especially fresh water fishing. National data on trends also indicates that all forms of water-based recreation are extremely popular, plus activities like camping, picnicking, hiking, nature trails and horseback riding (12).

Hunting

Various species of game such as deer, grey and fox squirrels, mourning doves, bobwhite quail and turkeys are found in this area of East Texas. However, in many parts sufficient quantities of game are not available for the development of widespread commercialized hunting. Therefore, the development of leasing arrangements and marketing systems has not generally reached the magnitude of economic importance that has occurred in other areas, as in the case of deer hunting in the Edward’s Plateau and goose hunting in many of the coastal areas. In a few counties deer are available in sufficient quantities so as to provide the resource base for supplying deer hunting, but in other counties this opportunity is relatively limited.

Additional reasons for the slow rate of development of commercialized hunting in East Texas were presented as follows in the recent publication “Build East Texas” (13).

“The tradition of free hunting on private lands appears to be deeply entrenched in the sociology of hunters and land operators in East Texas. This tradition has hindered the development of the hunting-lease system in East Texas. Commercialization of wildlife resources in many parts of the State has provided a powerful stimulus to encourage of large deer herds.

“Land units generally are small in East Texas, and land operators have been slow to adopt deer management programs, because they felt they would have little control over a wild population of deer and that an uncooperative public would harvest animals from their management programs.

“Also, free ranging or uncontrolled dogs have been responsible for the failure of deer brood stock to increase in some areas of East Texas. Deer are chased, harassed and often killed by dogs allowed to roam at will. Use of dogs is an important hunting method for taking deer in some areas of East Texas, but their use is detrimental to deer herds. Dogs are especially destructive during the late winter and spring when female deer are pregnant.”

This case is further substantiated by data collected in the field survey of 1961, which indicated that relatively few operators were selling hunting rights. Those who were selling hunting rights were doing so under long-term agreements. There were no intensive day leasing ar-
rangements reported. Day leasing will generally result in higher returns and more intensive use of resources but requires more labor and management and perhaps a higher investment in facilities and equipment. Many operators prefer longer term leases where limited quantities of game are available because a relatively small amount of labor, management and investment is required.

In almost all sections game numbers could be increased sufficiently for hunting if proper management practices were employed. In many parts of East Texas there may be a shortage of plants that provide quality winter forage for deer, particularly where livestock are wintered on rangeland. Generally, the best winter forage plants for deer are the shrubs and small trees that are also consumed by livestock (14).

Multiple use of farm resources for timber, livestock and game production would probably require some adjustment in all enterprises. Under an intensive management program the different enterprises would be competing for many of the same resources. This adjustment may result in a decrease in returns in the short run and this is a factor to be considered by the landowner.

Game other than deer have some economic importance in East Texas. Both grey and fox squirrels abound where there are sufficient nest trees and mast-producing trees. In many cases, management of timber and livestock with concern being given to the production of deer will also favor squirrels (15). At present, more time is spent in the aggregate in hunting squirrels than in hunting deer in East Texas. Moreover, under good management, squirrels often can be hunted rather intensively without detriment to the resource.

Mourning doves are also common in the area, although the abundance of surface water often disperses them so much that the popular "waterhole shooting" of the species cannot generally be practiced very successfully. Many East Texas soils are sandy and the simplest disturbance of them will foster luxurious growths of Croton and other weeds that produce seeds highly sought by doves (16). Judicious culture of these weeds around small, open waters probably would do much to improve dove hunting.

Bobwhite quail is a relatively stable wildlife crop in East Texas, but the shift from cash crops to rangeland and timber production has reduced quail numbers over most of the area (17). Intensive management of land for joint production of quail and range- or timber hardly seems feasible because these birds do best in areas where disturbed soils are allowed to produce annual weeds. This situation was common in much of East Texas 15 to 20 years ago when small, cash crop farms were common and fields lay fallow from fall to spring. However, limited management to insure a continuing low number of quail may give additional hunting features to an overall hunting lease contract. Suggested quail management practices are available from the Texas Parks and Wildlife Department (18).

Wild turkeys can be produced in this area, although they have not been too successful in most cases. The Texas Parks and Wildlife Department indicates that restocking should be done only with wild turkeys from the pine forest regions of the Southern United States and not from Southwest Texas (19). Even these birds have not proved highly successful in East Texas.

The hunting of ducks and geese in the area has a limited potential except on the rather large reservoirs. The sale of small-game hunting rights is an area which should have some potential, especially since there are more small-game hunters than waterfowl and big-game hunters in the State. Small-game hunting was estimated to have accounted for nearly 60 percent of all hunting in Texas in 1960. In the past, small-game hunting has not been given much consideration in leasing arrangements but undoubtedly will be considered a more valuable game resource in the future.

**Shooting Resorts**

Shooting resorts are gaining in popularity in Texas as in other states where there are large concentrations of people. Shooting resorts are defined by law in Article 908 as amended in 1959, "As an area of not less than six hundred (600) acres nor more than two thousand (2000) acres, that are contiguous to each other on which pen-raised fowls and/or imported game birds, banded and marked in accordance with the provisions of this Act, are released to provide hunting for members or guests authorized by the hunting laws of this state." (20). Anyone considering a shooting resort operation should certainly contact the Parks and Wildlife Department of the State for a complete set of regulations.

The owner or operator of the shooting resort is required to buy a license costing $10.00; a $2.00 fee is required of game breeders. Breeders of commercial game birds are required to pay $25.00 for a permit. These licenses are discussed in "Hunting in Texas 1963-64," Parks and Wildlife Department, Austin, Texas. Hunters using a shooting resort are required to have a valid hunting license. Non-residents may obtain a license for use on State-licensed shooting resorts for the sum of $3.15. This license is valid during the resort season from October 1 to April 1 and therefore out-of-state guests can make use of Texas shooting resorts for a nominal fee.

Before engaging in the shooting resort business the operator should be thoroughly familiar with what is involved. This is a very intensive type of operation and will involve management experience as well as compliance with regulations set forth in governing these operations.

It is definitely not the kind of business everyone can operate profitably. The number of shoot-
ing resorts that go out of business each year gives some indication of the risk involved.

The prospective operator will do well to visit several shooting resorts, using their facilities as a hunter and not just as a visitor. This will provide some insight into the investment and management required in such a business. The following are some of the questions that should be considered when undertaking a shooting preserve.

1. What types of game should be provided for hunting?

Quail, chukar and pheasant are the game birds generally offered in Texas shooting resorts. A few preserves are providing duck hunting. A new operator not only has to decide on the type of game for hunting, but needs to decide on whether he will produce his own game birds or buy them from commercial game breeders. In the early phases, a new operator may choose to offer only one species of game bird and to produce on a limited basis until sufficient experience is developed to carry on multiple species production and hunting. The risk of disease is rather high in producing game birds. Just producing live birds is not enough; the birds must be healthy, and properly conditioned to be good flyers so that they not only provide sporting shots but make good trophies and provide good meat. In addition to producing game birds, there are problems of maintaining the proper vegetation that will withstand heavy hunting for 6 months and at the same time provide cover. Considerable effort must be made to develop cover that will cause the birds to hold rather than run so the hunter can get in close for the flush (21).

2. What services should be made available for sportsmen?

Several items are rather basic to all shooting preserves. Guides and dogs are two items which nearly all resorts have available and a few require the hunters to use them. The hunter may provide his own dog or use one belonging to the resort. Dog kennels are generally available and in some cases the resort will board dogs and even train them.

Guns are rarely provided by the resort, although some sell ammunition, usually only as service to the hunter and not as a profit-making part of the business. Shooting resorts generally do not get into the sporting goods business but rely on local merchants to supply the needs of their hunters.

Some shooting resorts have restaurant and lodging facilities while others may rely on motels and restaurants in neighboring areas to supply these facilities. In some cases picnic areas and camping facilities are available. Air strips may be provided for those hunters that wish to fly in, others provide transportation to and from nearby airports.

Skeet ranges may be available for hunters that want to “warm up” before going to the field. This is an advantage to the operator that guarantees kills because misses and wounded birds that cannot be found reduce profits (21).

Facilities will generally have to be provided for cleaning and processing game. Hunters will generally want their game processed before returning home or may ask that it be shipped when processed.

3. How should game birds be marketed?

There are several methods being used by shooting resorts in Texas. Some operators charge a fixed amount per hunter and then a fee for each bird released. A few operators guarantee a specified kill, although this practice is not very common. Another version of the above method is to charge a flat fee per hunter, which permits the hunter to have a specified number of birds released, for example, 10 quail or 6 chukar, or 4 pheasant. If the hunter wants to shoot more than the minimum released he may purchase the release of additional birds on a per-bird basis. Some resorts just charge a flat rate per bird released with no additional charges. In some cases guides and dogs are included in the above rates; in others guides and dog services are sold together or separately according to the hunters’ preference.

There are several other factors to be considered in shooting resort development. Advertising is important in attracting prospective customers. Without a good promotional program it will be difficult to attract sufficient numbers of hunters for a profitable business. Location will partially determine the type of advertising required. This discussion of shooting resorts is not a complete critique of all of the ramifications of the business, but is included to provide general overview of some of the facets of the business. It is a complex business and should not be undertaken without a full understanding of what is involved.

Fishing

This area of East Texas offers a rather wide variety of fish to the sport fisherman. Some species which have varying degrees of economic importance are the largemouth bass, white bass, sunfish, crappie, catfish, buffalo and carp.

In the area are several major streams that have limited importance as suppliers of game fish. Streams, of course, do not lend themselves to private management. Also, pollution from various sources and turbidity are problems when considered from the standpoint of fish production (22). Generally, catfish, buffalo and carp account for most of the fishing in these waters. It is difficult to assess the economic importance of these streams for fishing.

Major reservoirs provide a wide array of fishing. Predominant species in these lakes are crappie, largemouth bass, white bass, catfish, sunfish, buffalo and carp. While many of these areas are very popular and supply tremendous quantities of fishing and other recreation, diffi-
cult problems are also involved. They are so large that it is difficult to operate them under controlled fish management programs. Fertility of the water in some of these lakes tends to diminish over time and is accompanied by a decrease in the number of game fish and an increase in rough fish (23). Another problem results from multiple use within the area of recreation, i.e., fishing and water skiing tend to conflict. Eventually use-zoning restrictions will probably have to be applied to these bodies of water. However, the fact that these are large bodies of fresh water that have beautiful locations provides most of the necessary ingredients for water-based recreation. They undoubtedly will continue to be major recreational attractions for the entire area and are capable of supplying vast quantities of many types of outdoor recreation.

Another supplier of sport fishing in East Texas is the farm pond. Some combination of one or more of the following species can be stocked in these small lakes for fishing: largemouth bass, redear sunfish, crappie, channel catfish, blue catfish, and flathead catfish. Generally

the topography, climate and vegetation of the area produce a suitable environment for these small lakes. If properly developed and managed these ponds can provide the foundation for many water-based farm-produced recreational activities, Figure 4.

If fishing rights are to be sold, ponds should be developed so that efficient management practices can be applied. Unfortunately, due to poor management practices or low returns from the sale of fishing rights many landowners sell fishing rights, but with few fish that can be caught by the average fisherman. This situation does not ensure the steady and continuous demand of returning customers that is necessary if the operation is to be profitable. A pond that is either too small, too large, or is improperly designed, so that controlled stocking, maintenance of the desired balance of species of fish, fertilization and vegetation control can not be accomplished is of little value to a farm recreational enterprise. Under some management programs a pond should produce between 100 and 400 pounds of fish per acre per year. Generally, ponds should not be less than 3 acres or larger than 20

Figure 4. Small lakes, if properly stocked and managed, provide excellent fishing for both the "inexperienced" and "experienced" fisherman.
Figure 5. Tent camping is a very pleasurable family experience when done in a clean, improved campsite under large shade trees.

acres for efficient management (24). This size limitation, of course, is arbitrary and circumstances might justify either a larger or smaller pond than suggested.

In lakes under intensive management programs involving direct feeding of fish, production costs may be so high as to require ways, other than day leases, for marketing fish. In some states operators of recreational areas sell fishing on the basis of pounds caught, but in Texas the sale of bass, crappie or white perch is prohibited in all counties. Per-pound or per-fish sale of fresh water fish species, other than those mentioned above, is not prohibited in most of the counties in Economic Area XIII. The exception is Sabine County where the sale of fish from waters other than the Sabine River is prohibited (25). For intensive fish production and marketing, recreation operators will have to explore the potential for commercial production and sale of catfish and rough fish—shad, carp, suckers, gar and buffalo, where their sale is not prohibited.

Fresh water fishing is one of the most popular outdoor sports in the State. Nearly 2 million people did some fresh water fishing in 1960 and spent over $175 million on equipment, travel fees, etc. The average expenditure of each sportsman doing some fresh water fishing was over $90. Since there is so much interest in fresh water fishing it would appear that this is one phase of recreation that should be incorporated into a farm recreational operation.

Campgrounds and Supporting Facilities and Activities

The resources of Economic Area XIII seem to be especially well suited for the development of multiple-activity recreational enterprises. Camping, picnicking, swimming and boating are activities that complement a fishing enterprise. Results of the field survey indicate that there is a large number of small lakes in the area that could be managed for sport-fish production and that some of the lakes under extensive management programs are being used rather intensively at the present time for fishing. In 1961, 32 operators reported that nearly 10,000 sportsmen fished in their lakes during that year. Another study concluded, “Campers, when compared with noncamping outdoor recreation enthusiasts, are more active participants in all outdoor recreation activities, including picnicking, fishing, swimming, boating, hiking, and hunting. This suggests that all kinds of outdoor recreation facilities will be used if available near camping areas. Proximity to water sport facilities, for example, may be an important factor to consider in planning the location of additional areas.” (26)

These small fishing lakes provide the base around which such activities as camping, fishing, picnicking, boating and swimming can be built. Such an enterprise can be expanded to include additional features such as horseback riding, nature trails and shooting ranges. In this kind of recreational development, the wider the array of activities, the larger will be the market from which customers can be drawn. This assumes that the land area is adequate for sufficient distribution of activities so that use-conflicts will not arise. Crowding is a common objection to public developments where adequate land areas exist but where it is difficult to limit the number of users of facilities. A private development should be able to not only distribute facilities, but also control intensity of use to suit the consumer preferences. If the private developments do not provide services and facilities efficiently and effectively, they will have difficulty in being competitive with public developments with similar facilities.

Even with the many factors favoring outdoor recreational enterprises in this area, the landowner should certainly consider very carefully the questions set forth under the preceding section entitled, “Some Factors to Be Considered By Potential Recreation Producers.”

There are basically two groups of campers that landowners will want to consider when developing a campground. These groups are the “vacation” camper and the “weekend” camper.

Vacation campers probably will not be nearly as important in the near future from the standpoint of business as will the weekend campers. However, during the tourist season, developments on major highways should receive considerable business from transient vacationers that are looking for places to camp overnight, Figure 5.

As the resources of this area of East Texas are developed, the area will begin to attract vacation tourists from within Texas and from other states. The number of tourists attracted to the area will depend on the rate of development of recreation facilities and its competitive position in relation to other areas with similar resources in neighboring states.

Weekend campers will undoubtedly provide the strongest demand now and for some years to come. As stated previously, the area is rather
Trees, water and clean facilities provide ideal camping and picnic sites. Ideally located for weekend use in relation to several metropolitan population centers.

Camping facilities required to meet the needs of both the vacation and weekend camper are not very different. The average camper in either group will prefer to have such facilities as tent or trailer sites, picnic tables, grills, drinking water, showers and flush toilets, Figure 6 (27). Electrical outlets, water and sewer hookups are desirable for sportsmen that own pickup campers and camping trailers, Figure 7. This is especially true if they plan to spend several days in one location. Laundry facilities either at the campground or in a nearby town can be an asset, Figure 8. A small playground will provide many hours of enjoyment for small children and does not add greatly to the investment.

With these basic facilities the camper has more time to participate in other recreation activities and to enjoy the beauty of the outdoors. This is especially true for families with children. Many campers indicate that they want to “rough it,” and some do. Nevertheless, for the average camper who is accustomed to the luxuries provided by a high standard of living, roughing over a very long period becomes more work than pleasure. Most campers like the natural features of the outdoors, but will place a premium on those operations that provide potable water supplies, sanitary facilities, show-
Hand laundry facilities or automatic washers are of special importance to vacation campers if facilities are not readily available in nearby towns.

Swimming is another attraction that should not be overlooked, especially in an area with a climate as warm as that of East Texas. Farm producers of recreation generally will not be able to afford to incur a large investment in swimming facilities due to the relatively low return. They will probably want to zone an area of the fishing lake or stream for swimming. This area can be improved somewhat for swimming by adding a small sand beach and a swimming dock. The swimming facilities can be offered as a free attraction with no additional charge for use in the same manner as playgrounds and other facilities.

Promotion of a multiple-activity recreational enterprise is extremely important. Letting potential users know where and how to find the development is mandatory, as well as a listing of what facilities and activities are available.

Picnic facilities can add to the income of the operation if located close enough to population centers. Picnickers will seldom drive more than 30 to 60 minutes to use this type of facility.

Common picnic facilities needed are tables, grills, drinking water, toilets — preferably flush type in this climate, garbage receptacles, and area lighting. A shelter to accommodate larger groups may be desirable in areas where there is sufficient demand. A small playground can add a lot to both a picnic and camping facility. Most of the camping families have children, as indicated by a recent survey; the average camping family had 2.3 children, and therefore some activities for all members of the family would be highly desirable.

Charges for campground facilities average $1.50 to $2.50 per night per car or campsite. Some operators quote special weekly rates and also differentiate according to facilities offered at different campsites.

Picnic facilities lease for about $1.00 per day. Some operators charge a per-person fee.

The East Texas survey indicated that fishing rights were normally sold for $1.00 per person per day. Where boats were available they were normally rented for $1.00 per day. In some cases this fee included oars and life preservers.

The relatively low rates that are customarily charged for the use of farm-produced recreation should indicate that considerable volume of use will have to be obtained before the returns from such an operation can be very great. An outlet for some farm-produced commodities could be developed by the operator as an additional source of income. Also, some camp supplies can be stocked at a home-operated concession stand. If fishing is available, the operator may want to retail bait to his customers.

Picnic facilities can add to the income of the operation if located close enough to population centers. Picnickers will seldom drive more than 30 to 60 minutes to use this type of facility, Figure 11.

Figure 8. Hand laundry facilities or automatic washers are of special importance to vacation campers if facilities are not readily available in nearby towns.

Figure 9. Clean comfort stations with hot and cold running water, showers and flush toilets are used continuously when available and are strongly desired by campers.
Figure 10. Swimming areas in small lakes are very popular with families with children. Almost all campers and picnickers prefer recreational areas having swimming facilities.

The following are some of the means available for promoting recreational enterprises:

1. Have a colorful brochure printed for distribution, providing information on available activities, facilities, and the corresponding rates. A good map providing clear and concise directions to the development should be included.

2. Facilities can be listed with the various sportsmen's clubs and camping associations in the State.

3. To get nation-wide coverage, there are several campground directories which list both private and public campgrounds. These directories have become very popular with campers and certainly should provide good advertisement among potential users. To obtain a listing write to some of the following:

   a. AAA Campground Directory
      American Automobile Association
      1712 G. Street
      Washington 6, D. C.

   b. Campground Atlas
      Alpine Geographical Press
      Box 246, Station A
      Champaign, Illinois

Figure 11. Picnic areas are heavily used during the summer months. They should be located in shaded areas and preferably near a lake or stream.

Figure 12. Neat directional signs give campers and picnickers a good initial impression of an area and provide valuable information.
4. Advertisements can be listed in local newspapers and in those metropolitan newspapers within a 200-mile radius.

5. Road signs on major highways can attract business and give directions.

6. Hunting and fishing guides are now being published in Texas and nearby states. A listing in these publications should get wide distribution throughout the State and other areas. Two of the guides are:

   Southern Angler's and Hunter's Guide  
   P. O. Box 117, Albert Pike Station  
   Hot Springs, Arkansas  

   Texas Hunter's Guide  
   P. O. Box 6701  
   Dallas 19, Texas

In selecting a method of advertising, the operator is going to have to be very careful to minimize costs. As indicated before, the recreational enterprises discussed here are relatively low return types of activities and thus the operator will have to be very selective in choosing effective, low cost methods of promotion.

Sources of Assistance

A rather complete bibliography has been developed pertaining to recreational materials and related subjects. Most of these publications are available from the various sources at a relatively low cost and the county agricultural agent can provide many of them at no cost.

Technical Assistance

For technical assistance on specific problems concerning the development, planning and operation of farm recreational enterprises in Texas the following are some of the individuals or agencies that can be contacted:

   a. Private firms specializing in recreational development  
   b. County Agricultural Agent  
   c. County Health Officer  
   d. Work Unit Conservationist  
   Soil Conservation Service  
   e. Soil Conservation Service  
   U. S. Department of Agriculture  
   P. O. Box 648  
   Temple, Texas

   f. Texas Agricultural Extension Service  
   Texas A&M University  
   College Station, Texas  

   g. Texas Agricultural Experiment Station  
   Texas A&M University  
   College Station, Texas  

   h. Texas Parks and Wildlife Department  
   John Reagan Building  
   Austin, Texas  

   i. Texas State Department of Health  
   Austin 1, Texas

Financial Assistance

Financial assistance for farm recreation development is available, in many cases, from the various lending agencies normally supplying agricultural credit. Some of these agencies are:

   a. Local banks  
   b. Insurance companies  
   c. Farmers Home Administration

Camping Magazines

Camping magazines provide some information on recreational operations and consumer preferences. Some of these magazines carry private listings of recreational facilities. A few camping magazines are:

   a. “Better Camping”  
   1027 North Seventh St.  
   Milwaukee 3, Wisconsin  

   b. “Camping Guide”  
   215 Park Avenue South  
   New York, New York

Sportsmen's Clubs and Camping Associations

Some sportsmen’s clubs and camping associations assist operators in developing and promoting recreational enterprises. Some of the organizations are:

   a. Sportsmen’s Clubs of Texas, Inc.  
   1011 San Jacinto  
   Austin 1, Texas  

   b. American Camping Association, Inc.  
   Bradford Woods  
   Martinsville, Indiana  

   c. National Campers and Hikers Association, Inc.  
   2919 West Oklahoma Avenue  
   Milwaukee 15, Wisconsin

Listing of the private organizations and publications referred to in this publication is done so with the understanding that it does not constitute endorsement, but only provides information, and does not imply that all such organizations or publications are named herein.
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23. H. S. Swingle, "Relationships and Dynamics of Balanced and Unbalanced Fish Populations," Alabama Agricultural Experiment Station, B-274, Alabama Polytechnic Institute, Auburn, Alabama, 1950.

24. Edwin H. Cooper, "Improve Your Farm Fish Pond," Texas Agricultural Extension Service, B-213, College Station, Texas.


27. Extreme care should be taken to ensure that drinking water and sanitary facilities conform to State health laws. See: "Texas Sanitation and Health Protection Law."
