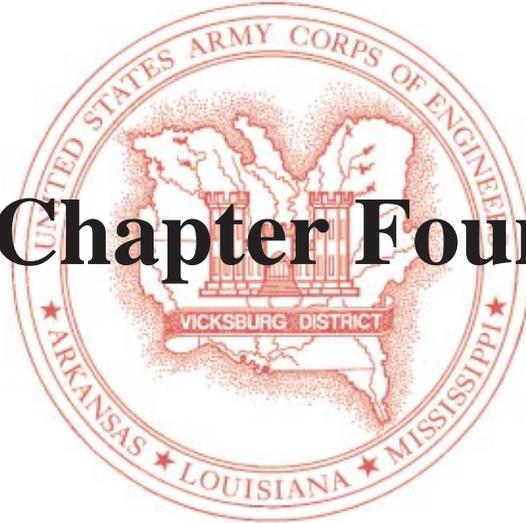


# Chapter Four



# Water for Enjoyment

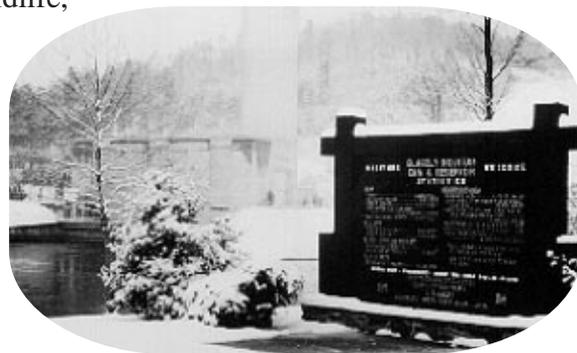


Since their creation, the lakes of the Vicksburg District have functioned as important recreational resources for the areas where they are located. During the last one-and-one-half decades, interest in leisure-time activities involving water recreation grew

dramatically in the Vicksburg District, so much so that about 27 million visitors used the district's facilities in 1991. The proximity of many of the Corps lakes to urban areas made them popular places, and their natural physical beauty appealed to the public's growing desire for contact with nature. As one enchanted visitor from Texas wrote in the DeGray Lake visitor's register, the lake in relation to its surrounding areas is "like a flower is to heaven." For these reasons, the lakes have become a major asset of the region as a whole, creating a regional industry worth more than a half billion dollars based on visitation revenue alone.



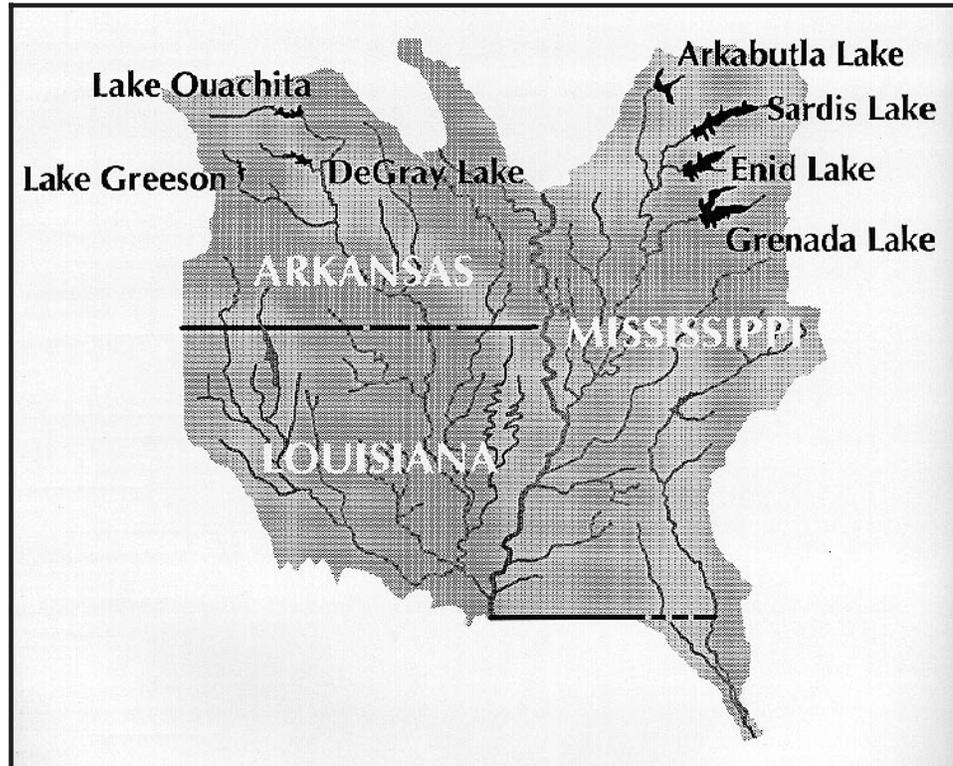
As the demand for recreation services increased during the 1950s, the district responded in a variety of ways that demonstrated its commitment to managing natural resources and providing a desirable and safe environment for visitors to its sites. The Project Resources Management Branch and its field offices developed a variety of programs in safety, volunteer participation, public education, and wildlife, fishery, and forest management that helped to satisfy the continuing increase in recreation use. The public participation in developing new wildlife areas at the Corps lakes took "volunteerism" to a new level of involvement.



## Crown Jewels: The Lakes

The major recreation resources of the Vicksburg District are the seven lakes that resulted from flood-control and hydroelectric projects, and three smaller lakes operated by the Bayou Bodcau Office. The oldest is Sardis Lake in Mississippi, created in 1940, and the newest is Arkansas' DeGray

Lake, which began operation in 1972. When the reservoirs reach their flood control pools, holding their maximum amount of water, the largest is Grenada Lake, which covers 64,600 acres, and the smallest is Lake Greeson, with 9,800 acres. The different characteristics of each lake present unique challenges for the resource management elements of the Vicksburg District.



Because it is the most recent of the Corps lakes, DeGray Lake, near Arkadelphia in Clark and Hot Spring Counties, is the only site with recreation facilities that were built according to a master plan. Construction took place in three stages. In 1972, the dam and adjacent powerhouse were opened; in 1974, the second stage was completed, including many recreation developments around the lake. By 1980, the last parts of the site, including a modern visitor information center, were opened to the public. Several years later, in response to a federal directive to lower operating costs at government facilities, the district permanently closed certain remote recreation sites at DeGray and temporarily closed other sites here and elsewhere during the off-season.

Still, with its smaller reregulation pool downstream, the lake is one of the most popular sites in the district. Water from the downstream pool can be pumped back to the main lake during off-peak hours, so that additional hydroelectric power can be generated during the peak demand hours of

the next day. The reregulation pool also provides a water supply downstream, and affords a dependable flow for water-sports enthusiasts. During the winter, volunteers also maintain a small impoundment off this pool for waterfowl feeding. At DeGray Lake, the state of Arkansas built and operates the DeGray State Park, with a marina, golf course, camping grounds, and a large and well-furnished lodge. The Corps of Engineers recreation area has also developed a popular group-use area called Oak Bower, which offers dormitory sleeping, a dining hall, and meeting facilities for church and community groups. In addition, groups from the



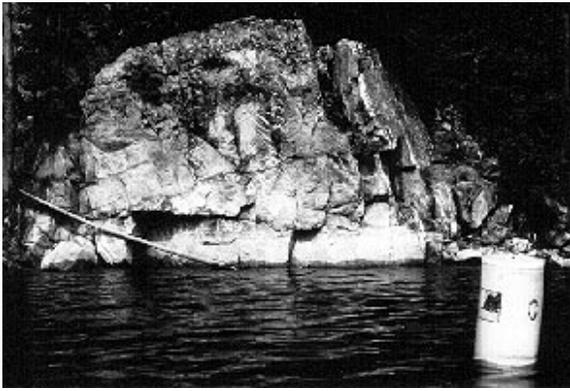
Little Rock Air Force Base and the Caddo Council Boy Scouts had recreation sites on the lake during 1985-91.<sup>1</sup>



Lake Greeson, located in Pike County and opened in 1950, is the oldest of the Arkansas lakes. A unique feature of its recreational appeal is the Bear Creek Cycle Trail, which traverses lake shore and forest for 37 miles. The only off-the-road trail in the Arkansas trail system, Bear Creek is maintained throughout the year by volunteers as part of an agreement with the Arkansas Motorcycle Dealers Association. Another trail on the nearly 16,000 acres of federal land that surrounds the lake, the Cinnabar Mine Nature Trail, allows hikers to view mining sites from the 1930s and 1940s.

Lake Greeson has very appealing scenery, including steep, rocky ridges that form long, finger-like peninsulas into the lake. Daisy State Park is located on its shoreline. In 1985 and 1986, approximately 40 bald eagles were counted in the mid-winter eagle censuses, and number grew to about 50 by 1990.<sup>2</sup> The release of water through the dam's flood-control valves or over its spillway provides a dramatic illustration of its hydroelectric potential. Downstream, the Arkansas Game and Fish Commission operates a nursery pond on the Little Missouri River and annually stocks rainbow trout and other species in the lake.





The largest of the Arkansas lakes is Lake Ouachita, which has a recreation pool that covers 48,300 acres of Garland and Montgomery counties. The lake is located partially within the Ouachita National Forest, and it opened in 1953. The scenery is highlighted by the unusual rock formations that surround the lake, which lies in one of the ten most geologically complex areas in the world.<sup>3</sup>

The district focused attention on this feature by creating a “Geo-Float Trail” in 1980 that combines land and water markings for a 16-mile trail.



Developed in cooperation with the U.S. Geological Survey and the Arkansas Geological Commission, it became the first water-based interpretive trail to be included in the National Trails System maintained by the federal Heritage Conservation and Recreation Service. In 1984, the Vicksburg District earned an honorable mention for the trail from the Chief of Engineers’ biennial Environmental Awards Program, which recognizes environmental achievements related to recently completed structures or Corps developments. In

1988, the lake was a national finalist in the “Take Pride In America” (TPIA) program, sponsored annually by the U.S. Department of Interior, and was cited as “one of the three best ‘total projects’ in the country.”<sup>4</sup>

The most visited of the district lakes is Sardis Lake; its recreation pool covers 32,100 acres of Lafayette, Marshall, and Panola Counties in Mississippi. A lower lake provides swimmers with several large, white-sand beaches and also offers fishing and boating, even during the winter months when the upper lake is lowered to its



conservation pool. A weir was constructed downstream in 1989 to stabilize the water level in the lower lake during those months.<sup>5</sup> Hiking trails, the Sandstone Nature and Fitness Trail, and off-road vehicle trails are found throughout the site.

Two wildlife refuges — Graham Lake and Sardis — are located on the upper lake, and the John W. Kyle State Park, which is located to the north of the 2.9-mile-long dam, contains additional recreational facilities for the main lake.

Although the dam has been in place since 1940, recent subsurface geotechnical analysis revealed a zone in the foundation of the dam that

might become significantly weaker should a large earthquake occur in the central United States. Construction under a first contract for \$2.7 million began in 1986 for a 1,000-foot sand and riprap berm on part of the upstream side of the earthen dam. The berm is designed to counteract the possible damage underneath the dam that might accompany such an earthquake. None of the recreation and wildlife activities of the lake were disrupted by this preventative work.<sup>6</sup>



Sardis Lake has also been an award winner in the TPIA program. In 1988, a park ranger received a national award during a White House ceremony, and 1989 the lake's volunteer activities were recognized with an TPIA award as the state's best program and a national winner.<sup>7</sup>

Other lakes in the Yazoo River Basin Headwater Project are Arkabutla, Enid, and Grenada. Arkabutla Lake is located in DeSoto and Tate Counties. Its proximity to Memphis makes it a prime location for weekend recreation trips. It is formed by the Coldwater River, and fishing for bass and crappie is one of the most popular activities at the site. One article in *Field and Stream* claimed the lake's bounty "can woo a fisherman away from his first choice."<sup>8</sup> The Delta Sailing Association is very active at Arkabutla Lake, and the club's regattas regularly draw participants from states as distant as Michigan and Wisconsin.

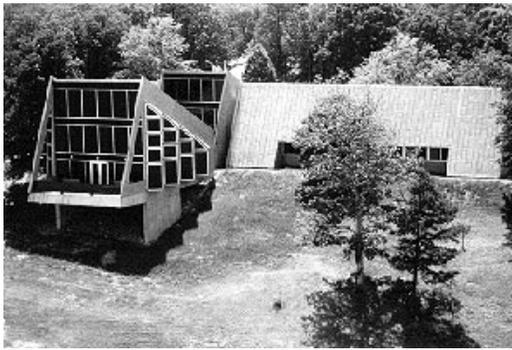


Arkabutla Lake opened in 1943, and it covers 33,400 acres at flood-control stage, 5,100 acres when lowered to the conservation pool, and 11,200 acres at its recreation pool, the normal stage. The lake offers three developed campgrounds and four primitive camp sites.

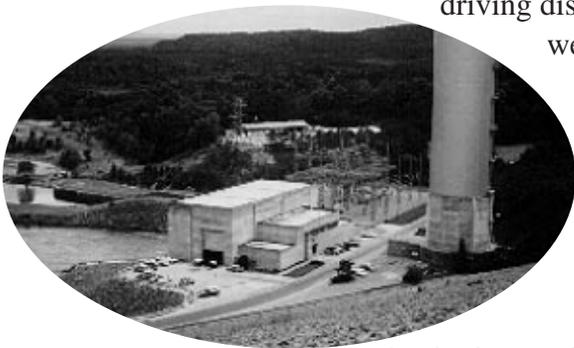
Enid Lake, located farther south in Panola and Yalobusha Counties, is also a favorite recreation area for Memphis residents, in part because of its close proximity to Interstate Highway 55. The 1.6-mile-long dam, which can be seen from the highway, is an imposing, earthen bulwark rising above peaceful pastures where farm animals graze. The state maintains a Scenic Loop from the highway through the dam area so that travelers can view the lake.



Enid's major facilities were opened in 1955 and include beaches, boating, hiking, campsites, and bike trails. A special fishing pier built for the handicapped was one of the only two in the district, the other being at Lake Ouachita. The world record crappie weighing five pounds and three ounces was caught at Enid Lake in 1957. The park also has a horseback-riding trail that is part of the National Trail System. Its recreation pool covers 15,600 acres, but at flood-control height the dam creates a lake that extends over 18 miles up the Yocona River Valley and covers 28,000 acres.



The largest of the Corps lakes in Mississippi is Grenada, which covers 34,300 acres of Calhoun, Grenada, and Yalobusha counties during the recreation-pool stage. The entire project contains 87,000 acres. The dam was completed in 1954, and features a new regional visitor's center at an excellent observation point overlooking the lake, the 2.6-mile-long dam, and the surrounding area. The center has interpretive exhibits highlighting the history and geographic significance of the Grenada area, its wildlife, and its recreational opportunities. In 1991, plans were in place to develop the 330-acre Haserway Wetlands Management Area in cooperation with the U.S. Fish and Wildlife Service and Ducks Unlimited.<sup>9</sup> Another 300 acres was to be managed in conjunction with Quail Unlimited. In addition to the Hugh White State Park, with two locations on the lake, community groups such as the Girl Scouts, Future Farmers of America, the Christian Camp of Northern Mississippi, and the Wildlife League have had recreation sites on the lake.



When the Corps of Engineers built the first lakes in the Vicksburg District, officials were uncertain that the public would be interested in using the limited recreational facilities available because of the long driving distance to them. At Lake Greeson, for example, home sites were sold to individuals along with permanent boat-docking rights to encourage the public to come and use the lake. Recreation facilities were not a major concern because the primary purpose of the reservoirs was flood control, supplemented on the three Arkansas lakes by the generation of hydroelectric power.

Yet the public appreciated the value of the lakes from the beginning, and hunters, anglers, boaters, and others began to use the land and water resources. Facilities were minimal prior to 1944, but the government began to change its approach to recreation as the number of

visitors increased. The Flood Control Act of 1944 authorized the Corps to build and operate recreational facilities and to lease project land to public groups for fishing, wildlife, and other recreational activities.

During the 1970s, as it managed the natural resources committed to it, the Corps of Engineers balanced a number of related and sometimes competing goals: navigation, flood control, hydroelectric power, timber and wildlife stewardship, and recreation. Navigation and flood control involved some interaction with the public, but the recreation aspect of Corps resource management developed into a permanent and continual contact with the recreation industry and the users of recreational facilities, which required new techniques of responding to customer needs. One result of this development was an increased visibility for the Vicksburg District throughout its region.



Except for the flood years of 1974, 1979, and 1991, and during the gasoline shortages in 1973-1974, recreation use continued to grow throughout the Vicksburg District during this period.<sup>10</sup> In fact, according to use data collected by the Corps, about four times as many people now visit the sites at the lakes and rivers as did in 1960. More than 27 million visitors came to the Corps facilities in 1991, compared with almost 6.7 million in 1960. Much of the growth came from increased use at the six lakes that had recreation opportunities in 1960, although millions of visitors also use the newer facilities at DeGray Lake and those along the Ouachita-Black River from Camden, Arkansas, to the Jonesville Lock and Dam in Louisiana, which are supervised by the Monroe Navigation Field Office.



The rapid growth of visitors, and campers in particular, led the Lake Ouachita staff to institute a campground reservation system in 1991. This was a first attempt by the district to regulate usage in this manner, and resulted from the large number of campers who were being turned away from the lake's many campsites during the peak summer months.

## Three More Lakes

Bayou Bodcau Reservoir was transferred to the Vicksburg District in 1981 along with the entire Red River Basin and the Red River Navigation Project. Two other Shreveport-area lakes, Wallace and Caddo, share the same lineage and also are operated and maintained by the Monroe Navigation Field Office through the Bayou Bodcau Office.



During the rainy season from December through March, and after the occasional flash floods, that occur on occasion, water backs up behind Bayou Bodcau's massive earthen dam and inundates as much as 21,000 of the 33,628 normally dry acres in the reservoir. At flood capacity, the reservoir can hold the runoff from a 10-inch rainfall on its watershed of 656 square miles, protecting 43,000 acres downstream that include a large part of Barksdale Air Force Base. Flood control is the "primary goal" of operation and maintenance at Bayou Bodcau Reservoir, but it requires little attention,

according to L.C. "Corky" Corkern, who headed the Monroe office. "Timber management is the biggest problem," he noted.<sup>11</sup>

The abundant wildlife at Bayou Bodcau Reservoir is managed by the Louisiana Fish and Wildlife Department. About 80,000 hunters come to the reservoir each year to try their luck with the ducks, deer, squirrels, and other game. Another 200,000 visitors come to the reservoir to fish and boat in Bayou Bodcau, which runs through the reservoir.

Wallace Lake, about 14 miles southeast of Shreveport, is a flood-control project that maintains a permanent pool. The land around the lake is privately owned, but the Corps of Engineers has responsibility for the dam and for an adjacent recreational facility.



Caddo Lake, 18 miles north of Shreveport, provides water for industrial and municipal purposes. Operation and maintenance is much the same as at Lake Wallace. More than 50,000 visitors per year came to the lake's recreational facilities during the 1980s. The Monroe office also coordinates activities at the new Felsenthal National Wildlife Refuge and the Catahoula National Wildlife Refuge, which are under the direct jurisdiction of the U.S. Fish and Wildlife Service. The

Monroe office has developed day-use facilities on the Red River near each of the three new lock and dams.<sup>12</sup> Other recreation sites in the district are at Warfield Point on the Mississippi River near Greenville, Mississippi; Lake Chicot in southeastern Arkansas; and along the Pearl River in southeastern Mississippi and eastern Louisiana.

Still, the primary recreation areas in the district are the seven Corps lakes in Arkansas and Mississippi and the river sites along the Ouachita-Black River. In Mississippi, Sardis Lake generally has the largest turnouts each year, followed by Grenada Lake; in Arkansas, Lake Ouachita has the largest attendance, although use of the Ouachita-Black River sites increased dramatically in the late 1980s.



According to data gathered by the Corps, fishing was the number one attraction at most lakes. This was particularly true at Arkabutla, Enid, Ouachita, and Sardis; as many as 60 percent of the visitors in 1985 came for that reason among others. Boating and swimming were attractions at every site, especially at the Arkansas lakes and at Arkabutla. Sightseeing and camping were also important activities at many spots that year, especially at DeGray, Enid, Greeson, and Grenada, where more than one-third of the visitors included these activities in their stay.



Recreation has also become an important use of other Corps waterways. Boating ramps along the Ouachita and Black Rivers, Red River, and Pearl River have made these areas accessible for boaters, fishers, hunters, and others. Lake Chicot in Arkansas and the Caddo, Bodcau, and Wallace sites in Louisiana offer similar recreational opportunities for area residents; altogether these sites accounted for about 3.3 million of the visitors to Corps areas in 1986 and 5.2 million in 1991.<sup>13</sup>

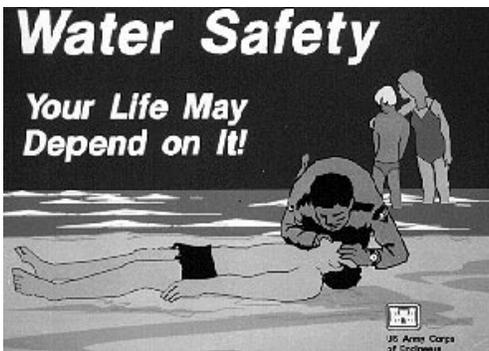
## Managing the Crowd

With the millions of visitors came problems of management and visitor safety. In addition to its natural resource management, the district was called upon to accommodate the needs of many new campers, anglers, skiers, hunters, hikers, bikers, and others in the same water-created locations. For example,



at Arkabutla visitor days increased 92 percent from 1976 to 1986, and the daily activities varied widely: 30 percent were fishing, 27 percent were boating, 21 percent were swimming, 18 percent were camping, 16 percent were picnicking, and 13 percent were sightseeing. Three major Corps initiatives were devised to handle the new pressures that came from such diverse demands on the sites: safety awareness programs, the contracting out of law enforcement with local sheriffs, and the involvement of volunteers in assisting the district with its onsite activities.

With the growth of recreation came an increased need for safety, especially during the peak usage periods. Nationally, the policy of the Corps was to alleviate the problem by promoting safety education



programs. In responding to this, the Vicksburg District has developed a number of significant programs, several of which have been recognized nationally.

Water safety was the biggest emphasis for these programs since boating and swimming fatalities accounted for the majority of the 15 deaths per year that occurred at the district sites during the 1980s. An analysis of the types and causes of recreation accidents led to the development of a comprehensive water safety policy. It included courtesy boat inspections, interpretive programs, activities promoting safe boating and fire prevention weeks, provision of and training in rescue devices, and other activities. Also, lake personnel were trained in boating safety, CPR, and search and rescue techniques.

Identifying safety hazards by constant contact with visitors was also important to the safety program. In 1984, the district reviewed its lake operations and facilities and adopted boat ramp specifications for reflective pavement markers, standardized swimming area designs, warning markers, and rescue devices.<sup>14</sup> This



effort was in part due to the tragic deaths of six family members in an auto that inadvertently left a park road, went down a boat ramp, and sunk in Sardis Lake in 1981. The district also realigned park roadways near many ramps to make the approaches less direct.<sup>15</sup> Then, in 1987, the district began implementing the Corps' *Sign Standards Manual*, which established visual and verbal sign consistency for the Corps projects for the first time.<sup>16</sup>

Another safety program was extensive contact between district personnel and the people who used the facilities. Corps personnel regularly visited community gatherings, schools, and clubs to discuss safety and the use of the water. Furthermore, meetings were held with representatives of other federal and state agencies and public organizations to explain the Corps' program on regulating safety, and to involve these groups in developing a comprehensive safety program.



In 1985, as a result, the Project Resources Management Branch at Vicksburg and four of its rangers received an award from the National Water Safety Congress for outstanding work in water safety at the community or state level. B. J. Woods, chief of the branch during this period, noted that “our safety program has been successful because of the cooperation of many agencies, organizations, and individuals. Also, our people are genuinely concerned about public safety . . . . The push for safety may be Corps-wide, but we’re putting an extra effort into our local program.”<sup>17</sup>

Meritorious individuals included a Sardis Lake park technician who attempted to save the life of a drowning victim by responding quickly and using CPR techniques. At Lake Greeson, a water safety suggestion by one ranger led to putting ring buoys on swimming platforms in 1984, a precaution that saved the life of a young non-swimmer that summer. Finally, awards were given to a Grenada park ranger who gave water safety presentations to school classes, and to a DeGray Lake ranger for coordinating the water safety festival.

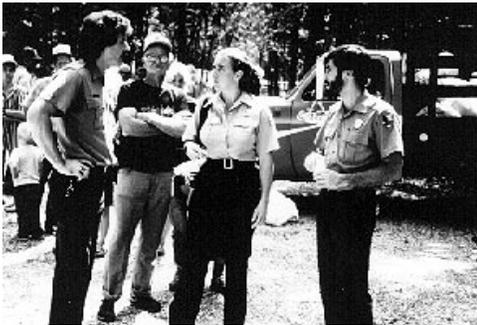
Another way of bringing safety to visitors' attention was to bring the visitors to safety exhibits or programs. Most of the early safety programs were poorly attended, however. At DeGray Lake, for example, there was little interest in National Safe Boating Week until 1983 when the staff planned a variety of entertainments to coincide with it. Called the DeGray Lake Water Safety Festival, the new weekend featured not only safety demonstrations but also bands, puppets, clowns, a ski show, powerboat races, craft displays, and local merchants showing their safety equipment such as flotation devices and fire extinguishers. Each annual event since then has emphasized the role of water safety as part of a fun experience, and attendance has numbered between 5,000 and 12,000 persons each year.



The most notable effect of this safety program has been the reduction in the number of fatalities at the Corps sites. The decline from 23 fatalities in 1984 to 13 in 1990 is an impressive drop during a period when visitation increased by about 6.2 million visitors. The accident rate was also reduced during this period.

## New Muscle in Law Enforcement

While public education was a large part of the district's approach to safety during the 1980s, law enforcement was also an important part of operating the lake sites. Prior to 1978, visitors often expected the rangers to act as policemen despite their lack of authority or equipment. They did their best to maintain order and respect for the law but lacked specific statutory jurisdiction and weapons. They could issue warnings or citations, but could not arrest or detain law-breakers. This unsatisfactory arrangement resulted in a tragedy in June 1977, when two armed escapees from an Oklahoma prison murdered a Little Rock District ranger and a town marshal and abducted and shot another ranger.<sup>18</sup> The Water Resources Development Act of 1976 had authorized a program of law enforcement contracts with local governments. This incident focused the public's attention on the need for more efficient law enforcement at Corps sites, and was partly responsible for the establishment of the Law Enforcement Service Contract program in 1978.



Since 1978, the Project Resources Management Branch had participated in a cooperative law enforcement program with local police and sheriff's departments which assist at Corps sites. Although Corps recreation areas have always been under the jurisdiction of local law enforcement agencies, they were not always patrolled on a regular, scheduled basis. The new program gave districts "the authority to contract with States or their political subdivisions to obtain increased law enforcement services at Civil Works water resource development projects."<sup>19</sup> The program clarified the authority of the rangers, which was to



enforce the federal regulations governing Corps parks and recreation areas, and supported a more active role for sheriffs in enforcing state statutes.

During 1984-86, the contracts in the Vicksburg District amounted to nearly \$1.1 million, with many county sheriff's departments hiring or selecting specific deputies to patrol the park areas. Besides funding the local police protection, the program frees the rangers to manage the parks better and assist visitors in ways that are more appropriate for their skills. While rangers still noticed some confusion on the part of visitors, both sheriffs and resource managers reported the program was a very successful innovation.<sup>20</sup>



Establishment of the law enforcement cooperative agreement involved some difficulties, however. The Corps had encouraged an attitude and image of professionalism and competence for its rangers. The Vicksburg District urged its resource managers to build a tradition of responsibility and accomplishment at each site, at times using old-fashioned values to instill this attitude. In 1974, for example, branch chief Woods provided the rangers with a recommended set of maxims from the 1880s in order to help develop a spirit of professionalism. Among other things, it exhorted public officers with “A time like this demands strong minds, great hearts, true faith and ready hands.”<sup>21</sup>



When the Corps began to deemphasize the “policeman” image of the ranger, many of its visitors reacted with alarm, writing to congressmen and to district engineers. One Mississippi resident suggested in a letter to Congressman Jamie Whitten that “people who do not obey the law would take these places over and a man and his family would not be able to go there.”<sup>22</sup> Such uncertainty at the time led to the development of a Visitor Assistance Program. Instituted in 1978, the program encouraged frequent contact with park users and included such activities as regular surveillance of lakes and park areas by rangers equipped with radio communication equipment that connected them to local law enforcement agencies.

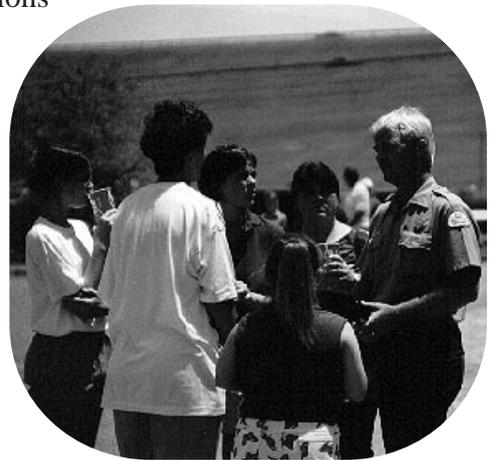




The location of some district lakes in several counties also posed some difficulties. Enforcement by one sheriff's department could be more vigorous than another, and yet the two departments had to interact at the same district site. At several of the lakes, one county did not sell alcoholic beverages and another did. Grenada Lake was served by three sheriff's

departments. To a large degree, however, resource managers overcame this problem by making their rangers aware of the different departments and their respective boundaries. In 1986, Corps personnel issued 471 citations and 1,713 warnings at the 153 recreation areas in the district, while 222 arrests were made by sheriff's departments. By 1991, district staff issued 513 citations and 1,604 warnings, while only 91 arrests were required by the sheriffs. On the whole, the new system worked smoothly and effectively.

Lastly, in a related law enforcement area, rangers had difficulty for a time issuing certain citations at the lakes in Arkansas. After the Corps Title 36 regulations were revised in 1979, the issuance of collateral forfeiture citations by rangers in the west central area of Arkansas could not be enforced. Such citations normally involve a fine that is forfeited if the party does not appear in court, or is found guilty as the result of a hearing. Meetings between district resource managers and magistrate officials resulted in an agreement that the Corps of Engineers rangers would have the authority to write such citations, and created a uniform system of fines for the western judicial district of Arkansas.<sup>23</sup>



## Volunteers Fill the Void

Knowing that its visitors develop a commitment to and regard for its recreation sites, the district has provided a variety of special activities for individuals and groups that are willing to volunteer their time and effort. As a result of provisions contained in Public Law 98-63, the Supplemental Appropriations Act of 1983, the Corps of Engineers began sponsoring organized volunteer participation in many areas including wildlife and forest management, maintenance, visitor information, and safety. The program, which grew out of the President's proclamation of 1983 as

the “National Year of Volunteerism,” attracted young and old to participate in the care and improvement of recreational sites.<sup>24</sup>



From this wealth of volunteers, the district fashioned a new concept of “participatory management” of the natural resources within its supervision. As the Corps of Engineers has done elsewhere, the district utilized the interest of other federal, state, and local agencies, and private organizations as well, in creating and managing natural areas. As federal government funds have been reduced for the operations of the district facilities, and district resource managers found it more difficult to operate with smaller staffs amid increasing demand for services, this idea proved an ideal solution.<sup>25</sup>

The concept worked in many different ways. Typical of them was an example at Sardis Lake in 1989. In a cooperative effort by government agencies and with funds from Ducks Unlimited, the waterfowl habitat at Graham Wildlife Management Area was regulated to allow water to remain in the refuge when lake is lowered. It was dedicated in November 1990.<sup>26</sup>

The money for the project came from Ducks Unlimited’s Matching Aid to Restore State Habitat (MARSH) program, which is part of the organization’s Wetlands America operation. The grant was the fourth that MARSH had made to Mississippi lakes at that time.<sup>27</sup> Earlier, the lake also received a smaller grant for waterfowl management from this program, and Enid Lake received one earlier the same year for work at the 1,537-acre Springdale Wildlife Management Project.<sup>28</sup>



The purpose of the MARSH program is to grant dollars to create waterfowl habitat in the state. Since its inception in 1985, the program had been allocated about \$70,000 from Ducks Unlimited net revenues each year; the funds had accumulated.<sup>29</sup>

Using the MARSH grant, the state’s Department of Wildlife and Conservation hired a contractor to build a system of levees, gates, and pipes to control the water level in the refuge during the winter. The 170-acre project includes about 40-70 acres for an upstream reservoir to flood the impoundments below. A set of culverts was built to return the water to the main lake in early March. The department hoped that the refuge development would provide more waterfowl habitat during the



winter season when Sardis Lake is lowered to its conservation-pool stage. Other refuges in the district, such as Catahoula on the Little River in Louisiana, operate in much the same manner.

A number of federal, state, and local agencies cooperated to promote development of the existing refuge. Even though the refuge and Sardis Lake are part of the district's Yazoo Headwaters Project, the state wildlife and conservation officials were deeply involved and instrumental in obtaining the funding for the project. They actually planned the project and presented it to Ducks Unlimited for approval.

The U.S. Soil and Conservation Service (SCS) completed the topological survey and design for the Mississippi Department of Wildlife and Conservation. The agency provided the set of plans that were used for the proposal to Ducks Unlimited for funding the Graham project.<sup>30</sup>



By 1991, Ducks Unlimited was also involved with the creation and maintenance of Haserway Wetlands Management Area at Grenada Lake, and Quail Unlimited was working cooperatively with the district at Arkabutla, Enid, Grenada, and Sardis Lakes.<sup>31</sup> In all, about 40 projects were under discussion or actively developing in the three-state area. Participants in this

“partnering” approach included federal agencies such as the U.S. Fish and Wildlife Service, the Soil and Conservation Service, U.S. Forest Service; state agencies such as the Mississippi Department of Wildlife, Fisheries & Parks, Arkansas Natural Heritage Commission and the Game and Fish Commission, the Louisiana Department of Wildlife and Fisheries, and several state universities; many city and county governments; and private interests such as the Nature Conservancy.

While it is hard to judge the program's outcome in its early stages, the reaction of district managers and volunteers showed the chances were good for long-term success. The MARSH project was



seen to mesh very well with the total operation at the lake. Volunteers would also be involved in maintenance at the refuge after the work is completed.<sup>32</sup> Another positive outcome was the new public appreciation of the district's many responsibilities in the environmental and resource management area. Also, the district's staff had many opportunities to receive input from the public about its management of these public lands. This created important "bridges" among the district, other governmental agencies, and the public at a time when other environmental issues were causing friction among those same groups.

## Programs Create a Bond

Another event that helped to recognize the important relationship between citizens and the Corps was the 50th anniversary of the completion of Sardis Lake and Dam. The celebration was a week-long affair, focusing on the rededication ceremony during the weekend of August 10, 1990. Activities included displays about the history and culture of the area, exhibits by commercial and agricultural interests in northern Mississippi, and speeches by Rep. Jamie Whitten, Col. Frank Skidmore, and the mayors of several local communities.<sup>33</sup>



One of the events was a reunion of people who built and worked at the dam during the early years. The district staff located employees at that time, and contractors who worked on the project. Major contractors that worked at the site since also were contacted. The celebration also highlighted the other three Corps lakes in the area. The district built and demonstrated a working model of the dam, with floodgates and other features, to educate visitors about the continuing flood-control responsibilities of the Corps.<sup>34</sup>

The district initiated discussions with local governments about ways to involve communities in the celebration, said Frank Walker, then resource manager at Sardis Lake. He planned exhibits to show life in the area in the 1930s and 1940s before the dam and lake were built. Additional exhibits showed the changes to the area in the 50-year period, and some of the possible effects that the future growth of northern Mississippi's population would bring.<sup>35</sup>



Attendance at the events probably broke visitation records for Sardis Lake. The Fourth of July and

Memorial Day weekends have attracted between 100,000 and 150,000 visitors in recent years. Woods said the involvement of many people and communities from the region fits the present mission of the Corps perfectly. Especially important are opportunities to show the public the Corps' multiple operations at the lakes, and the major contributions to the public and the local economy.<sup>36</sup>



Outside of these many structured agreements, the untold volunteers tackled various types of jobs. College students and Boy and Girl Scouts did forest management projects such as planting seedlings and marking and trimming mature trees. Student groups and adults helped with recreation management projects such as restoring storm shelters, providing visitor information, and even wearing Woodsy Owl character costumes in public safety programs at local schools and community events.

Wildlife management programs included cleaning nesting boxes used by migrating ducks, planting millet to ensure a food supply for waterfowl and other wildlife, and regulating the size and water stoppage of beaver dams, which otherwise will disturb aquatic habitats at Mississippi lakes by clogging slow-running tributaries. At DeGray Lake, an annual Eagles Et Cetera program was conducted in January by staff and volunteers, including live raptor demonstrations and educational events for more than 1,000 visitors. The program was getting bigger every year, leading lake officials to add more hikes and more barge tours to accommodate the increase.<sup>37</sup>

Other students and adults helped with administration by doing clerical work and preparing safety packets for distribution. Lake Ouachita was visited by a group of 30 Canadian college students from an outdoor recreation program at Lakehead University, who volunteered their time and used it to develop a management plan for what is now Avery recreation area.<sup>38</sup>



The number of persons involved in the district's programs made it one of the most successful in the nation. With only about two percent of the nation's population, the Vicksburg District program used almost five percent of the total number of 77,500 reported volunteers in 1991. Nationally the average volunteer worked more hours than those in the district. Still, volunteers contributed more than 29,000 hours to the district in 1991, and the dollar value of these services — nearly \$242,000 — was considerable.<sup>39</sup>

One annual volunteer event that originated in the neighboring Little Rock District was successfully adopted by the Vicksburg District. Called “The Great Arkansas Cleanup” or “The Annual Woodsy Owl Cleanup,” it was a day set aside for volunteers to gather at the lakes and to pick up trash and litter that had accumulated at recreation sites and along the shoreline during the peak season. After the debris was collected, private sponsors of the event provided a picnic, entertainment, games, and an awards presentation. In one recent year, the operation removed enough litter to fill approximately 70 dump trucks, and collected about 18,000 pounds of recyclable aluminum.<sup>40</sup> In Mississippi, the lakes have an “Annual Woodsy Owl



Cleanup Day,” and the district’s “Take Pride In America” campaign is now part of the federal “Public Lands Day” that is celebrated the Saturday after Labor Day.



The Corps staff at the lakes and the volunteers who worked with them were recognized repeatedly during the 1980s for the quality and generosity of their efforts. Additional TPIA national awards were given in 1991 to DeGray Lake for the Bluebird Trail, and to volunteers at Lake Ouachita. Work by a volunteer at Enid Lake on the Wildcat Brake Area was recognized in 1990 as a national TPIA finalist, and another volunteer was a national TPIA winner at Arkabutla Lake in 1988.<sup>41</sup> In addition, the Mississippi Wildlife Federation presented volunteers at Enid Lake its conservation awards for individual efforts (1990) and group activity (1991).

While volunteers donated plenty of work during these years to the Corps’ efforts in wildlife and forest management, recreation sites also became the location for many pleasurable volunteer activities. Arts and crafts festivals were organized at Lake Ouachita in the 1980s that highlighted the traditional crafts of the Ouachita Mountains. Approximately 20,000 persons attended the Arkabutla Lake Crafts Fair and Barbecue on Labor Day 1984 to raise money for the Le Bonheur Children’s Medical Center in nearby Memphis. The Baddour Memorial Center in Senatobia received the proceeds from this annual event in later years, when attendance swelled to 50,000 visitors and





more. Sardis Lake hosted a number of bass tournaments each season, sponsored by church, charitable institutions, and corporate groups.

Volunteers were also instrumental in bringing more physically impaired people to the lakes. At Arkabutla, plans were begun in 1991 to organize a deer hunt for physically challenged people using muzzle-loading guns. Volunteers assisted in selecting the participants from a large number of applications, setting up the site, and helping the hunters during the December hunt.<sup>42</sup> Elsewhere in the district, Ouachita, Greeson, Enid, and Arkabutla Lakes maintained special fishing piers for the physically impaired visitors.<sup>43</sup>



Grenada Lake utilized its Civil War heritage to add to the area's attractions. In 1862, troops built forts (or "redoubts") to house Gen. Pemberton's forces as they tried to prevent Gen. Grant's army from reaching Vicksburg. Two of the redoubts are featured south of Grenada Dam: one is reconstructed with cannons displayed, and the other remains in its original condition.<sup>44</sup> After the reconstruction, the lake hosted the reenactment of a Civil War battle in 1977. This event was not strictly a volunteer project, and the lake budgeted financial assistance for a limited amount of transportation costs for some out-of-state participants. It drew participants and observers from throughout the eastern and southern United States. Local Civil War buffs have continued to give volunteer demonstrations at many of the annual Grenada Lake Festivals since then.



## Not All Fun and Games

The public's involvement with recreation and the Vicksburg District was not limited to the roles of visitor and volunteer. As in other parts of the district's mission, citizens also functioned as policy critics and as partners in planning. One recurring dilemma for resource management was the inherent conflict between flood-control policies regarding lake water levels and the use of the lakes by hunters, fishers, and boaters. In order to plan effectively for flood control, the district annually lowered the

water level at its dams during the winter according to an interim rule curve for each lake. A minimum or conservation pool level was maintained at the Mississippi lakes, and a minimum power pool was preserved at the Arkansas lakes during this period. When the spring rains begin to fill the lakes, they function as catch basins to prevent or minimize flooding downstream. Even with these procedures, floodwaters did exceed the spillway level at district dams in 1973, 1980, 1983, and 1991.



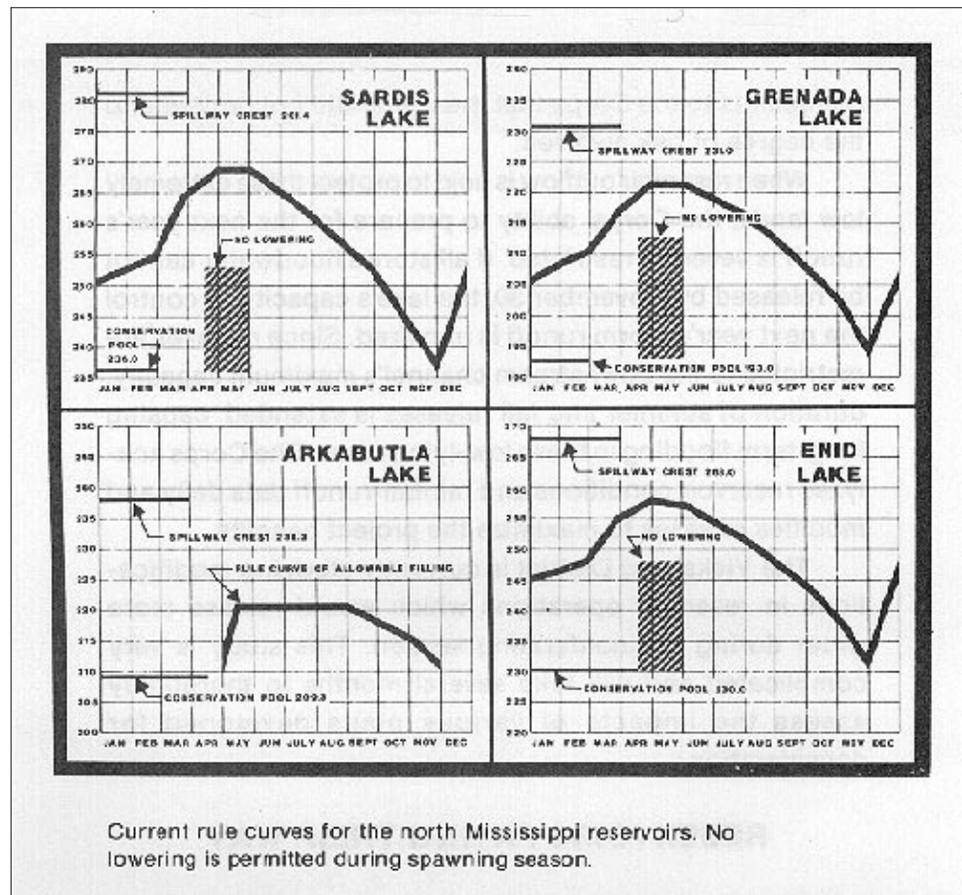
In 1985, public pressure began to build for higher water levels during the late winter and early spring seasons. For example, a delegation of marina owners at Lake Ouachita visited the offices of the Vicksburg District and Arkansas Power and Light, who between them control a series of dams on the Ouachita River, to request that higher levels be maintained there. In Mississippi, over 1,000 sports enthusiasts, commercial concerns, and local citizens petitioned the district in early 1986 to raise spring lake levels to enhance fishing and recreation. Meanwhile, upstream agricultural interests suggested lowering the summertime levels, allowing the natural stream flow to deepen and clear the paths of the tributaries that feed the lakes.

District personnel met with delegations of concerned citizens about the recreation and agricultural issues. They also evaluated the operation of the four Mississippi lakes to determine whether low water problems could be alleviated. As a result of record low spring rainfall in 1986, most of the lakes were 10 to 12 feet below normal. While the Corps was willing to make minor adjustments to achieve benefits for recreation and wildlife, District Engineer Col. Pat M. Stevens IV was clear about the priority of flood control: “We are not looking at getting away from our basic concept in operating those lakes. ... Managing those lakes to everyone’s satisfaction is extremely difficult because I have a lot of customers who



don't want their way of living changed." During the review, Col. Stevens tried to ensure that "all my customers know what we are doing and have ample time to comment or offer suggestions."<sup>45</sup>

A major part of the review concerned the 1981 Interim Water Control Plan, which included a rule curve during the winter months that was lower than the earlier plans. This rule curve had been adopted to provide greater downstream flood protection, especially for farmers who were losing crops to high water stages every year. The plan also provided for releasing lake water when agricultural fields were idle, and storing water when the planting season began. Water was released slowly during the summer months when more rapid releases would not only flood farmland under cultivation, as happened in 1983, but also damage riverbanks and channels. In the end, the District decided not to alter the existing rule curve, but to reevaluate it when downstream channel construction on the Yazoo Basin was completed in the 1990s.



Meanwhile, the drought of 1988 caused further public dissent over the low water levels at the Mississippi lakes. Lower rainfall in 1989 also caused problems for outdoor enthusiasts on the Arkansas Lakes,

especially DeGray Lake.<sup>46</sup> The drought hit Sardis Lake especially hard. Fish populations suffered, and the sponsors of the St. Jude Benefit Bass Classic became concerned that the lake's bass stock was "in pitiful, pitiful condition." A Save-the-Lake rally was held at Harmontown in June 1988. Nevertheless, pleas by the public that less water be released in the spring ran counter to the Corps' mission of flood control, based on a design rain of 28 inches in three days.<sup>47</sup> Plans continued, however, for the construction of the weir on the lower lake that provided more dependable water levels there after 1989. That project was completed in February 1990.<sup>48</sup> After 1988, the curve was modified somewhat to provide more water during January to March.



Another example of continued involvement with the public was the management of the shoreline at Lake Greeson, one of the oldest lakes in the district. Although some property owners at the lake had docking access as a property right, many others exercised it only because they were there prior to the lake's creation and had "grandfather" status. These properties lost the private access when they were sold. To involve the public in the shoreline planning, the resource manager held a series of public meetings and distributed the preliminary plan for public review and comment. The plan sought to limit private, exclusive use of the public property, encourage boat owners to utilize public facilities, and to protect wildlife habitat and the environment while promoting safe, recreational use of the lake. As a result, the final plan had public support and allowed the citizens in one Arkansas county to help direct the way in which the district served them.

At the beginning of the 1990s, DeGray Lake entered into unique negotiations with several water districts in Arkansas. The lake is the only district project that has public water supply as an authorized project purpose. The lake had previous agreements with the Ouachita River Water Association, and was considering granting water-use rights to the town of Kemzey and Little Rock water districts.

The public was also involved as new facilities were developed near Grenada Lake, along the Red River, at Sandy Beach near Camden, Arkansas, and at Warfield Point on the Mississippi River near Greenville. Washington County, Mississippi, supplied



the land for Warfield Point and staffed the facilities, which included camping sites, a bath house, playgrounds, a recreation house, and an observation tower for viewing the river.

Similarly, Camden provided land on the Ouachita River for Sandy Beach, and the district developed picnic sites, a playground, boat ramps, and a pavilion with river overlook. The city operated and maintained the park when it was completed in 1978. At Crossett Harbor, the district designed and built a recreation park adjacent to the Felsenthal National Wildlife Refuge, offering camping sites and picnic areas on the Ouachita River.<sup>49</sup>



The development of future recreational facilities was clouded by the recent cost-sharing requirements (see Chapter Seven), which might prove to be more expensive than many communities can bear. Still, plans were under way for new sites along the Red River and the Pearl River.

Land exchanges were also considered when the result would improve public use of the land. Corps officials at Vicksburg and Washington, D.C., agreed to an “interchange” of land near the shoreline at Lake Ouachita. The 10,000-acre area, which served as a buffer between the existing U. S. Department of Agriculture national forest and the Corps-managed property, could be managed by either agency under the relevant statutes. After a public hearing in May 1986, a final proposal for the interchange was considered by Congress for several years and approved in 1989. The Corps continued to have responsibility for recreation, flood control, and hydroelectric power at the lake on the land up to an elevation of 610 feet above sea level; above that the Forest Service took control of land management.

At Sardis Lake, an agreement was reached in 1990 for the Corps to lease 635 acres of land at Engineer’s Point to the city of Sardis. The city planned to develop recreational facilities and a marina at the location on the south end of the lake, near the damsite.<sup>50</sup>

With the increased interest in outdoor recreation during the 1970s and 1980s, local communities received many economic benefits. Direct income to the region increased from the wages and salaries paid by the Corps to its employees and subcontractors. In fiscal year 1986, for example, law enforcement contracts alone accounted for \$170,000 in direct income to the counties surrounding the three Arkansas lakes. In

1991, Mississippi counties were paid \$187,000 for law enforcement. In that year, the district paid a total of \$363,300 for law enforcement contracts to agencies throughout the three states.

Also, 75 percent of the lease money paid to the district by commercial operations at the lakes goes to the states each year, which distribute the money to the counties for use on schools and roads. The State of Mississippi, for example, received \$278,000 in 1977, \$478,000 in 1986, and \$325,000 in 1991 as refund payments from the Corps. In 1991, \$383,000 of the lease payments went to states in the Vicksburg district.<sup>51</sup>

Each county derived additional income as the redistributed money was respent in the area, increasing the demand for other goods and services in the region. In addition, user fees were paid to the district by campers at the lakes; in 1986, this amounted to \$479,000. However, rental income from concessions did not increase under the Corps' new leases, even as many lakes experienced rapid growth in visitation and concession use.

The link between recreation at the Corps facilities and the tourism industry in Arkansas, Louisiana, and Mississippi became stronger during the 1970s and 1980s because families began staying longer at the recreation sites. Based on average daily expense of \$40 for a family of four, the district estimated that visitors to the Mississippi lakes spent \$180 million at nearby communities. An additional \$160 million was spent at communities around the three Arkansas lakes, and many more dollars were applied at other sites in the district.<sup>52</sup>



## Chapter Four Notes

- <sup>1</sup>Interview with Bob Butler, resource manager at DeGray Lake, Jan. 27, 1987; interview with Charles Hargett, resource manager at DeGray Lake, August 18, 1993.
- <sup>2</sup>U. S. Fish and Wildlife Service, "Eagle Counts" for 1985 and 1986 Recreation-Resource Management Branch Files, p. 4; also, "1990 Bald Eagle Count," PRMB Files, p. 5.
- <sup>3</sup>*Arkansas Gazette*, May 4, 1980, p. 11G.
- <sup>4</sup>"Lake Ouachita receives 'Pride' award," *The Sentinel-Record*, Hot Springs, Ark., May 22, 1988, p. 3-A.
- <sup>5</sup>"Sardis facility put to good use," *Oxford Eagle*, Aug. 10, 1990.
- <sup>6</sup>"Berm Strengthens Sardis Dam," *Mainstem*, USACE, Vol. 3, No. 87-1, 1986, p. 23; also "Earthquake sends shock waves to north Mississippi," *Mainstem*, USACE, Vol. 1, No. 91-1, 1990, p. 6.
- <sup>7</sup>"Sardis Corps of Engineers takes award," *Batesville Panolian*, Dec. 6, 1989, p. 5A.
- <sup>8</sup>"Mississippi's Best Crappies," *Field and Stream*, Oct. 1985, p. 129.
- <sup>9</sup>"New wetland management area provides educational opportunities," *Mainstem*, USACE, Vol. 9, No. 91-3, 1991, p. 12.
- <sup>10</sup>"Natural Resources Management, Operations Division," briefing book prepared for the appointment of Col. Stevens, 1985, p. B-8.
- <sup>11</sup>Interview with L.C. "Corky" Corkern, Apr. 28, 1988.
- <sup>12</sup>"Corps keeps promise," *Mainstem*, USACE, Vol. 4, No. 88-4, 1988, p. 14.
- <sup>13</sup>"Natural-Resource Management System (NRMS) — Image Listing," Recreation-Resource Management Branch Files, Apr. 1, 1986, pp. 495-889; interview with Mac Montgomery, Project Resource Management Branch, August 22, 1993.
- <sup>14</sup>Safety and Health Requirements Manual (Washington, Office of Chief of Engineers, 1984), ch. 10.
- <sup>15</sup>Interview with Frank Walker, resource manager at Sardis Lake, Aug. 18, 1993.
- <sup>16</sup>"Corps Implements National Sign Program," *Information Bulletin* U.S. Army Corps of Engineers, Dec. 8, 1987, p. 1.
- <sup>17</sup>George Halford, "Mississippi Residents Receive National Safety Award," PAO News Release, May 3, 1985.
- <sup>18</sup>Leon J. Pantenburg, "Corps Lakes Security Program Helps Visitors, Communities," PAO News Release, Oct. 3, 1985.
- <sup>19</sup>Law Enforcement Service Contracts at Civil Works Water Resource Projects (PL 94-587) (Washington: Office of the Chief of Engineers, 1977), p. 2.
- <sup>20</sup>Based on discussions with six resource managers at district lakes between Jan. 27 and Feb. 12, 1987.
- <sup>21</sup>Memorandum to Project Managers from B. J. Woods, "Professionalism in the Park Ranger Force," Recreation-Resource Management Branch Files, May 10, 1974.
- <sup>22</sup>Letter to Representative Jamie L. Whitten from George P. Cossar, Jr., June 19, 1978, *ibid.*
- <sup>23</sup>Memorandum to file by B. J. Woods, "Uniform Issuance of Collateral-Forfeiture Citations for Western District of Arkansas," June 23, 1980 *ibid.*
- <sup>24</sup>Michael Logue, "Corps Volunteer Program a First Year Success," PAO News Release, Nov. 20, 1984.
- <sup>25</sup>Briefing notes for Denise White (CECW-ON) visit, PMRB files of Julie B. Marcy, July, 1993.

- <sup>26</sup>“Wildlife Management area dedicated,” *Mainstem*, USACE, Vol. 1, No. 91-2, 1990, p. 6.
- <sup>27</sup>“MARSH — good news for Graham Lake,” *Mainstem*, USACE, Vol. 1, No. 89-4, 1989, p. 14.
- <sup>28</sup>“Springdale Wildlife Area Is a Joint Effort,” *North Mississippi Herald*, Water Valley, Miss., Apr. 13, 1989.
- <sup>29</sup>Interview with Don Thompson, April 1989.
- <sup>30</sup>“Ducks in Mississippi,” *Arkansas Gazette*, Little Rock, Oct. 15, 1989.
- <sup>31</sup>“Haserway project still going strong,” *Mainstem*, USACE, Vol. 10, No. 92-1, 1992, p. 6.
- <sup>32</sup>Interview, April 1989.
- <sup>33</sup>“Area celebrates 50th year of lake,” *Southern Reporter*, Sardis, Miss., Aug. 16, 1990.
- <sup>34</sup>Interview with Joe Woods, Aug. 1990.
- <sup>35</sup>“Sardis Lake Dam celebrates half a century of service,” *Mainstem*, USACE, Vol. 1, No. 91-1, 1990, p. 18; interview, Aug. 1990.
- <sup>36</sup>“Workers fight hostile conditions in construction of dam in 1936,” *Tate County Democrat*, Senatobia, Aug. 9, 1990.
- <sup>37</sup>“Program at DeGray educates public about endangered birds,” *Daily Siftings-Herald*, Arkadelphia, Feb. 1, 1988; also, “Eagle weekend at DeGray,” *Mainstem*, USACE, Vol. 1, No. 90-3, 1990, p.8.
- <sup>38</sup>*Mainstem*, USACE, Vol. 2, No. 84-1, 1984, p. 11.
- <sup>39</sup>“Volunteer Program Activity and Expense Report,” Recreation-Resource Management Branch Files, Jan. 24, 1986; personal communication from Lawran Richter, PRMB staff, Nov. 5, 1993.
- <sup>40</sup>*Arkansas Gazette*, Sept. 2, 1986.
- <sup>41</sup>“At the lakes: Decade in retrospect,” *Mainstem*, USACE, Vol. 1, No. 90-2, 1989, p. 22.
- <sup>42</sup>“Hunters have a lot in common,” *Mainstem*, USACE, Vol. 9, No. 91-4, 1991, p. 18.
- <sup>43</sup>“Corps facilities accommodate physically challenged,” *Mainstem*, USACE, Vol. 11, No. 93-1, 1993, p. 8.
- <sup>44</sup>“Grenada Lake, park offer hiking, fishing, Civil War history,” *The Clarion-Ledger*, Jackson, July 11, 1991.
- <sup>45</sup>Michael H. Logue, “Corps Begins Review of Four North Mississippi Lakes,” PAO News Release, June 3, 1986.
- <sup>46</sup>“DeGray’s level reflects dry autumn; mudflats benefit both fish, wildlife,” *Daily Siftings Herald*, Arkadelphia, Dec. 27, 1989.
- <sup>47</sup>“Lake level debated, unabated,” *The Panolian*, Batesville, June 22, 1988.
- <sup>48</sup>“Sardis lower lake weir improves aesthetics, safety,” *Mainstem*, USACE, Vol. 1, No. 90-3, 1990, p. 22.
- <sup>49</sup>“Crossett Recreation Park has something for everyone,” *Ashley News Observer*, Crossett, Oct. 12, 1988.
- <sup>50</sup>“Area celebrates 50th year of lake,” *The Southern Reporter* Sardis, Aug. 16, 1990.
- <sup>51</sup>Interview with Billy Wright, Real Estate Branch, Nov. 30, 1987; Real Estate Branch via Julie Marcy, Nov. 17, 1993.
- <sup>52</sup>George Halford, “Recreation: A Multi-Million Dollar Industry,” PAO News Release, Nov. 7, 1984.