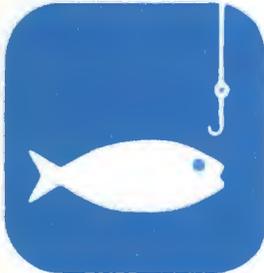


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Management  
Considerations  
in Operating  
Municipal Lake  
Recreation  
Enterprises  
in Oklahoma

Bulletin 730  
October 1977

Agricultural Experiment Station  
Oklahoma State University

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# Management Considerations in Operating Municipal Lake Recreation Enterprises in Oklahoma

**Edward J. Jordan and Daniel D. Badger\***

The increasing demand for outdoor recreation resulting from increased population, affluence, available leisure time, mobility and changes in attitudes toward recreation provides both public agencies and private individuals the incentive to increase development of recreation resources and improve the management of such resources. Many of these recreation resources are located in rural areas and thus have an impact on agricultural land and rural communities.

Outdoor recreation opportunities in Oklahoma historically have been provided by federal and state agencies. However, many Oklahomans as well as out-of-state recreationists prefer the types of recreation facilities provided by private individuals and local units of government. Recognizing the need for recreation facilities provided by both the public and private sector, federal agencies such as the Soil Conservation Service, Bureau of Outdoor Recreation and Small Business Administration have assisted in the development of local government-operated recreation enterprises.

The Soil Conservation Service administers the small watershed flood protection program. Watershed projects must be started, sponsored and maintained by units of government such as soil and water conservation districts, municipal governments and state agencies. The federal government can cost share with a sponsor on a basis of 50 percent of the construction costs, land rights and minimum basic facilities needed for public access to and enjoyment of the recreation area.

Public policy planners at the federal, state and local governmental levels require adequate socioeconomic information upon which to base their decisions concerning the development and management of recreation resources. Also, public officials generally have available only limited information on the competitive and complementary relationships of recreation facilities to make investment decisions involving recreation complexes to serve the public.

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Although several federal agencies provide financial and/or technical aid to develop water and related land-based recreation enterprises, many municipalities have difficulty in tracking down specific sources of information on the development and management of such enterprises. Also, many municipally operated recreation enterprises are forced to reduce their scope of recreation-operated activities in favor of other public services which local officials consider to be more important to voters. However, some municipal lake recreation enterprises have enjoyed continued success for many years.

## **Objectives and Procedures**

The general objective of this study was to provide guidelines needed in the decision-making process involving the establishment of municipal lake recreation enterprises in Oklahoma and managerial guidelines for their operation. Specific study objectives were to: 1) determine the characteristics of recreation enterprises operated by local municipal governments and 2) suggest guidelines needed in the decision process to establish and operate successful municipal recreation enterprises.

An inventory of municipal recreation enterprises was constructed with the assistance of officials of the Soil Conservation Service and various county agents in the state. The state was divided into four sectors by the north-south Interstate 35 highway and the east-west Interstate 40. The local municipal officials interviewed were selected to provide a geographic coverage of the state with approximately equal numbers of enterprises from each section. Alternative enterprises were selected in cases where an official of the sample enterprise was unable to be interviewed. Officials of 33 municipalities operating a total of 44 lakes were interviewed. A copy of the questionnaire developed for interviewing officials of these municipalities is presented in Appendix 1.

To determine the characteristics of the municipally operated recreation enterprises, information was collected on the uses permitted, location factors, facilities available, fee systems, future development plans, annual labor costs, visitation trends, problems encountered and methods of advertising used. This information was used to develop management guidelines for establishment and operation of successful recreation enterprises. Public policy planners should find it most useful in analyzing the supply of and demand for outdoor recreation by various levels of government.

## **Area of Study**

The specific study area focused on municipal lake recreation enterprises in Oklahoma (Figure 1). These enterprises were generally based upon or related to a city-owned lake. A typical municipal recreation enterprise involved one or many camping and/or picnicking areas around the city lake where various combinations of fishing, boating, water skiing and swimming were permitted.

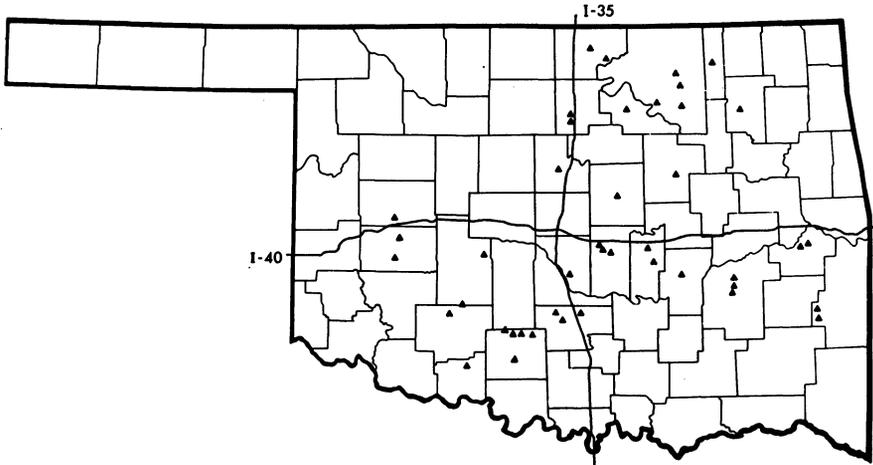


Figure 1. Location of municipal lake recreation enterprises in 1975 Oklahoma survey.

## **Operation of Municipal Lake Recreation Enterprises**

Municipal recreation enterprise characteristics include: location, recreation uses permitted, facilities and services available, fee schedules, expenditures for repairs, labor requirements, special lake events, development plans, attendance, management problems and use of advertising. Fifteen of the city officials interviewed were mayors or city managers, eight were lake rangers, three were directors of parks and recreation departments and the remaining seven held a variety of positions in city government. These officials had been in their present jobs an average of five and half years (Table 1).

### **Location of Municipal Recreation Enterprises**

Three locational factors concerning lake recreation enterprises were considered: the location of the lake relative to the operating municipality's city limits, the location of the enterprise relative to major transportation routes and the location of the lake relative to other federal, state and local recreation areas.

Only three of the 44 lakes were located within the city limits. The remaining 41 were an average of 6 miles from the city limits, ranging from a minimum of a quarter-mile to a maximum of 18 miles. The 44 lakes were an average of 19 miles from the nearest interstate, 6 miles from the nearest U.S. highway and 2 miles from the nearest state highway. Access to all city lakes was available via the county road system. The lakes were an average distance

**Table 1. Position and Tenure of City Officials Interviewed for 1975 Oklahoma Survey.**

<b>City</b>	<b>Position of Person Interviewed</b>	<b>Tenure (years)</b>
Bartlesville	City Manager	2.0
Blackwell	City Manager	.3
Bristow	Mayor	.3
Chandler	City Manager	6.0
Chickasha	City Manager	1.5
Claremore	Mayor	.3
Clinton	Secretary for City Manager	12.0
Comanche	City Manager	1.5
Cordell	Mayor	4.0
Duncan	Director of Parks and Recreation	1.0
Elmore City	Mayor	5.0
Fairfax	City Clerk	.5
Guthrie	Lake Ranger	1.0
Hobart	Mayor	2.5
Holdenville	Lake Superintendent	4.0
Hominy	City Treasurer	8.0
Lawton	Director, Community Services Dept.	1.0
Marlow	City Clerk	5.0
Maysville	Mayor	8.0
McAlester	Chief Lake Patrolman	1.0
Pauls Valley	Lake Patrolman	5.0
Pawhuska	Lake Superintendent	30.0
Pawnee	Mayor	.3
Perry	Utility Manager	20.0
Ponca City	City Manager	16.0
Purcell	City Manager	1.5
Seminole	Lake Ranger	.1
Shawnee	Director of Parks and Recreation	2.5
Stigler	City Manager	5.5
Talihina	Water Superintendent	2.0
Tecumseh	Lake Superintendent	1.0
Walters	Water Superintendent	27.0
Wewoka	Lake Caretaker	7.0

of 33 miles from the nearest federal recreation area, 35 miles from the nearest state recreation area and 22 miles from the nearest local recreation area, excluding its own recreation facilities (Table 2).

### **Recreation Uses Permitted at the Enterprises**

To determine recreation uses of municipal recreation enterprises, the city officials interviewed were asked to indicate which uses were permitted at the lake. They chose from a list of eight activities including: camping, swimming, boating, hunting, picnicking, fishing, water skiing and hiking.

The most frequently permitted activity was fishing, with all 33 city officials indicating this activity was permitted. Thirty-two officials indicated picnicking to be the next most frequently permitted activity, followed by

**Table 2. Distance of Municipal Lakes from City Limits, Other Recreation Areas and Major Transportation Routes, Based on 1975 Oklahoma Survey.**

City	Lake	Surface area (acres)	Distance (miles)						
			City Limits	Nearest Rec. Area			Nearest Highways		
				Fed.	State	Local	Interstate	U.S.	State
Bartlesville	Hudson	335	5	22	12	30	52	4	3
Blackwell	Blackwell	300	18	35	35	20	3	1	1
Bristow	Massena	24	—	15	15	18	1.5	.75	.8
Chandler	Chandler Municipal	120	1.5	35	35	14	1	1.5	1
Chickasha	Chickasha	1,950	17	17	17	14	20	7	8
Claremore	Claremore	470	1	15	16	21	2	2	1
Clinton	Clinton	335	17	10	10	17	2	17	4
Comanche	Comanche	201	3	70	70	12	50	3	.8
Cordell	Cordell	11	12	35	34	17	14	6	4
Duncan	Duncan	400	10	52	48	24	39	11.5	2.5
	Clear Creek	560	12	59	55	30	37	10	3
	Humphreys	882	10	60	56	28	34	6	2.5
	Fuqua	1,500	18	47	43	21	30	24	3
Elmore City	Brewer	NA <sup>a</sup>	.3	56	56	15	11	14	.3
Fairfax	Fairfax City	101	2.5	23	21	20	35	6	2.5
Guthrie	Guthrie	184	6	40	40	30	2	1	9
Hobart	Hobart	450	12	26	26	25	33	6	8
Holdenville	Holdenville	550	4	48	60	18	23	6	.1
Hominy	Hominy Municipal	365	.3	17	17	24	17	9	.3
Lawton	Ellsworth	5,600	10	11	40	30	2	1	1
	Lawtonka	1,868	15	.1	50	45	4	11	1
Marlow	J. W. Taylor	500	9	90	90	12	15	2	11
Maysville	Wiley Post Mem'l.	302	3.5	40	40	12	13.5	15	5.5
McAlester	Tahiwanda 1	102	3	8	19	46	3.5	4	3
	Tahiwanda 2	104	4	7	18	46	3.5	3	2
	McAlester	2,100	7	6	19	46	1	1	2
Pauls Valley	Pauls Vly. City	750	3	53	53	12	3	9	1

Municipal Lake Recreation Enterprises

Table 2. (continued)

Pawhuska	Bluestem	800	4.5	30	18	24	52	2.5	2.5
	Pawhuska	95	6	33	21	27	55	5	5
Pawnee	Pawnee City	257	1	29	1	22	11	1	.3
Perry	Perry	614	3.5	70	24	24	3.5	2	3.5
	CCC	75	1	67	21	21	1	3	.5
Ponca City	Ponca	805	2.5	15	15	20	11	2.5	.1
Purcell	Purcell City	160	—	15	15	13	.1	.25	.3
Seminole	Sportsman	355	6	65	75	10	16	8	2
Shawnee	Twin Lake N.	1,100	7.5	8	20	1	1.5	7.5	.8
	Twin Lake S.	1,336	6.5	7	18	12	2.5	6.5	.5
Stigler	John Wells	237	3	9	36	18	34	17	2
	Stigler	28	—	12	33	21	22	21	1
Talihina	Carl Albert	220	1.5	8	26	23	60	3	3
	Talihina	40	1	8	26	23	60	3	3
Tecumseh	Tecumseh	127	2.5	15	15	12	11	2	2
Walters	Walters City	NA <sup>a</sup>	2	91	91	20	4	6	1
Wewoka	Wewoka City	625	3	67	77	18	20	6	3

<sup>a</sup>Data not available.

**Table 3. Recreation Uses Permitted by Municipal Governments at Lake Recreation Enterprises, Based on 1975 Oklahoma Survey.**

<b>Recreation Uses</b>	<b>No. of Municipal Gov'ts. Permitting Activity</b>
Fishing	33
Picnicking	32
Boating	31
Camping	29
Hiking	25
Hunting	23
Water skiing	16
Swimming	6

boating, camping, hiking, hunting, water skiing and swimming. Although water skiing was allowed at 16 lakes, only six permitted swimming. The most common reason given for not permitting swimming was the health factor associated with use of the lake as the city water supply (Table 3).

### **Facilities and Services Available at Municipal Lakes**

A variety of facilities, from blacktopped roads to convenience stores, was available at lake sites (Table 4). Facilities most commonly available included trash barrels, dirt roads, hard-surfaced roads, boat ramps, location and direction signs and tent campsites. Rental cottages or cabins, sunbathing beaches, swimming areas and showers were the least frequently provided facilities.

**Table 4. Facilities and Services Available at Municipal Lake Recreation Enterprises, Based on 1975 Oklahoma Survey.**

<b>Facilities and Services</b>	<b>Number</b>
Trash barrels	33
Dirt roads	33
Hard-surfaced roads	30
Boat ramps	28
Location and direction signs	26
Tent campsites	24
Boat docks	22
Pit-type toilets	17
Convenience store	17
Auto/RV campsites	16
Toilets with running water	16
No designated campsites	7
Rental boats	6
Showers	5
Swimming area	3
Sunbathing beach	2
Rental cottages, cabins	2

## **Fees**

Twenty-nine of 33 city officials indicated that some type of fee was charged for the use of the lake by recreationists (Appendices 2-7). At 24 cities permits are sold at the lake by either lake patrollers or concessionaires, while 10 municipalities sell permits at city hall. In one municipality the local bait shops sell permits; there is an additional charge of \$.25 for the same permit sold at city hall.

Twelve cities charge camping fees ranging from \$.75 to \$2.50 per vehicle per day depending on the hookups used by campers. Six of these cities charge \$1 per vehicle per day without any hookups. Electrical hookups cost an additional \$.50 to \$2 per hookup per day. Only two cities sell annual camping permits, which range from \$75 to \$135 per camping unit per year.

Twenty-two charge fishing fees. Daily fees per person range from \$.25 to \$2. Fourteen cities charge \$.50 per person per day. Nineteen cities charge from \$2.50 to \$15 per person for annual fishing permits. Eight cities sell family annual fishing permits ranging in price from \$4 to \$20. One city charged no fees for persons under 16 and over 65 years of age. Several cities charged nonresidents of the county higher fishing fees than county residents.

Boating permits were sold by 18 lake enterprises. Daily boating permits ranged from \$.50 to \$3 per boat. Eight of these enterprises charged \$1 per boat. Annual permits from \$2.50 to \$20 per boat were sold at the 18 lakes. Six of these 18 lakes charged \$7.50 per boat per season. One city charged residents and nonresidents of the county different rates. The range in annual boating fees varied according to the size of the boat and motor.

Hunting fees were charged by 13 cities. Daily hunting fees ranged from \$.50 to \$2 per hunter and annual permits were \$3 to \$7.50 per hunter. Nine enterprises charged \$1 for daily permits and eight enterprises charged \$5 per hunter for annual permits. Five of the 13 enterprises allowed quail hunting in addition to duck hunting.

Water-skiing permits were sold at nine lake enterprises. Daily permits cost \$1 to \$3 per boat or \$.25 to \$.50 per person. The cost of annual permits was \$12.50 to \$20 per boat or \$2.50 to \$3 per person.

Other fees charged by lake enterprises included permits for duck blinds, boat docks and lake lot leases.

## **Repair Costs of Facilities**

Twenty-four of the 33 municipal officials responded to questions about costs for repairs and erosion control at the lake enterprises. These 24 officials indicated an average annual bill for repair and/or replacement of worn or damaged facilities of \$2,785, ranging from a minimum of \$100 to a maximum of \$15,000.

Only eight city officials indicated expenditures on erosion control at the lake enterprises. These expenditures, ranging from \$100 to \$15,000, averaged \$3,225 per year.

### Operation and Maintenance Labor Required by Municipal Lake Enterprises

To determine labor requirements for operation and maintenance of a municipal lake enterprise, city officials were asked to relate in terms of time or dollars their labor requirements for operations such as mowing, repair of vandalism, trash collection, spraying and general cleanup of litter. Half of the city officials were unable to estimate either time or dollars devoted to the above activities due to the interrelated roles of the various city maintenance departments which provided the labor for such operations. However, 17 enterprises did have estimates for operation and maintenance labor requirements.

In terms of man-hours, these 17 enterprises averaged 690 man-hours for mowing, 270 man-hours for repair of vandalism, 414 man-hours for trash collection, 63 man-hours for spraying and 864 man-hours for general cleanup (Table 5). The average annual total man-hours used by the 17 enterprises was 2,301.

**Table 5. Labor Required for Operation and Maintenance at Municipal Lake Recreation Enterprises, Based on 1975 Oklahoma Survey.**

Municipality Code No.	Mowing	Repair	Trash Collection	Spraying	General Cleanup	Total
			(Man-hours)			
1	4,000	1,500	500	—	4,000	10,000
2	16	72	64	32	48	232
3	100	16	200	—	200	516
4	240	104	156	24	104	628
5	480	36	240	—	240	996
6	333	833	166	333	500	2,165
7	475	160	190	240	24	1,089
8	128	100	320	—	384	932
9	80	160	400	—	140	780
10	80	10	25	—	80	195
11	1,933	145	1,667	—	4,350	8,095
12	192	300	112	—	192	796
13	600	500	1,700	200	1,500	4,500
14	1,800	175	300	44	1,400	3,719
15	448	200	400	100	488	1,636
16	500	200	500	100	700	2,000
17	333	85	100	—	333	851
Total	11,738	4,596	7,040	1,073	14,683	39,130
Average	690	270	414	63	864	2,301

Based on \$3 to \$5 per hour for wages and fringe benefits, the cost for these maintenance operations at the 17 enterprises averaged \$3,018 for mowing, \$1,310 for repair of vandalism, \$2,423 for trash collection, \$276 for spraying for weeds and insects and \$3,150 for general cleanup, for an average annual maintenance bill of \$10,177 (Table 6).

The city officials were questioned about the number of full-time and part-time employees on the lake's labor force. The responses of the officials revealed an average of two full-time workers and one part-time worker was employed at each lake.

The city officials were also asked about the mowing schedule at the lakes during a typical year and during an extremely rainy year. Twenty officials indicated a once-a-week mowing schedule during the recreation season, six mowed as needed, five mowed twice a week, two mowed every 10 days and one mowed twice a month. In an extremely rainy season, 20 of the enterprise operators mowed once a week, five mowed as needed, five mowed twice a week, two mowed every 10 days and one mowed twice a month. Nine of the 20 enterprises which mowed on a weekly basis during an extremely rainy season said this was the same mowing schedule they maintained in a typical year due to the constraint of number of men and machines available for mowing.

**Table 6. Labor Costs for Operation and Maintenance at Municipal Lake Recreation Enterprises, Based on 1975 Oklahoma Survey.**

Municipality Code No.	Mowing	Repair	Trash Collection	Spraying	General Cleanup	Total
1	\$20,000	\$ 7,500	\$ 5,000	—	\$20,000	\$ 52,500
2	160	360	640	160	240	1,560
3	300	48	600	—	600	1,548
4	720	312	468	72	312	1,884
5	1,440	108	720	—	720	2,988
6	1,000	2,500	500	1,000	1,500	6,500
7	1,000	800	400	—	480	2,680
8	1,024	300	8,000	—	1,152	10,476
9	400	480	1,200	—	420	2,500
10	240	30	75	—	240	585
11	5,800	725	5,000	—	4,350	15,875
12	576	900	336	—	576	2,388
13	4,000	5,000	10,000	2,500	10,000	31,500
14	10,800	1,750	5,250	367	8,400	26,567
15	1,344	600	1,200	300	1,464	4,908
16	1,500	600	1,500	300	2,100	6,000
17	1,000	250	300	—	1,000	2,550
Total	\$51,304	\$22,263	\$41,189	\$4,699	\$53,554	\$173,009
Average	\$ 3,018	\$ 1,310	\$ 2,423	\$ 276	\$ 3,150	\$ 10,177

## **Special Activities at the Lakes**

Twelve of the 33 city officials indicated that special events were held at the lakes each year. Activities such as fishing contests, arts and crafts shows, boat shows, boat races, fireworks displays and picnics were popular special events. Generally, these activities were held in conjunction with Fourth of July celebrations. City officials for 21 municipalities which had not held any special activities expressed an interest in starting such events at their lakes.

Six lake enterprises were used by local clubs and scouting organizations for meetings on outdoor activities. These activities included boating safety courses, hunting safety courses and camp skills programs. One lake ranger, who in his off-time is a scout leader, said the lake provides an excellent training facility for his scouts because it is near their homes.

## **Future Development Plans**

Fifteen city officials indicated they were satisfied with their current set of facilities and saw no need for additional facilities. Eighteen indicated they were planning additional facilities or major repairs of present facilities for future development of the lakes. Commonly mentioned facilities to be added were campground areas, playgrounds, restrooms, concrete picnic tables, parking-lot-type lights, fishing docks and marinas. Officials for three city lakes indicated a greater need to repair heavily used facilities instead of adding new ones.

When asked about facilities which were not currently available but were most needed to meet future recreation demands, 14 city officials responded with the types of facilities they were considering in their future development plans. Most of the officials said their immediate facility needs were campgrounds, playgrounds, restrooms, lights for campgrounds, concrete picnic tables and boat docks.

## **Recreation Attendance at City Lakes**

Attendance data for 1975, 1974 and the 1971-75 average attendance at the city lake enterprises are presented in Table 7. Thirty-two of the 33 city officials reported their 1975 recreation attendance. Thirty-one officials reported 1974 and 1971-75 average recreation attendance. Recreation attendance for 1975 was 2,000 or more visitors at 21 city lakes. In 1974, recreation attendance totaled 2,000 or more visitors for 17 lakes. For a five-year average of recreation attendance, 16 lakes had 2,000 or more visitors. Officials at nine lake enterprises indicated that lake attendance had been increasing in recent years. Several of these officials believed the increasing attendance could be attributed to more people vacationing closer to home in the face of the energy crisis.

**Table 7. Recreation Attendance at Municipal Lakes, Based on 1975 Oklahoma Survey.**

Number of Recreationists	1975		1974		1971-75	
	No.	%	No.	%	No.	%
Less than 999	5	16	5	16	5	16
1000-1999	6	19	9	29	10	32
2000-4999	9	28	8	26	7	23
5000-9999	4	12	1	3	2	6
10,000 or more	8	25	8	26	7	23
Total	32	100	31	100	31	100

### Management Problems

To determine the most critical management problems facing lake management, city officials were asked to rank in order of importance a list of nine problems (Table 8). The most important management problems facing the 31 city officials responding to the question were abuse of facilities, littering, hiring and keeping good labor and vandalism. The least important problems included fluctuating lake levels, solid waste collection and disposal and reducing conflicts between competitive recreation uses.

### Advertising

All 33 municipalities used word-of-mouth advertising by recreationists. This was the only method of advertising for 15 cities. Seventeen enterprises advertised the lake with road signs. Ten enterprises were advertised in local newspapers and five on local radio stations. Several city officials indicated the reason for use of no advertising besides word-of-mouth by recreationists was to assure that their facilities would be available for the citizens of their city and not nonlocal recreationists.

**Table 8. Management Problems of Municipal Lakes, Based on 1975 Oklahoma Survey.**

Problem Area	Rank
Abuse of facilities	1
Littering	2
Hiring and keeping good labor	3
Vandalism	4
Communication between recreationists and lake management	5
Enforcement of lake rules and regulations	6
Reducing conflicts between competitive uses	7
Solid waste collection and disposal	8
Fluctuating lake levels	9

## **Management Guidelines for Lake Recreation Enterprises**

Three major differences exist between private and municipal recreation enterprises: 1) the municipal enterprise does not have to make a profit, 2) the citizens of the municipality have some influence with their votes on decisions made by elected officials concerning the management of the lake enterprise and 3) recreation is only one of several uses for municipal lakes. Flood protection and municipal and industrial water supply usually have priority over recreation uses. These differences lead to differences in approaches to managing municipal recreation enterprises compared to private ones.

### **Development Programs**

Since local citizens have at least some input into lake management decisions through their elected officials, the unit of city government responsible for managing recreational facilities seeks to provide the types of facilities preferred by its constituents. The basic package of recreation facilities at Oklahoma municipal lakes typically includes a system of access roads, camping areas with restrooms and boat launching ramps. This group of facilities provides for recreation uses such as boating, camping, fishing, picnicking and water-skiing. In many cases this is the extent of the decision process of development plans for the enterprise.

An aggressive maintenance program insures that current facilities are kept in good condition throughout their useful life. Some cities develop their basic facilities, allocate resources for operation and maintenance and then terminate their development program. Later, as use of the facilities increases, maintenance problems may appear, particularly in high-use recreation areas. When additional resources for maintenance and capital improvements are finally provided, some of the facilities may be beyond repair. Then the choice is between a major repair program for the original facilities and developing new recreation areas. The latter choice spreads an already inadequate operation and maintenance budget over even more facilities.

Prior to making such decisions, city officials responsible for setting lake recreation policy should consider the tradeoff between a large quantity of inadequately maintained facilities and a smaller number of facilities maintained in good operating condition. As more recreationists use the lakes' facilities, responsible officials determine what additional facilities are required. However, development of additional facilities should keep pace with the city's ability to properly maintain its recreation facilities.

The responsible city officials should set up a timetable for the development of recreation facilities (Table 9). For example, suppose the city officials plan to develop camping facilities at the municipal lake. The objective is to provide two camping areas, each with 75 campsites, a restroom with showers, paved access roads, boat launching ramps, boat docks, fishing piers, a swimming area and a convenience store. The city officials, realizing the parks

**Table 9. Suggested Timetable for Development of Facilities over a 10-Year period for a Municipal Lake Recreation Enterprise.**

<b>Selected Investment Item</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>	<b>Year 9</b>	<b>Year 10</b>	<b>Total</b>
<b>Campground:</b>											
Picnic tables	20	20	10	10	15	20	20	10	10	15	150
Trash barrels	30	20	10	10	15	30	20	10	10	15	170
Campfire grills	20	20	10	10	15	20	20	10	10	15	150
Concrete pad	10	10	10	10	10	10	10	10	10	10	100
Electrical hookup	10	10	10	10	10	10	10	10	10	10	100
Water hookup	10	10	10	10	10	10	10	10	10	10	100
<b>Restrooms:</b>											
Flush-type	—	—	1	—	—	—	1	—	—	—	2
Pit-type	1	1	—	—	—	1	1	—	—	—	4
Showers	—	—	1	—	—	—	1	—	—	—	2
Swimming beach and area	1	—	—	—	—	1	—	—	—	—	2
Boat launching ramp	2	—	—	—	—	—	—	—	—	—	2
Convenience store	—	—	—	—	—	—	—	—	—	1	1
Rental boats	6	—	—	—	—	6	—	—	—	—	12
Boat docks	1	1	—	—	—	1	1	—	—	—	4
Fishing pier	1	1	—	—	—	1	1	—	—	—	4
Location, direction and entrance signs	6	—	—	—	—	6	—	—	—	—	12

department's budget would not permit development of all facilities within one year, have planned to spread the project over a 10-year period.

The project is to be developed in two five-year phases. In the first five years, development emphasis is placed on one campground. While maintaining the facilities developed at the first campground, development emphasis is placed on a second campground in the project's second five-year phase.

In the first year, a basic set of facilities for one campground is constructed. Additional facilities are added to the first campground over the next four years. In the sixth year, a basic set of facilities for the second campground is constructed, while maintaining the facilities at the original campground. Additional facilities are constructed at the second campground over the next four years. At the end of the two-phase, 10-year period, the city officials will reach their objective of providing two campgrounds within the parks department's budget to maintain all facilities in good condition.

### **Physical Area to be Maintained**

The responsible city officials should reevaluate the amount of physical area around the lake which is provided for recreation use. If the situation is one of trying to provide too much space, given the budget constraint, closing off some areas and/or cutting back of services at areas less intensely used may be required. Other management decisions also need to be made. For example, do all recreation areas need frequent mowing? Areas located the greatest distance from one or two heavily used camping or boating areas could be placed on a mowing schedule with longer time periods between mowings. The lake managers should concentrate their efforts on keeping the more heavily used recreation areas in excellent condition.

Emphasizing operation and maintenance of fewer areas maintained in excellent condition can also be the guide for control of insects and other outdoor pests. Regular spraying for chiggers, ticks, mosquitoes and other insect pests at picnicking and camping areas where facilities are more highly developed and heavily used will result in more efficient and effective allocation of operation and maintenance resources. Also, problems with flies, skunks, raccoons and other night prowlers attracted by garbage and other solid wastes in trash barrels can be reduced through regular collection and proper disposal. Again, concentration of resources in fewer recreation areas expedites the collection of solid wastes.

Control of vandalism also is facilitated by operating fewer, well patrolled recreation areas. Sufficient personnel are required for supervision of recreation areas to provide daily inspection of facilities. More frequent inspection visits should be made of each area during periods of peak use. However, even during the off-season, facilities should be checked on at least a weekly basis. Frequent inspection schedules reduce opportunities for vandals to destroy property. Also, once such damage occurs, frequent inspection will detect it and ar-

rangements can be made to have damaged facilities quickly repaired or replaced.

### **Environmental Quality Problems**

Many city lakes in Oklahoma were built for the multiple-purpose mix of flood control, water supply and recreation. This mix of uses results in some environmental problems. During times of flood waters, temporary loss of some picnicking and camping facilities may occur. This is especially a problem where facilities have been located near the shoreline to maximize scenic views of the lake and reduce the distance recreationists must walk to reach the water. Associated with periods of high waters is the physical erosion of topsoil leading to damage to the vegetative cover and the exposing of tree roots. Such damages to a recreation area not only cause losses to its scenic or aesthetic quality, but also to its future usefulness.

Use of off-road vehicles, motorcycles, minibikes, dune buggies and four-wheel-drive vehicles is increasing. Noise from these vehicles added to the sounds of early morning boaters, fishermen and skiers have increased noise problems in recreation areas. The lake management needs to establish areas for use of off-road vehicles. Quiet zones and quiet times for evening, night and early morning hours need to be established and lake personnel must enforce these regulations.

### **Economic Considerations in Lake Recreation Management**

A key question the management of a municipal lake must answer is, "Who do we serve or who are our clientele?" Most city officials view the answer to this question to be the local residents. However, depending on the method to finance the lake project, the community may have an obligation to serve more than just local residents. Some municipalities have obtained ownership control of the lake project through cooperation with the Soil Conservation Service under one of two flood protection programs, either Public Law 566 of 1956 or the Flood Control Act of 1944. Other cities have financed the actual building of the lakes themselves, but have used federal matching funds from the Land and Water Conservation Fund Act through the Bureau of Outdoor Recreation on a 50-50 cost-sharing basis to develop recreation facilities. In view of these federal sources of financing the recreation facilities, consideration needs to be given to making the facilities of the lake available not only to local residents, but also to other state residents as well as out-of-state recreationists. The position the lake management takes on who is to be served influences the city's policy of user fees.

## Fee Policy

There are four approaches to setting user fees. First, the municipal lake enterprise can be fully subsidized to the user (i. e., paid for by city revenues). Second, nominal fees can be established to cover part of the average variable costs (i.e., operation and maintenance costs associated with the recreation facilities at the lake). A third approach is to set the level of fees to cover the operation and maintenance costs plus a portion of average fixed costs (i.e., those costs incurred whether or not any recreationists visit the lake enterprise). Another approach is to establish a higher level of fees to cover both average variable costs and fixed costs plus an additional return on the investment, so funds can be accumulated for future improvements at the lake.

Seven municipalities fully subsidize the lake enterprise, providing facilities without charging user fees. Fifteen charge user fees which recover all or part of the operation and maintenance costs at the lake. Eleven charge user fees which cover operation and maintenance costs plus some portion of average fixed costs. None of the municipalities in this study operated its lake enterprise to cover both average variable costs, operation and maintenance costs and average fixed costs.

The policy of setting fees at levels which cover none or only a portion of average variable cost reflects the lake management's view of who is to be served. Municipalities which do not cover all average variable costs, operation and maintenance costs with revenue from the lake enterprise evidently have a policy of maximizing recreation benefits for the local citizens, subject to the city's lake budget constraint. These cities' officials argue that local citizens, through their tax dollars and nominal user fees, pay for the lake enterprise. They see no reason to encourage use of the lake enterprise by recreationists other than local citizens because these recreationists would share benefits for which local residents have paid. However, this argument overlooks the fact that for lakes and recreation facilities partially built with federal grants the costs are shared by all federal taxpayers. In these cases no valid reason exists to exclude nonresident recreationists.

Another argument for exclusion of nonresidents is although all taxpayers share part of the fixed costs of the lake and facilities, local citizens through their local taxes and user fees pay the operation and maintenance costs. While nonresident recreationists are paying the same user fees as residents, they pay fewer local taxes. However, a mixed pricing scheme of higher user fees for nonresidents than residents would equalize the portion of average variable costs which are paid by residents and nonresidents. Several municipalities in this study currently use mixed pricing schemes.

## **Advantages of Serving a Wider Range of Recreationists**

By encouraging use of the lake and its facilities by more recreationists than just local citizens, a number of advantages accrue to the lake enterprise. For example, consider a municipality operating a lake financed through participation with the Soil Conservation Service in the Public Law 566 program. The lake recreation facilities may be cost-shared on a 50-50 basis with either the Soil Conservation Service or the Bureau of Outdoor Recreation. The recreation facilities provided include a campground of 100 campsites with parking space, concrete picnic table, campfire grill and electrical hookups at each site, a restroom and shower complex, a boat launching ramp, a picnic area of 25 picnic sites with concrete picnic tables, campfire grill and parking space at each site, a group of picnic shelters with concrete tables and fireplaces, and access roads to all facilities.

The municipality charges local resident recreationists \$3 per site per night for camping, \$.50 per electrical hookup per night, \$.50 per boat per day (\$5 per year), \$.50 per person per day for water-skiing (\$5 per year), \$.50 per person per day for fishing (\$5 per year), \$1.50 per site per day for picnicking and \$20 per day for the group picnic shelter. User fees for nonresidents are \$4 per site per night for camping, \$.75 electrical hookup per night, \$1 per boat per day (\$10 per year), \$1 per person per day for water-skiing (\$10 per year), \$1 per person per day for fishing (\$10 per year), \$2 per site per day for picnicking and \$25 per day for the group picnic shelter.

Annual fixed costs for the lake enterprise are \$31,727 (Table 10) and annual variable costs are \$50,500 (Table 11) for annual total costs of \$82,227. Revenue from local resident recreationists was \$56,405 and revenue from nonlocal recreationists was \$29,830 for an annual total revenue of \$86,235. Thus, annual net returns to the enterprise are \$4,008 (Table 11). Without the revenue from the nonresident recreationists, only the variable costs plus a portion of fixed costs are covered. Thus, to provide this particular package of recreation facilities at the lake enterprise, the municipality either must subsidize the operation from the city treasury or charge higher fees to nonresidents.

The additional revenue from nonlocal recreationists permits the hiring of additional maintenance personnel and the purchase of additional equipment and material for operation and maintenance. The additional resources may not be provided as quickly if the costs of developing and operating the lake enterprise must be paid from city revenues. The city revenues freed by a self-sufficient lake enterprise can be used for future development of its facilities.

Through the multiplier effect, local merchants of the city also will benefit from expanded use of the lake by nonlocal recreationists. Although many recreation purchases made by nonlocal recreationists occur in their

**Table 10. Total Investment and Annual Capital Costs at a Municipal Lake Recreation Enterprise.**

Items	Quantity	Expected Life (years)	Total Investment	Depreciation <sup>a</sup>	Interest <sup>b</sup>	Annual Capital Costs
Land (acres)	60	—	\$ 18,000	—	\$ 1080	\$ 1080
Parking spaces	125	10	18,750	\$ 1875	1125	3000
Picnic tables	150	10	32,500	3250	1950	5200
Campfire grills	125	10	12,500	1250	750	2000
Trash barrels	130	5	1,300	260	78	338
Electrical system	1	20	20,000	1000	1200	2200
Restroom & showers	1	20	25,000	1250	1500	2750
Picnic shelter	1	20	10,000	500	600	1100
Boat launch ramp	1	25	10,000	400	600	1000
Parking lot	1	25	7,500	300	450	750
Road system	1	25	50,000	2000	3000	5000
Landscaping	—	10	10,000	1000	600	1600
Miscellaneous	—	5	2,000	400	120	520
Trucks	2	5	10,000	2000	600	2600
Tractor	1	5	4,000	800	240	1040
Lawn mowers	2	2	200	100	12	112
Tools	—	5	2,000	400	120	520
Repair shed	1	10	2,000	200	120	320
Office building	1	10	1,000	100	60	160
Trash Truck	1	5	1,680	336	101	437
<b>Total</b>	<b>—</b>	<b>—</b>	<b>\$238,430</b>	<b>\$17,421</b>	<b>\$14,306</b>	<b>\$31,727</b>

<sup>a</sup>Straight line depreciation.<sup>b</sup>Assumed 6% interest rate.

**Table 11. Annual Costs and Returns for a Municipal Lake Enterprise Based on an Innovative Management Outlook.**

<b>Annual Income</b>		
Residents:		
Camping (120 days x 100 sites x 56% occupancy x \$3/site)	\$20,160	
Electrical hookups (42 hookups x 120 days x \$.50/hookup)	2,520	
Boating (100 days x 50 boats/day x \$.50/boat)	2,500	
(400 annual permits x \$5/boat)	2,000	
Fishing (150 days x 175 fishermen x \$.50/fisherman)	13,125	
(200 annual permits x \$5/permit)	1,000	
Water-skiing (100 days x 200 boats x \$.50/boat)	10,000	
(200 annual permits x \$5/permit)	1,000	
Picnicking (100 days x 14 sites x \$1.50/site)	2,100	
(100 days x \$20/group x 1 group/day)	2,000	
<b>Total Resident Income</b>	<b>\$56,405</b>	
Nonresidents:		
Camping (120 days x 100 sites x 19% occupancy x \$4/site)	9,120	
Electrical hookups (120 days x 14 hookups x \$.75)	1,260	
Boating (100 days x 20 boats/day x \$1)	2,000	
(200 annual permits x \$10/permit)	2,000	
Fishing (150 days x 50 fishermen x \$1/fisherman)	7,500	
(50 annual fishing permits x \$10/permit)	500	
Water-skiing (100 days x 50 boats/day x \$1/boat)	5,000	
(50 annual permits x \$10/permit)	500	
Picnicking (100 days x 6 sites x \$2/site)	1,200	
(30 days x \$25/group x 1 group/day)	750	
<b>Total Nonresident Income</b>	<b>\$29,830</b>	
<b>Total Annual Income</b>		<b>\$86,235</b>
<b>Annual Operating Costs</b>		
Advertising	5,000	
Fuel, oil	10,000	
Utilities	10,000	
Supplies	1,500	
Labor:		
Lake patrollers	12,000	
Laborers (6 workers x 8 hours/day x \$2.50/hour)	12,000	-\$50,500
<b>Annual Capital Costs (see Table 10)</b>		<b>-\$31,727</b>
<b>Net Return</b>		<b>\$ 4,008</b>

hometowns, a number of on-site services are required. Groceries, picnic supplies, gasoline, bait, sporting goods and other service items often are needed by the recreationists.

### Advertising of Lake Facilities

Additional revenue generated by the lake enterprise from increased recreation attendance may permit the development of an advertising program for the lake. Information about the location of the lake, hours of operation, fee schedule and facilities available may be conveyed to nonresident recreationists through an advertising program. Advertising can be used to encourage use of the lake in late spring or early fall when many of its facilities are underutilized.

Advertising can also be used to promote special events held at the lake.

Special events such as opening for a new season, boat races, picnics, demonstrations of various outdoor skills, fireworks displays and others can be used to stimulate use of the lake facilities. Such special events are excellent opportunities to show recreationists the facilities available and the type of job the lake management is doing with the enterprise.

## **Liability Aspects of Municipal Lake Recreation Enterprises**

Many of the liability aspects of private recreation enterprises are similar to the liability aspects which apply to municipal lake recreation enterprises. The three classes of entrants upon municipal property—trespassers, licensees and invitees—are owed varying degrees of legal duties by the city. Usually, the city owes no duty to anticipate the presence of trespassers, but it must refrain from willfully or wantonly injuring the trespasser.

A higher duty is owed to the licensee, who pays a fee or buys a permit to use the facilities of the city. The city owes the licensee the duty to anticipate his presence and to protect him accordingly against known danger. If the city's premises are inherently dangerous or there exists dangerous instrumentalities on the premises the failure to exercise ordinary care to prevent injury to the licensee will be considered willful and wanton. The city owes the invitee the duty to keep the premises reasonably safe by exercising ordinary care and prudence not to injure him.

The "attractive nuisance doctrine" is the exception to the general rule that no duty is owed to a trespasser other than not intentionally injuring him. This doctrine imposes liability upon the municipality for injuries sustained by children. The children are technically trespassers, but are attracted to the land by instrumentalities which are unusual and dangerous in nature. These instrumentalities arouse the curiosity of children so immature as to be unable to appreciate the danger.

When the municipality charges an admission fee, the city owes a duty to the public to use a high degree of care to keep the premises in safe condition for use. If the city fails to do so it is liable in damages. The municipality may reduce the chance of accident as well as its legal liability by specifically delineating the recreation area and restricting guests from areas not integral to the city's recreation enterprise.

### **Methods of Limiting Liability**

The municipality which operates a recreation enterprise owes the licensee and invitee the duty to warn them of dangerous conditions which may exist on the premises. One way to alert invitees and licensees of dangerous conditions is

an oral (verbal) warning. Large, printed signs in conspicuous places also can be used to warn persons of dangerous conditions. However, signs stating that the city is not liable for injury or damage have *no* legal effect in eliminating the city's liability in case of injury to an invitee or licensee.

The city may be able to limit its liability by excluding unwanted guests. Typically, an unwanted guest is one who is considered to be a troublemaker. The city may evict a trespasser so long as no "unreasonable" force is used. An unwanted licensee may be requested to leave by orally telling him his license or right to use the property is terminated. To exclude an unwanted invitee who has paid a fee to use the recreation facilities, the city must first repeal the status of invitee. This can be done when the invitee is acting in a negligent or dangerous manner, whereupon the city can ask the violator to leave the premises.

Wherever fees are charged for the right to enter property or the right to use recreation facilities, liability insurance is a must for protection from large tort liabilities. The city attorney should be consulted to determine just what coverage is needed to protect the city's interests in case of injury to recreationists using recreation facilities operated by the city.

## Summary

The purpose of this study was to provide guidelines for establishment and operation of successful municipal lake recreation enterprises in Oklahoma. To determine the characteristics of municipal recreation enterprises in Oklahoma, officials of 33 municipalities which operate 44 lakes were interviewed. The group surveyed was selected to provide geographic coverage of the state. Information was obtained in these interviews on location, advertising, attendance, fees, operation and maintenance costs for the recreational management of the city lakes.

Only three of the 44 lakes are located within the city limits. The remaining 41 are an average of 6 miles from the city limits, ranging from a quarter mile to 18 miles. Access to all 44 lakes is available via the county road system. The 44 lakes are an average of 19 miles from the nearest interstate, 6 miles from the nearest U.S. highway, and 2 miles from the nearest state highway.

The most common method of advertising the lake is word-of-mouth advertising done by the recreationists. Word-of-mouth advertising is the only method used to advertise the lake enterprise in the case of 15 of the city officials interviewed. Ten municipalities advertise in local newspapers and five use ads on local radio stations.

In 1975, recreation attendance totaled 2,000 or more visitors at 21 city lakes. The 1974 recreation attendance was 2,000 or more visitors for 17 lakes. The five-year average recreation attendance was 2,000 or more visitors for 16 lakes.

Twelve cities charge camping fees which range from \$.75 to \$2.50 per vehicle per day. Six of these cities charge \$1 per vehicle per day with no

hookups. Generally, electrical hookups cost \$.50 per day. Fishing fees are charged at 22 cities, ranging from \$.25 to \$2 per person per day. Fourteen of these cities charge \$.50 per person per day. Annual fishing permits are sold by 19 cities, ranging from \$2.50 to \$15 per person. Eighteen municipalities sell boating permits. The daily boating permits range from \$.50 to \$3 per boat. Annual boating permits are also sold, ranging from \$2.50 to \$20 per boat.

Thirteen cities sell daily hunting permits ranging from \$.50 to \$2 per hunter, and annual permits ranging from \$3 to \$7.50 per hunter. Nine lake enterprises sell daily water-skiing permits which range from \$1 to \$3 per boat or \$.25 to \$.50 per person. Annual water-skiing permits are \$12.50 to \$20 per boat or \$2.50 to \$3 per person.

At 24 of the 33 municipalities repair expenditures average \$2,785 per year, ranging from \$100 to \$15,000. Eight municipalities spend an average of \$3,225 annually for erosion control.

For annual operation and maintenance labor requirements, 17 cities average 690 man-hours for mowing, 270 man-hours for maintenance and repair of vandalism, 414 man-hours for trash collection, 63 man-hours for spraying and 864 man-hours for general cleanup (e.g., picking up litter). In terms of annual costs, these 17 municipalities average \$3,018 for mowing, \$1,310 for repair of vandalism, \$2,423 for trash collection, \$276 for spraying and \$3,150 for general cleanup.

Officials for 15 municipalities are satisfied with their current set of facilities, while city officials for 18 cities indicate they are planning to add facilities in the future. Fourteen of the 18 officials who indicated plans for additional facilities are considering the addition of more of the same type of facilities they currently provide.

The demand for all outdoor recreation activities is rapidly increasing. Municipal recreation enterprises can provide facilities for many of these recreation activities, while at the same time earning revenues to cover some of the operation and maintenance costs at the lake recreational enterprise. However, providing recreation for a paying public is a business requiring as much or more attention to detail as any other business. Running a recreation enterprise is a 24-hour-a-day, seven-days-a-week job during the recreation season. While the main recreation season is generally from Memorial Day to Labor Day, operation and maintenance tasks still have to be done in the off-season. Also, the lake manager must be willing to put up with some recreationists who are not so easy to satisfy. Success of the lake recreation enterprise depends on careful planning and adoption of innovative management practices such as:

1. The lake recreation enterprise should be accessible by paved roads.
2. A package of recreation facilities and services of a quantity and quality to satisfy a wide range of recreation interests should be provided, if at all possible.

3. The lake manager's public or interpersonal relations are important. He must display a "stage personality" by greeting customers courteously, smiling, listening to their problems and always maintaining his self-control.

4. The establishment of the fee structure by the city is important also. The level at which fees are set will be determined by the policy of the city as to what proportion of the facilities' capital costs, if any, should be recovered and/or if only the operation and maintenance costs should be recovered.

5. Attendance records should be maintained, by type of activity, if at all possible. This information permits the lake manager to critically analyze areas of operation which are most profitable and those areas which need improvement.

6. An advertising program should be considered to provide recreationists with the information they need in their decision to patronize the lake enterprise.

7. Proper sanitation and maintenance of facilities is a must. The lake enterprise's facilities must be clean and well maintained.

In addition to these management practices, city officials responsible for management of a lake recreation enterprise should consider: 1) a timetable for development of facilities within the city's ability to maintain these facilities, 2) concentration of the city's resources in properly maintaining a few highly developed recreation areas and 3) the need or desirability to serve a wider clientele than local residents only. This permits the lake enterprise to be more economically operated, and allows the city to cover more of the costs of operating the enterprise.

1975 Recreation Management Survey
for
City-Owned Lakes in Oklahoma

Department of Agricultural Economics
Oklahoma State University
Stillwater, Oklahoma 74074

1) City \_\_\_\_\_ 2) County \_\_\_\_\_

3) Name of Person Interviewed \_\_\_\_\_

4) Job title \_\_\_\_\_

5) How long have you been in this position? \_\_\_\_\_

6) Name of lake and/or lakes managed? \_\_\_\_\_

7) What recreational uses are permitted at lake? (Please check)

- a) camping b) swimming c) boating d) hunting e) picnicking
f) fishing g) water skiing h) hiking i) other (please specify)

8) Is lake within city limits? (Please check)

Yes \_\_\_\_\_ No \_\_\_\_\_
If no, how far (in miles) from city limits is lake? \_\_\_\_\_

9) Location of lake from nearest:

Interstate \_\_\_\_\_ miles
U.S. Highway \_\_\_\_\_
State Highway \_\_\_\_\_
County Road \_\_\_\_\_

What is the location and distance of nearest:

Table with 3 columns: Name, Miles, Direction. Rows include Federal recreation area, State recreation area, Local (recreation area of nearby city or town).

10) Please check facilities and services which are currently available at lake:

- a) system of access roads:
  - Hard surface
  - Dirt
- b) campground:
  - Tent campsites (fireplace grill, trash barrel, picnic table)
  - Auto/RV campsite (fireplace grill, trash barrel, picnic table, concrete pad, electric hook ups)
  - No designated campsite
- c)  Trash barrels
- d)  Location, direction & entrance signs
- e) Rest rooms
  - Pit type toilet (no running water)
  - Toilet with running water, flush type commodes
  - Showers
- f)  Swimming area
- g)  Sun bathing beach
- h)  Boat launching ramps
- i)  Convenience store (concessions, bait, ice)
- j)  Rental boats
- k)  Boat docks
- l)  Rental Cottages, Cabins
- m)  Other (please specify \_\_\_\_\_)

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11) Are fees charged for the use of lake, facilities and services? Yes \_\_\_\_\_ No \_\_\_\_\_  
 If yes, please explain what type of fees:

	Rates		
	Day	Month	Year
a) camping	_____	_____	_____
b) swimming	_____	_____	_____
c) boating	_____	_____	_____
d) hunting	_____	_____	_____
e) fishing	_____	_____	_____
f) water skiing	_____	_____	_____
g) hiking	_____	_____	_____
h) other (please specify _____)	_____	_____	_____

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12) If fees are charged who sells permits, collects fee and where are they sold (at lake or city hall)? \_\_\_\_\_

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13) What is the approximate annual cost of materials (lumber, concrete) for replacement or repair of damaged or worn facilities?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

14) In a typical year how much (dollars) is spent on erosion control practices?

\_\_\_\_\_  
\_\_\_\_\_

15) What type of grass cover is maintained around the lake area?

	No. of Acres
Native grass	_____
Bermuda	_____
Other (please specify)	_____
_____	_____

16) What are the annual labor costs in terms of time and/or dollars for operation and maintenance of lake facilities such as:

	Time	Dollars
a) mowing and brush hog operations	_____	_____
b) repair of vandalism	_____	_____
c) trash and other solid waste collection & disposal	_____	_____
d) spraying to kill insect pests	_____	_____
e) general clean up of campground, picnic areas, swimming beach	_____	_____
f) other (please specify) _____	_____	_____

17) What is mowing schedule in typical year? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

What is your mowing schedule during an extremely rainy season?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

18) Do you fertilize the grassland areas of the lake? (Please check) Yes \_\_\_\_\_ No \_\_\_\_\_  
If yes, how often, how much, and what kind of fertilizer do you use?

\_\_\_\_\_  
\_\_\_\_\_

19) Do you have the facilities at the lake to raise your own fish for stocking purposes? (Please check) Yes\_\_\_\_\_ No\_\_\_\_\_

If yes, please describe the operation: \_\_\_\_\_

20) Do you have boat shows, arts and crafts shows and other special activities at the lake? (Please check) Yes\_\_\_\_\_ No\_\_\_\_\_

If yes, please describe activity \_\_\_\_\_

If no, do you plan to have such activities in the future? (Please check) Yes\_\_\_\_\_ No\_\_\_\_\_

21) How many employees make up the labor force?

Number of full time employees\_\_\_\_\_

Number of part time employees\_\_\_\_\_

Is there a concession operation at the lake? Yes\_\_\_\_\_ No\_\_\_\_\_

If yes, please explain briefly the financial arrangements: \_\_\_\_\_

If no, how far (in miles) is the nearest (to lake) concession or convenience store? \_\_\_\_\_

22) Is the sale or rental of lake lots to build permanent or seasonal homes permitted at the lake? (Please check) Yes\_\_\_\_\_ No\_\_\_\_\_

If yes, please describe the restrictions and regulations of such arrangements: \_\_\_\_\_

23) What facilities and/or activities which are not currently available, do you feel are most needed to meet future recreation needs? \_\_\_\_\_

24) What are the plans for the future development of lake facilities?

a) new facilities to be added in form of major capital improvements, another campground or playground, et cetera \_\_\_\_\_

b) close parts of lake to concentrate management of high use areas of lake \_\_\_\_\_

c) Other plans \_\_\_\_\_

25) Approximately how many recreationists visited the lake in:

Number of recreationists	1974	1973	1969-73 (5 year average)
a) less than 999	_____	_____	_____
b) 1000-1999	_____	_____	_____
c) 2000-4999	_____	_____	_____
d) 5000-9999	_____	_____	_____
e) if over 10,000 (please specify)	_____	_____	_____

26) What is the most critical technical problem facing lake management? (Please check)

- a) abuse of facilities (e.g. not camping in designated areas, driving off established roads)
- b) hiring and keeping good labor
- c) reducing conflicts between competing recreational uses (e.g. swimming vs. boating, skiers vs. fishermen, hunters vs. campers.)
- d) Communication between recreationists and lake management (e.g. notice of fee schedule, campground rules and regulation proper use of facilities)
- e) fluctuating of facilities
- f) vandalism of facilities
- g) littering
- h) enforcement of lake rules and regulations
- i) solid waste collection & disposal
- j) other (please specify) \_\_\_\_\_

27) Are any seminars on such topics as camp skills, camp cooking, boating safety held at lake? Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, what type? \_\_\_\_\_

28) What method is used to advertise lake to public? (Please check)

- local newspaper
- local radio
- road signs
- statewide radio
- large city newspapers (Tulsa, Oklahoma City)
- other (please specify) \_\_\_\_\_

29) General comments on additional topics and/or suggestions you wish to make.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Appendix 2. Camping Fees Charged at Municipal Recreation Enterprises, Based on 1975 Oklahoma Survey.

Municipality	Fee Charged
Chandler	\$1 per camping unit per day
Chickasha	\$1 per camping unit per night \$1 per night for electrical hookup \$75 per camp trailer per season
Clinton	No charge for camping, electrical hookup is metered
Comanche	No charge for camping, electrical hookup is \$1 per night
Duncan	\$1 per vehicle per day
Hominy	\$1.50 per vehicle per night
Lawton	\$1 per camping unit per day without electrical hookup, \$3 per unit per day with electrical hookup
Pawnee	\$1 per camping unit per night
Perry	County resident: \$.75 per camping unit per day, \$90 per camping unit per year Nonresidents: \$1.50 per camping unit per day, \$135 per camping unit per year
Ponca City	\$1 per vehicle per day without electrical hookup, \$1.50 per vehicle per day with electrical hookup
Purcell	\$2.50 per night for full hookup, electric, water and sewer
Seminole	\$2.50 per vehicle for seven days

## Appendix 3. Other Fees Charged at Municipal Recreation Enterprises, Based on 1975 Oklahoma Survey.

Municipality	Fee Charged
Blackwell	\$60 per year for lease of lake lots
Chandler	\$5 per boat per year for dry storage of boats at lake
Chickasha	\$25 per year for private boat docks
Hominy	\$10 per city resident per year for lake lot \$15 per nonresident per year for lake lot
Lawton	\$2.50 per foot of space for Class A boat housespace \$1.50 per foot of space for Class C boat housespace \$1 per blind per year for duck blinds
Perry	\$10 per duck blind per year for county resident \$20 per duck blind per year for nonresident \$7.50 per boat dock per year for county resident \$10 per boat dock per year for nonresident
Shawnee	\$1 per person per day and \$5 per person per year for floating fishing wharf

**Appendix 4. Fishing Fees Charged at Municipal Recreation Enterprises, Based on 1975 Oklahoma Survey.**

<b>Municipality</b>	<b>Daily Per Person</b>	<b>Daily Per Family</b>	<b>Annual Per Person</b>	<b>Annual Per Family</b>
Chandler	\$1.00	—	\$ 7.50	—
Chickasha	.50	—	5.00	\$ 7.50
Clinton	.50	—	5.00	—
Comanche	.50	—	7.50	—
Duncan	.50	—	10.00	—
Elmore City	.50	—	5.00	—
Fairfax	2.00	—	—	20.00
Guthrie	1.00	—	1.00	—
Hobart	.50	—	—	—
Hominy	1.50	—	10.00	—
			(resident)	
			15.00	
			(nonresident)	
Lawton	1.00	—	7.50	10.00
Marlow	.50	—	5.00	7.50
Maysville	.50	—	5.00	—
McAlester	.50	—	3.00	4.00
Pauls Valley	.50	—	—	5.00
Pawhuska	.50	—	3.00	—
Pawnee Resident	.50	1.00	3.00	—
Nonresident	1.00	2.00	6.00	—
Perry Resident	.50	—	3.00	4.00
Nonresident	1.00	—	6.00	8.00
Ponca City	.25	—	2.50	5.00
Shawnee	.50	—	4.00	—
Tecumseh	.25	—	3.00	—
Wewoka	2.00	—	5.00	—

**Appendix 5. Boating Fees Charged at Municipal Recreation Enterprises, Based on 1975 Oklahoma Survey.**

Municipality	Daily per Boat	Annual per Boat
Bartlesville	—	\$ 7.50
Blackwell	—	5.00
Chandler	\$1.00	7.50
Chickasha	—	15.00
Clinton	1.00	5.00
Comanche	.50	12.00
Duncan	1.00	6.00
Fairfax	2.00	20.00
Guthrie	1.00	10.00
Holdenville	2.00	10.00
	(weekday)	(resident)
	3.00	20.00
	(weekends, holidays)	(nonresident)
Hominy		
Fishing boat	1.50	10.00
Ski boat	2.50	15.00
Lawton	1.00	7.50
Marlow	1.00	7.50
Maysville	—	7.50
Pawhuska	1.00	3.00 to 20.00
Perry	1.00	2.50 to 10.00
Ponca City	.50	5.00
Shawnee	1.50	7.50

**Appendix 6. Hunting Fees Charged at Municipal Recreation Enterprises, Based on 1975 Oklahoma Survey.**

Municipality	Type of Hunting	Daily per Hunter	Annual per Hunter
Chandler	duck	\$1.00	\$5.00
Chickasha	duck	1.00	5.00
Clinton	duck	.50	5.00
Comanche	duck	.50	3.50
	quail	1.00	—
Duncan	duck	.50	3.00
	quail	1.00	7.50
Elmore City	duck	.50	5.00
	quail	.50	5.00
Guthrie	duck	—	5.00
Lawton	duck	1.00	5.00
	quail	1.00	5.00
	deer	—	7.50
McAlester	duck	—	4.00
	quail	—	4.00
Pauls Valley	duck	.50	5.00
Pawhuska	duck	1.00	—
Perry Resident	duck	1.00	3.00
Nonresident	duck	2.00	6.00
Shawnee	duck	1.00	5.00

**Appendix 7. Water-Skiing Fees Charged at Municipal Recreation Enterprises, Based on 1975 Oklahoma Survey.**

<b>Municipality</b>	<b>Daily Per Person</b>	<b>Daily Per Boat</b>	<b>Annual Per Person</b>	<b>Annual Per Boat</b>
Chickasha	—	\$2.00	—	\$15.00
Duncan	—	1.50	—	12.50
Fairfax	—	2.00	—	20.00
Hominy	—	—	3.00	—
Lawton	—	3.00	—	17.50
McAlester	.50	—	3.00	—
Pawhuska	.50	—	2.50	—
Ponca City	.25	—	2.50	—
Wewoka	—	3.00	—	15.00