REPORT OF THE LICKING RIVER BASIN TASK FORCE

House Concurrent Resolution 69

Research Report No. 242

Legislative Research Commission
Frankfort, Kentucky
October, 1989

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FOREWORD

The Licking River Basin Task Force was created by 1988 House Concurrent Resolution 69 to study the water resource potential of the Licking River Basin in Northern Kentucky. Eighteen members of the task force are elected officials, representing some part of the Licking River Basin. The remaining four members are associated with a Water District, a Soil Conservation District, and two Area Development Districts within the region.

This report, adopted September 7, 1989, summarizes material obtained by the task force from many sources over the course of a year. We hope that the information presented here lays a foundation for future work. The report was prepared by Linda Kubala and Alice Downey. It was edited by Charles Bush and typed by Diana Hill.

Vic Hellard, Jr
Director

The Capitol
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October, 1989

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Summary

The Licking River Basin Task Force was created by House Concurrent Resolution 69. The main focus of its work during the interim was the evaluation of several proposals to build lakes in the middle and lower parts of the Licking River Basin, including the 1600-acre Callensville Lake in Pendleton County. The task force reviewed available information about these projects, concentrating on the basic, general questions of reservoir feasibility, in order to complement rather than duplicate an ongoing Corps of Engineers study of the same project. The task force investigated basinwide water supply and flood control needs, reviewed information about the economic development and tourism potential of lakes like those proposed for the basin, conducted a preliminary survey of environmental/cultural characteristics of the lake sites, and gathered information about various funding sources.

HCR 69 required the task force to finish its work and report to the Legislative Research Commission by October 1, 1989. The Corps of Engineers is scheduled to finish its study of the basin in September of 1990. Under these circumstances, task force members found that decisions about the projects are premature at this time. The task force made the following recommendation:

RECOMMENDATION

The task force does not take a position concerning the feasibility or desirability of any of the proposed reservoirs in the basin at this time, in order to await completion of the Corps of Engineers' reconnaisance study of the basin, expected September 1, 1990. The task force should be reconstituted by the General Assembly to work with the people of the basin and with the Corps of Engineers, to evaluate the results of the Corps' study and to coordinate a state and local response.

The Licking River Basin covers about 9% of the state's area, including part or all of 22 counties. The river begins in Eastern Kentucky's Magoffin County and enters the Ohio River at Covington/Newport in Northern Kentucky. Except for the two urbanized Northern Kentucky counties, Campbell and Kenton, basin settlement is predominately rural, and per capita personal incomes average less than 90% of statewide figures. Cities outside of metropolitan Northern Kentucky include Morehead, Mt. Sterling, Cynthiana, Paris, Falmouth, and Salyersville.

The river and its major tributaries, the North and South Forks, are generally free flowing. Cave Run Lake, which covers 8270 acres at seasonal pool, is by far the largest impoundment, followed by the 300-acre Williamstown Lake. The Falmouth Dam project, a Corps of Engineers proposal to impound a large lake above Falmouth, Kentucky, has been on inactive status since 1980.

County Judge-Executives have proposed a series of lakes, ranging from 100 to 1600 acres in size, to be located in nine counties. The sites are tributaries to the South Fork, the North Fork, and the Main Stem Licking River, which could be dammed with

minimal loss of cropland or dwellings. The proponents of these projects hope for economic benefits from the new lakes. Little analysis has been done of the individual sites, other than the Callensville site, discussed below. One purpose of the Corps of Engineers reconnaisance study of the Licking River Basin is to gather basic data and conduct a preliminary assessment of lakes on these sites.

The Callensville Lake is a proposed 1600-acre reservoir on Fork Lick Creek, a tributary of the South Fork Licking River in Southwestern Pendleton County. It is viewed by proponents both as a promising project in its own right, and as the anchor of the proposed set of lakes. The Callensville Lake Committee, created by the Pendleton County Fiscal Court, has worked since December 1987 to develop and promote the project. An initial study was completed, landowners were contacted, and a public hearing was held in Falmouth. Construction cost estimates available to the task force for a lake the size of Callensville ranged from $5 to $48 million. The actual cost and the development options for recreation will depend on many factors, including whether the lake is to provide flood control, and whether federal funds are sought.

The task force reviewed water supply needs in the basin. Virtually all water systems in the Licking River Basin use surface water sources rather than ground water. Those systems which draw from the river are vulnerable to pollution from upstream, and also to upstream withdrawals, particularly withdrawals for summer irrigation. West Liberty's water, above Cave Run Lake, is threatened by high chloride concentrations. Several towns have experienced serious water supply shortages during the 1980's, including Cynthiana, North Middletown, and Millersburg. Overall, permitted water withdrawals in the basin increased 20.6% between 1980 and 1988, while maximum monthly usage rose 40%. Cave Run Lake, with 614,000 acre-feet of water storage, helps to maintain summer low flows along the river downstream, and is a potential supply source for strapped systems. Water systems can purchase storage in the lake, and direct that water be released when needed. West Liberty and Cynthiana have approached the Corps of Engineers about purchasing such storage, which would be cheaper than constructing new reservoirs with comparable storage. The Corps cannot guarantee, however, that water released will reach a downstream user, making this option less attractive for towns some distance from the lake. The Task Force did not find any direct links between water systems expansion plans and specific proposed reservoirs, but such uses may develop as planning proceeds.

Flooding causes an estimated $2.43 million in damages annually in the basin. While much of this flooding occurs upstream of any of the proposed lakes, and would not be affected by them, well-designed reservoirs could help reduce flooding downstream. Flood control structures currently in place in the Licking River Basin include: Cave Run Dam, which controls runoff from the upper quarter of the basin; a series of small flood control dams on the Salt Lick Creek; and another group of dams along Fox Creek. To provide flood control, dams must be built to hold water well above the usual lake level. Flood control capability would increase the cost of the proposed reservoir projects, and also would restrict lakeside development. The Corps of Engineers, however, cannot pursue a project unless at least 10% of the expected benefits are for flood control.

Tourism and recreational activity can be an economic plus for an area, and proponents anticipate such benefits from Callensville and the other proposed lakes. To provide a net benefit, the projects must generate returns greater than the costs of building and operating them. The task force obtained information about Taylorsville Lake in Spencer County, completed by the Corps of Engineers in 1978. State budget constraints have slowed development of recreational facilities at Taylorsville Lake, and visitation remains far below the numbers originally predicted. Nevertheless, Spencer County Judge-Executive C. L. Glasscock reported that the lake has been a net plus for the county. High occupancy rates at Kincaid Lake State Park, located only a few miles from the site of the proposed Callensville Lake, demonstrate a high use potential for a development in that area, a potential also displayed by a study of overnight stays at 11 existing state parks, prepared for the task force. Callensville, if built, would be the largest lake in Northern Kentucky. It would not, however, be without competition for visitors from Northern Kentucky or Lexington. The Corps of Engineers already operates five lakes larger than 1,000 acres within 50 miles of these cities. Analysis of the economic potential of any of the projects will require more specific development plans.

It is important that environmental and cultural characteristics of an area be considered early and throughout the planning process. Environmental concerns can kill a project if not handled properly; on the other hand, nearby environmental and cultural resources can be combined with a lake to make it a superior attraction. The task force conducted a preliminary scan of the proposed lakesites in the basin, to identify known problems on the sites. Six agencies were asked to review their records for any information about wetlands, rare species, waste sites, oil or gas wells, or historical and archeological sites on the tributaries proposed as lake sites. The agencies reported some characteristic of note associated with 18 of the 29 tributaries listed. The preliminary scan underscored the likelihood that any project site will show some potential problems, and thus the importance of early planning.

A critical aspect of the feasibility of any project is the availability of funding. The task force reviewed several potential funding sources for lake projects in the Licking River Basin. The huge expense of a lake construction project would suggest the desirability of establishing partnerships between several programs to meet funding needs. The report briefly summarizes fund availability and restrictions of selected programs operated by the U.S. Army Corps of Engineers, the Soil Conservation Service, the Kentucky Infrastructure Authority, the Finance and Administration Cabinet, the Department of Fish and Wildlife Resources and the Department for Local Government, and pooled lease financing programs operated by the Kentucky League of Cities and the Kentucky Association of Counties.

CHAPTER I

TASK FORCE ACTIVITIES AND RECOMMENDATION

Scope of Work

The Licking River Basin Task Force was created by the 1988 General Assembly through passage of House Concurrent Resolution 69 (see Appendix A). The resolution directed that the task force be comprised of 22 members, chosen to represent various interests in the Basin, as follows: two state Senators; three state Representatives; seven County Judge/Executives and six mayors; one member each of a water district board and a soil conservation district board; and citizen members of the Northern Kentucky and Buffalo Trace Area Development Districts.

HCR 69 directed the task force to " . . . advise and make recommendations to the Legislative Research Commission on all matters relating to the Licking River and its tributaries in Northern Kentucky, including:

1. The necessity for flood control;

2. The need for alternative potable water supplies;

3. The rationale for one or more impoundments;

4. The potential need for recreational development in the region;

5. The feasibility of economic development projects which could benefit the area, the effect on land and water resources; and

6. The overall level and commitment of community support for such projects."

The main impetus for creation of the task force, and the focus of its work during the interim, was a proposal by a group of leaders in the region to build up to 30 impoundments, ranging from 100 to 1600 acres in size, on tributaries of the Licking River. The proposed lakes, located in nine counties in the middle and lower part of the basin, were conceived in part as a replacement for the earlier and much larger Falmouth Dam Project. The Falmouth Dam, a Corps of Engineers project, would have created an 85 mile-long lake on the main stem of the Licking River. It was bitterly fought over in the 1970's, and became an inactive project after Kentucky failed to provide matching funds necessary for project continuation in 1980. Supporters of the plan believe that a set of smaller lakes could bring the same economic and resource benefits to the region without the problems which plagued the Falmouth Dam project.

While supporting the concept of a series of lakes, promotors have directed most of their efforts to one proposal, the 1600-acre Callensville Lake on the Fork Lick Creek in Pendleton and Grant Counties. The Licking River Basin Task Force began its work by reviewing the Callensville project, and concentrated throughout the interim on the

need for, the feasibility of, and the economic viability of new lakes in the Licking River Basin.

The task force's work also was influenced by a parallel study of the basin by the Corps of Engineers. In 1987, Congress authorized the Corps of Engineers to conduct a study of flood control and water development needs in the Licking River basin, which will include a preliminary evaluation of the locally-proposed reservoir projects, and it later authorized $800,000 for that purpose. The Reconnaissance Study began in April 1989 and will not be completed until September 1990. The Reconnaissance study is expected to provide the detailed data needed to analyze the effect of any proposed lake on flooding, as well as comprehensive water use information, engineering analysis and cost estimates for at least some of the proposed lakes.

Task force members felt that the Corps of Engineers study would provide information crucial to a final evaluation of the lakes, yet this study will not be available for another year. The task force therefore concentrated on the broader questions of regional flood control and water supply needs and looked at a variety of factors which could influence the success of a major recreational lake. The task force also provided a forum for public comment and debate on the issues related to lake development.

The Licking River Basin Task Force held its first meeting in September 1988, and met each month after that until September 1989. The minutes of these meetings form Appendix B of this report.

HCR 69 requires the task force to finish its work and report to the Legislative Research Commission by October 1, 1989. Due to circumstances mentioned above, however, the task force finds itself in the middle of its task, rather than at an end. Therefore, the recommendation of the task force is as follows:

RECOMMENDATION

The task force does not take a position concerning the feasibility or desirability of any of the proposed reservoirs in the basin at this time, in order to await completion of the Corps of Engineers' reconnaisance study of the basin, expected September 1, 1990. The task force should be reconstituted by the General Assembly to work with the people of the basin and with the Corps of Engineers, to evaluate the results of the Corps' study and to coordinate a state and local response.

This report summarizes the task force findings. Chapter III summarizes available information on the Callensville Lake Project, and on the other proposed lakes in the Licking River Basin. Chapters IV and V review water supply and flood control needs in the basin. Chapters VI—VII deal with other subjects which could determine the feasibility of a lake project: recreational and tourism potential, environmental constraints, and funding sources.

CHAPTER II

THE LICKING RIVER BASIN

AN OVERVIEW

A. Physical Characteristics

The watershed of the Licking River and its tributaries covers 3660 square miles, including all or parts of 22 counties. From its origin in Magoffin County, in Eastern Kentucky, the Licking River flows generally northwest about 320 miles to the Ohio River at Newport/Covington. Two major tributaries, as well as numerous smaller streams, contribute to Licking River flows. The North Fork begins in Northeastern Kentucky at the Lewis-Fleming County border and flows westward about 60 miles to the main stem. Tributaries of the South Fork of the Licking River drain much of the eastern Bluegrass. The South Fork flows through Cynthiana and into the Main Stem Licking at Falmouth.

Both flooding and water shortages are problems in the basin. The general topography of the basin ranges from hilly to mountainous, except for the area of rolling Bluegrass land in the upper reaches of the South Fork. Tributary streams are relatively short and have steep gradients, so runoff is rapid when it rains. Localized flooding along tributaries is common. At the same time, this configuration does not sustain low flows well during dry periods, when many of the streams run dry.[1]

Cave Run Lake, completed in 1973, with a storage capacity of 614,000 acre-ft, is the only major impoundment on the river. Cave Run is used to control flooding and also to augment low flows in the area downstream. The U.S. Soil Conservation Service has built small lakes and other flood control measures in the Fox Creek, Salt Lick Creek and Twin Creek watersheds in the basin. Nevertheless, most of the river is unregulated. The Nationwide Rivers Inventory in 1981 identified a 107-mile stretch of the river as one of the nation's significant remaining free-flowing streams.[2]

B. Population and Economic Characteristics

The Licking River Basin extends into 22 Kentucky counties. However, since only very small portions of Boone, Lewis, Elliott and Wolfe counties are within the basin, the population and economic figures developed for the task force are based on the 18 counties listed in Figures 2 and 3. The area is represented by five Area Development Districts: Big Sandy, Buffalo Trace, Gateway, Bluegrass, and Northern Kentucky.

The total population of the 18 Licking River Basin counties was 434,668 in 1980. This population grew more slowly than in Kentucky as a whole during the 1970's, and is projected by the University of Louisville Urban Studies Center to lag behind state rates through 1995.

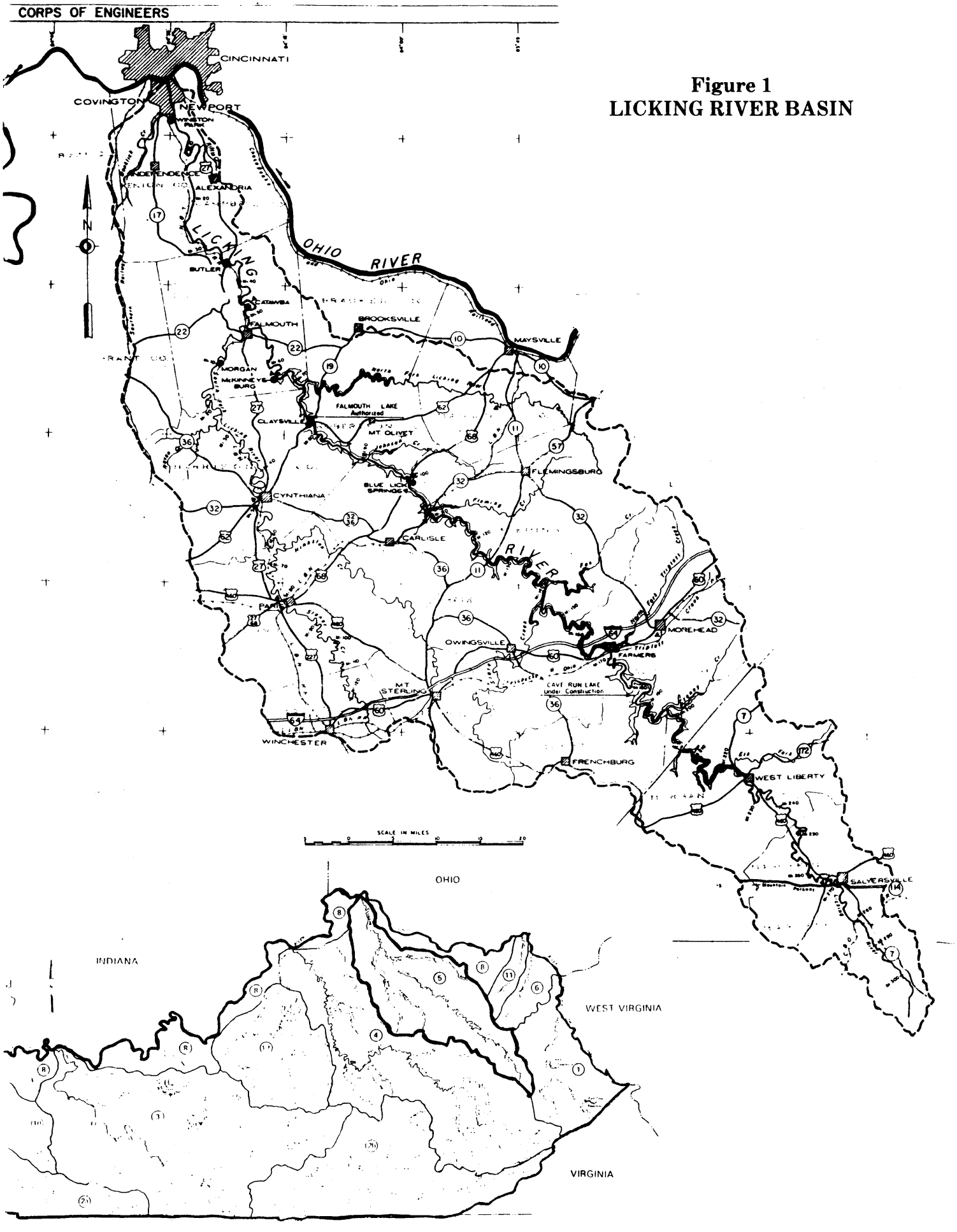


Figure 1
LICKING RIVER BASIN

One-half of the total population in the basin lives in Kenton and Campbell Counties in Northern Kentucky. The population in these two counties is overwhelmingly urban, while the remaining 16 counties are predominately rural. The largest town in the basin, outside of Kenton and Campbell Counties, is Winchester, with 15,216 residents. Eight of the counties had no urban population in 1980.[3]

Figure 2

LICKING RIVER BASIN POPULATION

	1970	1980	% Change 1970-1980	1985	% Change 1980-1985	1995	% Change 1980-1995
1. Bath	9,235	10,025	8.6	10,096	0.7	10,261	2.4
2. Bourbon	18,476	19,405	5.0	19,320	0.4	20,292	4.6
3. Bracken	7,227	7,738	7.1	7,533	-2.6	7,940	2.6
4. Campbell	88,704	83,317	-6.1	80,936	-2.9	80,184	-3.8
5. Clark	24,090	28,322	17.6	29,100	2.7	30,518	7.8
6. Fleming	11,366	12,323	8.4	12,341	0.1	13,458	9.2
7. Grant	9,999	13,308	33.1	14,031	5.4	15,953	19.9
8. Harrison	14,158	15,166	7.1	15,769	4.0	17,291	14.0
9. Kenton	129,440	137,058	5.9	137,171	0.1	144,534	5.5
10. Magoffin	10,443	13,515	29.4	14,171	4.9	16,068	18.9
11. Mason	17,273	17,765	2.8	17,208	-3.1	16,749	-5.7
12. Menifee	4,050	5,117	26.3	5,270	3.0	5,656	10.5
13. Montgomery	15,364	20,046	30.5	20,410	1.8	21,682	8.2
14. Morgan	10,019	12,103	20.8	11,852	-2.1	12,107	0.03
15. Nicholas	6,508	7,157	10.0	7,224	0.9	7,645	6.8
16. Pendleton	9,949	10,989	10.5	10,949	-0.3	11,629	5.8
17. Robertson	2,163	2,265	4.7	2,231	-1.5	2,164	-8.8
18. Rowan	17,010	19,049	12.0	19,285	1.2	19,391	1.8
Licking River Basin Total	405,474	434,668	7.1	434,890	0.1	453,522	4.2
Kentucky Total	3,220,711	3,660,777	13.7	3,728,540	1.9	3,847,018	5.1

Source: University of Louisville, Urban Studies Center, *How Many Kentuckians: Population Forecast, 1985-2020 The 1988 Edition.*

Figure 3
LICKING RIVER BASIN URBAN POPULATION BY COUNTY, AND TOWNS WITH AT LEAST 1000 POPULATION

County	% Urban-1980	Population 1980	1970
Bath	—		
Owingsville		1,419	1,381
Bourbon	40.9		
Paris		7,935	7,823
Bracken	—		
Augusta*		1,455	1,434
Campbell	83.9		
Alexandria		4,735	3,844
Belleview*		7,678	8,847
Cold Spring		2,117	1,406
Dayton*		6,979	8,751
Ft. Thomas*		16,012	16,338
Highland Heights*		4,435	4,543
Newport**		21,587	25,998
Silver Grove*		1,260	1,365
Southgate		2,833	3,212
Clark	53.7		
Winchester**		15,216	13,402
Fleming	23.0		
Flemingsburg		2,835	2,483
Grant	18.8		
Dry Ridge**		1,250	1,100
Williamstown**		2,502	2,063
Harrison	38.8		
Cynthiana		5,881	6,356
Kenton	91.8		
Covington**		49,563	52,535
Crescent Springs*		1,951	1,662
Crestview Hills*		1,408	1,114
Edgewood		7,230	4,139
Elsmere**		7,203	NA
Erlanger**		14,433	NA
Ft. Mitchell**		7,297	6,982
Fort Wright		4,481	4,819
Lakeside Park		3,038	2,511
Ludlow*		4,959	5,815
Park Hills**		3,500	3,999
Taylor Mill		4,509	3,146
Villa Hills*		4,402	1,647
Independence		7,998	1,715
Magoffin	—		
Salyersville		1,352	1,196
Mason	44.9		
Maysville*		7,983	7,411
Menifee	—		
Montgomery	29.0		
Camargo		1,301	244
Jeffersonville		1,528	775
Mt. Sterling		5,820	5,083
Morgan	—		
West Liberty		1,381	1,387
Nicholas	—		
Carlisle		1,757	1,579
Pendleton	—		
Falmouth		2,482	2,593
Robertson	—		
Rowan	40.9		
Morehead		7,789	7,191

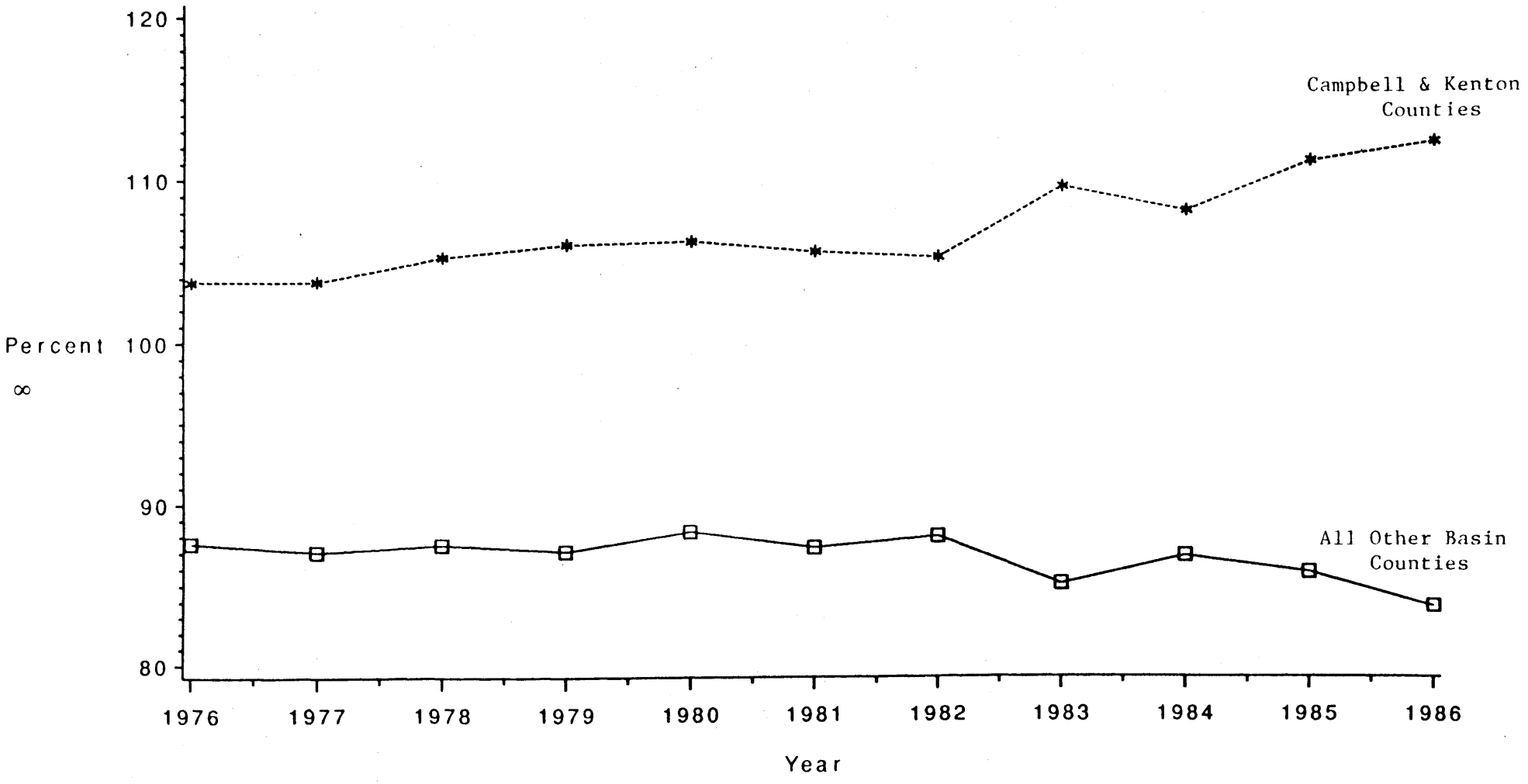
*Not located within the Licking River Basin per se.
**Located on boundary between two river basins.

Source: U.S. 1980 Census of Population, Vol. (PC(1), A(19) *Kentucky, Number of Inhabitants*, Tables 3 & 4.

The charts in Figures 4, 5 and 6 show trends in three key economic indicators for the region. Per capita personal income figures (Fig. 4) emphasize the disparity between Northern Kentucky and the rest of the basin. Incomes in the northern two counties lie above the state average, and have increased in relative terms since 1976. Per capita incomes in the other counties began below average and fell behind during the same period, dropping from about 88% to 84% of the state figure between 1976 and 1986.

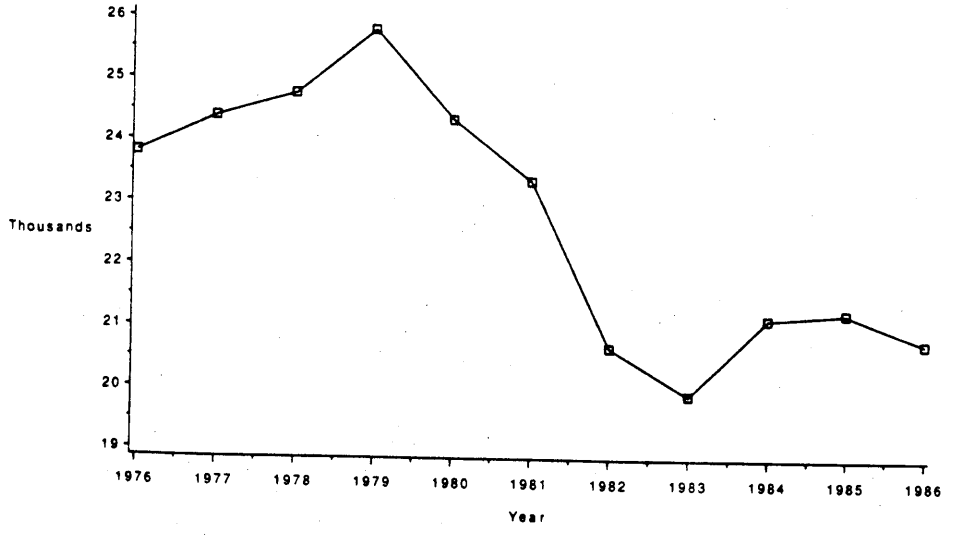
Manufacturing employment in the Licking River Basin (Fig. 5) fell between 1976 and 1986, both in absolute terms and relative to statewide performance. Farm employment, however, held its own during a period which saw statewide declines (Fig. 6).

Figure 4
LICKING RIVER BASIN PER CAPITA PERSONAL INCOME AS A PERCENT OF KENTUCKY PER CAPITA PERSONAL INCOME



Source: Kentucky Economic Information System and LRC Budget Review Office.

Figure 5
LICKING RIVER BASIN MANUFACTURING EMPLOYMENT
Including Campbell and Kenton Counties



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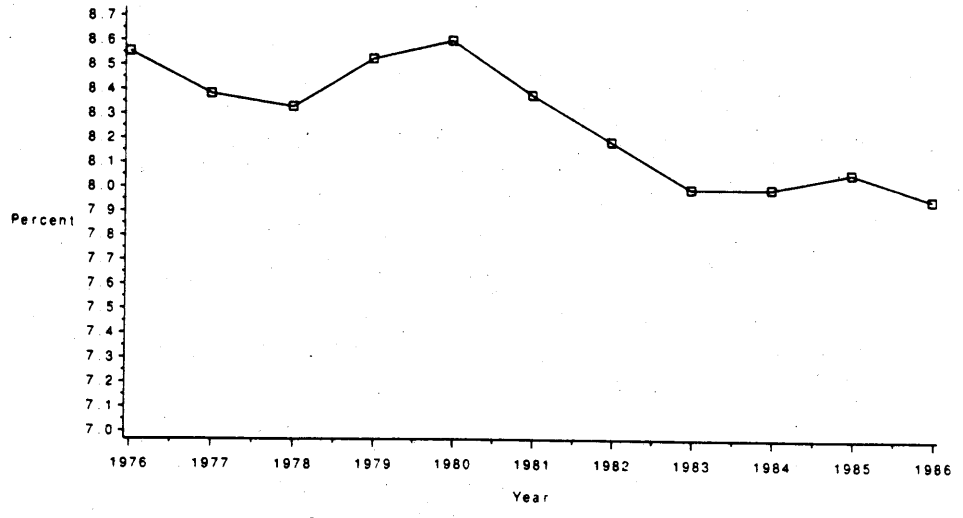
Including Campbell and Kenton Counties



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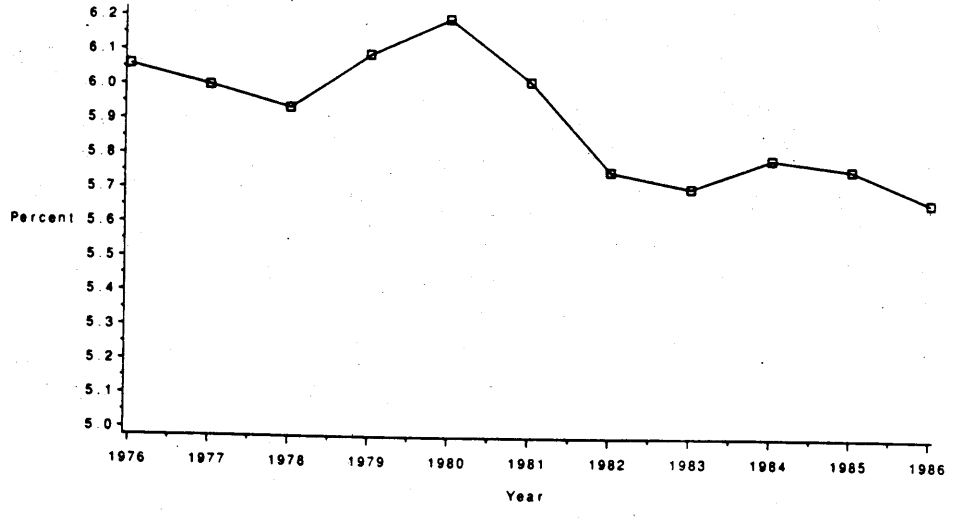
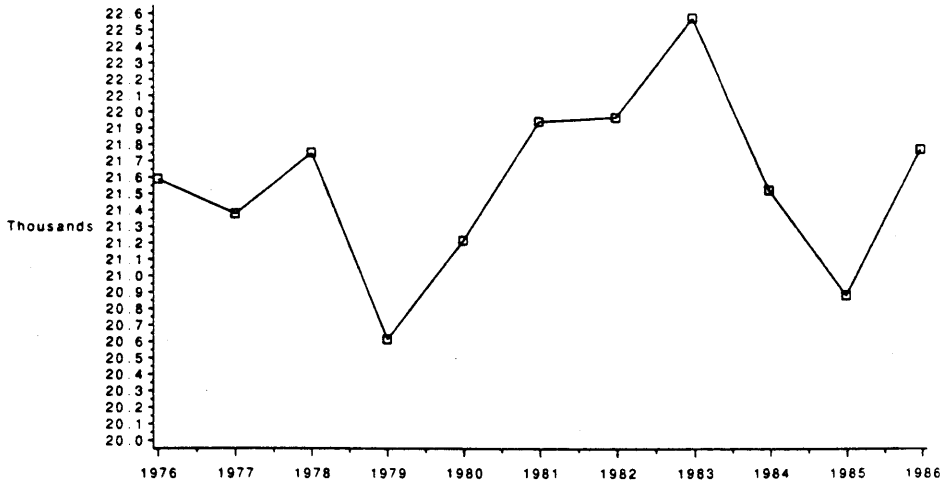
Excluding Campbell and Kenton Counties



Source: Kentucky Economic Information System
and LRC Budget Review Office.

Figure 6
LICKING RIVER BASIN FARM EMPLOYMENT
Including Campbell and Kenton Counties



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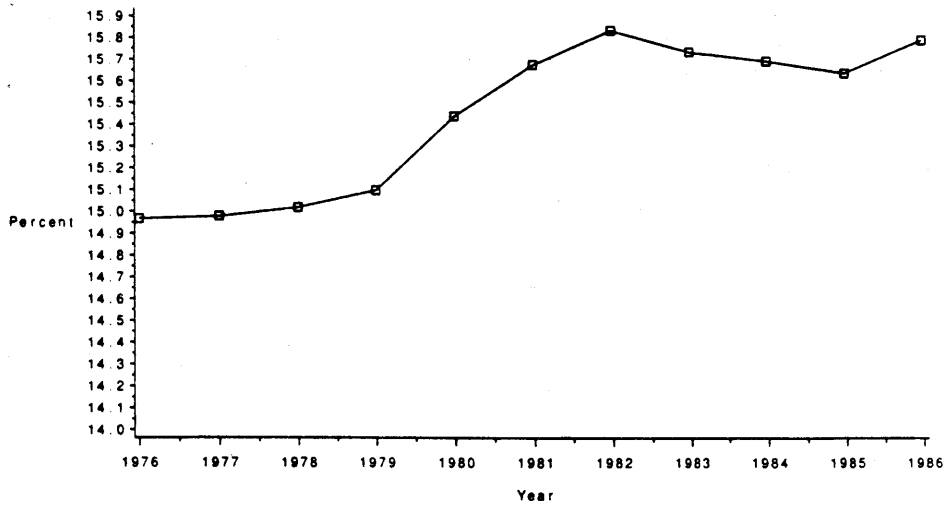
Including Campbell and Kenton Counties



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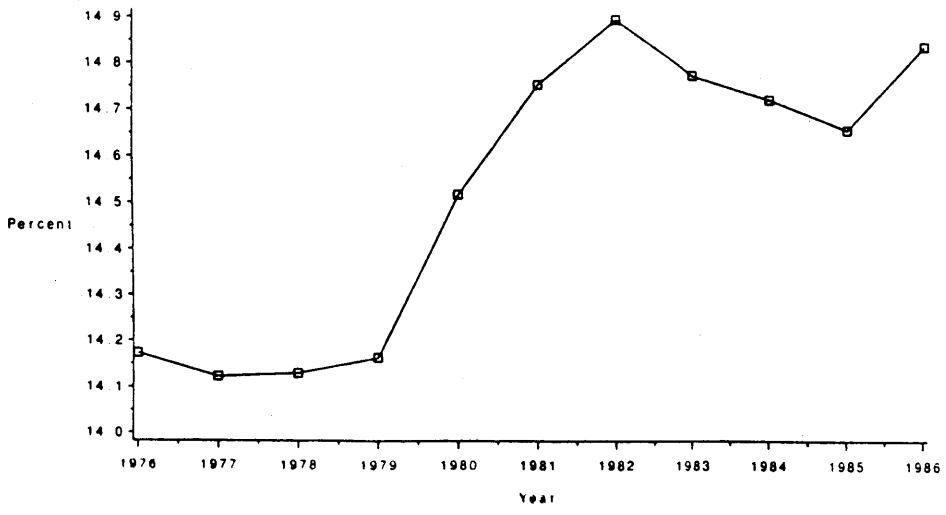
Excluding Campbell and Kenton Counties



Source Kentucky Economic Information System
and LRC Budget Review Office

CHAPTER III

SUMMARY OF LAKE PROJECTS IN THE BASIN

Overview: The Nine-County Lakes Project

The Task Force identified 31 lakes proposed for 9 counties, ranging in size from about 100 acres to 1600 acres. These are shown on Figures 7 and 8. Most of these are part of a set of lakes conceived as a regional multi-purpose project by the County Judge/ Executives of the region, but two additional lakes were proposed to the task force at one of its meetings.[4]

Planning on most of the lakes is at an early conceptual stage. As explained to the task force, local officials envision a series of smaller lakes created by earthen dams on tributaries to the South, North, and Main Stem Licking River which, collectively, can offer benefits to the region similar to those which supporters had hoped would be provided by the inactive Falmouth Lake project. The lake sites selected in the initial plan are those which could be dammed with a minimal loss of farmland, dwellings or other buildings. Many of these lakes have not been mapped, nor have the flood control or water supply potential of most of the sites been analyzed. The lakes listed and mapped in Figures 7 and 8 are, in large part, a concept which is better developed as a whole than in its details. If some individual sites prove unsuitable on closer scrutiny, others could replace them. The concept also could be realized with more or fewer lakes than are shown on the map. Proponents of the lake project expressed the hope on several occasions that the Corps of Engineers Reconnaissance study of the Basin would help identify those lakes which would provide significant flood control benefits and a positive ratio of benefits to cost.

County Judge/Executives from the region met with representatives of the Corps of Engineers and the U.S. Soil Conservation Service in January 1988, and with members of the Kentucky Congressional Delegation in February 1988, seeking support for the project. The Kentucky Flood Control Advisory Commission endorsed the project by resolution February 5, 1988. These efforts were largely responsible for obtaining funding for the Corps of Engineers study of the basin.

Callensville Lake Project

The proposed Callensville Lake would be created by a dam on the Fork Lick Creek about one mile above its confluence with the South Licking River, near Morgan in Southwestern Pendleton County. The lake would cover approximately 1600 acres in Pendleton and Grant counties, with a total channel length of about 12 miles. Figure 9 shows the location of the proposed lake.

Figure 7
PROPOSED LAKE SITES ON TRIBUTARIES BY COUNTY

BATH COUNTY — **Judge Ray Bailey**

Prickley Ash Creek
Mud Lick Creek
Mill Creek

BRACKEN COUNTY — **Judge Dwayne Jett**

Camp Creek
Willow Branch
Pike Creek
part: Kincaid Creek, Willow Creek

FLEMING COUNTY — **Judge Bill Owens, member**

Mud Lick Elk Creek
part: Johnson Creek

GRANT COUNTY — **Judge Byron Martin, member**

part: Grassy Creek, Middle, South Fork
Fork Lick Creek (Callensville)

HARRISON COUNTY — **Judge Charles Swinford, member**

Raven Creek, South, Middle, North Fork
Snake Lick Creek
Currys Run
Beaver Creek

NICHOLAS COUNTY — **Judge Reese Smoot, member**

Stony Creek
Coon Creek

PENDLETON COUNTY — **Judge David Pribble, member**

Grassy Creek, Middle South
Callensville (Fork Lick Creek)
Short Creek
Kincaid Creek
Little Kincaid Creek
Willow Creek
Blanket Creek West
Four Oaks—Steer Creek

ROBERTSON COUNTY — **Judge G. Wayne Buckler**

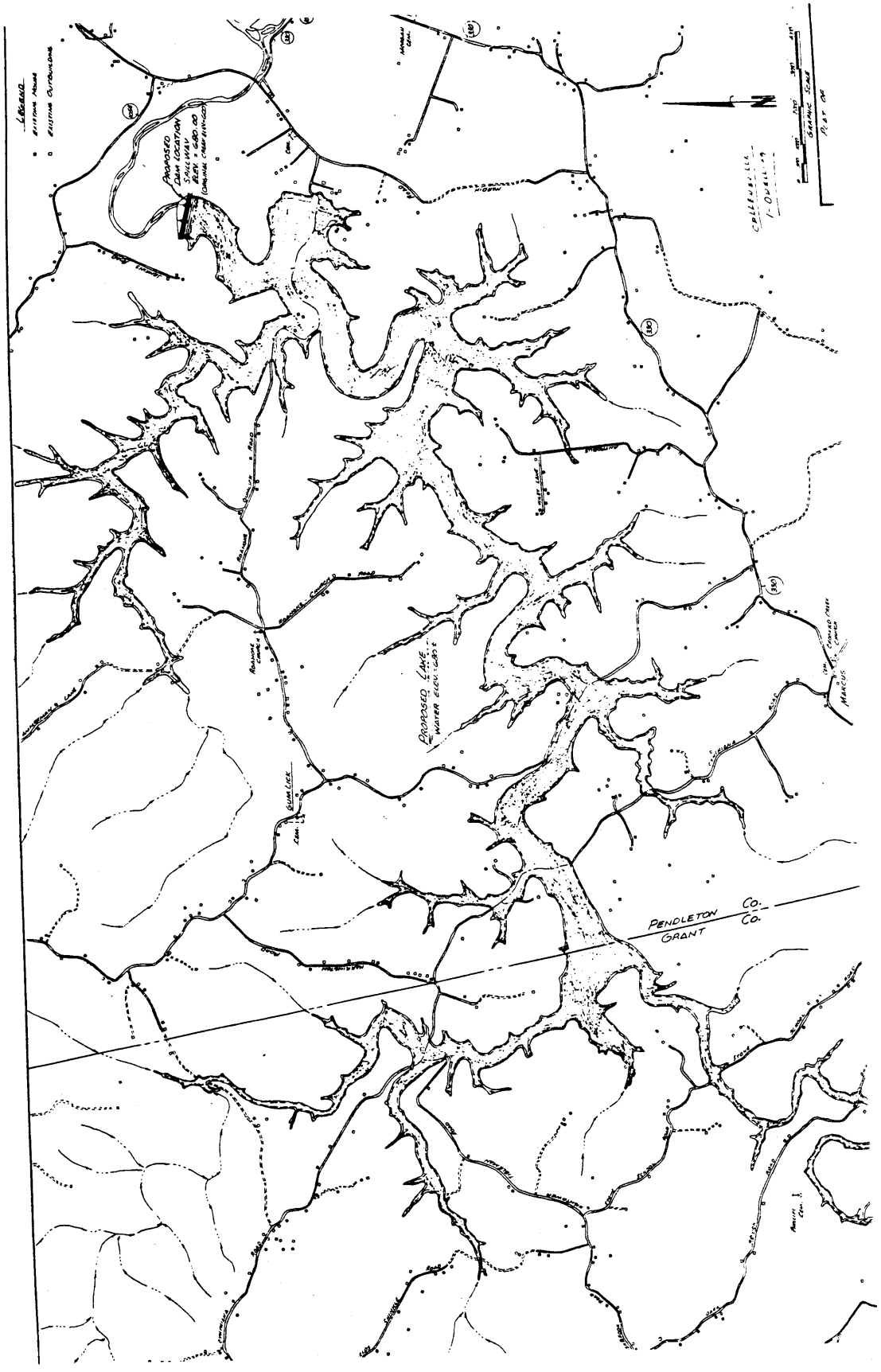
West Creek
Cedar Creek
Johnson Creek

MASON COUNTY — **Judge Billy F. Ross**

Shannon Creek
Absalom Creek

Figure 8
PROPOSED LAKE SITES ON TRIBUTARIES

Figure 9
EXTENT OF PROPOSED CALLENSVILLE LAKE



Proponents of the Callensville Lake see it both as a promising project in its own right, and as anchor of the multi-lake project. Supporters of the regional project have agreed to promote Callensville as their first priority. The Callensville Lake Committee was created by the Pendleton County Fiscal Court in December, 1987, to develop the concept and promote the project. This committee has worked out initial development guidelines, identified and contacted landowners in the project area, disseminated information about the project, and held a public hearing in Falmouth in February, 1989.[5] The Pendleton County Industrial Foundation, Inc. commissioned a study of the project, "Callensville Lake Project: Visions of a Better Future," to outline the project and describe possible benefits.[6] The Callensville project also has numerous supporters and opponents. Appendix C contains a list of endorsements, and a petition by opponents of the lake.

Proponents tout the multiple advantages of a lake to the area, but emphasize the predicted benefits to the economy of Pendleton and Grant Counties, including greater tax base from resort and second home developments, greater tourism and recreational spending, job creation, and irrigated agriculture. Landowners in or near the proposed lake comprise much of the opposition. They argue that supporters greatly understate the amount of productive land that will be inundated by the lake, and are too optimistic about predicting economic benefits. Some landowners also were angered by provisions of a land purchase option sent to them by the Callensville Lake Committee, and by perceived pressure to donate their land to the project, especially since these actions came before detailed studies have been made or funding obtained.

The proposed lake has been surveyed to determine its approximate extent, on the assumption that the impoundment would be 80 feet deep at the dam site. However, the task force did not have detailed engineering studies, and cost estimates for a lake like Callensville ranged from $5 to $48 million, a range too large to be useful. The $5 million figure, shown in Figure 10A, was prepared by Hicks and Mann Consulting Engineers in Williamstown. It assumes a simple earthen dam, fixed pipe for drainage, and virtually no flood control capability. Unit costs for land acquisition, clearing and earth moving are at or somewhat below current highway construction averages. It represents a minimum project cost. The Pendleton County Industrial Foundation's study assumes a cost of $20 million for construction, but no basis is given for that figure.[7] The highest estimates, by the Corps of Engineers, are not for Callensville, but for a similarly sized project, Station Camp Creek in the Kentucky River Basin. Both Callensville and Station Camp Creek would have a normal pool 80 feet above the present creek bed, which would impound 1600 acres at Callensville and 1100 acres at Station Camp Creek. The 1988 Corps of Engineers estimates for Station Camp Creek are $38 million for a concrete dam, and $48 million for an earthfill one, as shown on Figure 10B. The Station Camp Creek facilities are designed to hold 30 feet of water above the normal pool for flood control. They include expensive spillway and outlet works, so that the impoundment level can be controlled. The Corps of Engineers added 25% to its estimates to cover contingencies. The Corps estimates probably represent an upper range of likely cost for actual lake construction, although it should be noted that they do not include any of the costs to provide recreational access and facilities. The drastically different design assumptions, however, and the 10-fold difference between cost estimates, emphasizes the need for more information about this proposal.

The Corps of Engineers' study is expected to provide much of the technical information now lacking. Dependable cost estimates and design criteria will be necessary to accurately evaluate the project.

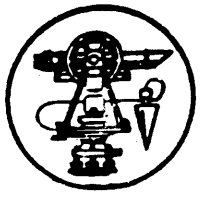
Clay Wildlife Management Area

The Department of Fish and Wildlife, Division of Fisheries, expects to construct a dam sometime this year on Fishtrap Creek, a tributary of the Licking River in Nicholas County. This project will benefit the Clay Wildlife Management Area, a preserve of about 5000 acres in Nicholas County. Funding for the project will be through Dingell-Johnson and Wallop-Breaux federal funds, available for projects which benefit boating. These funds also are used for the purpose of fish restoration and boat access site development.[8]

Although the lake is estimated to be approximately 30 acres, the size will depend on the final design.

Figure 10A

FIGURE 10A



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CALLENSVILLE LAKE COST ESTIMATE

Dam Length:	1100'
Dam Height:	85'
Land Acquistion:	$ 1,500,000.00
Clearing:	960,000.00
Dam Construction:	1,700,000.00
Preliminary Engineering:	197,250.00
Utilities:	100,000.00
Contract & Construction Engineering 15%:	417,750.00
Piping:	125,000.00
TOTAL AMOUNT OF ESTIMATE:	**$ 5,000,000.00**

ESTIMATE PREPARED BY
HICKS & MANN CONSULTING ENGINEERS

Figure 10B

STATION CAMP CREEK, KENTUCKY

COST ESTIMATE SUMMARY

EARTHFILL DAM
200 FOOT SPILLWAY AT ELEVATION 680*
TOP OF DAM ELEVATION = 712.0

Cost Acct. No.	Item Title	Total Cost
01	Lands and damages	$ 4,300,000
02	Relocations	775,000
03	Reservoir and pool preparation	1,603,100
04	Dam and appurtenances	33,704,800
08	Roads	72,450
19	Buildings, grounds, and utilities	747,500
20	Permanent operating equipment	387,500
	Subtotal	$41,590,350
30	Engineering and design	3,915,500
31	Supervision and administration	3,078,700
	Grand Total	$48,584,550

ROLLER COMPACTED CONCRETE DAM
250 FOOT SPILLWAY AT ELEVATION 680*
TOP OF DAM ELEVATION = 705.0

Cost Acct. No.	Item Title	Total Cost
01	Lands and damages	$ 4,300,000
02	Relocations	775,000
03	Reservoir and pool preparation	1,603,100
04	Dam and appurtenances	24,894,350
08	Roads	72,450
19	Buildings, grounds, and utilities	747,500
20	Permanent operating equipment	387,500
	Subtotal	$32,775,900
30	Engineering and design	2,990,000
31	Supervision and administration	2,351,000
	Grand Total	$38,116,900

* Elevation at base: 600

Source: U.S. Corps of Engineers: Reconnaisance Report, Station Camp Creek, Ky., March 1988, Vol 4., Tables 11 and 17.

CHAPTER IV

WATER SUPPLY NEEDS

Kentucky suffered numerous droughts throughout the 1980's, causing unexpected shortages on many water systems, competition between farmers and water systems, and unusual concentrations of pollutants in streams. The 1988 drought in Kentucky was the most serious of the decade. Therefore, a major concern of the Task Force, one expressed repeatedly by individual members, was the need to ensure sufficient, clean water supplies for the future.

The Kentucky Division of Water provided the task force with data on all water use permits in the basin, and presented information about some systems' responses to water shortages. This information is summarized in Figure 11. Taking the basin as a whole[9], average permitted water use increased by 20.6% between 1980 and 1988. Maximum monthly usage increased even more, by 40%. These increases are especially notable since they coincided with much slower population growth, and with declines in manufacturing employment in the basin.

Surface sources—streams or lakes—supply virtually all the public water systems in the basin. Several systems use reservoirs located on tributaries of the river. Most take water directly from the river, usually using low dams to create pools at the water intake.

North Middletown's supplies dropped to a dangerous level in 1988 because of irrigation use upstream. Cynthiana, on the South Fork, reacted to short supplies throughout the 1980's by building a water line to the Main Stem of the Licking River. These systems appear to have had the most serious shortages, but Figure 11 shows that many other water systems in the basin also had supply problems.

Dependence on river flow for water supply makes water systems vulnerable to upstream users and polluters. Discharges from sewage treatment plants, animal wastes, metals, and other pollutants may not be sufficiently diluted when the river is especially low. Permitted discharges of treated wastewater into basin streams equalled 88% of amounts withdrawn in 1988.[10] Brine pollution from the oil fields is a particular problem in the upper Licking River Basin. West Liberty's water supply, taken from the Licking upstream from Cave Run Lake, contains high chloride concentrations. West Liberty presently is considering withdrawing water from Cave Run Lake at Blackwater Creek to get a safer drinking water supply. Chloride concentrations in Cave Run Lake, while not yet excessive, increased 4 1/2 times between 1976 and 1986.[11]

Figure 11

PERMITTED WATER WITHDRAWALS, LICKING RIVER BASIN

Facility	Source of Water	Avg. Monthly Withdrawals (million gallons per day) 1980	1988	% Change	Maximum Monthly Widrawals (million gallons per day 1980	1988	% Change
Millersburg Municipal Water Works	Hinkston Creek	0.104	0.087	-16%	0.134	0.101	-25%
Repairs needed on dam and infrastructure. Low supplies 1983, 1988 (state advisory level). Competition from irrigation.							
Paris Municipal Water Works	Stoner Creek	1.084	1.288	19%	1.165	1.635	40%
Mild shortages in 1986,87,88.							
Kenton Co. Water District #1	Licking River	9.158	8.576	- 6%	10.395	10.881	5%
Insufficient treatment and distribution capability. District also draws water from Ohio River. Voluntary conservation 3 months in 1988.							
Mt. Sterling Water & Sewer System	Greenebrier Lake, Slate Creek	2.174	1.653	-24%	2.303	2.105	- 9%
Lake expanded, approval to reuse waste water. Low supplies 1983,87,88 (state advisory level 1988).							
Mt. Olivet Municipal Water Works	Licking River	0.118	0.058	-51%	0.131	0.088	-33%
Cynthiana Municipal Water Works	Licking River	1.602	1.672	4%	1.817	2.167	19%
Shortages 1983,85,86,87,88. Began line to Main Stem Licking in 1984, finished 1988. Competition from irrigation.							
Flemingsburg Utilities	Flemingsburg Lake impoundment	0.481	0.409	-15%	0.514	0.573	11%
Considering new source: Licking or Ohio River. Supplies remained adequate, conservation used in 1988.							
N. Middletown Municipal Water Works	Stoner Creek	0.086	0.078	- 9%	0.090	0.085	6%
Low supply 1987. Serious shortage 1988 (state alert level).							
Williamstown Municipal Water Works	Lake Williamstown	0.451	0.660	46%	0.515	0.900	75%
Experienced difficulty repairing leak in lake - no supply shortages.							
Morehead State Univ. Water Plant	Evans Branch Impoundment Tripletts Creek	0.523	0.411	-21%	1.001	0.842	-16%
Butler Municipal Water Works	Licking River	0.047	0.086	83%	0.064	0.103	61%
Irrigation Competition							
Carlisle Municipal Water Plant	City Lake (river intake after 7/88)	0.464	0.832	79%	0.508	1.341	164%
Low supplies 1981,83,86,87. New source July 1988. Booster pump added 1987: System capacity problems.							
Falmouth Water Plant	Licking River	0.672	0.742	10%	0.672	0.840	25%
Managers dammed river without permit in 1987,88. Competition from irrigation.							
Morehead Utility Plant Board	Licking River	1.874	1.865	--	1.983	2.120	7%
Sells to Bath County, Frenchburg, and Sharpsburg. No availability problems.							
West Liberty Water Company	Licking River	0.195	0.198	2%	0.204	0.230	13%
Concern in 1987 and 1988. Alternate source (Blackwater Creek) being considered.							
Western Fleming Water District	Licking River	0.193	0.795	312%	0.214	0.964	350%
Sells to others.							
Owingsville Water Works	Slate Creek	0.155	0.163	5%	0.160	0.189	18%
State advisory level in 1986,87,88. Supply and distribution problems.							

Facility	Source of Water	Avg. Monthly Withdrawals (million gallons per day) 1980	1988	% Change	Maximum Monthly Widrawals (million gallons per day 1980	1988	% Change
Licking River Terminal Co.	Licking River	0.010	0.003	-70%	0.032	0.010	-69%
Salyersville Municipal Water Works Backup from wells 1988, used up to 25% of river flow (state advisory level).	Licking River	--	0.369	--	--	0.654	--
Minor E. Clark Fish Hatchery Surface intake, Cave Run Lake.	Cave Run Lake	--	3.579	--	--	6.300	--
TOTALS		*21.553	23.524	9.1%	*25.574	32.128	25.6%
Totals excluding Kenton Co. Water District #1 (pumps from both Licking and Ohio pools.		12.395	14.948	20.6%	15.179	20.247	40.0%

*1980 Totals include some discontinued permits.

Stages of Water Shortage:

Advisory: Conditions indicate potential for serious water shortages (45-60 days' supply in a reservoir).
Alert: Supplies are significantly lower than the seasonal norm and dimininishing (21-45 days' supply in a reservoir).
Emergency: Water shortfall exists (14-21 days' supply in a reservoir).
Rationing: Supply clearly is inadequate to meet projected demands (less than 14 days' supply in a reservoir).

Information supplied to Licking River Basin Task Force by the Division of Water, Natural Resources and Environmental Protection Cabinet.

Several of the water systems in the basin experienced low supplies in 1988 because water was being used upstream, or withdrawn from the city pool, by local farmers. Cynthiana, North Middletown, and Millersburg are a few of the systems with this problem. Farmers do not need a water withdrawal permit, regardless of the amounts they use. Many farms today have irrigation equipment and pumping capacities which rival those of public systems, yet their usage is not regulated. The state Division of Water, which issues water permits, estimates that only 25% of the water withdrawals in Kentucky are permitted. The overwhelming majority of water is withdrawn by exempted users: agriculture, electric power plants, and oil and gas recovery operations. Further, while most domestic water returns to the river after treatment, irrigation water does not return. Unlimited agricultural withdrawals during dry periods placed water systems across the state in jeopardy in 1988.[12] These unregulated withdrawals mean that public systems dependent on stream flows cannot predict how much water they will have, nor can they protect their supply.

The need for a clean, assured water supply was mentioned repeatedly by task force members as one reason for building a string of reservoirs in the Licking River Basin. Several existing lakes, such as Williamstown Lake (300 acres) are used for water supply as well as recreation. The task force is not aware, however, at this early planning stage, of any case where construction of any lake listed in Chapter III is involved in the expansion plans of any water system.

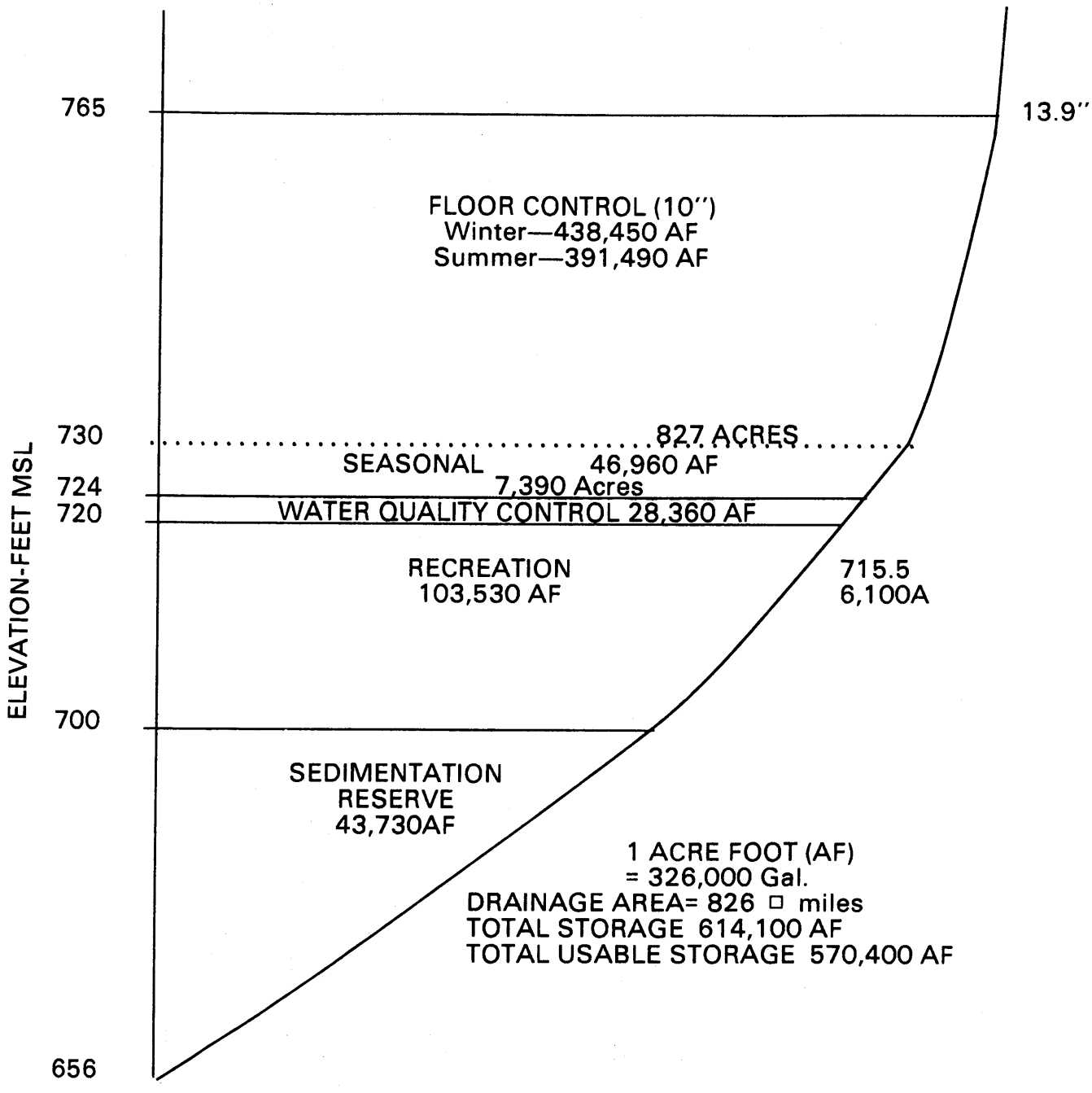
Cave Run Lake, operated by the U.S Army Corps of Engineers, covers 8270 acres at seasonal pool, and provides 222,580 acre-feet of water storage. Water released from the lake during the summer maintains downstream flows during dry years. Low flow at Catawba, near the mouth of the Licking, averaged 55 cu. ft./sec. in June/July 1988, partly because 45 cu. ft./sec. were being released from Cave Run. Prior to the creation of the lake, the record shows average monthly figures as low as 5 cu. ft./sec.[13]

The Corps of Engineers provided the task force with information about potential water supply from Cave Run Lake. The lake is so large, according to the Corps, that it could supply the basin without significant effect on other uses. Permitted withdrawals from the whole basin during the maximum month of 1988(see Table 11) equal only about 4 inches of water in the lake.[14] By comparison, evaporation reduces lake levels by about 2 feet in an average year. Figure 12 diagrams the allocation of storage to various uses in Cave Run Lake.

The Corps of Engineers can sell water storage in its reservoirs to water systems, which then "own" the water represented by the storage capacity. Cynthiana and West Liberty have approached the Corps of Engineers about purchasing storage in Cave Run Lake. Preliminary cost figures, developed by the Corps for these towns, are shown below.

Figure 12

CAVE RUN LAKE STORAGES



Source: Presented to Task Force by U.S. Army Corps of Engineers, Louisville District, February 2, 1989.

Figure 13

CAVE RUN LAKE

Potential Water Supply Users to Date

Potential User	Max. Yield Considered	Storage Required	Storage Cost 2/	O&M 3/ Cost
	MGD 1/	Acre-Feet	$	$
	3 (at intake)	1,057	223,000	800
Cynthiana	3.9 (at lake)			
West Liberty	2	436 4/	92,000	330

1/Million gallons per day.
2/10% reduction if paid within 30 days of contract approval.
3/Operation and maintenance - paid annually.
4/Assumes credit for 350,000 gal. permitted withdrawal. If credit not allowed, storage would be 528 acre-feet.
Data presented to Task Force by U.S. Army Corps of Engineers, Louisville District, February 2, 1989.

According to these cost figures, Cynthiana could buy 1,057 acre-feet of Cave Run Lake for $223,000, plus an annual maintenance cost of $800. Figures for West Liberty are $92,000 and $330, respectively. These costs appear quite reasonable compared to building a separate lake: Cynthiana's 1,057 acre-feet of storage would roughly equal an 80-acre reservoir (about 13 feet deep, on average). For users some distance downstream, such as Cynthiana, however, storage in Cave Run may not provide the desired certainty. While the Corps of Engineers would release water when directed by the storage owner, unpermitted users might take it before it reached its destination. Cave Run may be too far away from many communities to represent a practical supply alternative.

In summary, the task force found that water quantity and quality have posed problems in some parts of the Licking River Basin. Construction of reservoirs close to the areas experiencing problems is one available alternative. At the present time, however, there are no concrete links between the plans of water systems for new supply and any of the proposed lakes.

CHAPTER V

FLOODING AND FLOOD CONTROL

Floods are a recurring problem in the Licking River Basin. The Corps of Engineers estimates average annual flood damages, altogether, of about $2.43 million basin-wide.[15] Records from the National Flood Insurance Program, Table 15, show payments for flood damages in 1978, 79, 81, 82, 83, 84, and 86. Record rainfalls statewide in February 1989 also caused flooding on the Licking River and its tributaries, and damage in many areas, especially Salyersville, Cynthiana, and Butler. Payments to communities and individuals under two emergency assistance programs available to flood victims are listed in Figure 14.

Reservoirs, properly constructed, can be used to control flooding downstream, and flood control is one of the many benefits hoped for from construction of a set of lakes in the basin. Assistance through the Corps of Engineers is available only if reservoir projects show significant flood control benefits,[16] so an analysis of flooding will be a major component of the Corps of Engineers Reconnaissance study currently underway.

The Licking River Basin Task Force obtained information about flooding and flood control from the Kentucky Flood Control Advisory Commission, the Floodplain Management Section of the Division of Water, Kentucky Disaster and Emergency Services, the Corps of Engineers, and the federal Soil Conservation Service. Those materials are the basis for this chapter.

Overview of Flood Damages

The flood plain of the Licking River is generally narrow, less than 1/4 mile across in most parts. Since much of this flood plain is agricultural land or not eligible for flood insurance, overall flood damages are hard to assess. The most serious flooding seems to occur in the headwaters, along certain tributaries, and near the mouth of the river.[17] A large area in northern Kentucky is inundated regularly when a swollen Ohio River cannot take the additional discharge from the Licking. This flooding precludes most kinds of development which might otherwise occur in this urban area. Since much of the land is undeveloped, however, damages under the National Flood Insurance Program (Figure 14), or Disaster Assistance (Figure 15) are minimal. Magoffin and Morgan Counties, located in the hilly upper reaches of the Licking above Cave Run Dam, routinely experience heavier flood damages, and higher claims, than any other part of the Basin. The floodplain often is the only place to build in these hilly and mountainous areas, but the steep and narrow valleys are especially prone to destructive floods. Settlements along the Hinkston and Stoner Creeks, Cynthiana on the South Fork, and Morehead on Triplett Creek, also experience routine flooding.

Figure 14

FEBRUARY 1989 FLOOD PAYMENTS

The following amounts reflect grant disbursements under the Individual and Family Grant Program and estimates of damages under the Public Assistance Program as a result of flooding in February and March. These amounts do not include assistance provided by other programs such as SBA, FmHA, Temporary Housing, Red Cross and other private relief agencies.

	Individual and Family Grant	Public Assistance	County Total
Bath	18,219	46,453	64,672
Bourbon	34,522	3,723	79,394
Paris, City of	-0-	41,149	
Clark	1,030	49,858	60,339
E. KY Power Coop	-0-	9,451	
Fleming	18,791	41,144	59,935
Harrison	48,443	13,004	90,174
Cynthiana, City of	-0-	28,727	
Magoffin	1,416	68,670	165,793
Salyersville	-0-	95,707	
Montgomery	5,348	33,331	38,679
Morgan	128	103,980	116,937
West Liberty	-0-	3,105	
Pleasant Valley Country Club	-0-	658	
West Liberty Kiwanis	-0-	554	
Morgan Co. Board of Education	-0-	8,512	
Nicholas	14,157	22,455	36,612
Pendleton	26,630	14,549	43,714
Falmouth	-0-	2,535	
Rowan	956	18,898	40,636
Morehead	-0-	20,782	
TOTAL	169,640	627,245	796,885

Source: Disaster and Emergency Services, Department of Military Affairs, in letter dated May 19, 1989.

Figure 15

OVERVIEW OF FLOOD DAMAGES (12/31/87 Status) NFIP

Community	Year	No. of Claims	Claim Amount
Boone Co.	'78	1	$ 2,000.00
	'79	4	3,900.00
	'83	1	17,400.00
Campbell Co.	'79	9	26,000.00
	'82	1	1,800.00
Cynthiana	'78	1	900.00
	'79	5	6,900.00
Kenton Co.	'79	4	29,000.00
	'83	1	500.00
Lewis Co.	'78	2	3,900.00
	'79	1	800.00
Magoffin Co.	'81	25	67,495.00
	'83	1	150.00
	'84	35	125,000.00
Morgan Co.	'81	2	1,800.00
	'82	3	18,800.00
	'84	17	201,000.00
Newport (Campbell Co.)	'81	1	700.00
Nicholas Co.	'79	5	21,000.00
	'83	1	9,400.00
	'84	14	52,500.00
	'86	3	22,400.00
Rowan Co.	'78	2	1,600.00
Salyersville (Magoffin Co.)	'78	27	158,400.00
	'79	1	215.00
	'81	47	254,800.00
	'84	25	93,800.00
Taylor Mill (Kenton Co.)	'78	1	240.00

Source: Department of Environmental Protection, Division of Water.

Flood Control Measures in the Basin

Despite the relatively "unregulated" nature of the Licking, flood control measures now in place protect many of those parts of the basin which, historically, sustained severe damage. The largest project is Cave Run Dam and Lake, completed by the Corps of Engineers in 1974. The dam is constructed to allow water to rise 35 feet beyond the seasonal water level, and store an additional 438,450 acre-feet of water, to control flooding downstream. Cave Run controls runoff from 826 sq. mi. or nearly a quarter of the basin. It protects some 10,000 acres of agricultural land in a wide flood plain just below the dam, and reduces the severity of flooding on the river at all points below the dam.[18] The city of Falmouth experienced a devastating flood in 1964; the relatively modest flood damages experienced by Falmouth since that time can be attributed in part to regulation of the Main Stem Licking by Cave Run Dam. Other basin projects built by the Corps of Engineers include levees and pumps to protect property in Newport and Covington in Northern Kentucky, and projects to clear channels, shore up stream banks and protect facilities from flood-induced erosion in Morehead, North Middletown, and Butler.[19]

The Soil Conservation Service has built a series of flood control dams on the Salt Lick Creek in Menifee and Bath Counties, and on the Fox Creek in Fleming Counties, and has constructed flood control measures on Twin Creek in Harrison County. These impoundments, which are designed for temporary storage of large amounts of water, protect productive farmland and the town of Salt Lick from the routine flooding of the past, and also contribute to flood control downstream.[20]

Plans now are being completed to cut an overflow channel so that flood waters will bypass Salyersville, protecting that city from most of the regular, devastating flooding it has experienced in the past. This project, which will be constructed by the Corps of Engineers, will route floodwaters away from Salyersville itself. It will not provide any flood control benefits downstream.[21]

Flood control policy has changed considerably in recent decades. Emphasis before 1960 was on construction of dams, floodwalls, and levees. The National Flood Insurance Program began in 1960 as a way to hold down disaster relief costs. The ensuing decades saw ever greater emphasis on managing land use in flood-prone areas, and more fiscal and environmental restrictions on construction. The 1980's brought increased local control in establishing appropriate floodplain management strategies, as well as greater local financial responsibility. The Water Resources Development Act of 1986 (PL 99-662) requires a minimum 25% local match for any project constructed by the Corps of Engineers, and restricts Corps funding to certain purposes.

Many communities in the Licking River Basin participate in the National Flood Insurance Program, which allows residents of those communities to protect themselves from losses by buying flood insurance. Participation in the program requires communities to adopt by ordinance proper flood plain management and construction practices. Figure 16 shows the flood insurance participation of communities in the basin.

Flood Management Potential of Proposed Lakes

The lakes proposed for Licking River tributaries are located generally along those parts of the river which would have been inundated by the Falmouth Dam and Lake. That project was designed to provide considerable flood control to Falmouth and areas further downstream, as well as for the Ohio River. While some of these benefits now are provided by Cave Run Lake, multiple impoundments on Licking River tributaries might further reduce flooding on parts of the South and North Forks, as well as on the lower reaches of the Main Stem of the Licking River.

The proposed lakes are downstream of many of those areas which reported flood damages since 1978, however, so they cannot be considered a solution, by themselves, to basin flooding. More than $500,000 of the $796,885 disbursed by Disaster and Emergency Services after the February, 1989 floods went to counties upstream of any of the proposed lakes (See Figure 14). An additional $90,000 disbursed in Harrison County went mainly to areas upstream of the lake projects. The lakes could not reduce these losses. The Corps of Engineers' study will produce data to estimate the flood control potential of the various projects.

The lakes will provide significant flood control only if they are designed to retain, on a temporary basis, large amounts of water in excess of the normal pool. In simple terms this means constructing larger, sturdier dams than would be needed to impound the proposed lakes, and it means acquiring extra land and restricting lakeside development to allow considerable fluctuation of water level. This will increase the cost of building a lake, and may restrict development of some lakeside facilities for recreation.

Figure 16

NATIONAL FLOOD INSURANCE PROGRAM—12/31/87 STATUS

Community	No. of Policies	Amount of Coverage
Boone Co.	8	$ 230,000
Bourbon Co.	5	201,400
Campbell Co.	10	$ 356,500
Carlisle	3	78,500
Cynthiana	10	$ 150,000
Kenton Co.	12	328,700
Lewis Co.	2	$ 20,500
Magoffin Co.	3	48,300
Millersburg	2	$ 28,000
Morgan Co.	1	20,000
Mt. Sterling	1	$ 105,000
Newport	1	250,000
Nicholas Co.	5	$ 106,100
Rowan Co.	8	532,200
Salyersville	23	$1,000,900
Taylor Mill	1	33,000

Communities identified and not participating:

Berry (Harrison C0.)
Bracken Co.
Falmouth (Pendleton Co.) (Rejoined 1989)
Mason Co.
Pendleton Co.
Robertson Co.
Southgate (Campbell Co.)

Communities not considered flood-prone:

Fleming Co.
Grant Co.
Menifee Co.
Wolfe Co.

*Does not include Write Your Own (WYO) policies.

Source: Department for Environmental Protection, Division of Water.

CHAPTER VI

ECONOMIC DEVELOPMENT POTENTIAL OF RESERVOIRS AND LAKES

Potential economic benefits are extremely important to local supporters of the Callensville Lake project, and a primary reason for interest in most of the lakes projects. Supporters hope that these developments will stimulate economic activity in the region, creating new jobs, new business, and additional tax revenues. Some economic benefits might result from water supply and flood control improvements, but this chapter deals mainly with likely economic effects of new tourism and recreation facilities.

Tourism is a growing industry in Kentucky, one which increasingly is seen as an attractive development option for communities. According to the Kentucky Department of Travel Development, the tourism and travel industry contributed over $4 billion to Kentucky's economy in 1987, contributed $283 million in state and local tax revenues, and was responsible for 114,707 jobs.[22] Money spent by vacationers is new money in the local economy, and can support other services in much the same way as manufacturing or commercial agriculture. This makes it very attractive in areas where manufacturing jobs have been lost, as in many parts of the Licking River Basin.

The central economic question is whether, once built, these projects will generate returns that outweigh the costs of building and operating them. For the state, the question is whether a project will attract new visitors and money to the state, or keep Kentucky residents in Kentucky who otherwise would leave the state for vacation. There is no statewide benefit if tourists switch from one Kentucky attraction to another.

Various methods are available to analyze economic feasibility of a new attraction, but these require assumptions about what facilities will be offered. In light of the many proposed projects, the task force concentrated on the general recreation and tourist potential of lakes in the Basin. It gathered information about some other recreational lakes in the region, reviewed an analysis of locational factors relevant to the popularity of existing resort parks, and discussed ways to make the most out of a new lake. This information is summarized below.

Other Lakes in the Region

A useful procedure for assessing demand for a new attraction is to look at the experience of existing attractions with similar characteristics. Similar facilities in the same market area also represent competition for the new project. The task force looked at other lakes in the Licking River Basin, lakes near target cities, and two lakes with notable similarities to the proposed Callensville Lake near Falmouth.

The 1600-acre Callensville Lake, if built, would be the only large lake in Kentucky North of Interstate I-64. The only other sizeable lakes in the Northern Kentucky area are Williamstown Lake, 300 acres, in Grant County, and Kincaid Lake, 183 acres, in Kincaid Lake State Park near Falmouth. There are only 15 lakes at least 30 acres in size in the

whole Licking River Basin, and several of these actually are water supply pools created by low dams in the river.[23] While some of these lakes are used for fishing and other water recreation, they cannot easily support such popular activities as high-speed boating or water skiing.

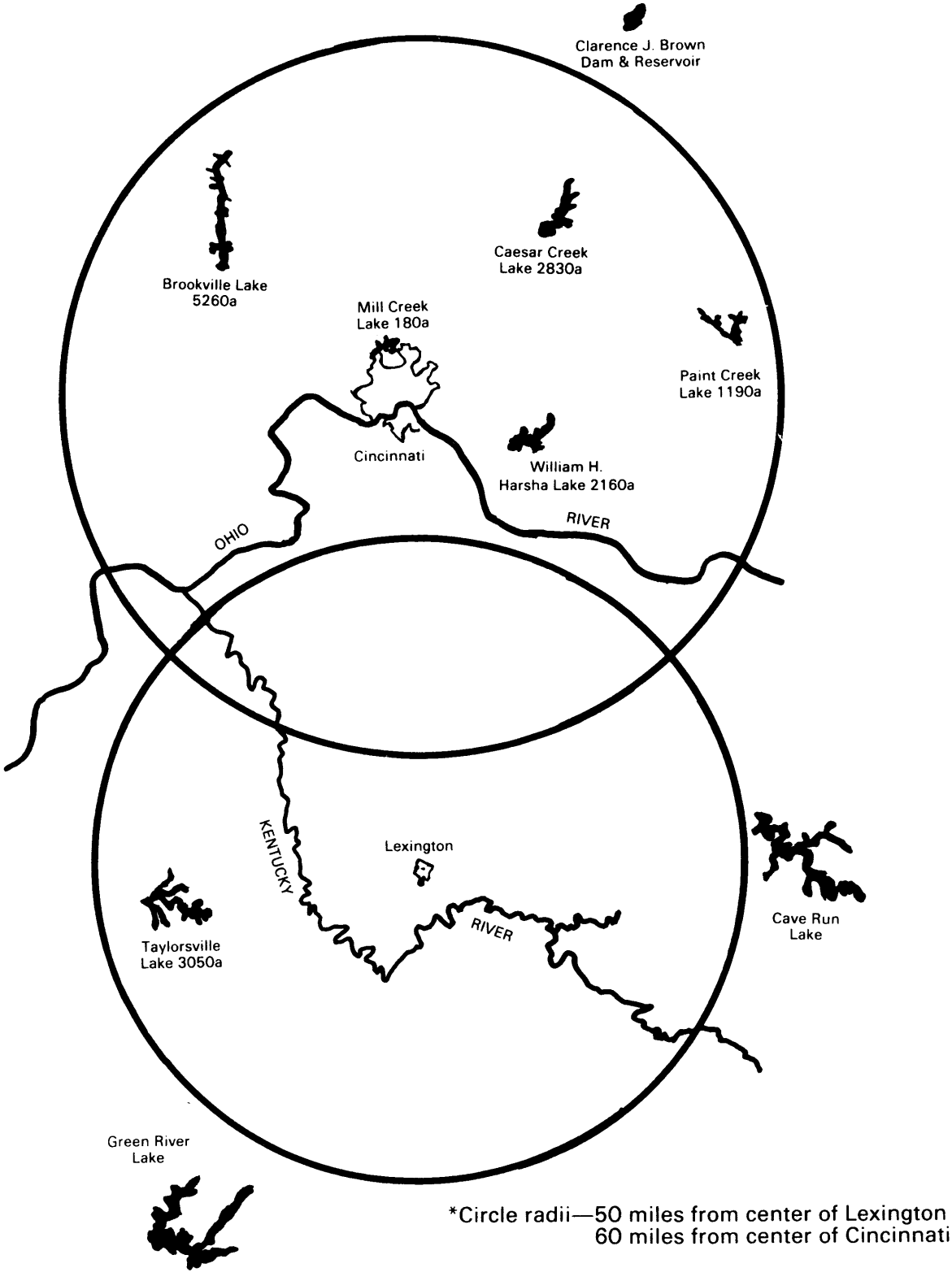
The situation looks different from the perspective of Cincinnati/Northern Kentucky and Lexington. The Cincinnati metropolitan area, with nearly 1.7 million people, is assumed to be the biggest potential market for Callensville facilities, followed by Lexington, with a metropolitan population of 332,000.[24] The Corps of Engineers operates 5 multi-purpose lakes within 50 miles of Cincinnati, and another near Lexington, as shown in Figure 17. West Fork Mill Creek Lake (180 acres), Paint Creek Lake (1190 acres), Caesar Creek Lake (2830 acres, and William H. Harsha Lake (2160 acres) in Ohio, and the Brookville Lake (5,260 acres) in southwestern Indiana all serve Cincinnati populations. Taylorsville Lake (3050 acres) in Kentucky is the only Corps of Engineers reservoir within 50 miles of Lexington. This list does not include lakes which were not built by the Corps of Engineers, such as Harrington Lake. Each of the Corps lakes offers several kinds of water recreation. The 6 lakes together hosted over 6 million visitors in 1986.[25] The Ohio and Kentucky rivers also provide space and facilities for water recreation for these metropolitan centers.

The Statewide Outdoor Recreation Plan, prepared by the Kentucky Department of Local Government, attempts to assess recreational needs in the Commonwealth and establish priorities for funding projects. The most recent plan, in 1984, calculated a surplus of facilities for boating, water skiing and fishing, both statewide and in the Northern Kentucky ADD, but a small deficiency in the Bluegrass ADD.[26]

The experience of Kincaid Lake and Taylorsville Lake can throw some light on expected usage of Callensville Lake. Kincaid Lake is a developed lake and state park near Falmouth, only a few miles from the proposed Callensville Lake. The park offers camping, hiking, swimming, fishing and boating (10-horsepower limit), picnic shelters, boat rentals, an amphitheater, multi-purpose building, and other facilities. The park hosted almost 20,000 campers in 1988, for a 40% campground occupancy rate, higher than the state average of 34%. Twenty-two percent of the campers came from out-of state, 15% from Ohio alone.[27] The facility appears to be thriving. Presumably, this facility is an asset to Pendleton County's economy. A recent study recommended against building a resort lodge at the lake,[28] but one consideration was the small size of the facility. The small (183 acre) lake, and restrictions on power boats, probably draw a somewhat different group of visitors than might be expected at Callensville, but the high visitation at Kincaid portends good drawing power for a larger nearby lake.

Taylorsville Lake, completed by the Corps of Engineers in 1978, has several interesting similarities to the proposed Callensville Lake. The 3050-acre lake, in Spencer and Anderson counties, is large enough to offer a full range of recreational activities. It is located, like Callensville, in a rural area between two potentially large markets: Taylorsville Lake is about 25 air miles from Louisville and 40 from Lexington.

Figure 17
LAKES OPERATED BY THE CORPS OF ENGINEERS IN THE VICINITY* OF CINCINNATI, OHIO OR LEXINGTON, KENTUCKY



Source: U.S. Army Corps of Engineers, Louisville Engineers District; Plan of Development for Civil Works (map) 1984

Lake access and development at Taylorsville is governed by present Corps of Engineers policies, which are more restrictive to private lakeside development than those which applied to earlier lakes like Lake Cumberland or Barren River Lake. These newer policies would govern development at Callensville or other lakes in the basin, if they were built with Corps of Engineers assistance. The Corps now buys all land below flood pool elevation, with five feet of elevation added as "freeboard." At Taylorsville, flood pool is 45 feet higher than the usual lake level(recreational pool), and covers over twice the surface area. In addition, the Corps buys the land outright for planned recreational facilities, buys extra land to avoid splitting up tracts or creating landlocked parcels, and buys any land which is less than 300 horizontal feet from the lake at recreational pool. As a result, very little private land at Taylorsville even has a view of the lake, let alone private access. Lakeside development is controlled by a master plan and the land has to be leased from the Corps of Engineers.

Because of the proximity of this project to the Louisville and Lexington metropolitan areas, the Corps of Engineers originally projected that 2.5 million people would visit Taylorsville Lake annually when it first opened, with an ultimate annual visitation of 4.3 million. However, court rulings in *Parkie Gividen, et al. v. Corps of Engineers of the United States Army, et al. (Ky. West, No. C76-0074 L(A) 1980)*, a lawsuit filed against the project, found that the state could not honor its original cost-sharing contract because it could not obligate future legislatures to appropriate funds to pay for costs currently incurred to develop the facilities in the recreational master plan. This restriction also affected recreational plans for the Paintsville Lake, completed in 1983, and Yatesville Lake, scheduled for completion in 1991. The court decision forced state government into a "pay as you go" situation, and much slower development of the public facilities, such as boat ramps, marinas, or campgrounds, envisioned in the 1979 master plan.[29] Estimated visitation in 1986 was 587,000,[30] or only about 20% of the visitors expected in the original plan.

The Hon. C.L. Glasscock, Jr., Spencer County Judge/Executive, spoke to the taskforce about changes he has seen in the county due to the lake. He said the overall impact of the $108 million lake has been good for Spencer County. Total property tax revenues have increased from $73,000 in 1978, when the lake opened, to $118,000 in 1988, and the Federal Government pays an additional $9200 in lieu of taxes. The judge mentioned several growth-related problems, but estimated that 3/4 of the residential growth is due to proximity and better road access to Louisville, not to the lake. He criticized the Corps of Engineers for acquiring so much land around the lake, restricting development. He said they took 14,000 acres to impound a 3000 acre lake. The dam is built to inundate up to 6350 acres to control flooding.

Predicting Lake Visitation

A statistical analysis can be used to predict the demand for a new facility, using factors known to be related to the usage of existing facilities. William Hoyt, an economics professor at the University of Kentucky, provided the task force a "quick and dirty" but intriguing analysis of Callensville Lake's attractiveness, by looking at the number of overnight guests at Kentucky's State Resort Parks. He found that, for 11 resort parks with

lakes, he could predict the number of annual overnight stays based on the number of miles from a 4-lane highway, the size of the lake, the number of other lakes within 35 miles, and the distance from major metropolitan populations in Ohio (measured as distance from Covington) or Tennessee (measured as distance to Hopkinsville or Bowling Green). He then measured each of those factors for the proposed Callensville Lake and calculated the number of visitors using the formula derived from the resort parks. By his calculations, a state resort park on a part of the Callensville Lake most accessible to I-75 (6 miles from a four-lane road) would draw 36,255 annual overnight guests, more visitors than 8 of the 11 parks in his sample. Proximity to the Ohio market also implied, according to Mr. Hoyt, that the lake would draw many out-of-state visitors, bringing new money to the state. Mr. Hoyt's analysis is in Appendix D of this report.

Dr. Allan Worms, a recreation specialist with the University of Kentucky, emphasized to the task force that a favorable location alone does not insure success. The right kinds of facilities, infrastructure, and business elements also are needed. He stressed that different people go to different recreation areas for different reasons. Lakeside cottage development will have different economic impacts on the community from those of a condominium/resort development, or a state park facility. Speed boating and fishing can coexist on a lake only if some provision is made for separate areas. If local stores are lacking, visitors will bring along their provisions instead of spending money on site.

Planners need to decide which markets to target, and design their attraction accordingly. They need to anticipate the effects of new visitors on traffic, utilities and public services like police, fire, garbage pickup, and schools. Local communities make a big difference in the eventual success and local economic impact of a recreational attraction.[31]

CHAPTER VII

ENVIRONMENTAL AND CULTURAL SITE CHARACTERISTICS

The passage of Public Law 91-190, the National Environmental Policy Act of 1970, marked the beginning of a new era for projects with federal funding. It brought a strong focus on environmental issues, established a common process for effectuating earlier federal environmental legislation, and a point of departure for later enactments. These laws now include the Fish and Wildlife Coordination Act, the Reservoir Salvage Act, the Wild and Scenic Rivers Act, the Endangered Species Act, the Clean Water Act, the Archeological Resources Protection Act, the National Historic Preservation Act, and others. State and locally funded projects are affected by some of these laws, as well as by various state permitting requirements.

Even without these many laws, popular concern with protecting what remains of the nation's natural and historical heritage is widespread and appears to be growing. Many projects, which in earlier decades could have been built without objection, have been stopped or changed since 1970 by public opposition, often fueled by environmental concerns. The proposed damming of Red River Gorge, defeated by environmentalists, is one Kentucky example.

These conditions make it extremely important that the environmental and cultural characteristics of an area be considered early and throughout the planning process. From a defensive point of view, an early assessment can identify potential problems at a stage where they probably can be mitigated or avoided. For example, a dam might be designed to maintain the downstream environment needed for an endangered variety of mussel, or new wetlands could be incorporated into a design to replace existing ones. Some obstacles, such as finding a landfill at the bottom of a proposed lakesite, might cause planners to reject the site altogether. Whatever the result, early warning before large sums have been spent and before plans are "cast in stone" can save a great deal of time and money, and often can save a project.

On a more positive side, local resources often can be incorporated into the planning process to greatly improve the result. The task force was told about a Corps of Engineers assessment of southwestern Ohio in which map overlays were prepared emphasizing numerous features, such as historic routes and settlements, scenic resources, fisheries, rare or endangered species, and modern highways. Combinations of these characteristics, viewed on the map, began to show clusters of features in certain areas, which might recommend them, say, for tourism development or preservation. On a smaller scale, nearby cultural or environmental resources could make a new lake a superior attraction.

The task force conducted a preliminary scan of the proposed lakesites in the basin, both to identify any known problems on the sites, and to see what kinds of information are available from state agency files. The following agencies were asked to review their records for any information about the tributaries proposed to be dammed, and to report their findings to the task force:

Department of Fish and Wildlife—wetlands and endangered species;

Nature Preserves Commission—rare species and ecosystems;

Department of Mines and Minerals—oil and gas wells;

Department for Environmental Protection—solid and hazardous waste sites,

Wild rivers or other notable stream segments;

Kentucky Heritage Council—historic and archeological sites; and

State Archaeologist—archeological sites.

All of the agencies responded to the task force request. Taken together, they found some characteristic of note associated with 18 of the 29 tributaries identified as possible lake sites. The information received by the task force is summarized below.

Figure 18

ENVIRONMENTAL/CULTURAL ATTRIBUTES OF PROPOSED LAKESITES

Agency Responses to Task Force

GENERAL

A 107-mile segment of the main stem Licking has been identified in the Nationwide Rivers Inventory, 1981, as one of the nation's significant remaining free-flowing rivers.

A federally-endangered species, the Indiana bat, may utilize wooded corridors in the area as maternity habitat during the summer months.

The Division of Waste Management identified several uncontrolled waste sites—abandoned sites which might be hazardous—within the affected counties. Only those near proposed lakes are listed below.

BATH COUNTY

Mud Lick Creek
Oil and Gas Wells
Archeological Sites (some of following) 15 Bh 11,79,80,81,82,140
Wetland areas: 2 sites

Mill Creek
Rare or Endangered Species:
Hairy Jacob's Ladder (plant—Ky. concern)
Snuffbox (mussel—Ky. concern)
Long-Solid (mussel—Ky. threatened)
Archeological Site 15 Bh 2

Prickley Ash Creek
Archeological Sites (some of following) 15 Bh 11, 79, 80, 81, 82, 140.

FLEMING COUNTY

Johnson Creek
Historic Structures:
FL 197 Threlkeld House
FL 199 William Morgan House
Fl 201 Whaley House
Fl 204 Landers House

Mud Lick Creek
Historic Structures:
FL 157 Elizaville Grade School
FL 168 House
FL 192 Commercial Building
FL 193 House

Elk Creek
Rare or Endangered Species:
Eastern Sanddarter (fish—Ky. concern)
Gilt Darter (fish—Ky. concern)
Long-Solid Mussel (Ky. threatened)

GRANT COUNTY

Fork Lick Creek (Callensville Lake site)
Uncontrolled waste site: Epperson Trash Haul

HARRISON COUNTY

County Generally:
Uncontrolled waste site: Ladish Co.

Beaver Creek
Archeological Site 15 Hr 1

Curry's Run
Uncontrolled waste site: Harrison County Site

Mud Lick Branch
Wetland area—1 site

NICHOLAS COUNTY

Sugar Creek (Coon Creek)
Rare or Endangered Species:
Blue Sucker (fish—U.S.candidate for listing)

Stony Creek
Rare or Endangered Species:
Yellowish Gentian (plant—Ky endangered)
Short's Goldenrod (plant—U.S. endangered)
Ladies' Tresses (plant—Ky. endangered)

PENDLETON COUNTY

Grassy Creek, South Fork
Water quality: 3 fish kills in 9 years, from animal waste

Fork Lick Creek (Callensville Lake site)
Oil and Gas wells
Wetland areas—3 sites
Landfill for Grant County within watershed; application pending to enlarge site (Freddy Epperson)
Water Quality: 2 fish kills in 9 years, caused by animal waste

Short Creek
Archeological sites 15 Pd 101,102,103

Steer Creek
Rare and Endangered Species:
Elktoe (mussel—Ky. threatened)
Fan shell (mussel—Ky. threatened)
Long-Solid (mussel—Ky. threatened)
Clubshell (mussel—Ky endangered)

ROBERTSON COUNTY

Johnson Creek
Archeological Sites 15 Rb 1,4
Historic Structure RB 3, Johnson Creek Covered Bridge

West Creek
Archeological Site 15 Rb 10

Several of the agencies pointed out in their response to the task force that their records are not at all comprehensive. Complete information is not available even for oil and gas wells or waste sites, which require permits. Information about historic or archeological sites is gathered largely through interested individuals who register them, or from surveys conducted for some specific purpose. Knowledge of the distribution of rare species or environments comes mainly from field surveys, which are not attempted statewide. Several of the agencies noted that the Licking River basin is a relatively unstudied part of the state for their purposes, being neither a coal mining region, nor the site of rapid development or major government projects. Therefore, the tributaries mentioned in the summary might differ from some not listed, mainly to the extent that someone has surveyed parts of some of them, but not of others. The results of this initial scan emphasize the likelihood that any project site will show some potential problems, and thus the importance of early planning.

The results of this preliminary scan raise intriguing questions. More information is required about most of the items listed before conclusions can be drawn about their importance. It is hoped that these initial results can give direction to the work which must follow.

CHAPTER VIII

POTENTIAL FUNDING SOURCES

The Licking River Basin Task Force heard testimony from various state and federal agencies relating to funding for flood control and water resource projects. At the same time, the task force took into consideration the effect a project or projects could have on economic development and recreational resources.

The huge expense of a lake or reservoir project emphasizes the importance of establishing partnerships among the loan programs to meet funding needs.

This chapter briefly summarizes potential funding sources and outlines criteria for their use.

Corps of Engineers

Federal Agency: Department of the Army
Louisville District, Corps of Engineers
P.O. Box 59
Louisville, Kentucky 40201

The United States Army Corps of Engineers, formed in 1775, is the largest engineering organization in the world. The Corps' main purposes are to 1) support the Army through its military construction programs and real property maintenance activities; and 2) serve the nation through civil works programs, such as the development of water resources in the United States.

There are two ways in which the Corps of Engineers assists in a civilian water resource problem. The first is under the Continuing Authority Program, known as the "Small Projects" program. The maximum federal cost of a project under this program ranges from $500,000 for streambank protection or snagging and clearing, to $5 million for small flood control projects. The second is through a specific congressional authorization. Both Continuing Authority Program projects and congressionally authorized projects must go through initial reconnaisance and feasibility stages, but congressionally authorized projects must go through more steps prior to final approval. The following is a brief description of each program:

Continuing Authority Program

The Corps of Engineers designs and constructs the project. Each project selected must be technically feasible, complete within itself, and economically justified. The non-federal sponsoring agency must share equally in the cost of feasibility studies (cash and in-kind services); must share in the project costs in excess of the federal cost limit; provide a cash contribution for land enhancement benefits and for project encroachment which might interfere with proper functioning of the project for flood control; and maintain the project after completion. Local cost participation requirements and procedures for

determining the local share of project costs are similar to those for flood control projects specifically authorized by Congress under regular authorization procedures.

Examples of Continuing Authority projects include streambank and shoreline protection, small navigation projects, small flood control projects and snagging and clearing for flood control.

Specifically Authorized Projects

In order to receive Corps funds for a specifically authorized project, the reconnaisance report must determine whether the project is economically, environmentally, and socially feasible. The benefits have to exceed the cost, and cost ratios must be greater than 1 to 1. In a multi-purpose project, at least 10% of the total benefits must be for flood control.

A sponsor must be identified before proceeding past the reconnaisance phase. Specifically, it is the goal of the Corps of Engineers to have a sponsor identified, to have a preliminary letter of intent signed, and to have a commitment to sign the feasibility study cost-sharing contract before the reconnaisance report is submitted. The feasibility phase begins the 50-50 cost sharing between the federal and local sponsors and the cost-sharing agreement continues until completion of the report.

Most specifically authorized studies take five years or more to accomplish because of the extensive review and approval process. In cases where major efforts are necessary, such as a flood control reservoir, the project can take 20 years or more to complete.

Non-Federal Cost Sharing

P.L. 99-662 requires non-federal participants to pay all or part of construction costs for a project, as follows:

Non-Federal Share of Project Cost

Costs assigned to:

Flood Control	25%-50%
Nonstructural Flood Control	25%
Hydroelectric Power	100%
Municipal & Industrial Water Supply	100%
Recreation, including recreational navigation	50%
Agricultural Water Supply	35%

Multiple Purpose Watershed Program

Federal Agency: U. S. Department of Agriculture
Soil Conservation Service
333 Waller Avenue—Room 305
Lexington, Kentucky 40504

State Agency: Natural Resources and Environmental Protection Cabinet
Capital Plaza Tower
Frankfort, Kentucky 40601

The Watershed Protection and Flood Prevention Act, Public Law 83-566, 68 Stat. 666, 16 U.S.C. 1001 et. seq., was approved by the President on August 4, 1954. The Soil Conservation Service was assigned primary responsibility for the United States Department of Agriculture's cooperation with local organizations in small watersheds throughout the Nation.

A small watershed recreation development is basically for small communities with watershed areas less than 250,000 acres in size. Capacity of a single structure is limited to 25,000 acre feet of total capacity and 12,500 acre feet of floodwater detention capacity.

To be eligible for cost sharing, recreation developments must be open to the public. Cost sharing may be provided for one development in a project of less than 75,000 acres, for two in a project of 75,000 to 150,000 acres, and for three in a project larger than 150,000 acres.

Representatives from the Soil Conservation Service addressed the task force on the Multiple Watershed Program. They explained that benefits must exceed costs and the plan must include in its Environmental Impact Statement a purpose of watershed protection, flood prevention, irrigation or drainage. The federal government is responsible for 100% of the cost of dam construction (flood control), and an important condition of the participating sponsor in the cost share agreement is the ability to buy land rights. An agreement entered into between the sponsor and the Soil Conservation Service is the basis for obligating federal funds. If the project cost is greater than $5 million, or the dam is greater than 2,500 acre feet, or if certain controversial issues are involved, then the application is forwarded to Washington for review by the Office of Management and Budget and appropriate congressional committees. When federal funding is obtained, construction can begin.

Kentucky receives approximately $1 million per year from this program. Allocated funds are based on nationwide availability.

Kentucky Infrastructure Authority

State Agency: Office for Investment and Debt Management
Kentucky Finance and Administration Cabinet
Room 318, Capitol Annex
Frankfort, Kentucky 40601

The Kentucky Infrastructure Authority was established by the 1988 General Assembly (KRS 224A.011 through KRS 224A.260) to provide state financial and technical assistance to local government for the construction and rehabilitation of infrastructure projects necessary to attract and retain business development, promote job creation and improve the quality of life for Kentucky citizens.

There are four separate programs offered to local governments. Fund A (Federally Assisted Waste Water Revolving Loan Program) can be used only for financing wastewater treatment facilities and is a combination of federal and state dollars. Loans are provided at below-market interest rates of 2 1/2% or 4 1/2%, depending upon the income level of the county or community.

Fund B (Infrastructure Revolving Loan Program) provides money for utilities and other public projects that will enhance economic development and job creation. The interest rate is 3 1/2% for low-income counties and communities and 5 1/2% for the high-income counties and communities. No federal monies are included.

Funds provided by the Commonwealth in direct appropriation for debt service and projected project funding for 1988-90 are as follows:

PROGRAM	STATE APPROPRIATION	PROJECT FUNDING
Fund A	$1.5 million	$38.7 million
Fund B	$2.5 million	$20.0 million
TOTAL	$4.0 million	$58.7 million

Since Fund A and Fund B are loan operations, they will continue to grow and generate the monies for future projects.

Fund C (Government Agencies Program) is intended to provide local governmental agencies in Kentucky access to funding through the municipal bond market at better terms than could be obtained on an individual basis. Financial assistance is available on loans for up to 20 years for both waste water treatment and drinking water distribution facilities owned by governmental entities in the Commonwealth. The loans may be used to totally fund a construction project or to supplement grants or cash contributions. Loans are provided by credit-enhanced revenue bonds with prorated allocation of financial costs. Qualifications are based solely on the ability to repay the loans and are processed on a first-come, first-served basis.

Fund D, the Farmers Home Administration Loan Supplement Program (FmHA), provides construction loans for projects which have obtained U. S. Farmers Home Administration commitments for permanent financing. The funding for this loan program comes from the issuance of state bonds for this purpose. The loans provide short-term financing at below-market interest rates which may not be available otherwise. The proceeds of the bonds are invested in a manner that provides immediate availability of funds. This allows loans to be made in a timely fashion at interest rates usually as low as 2% to 5%.

The authority can also refinance FmHA loans through the discount prepayment program or other means of financing.

Even though state dollars are not included with Fund C and Fund D, the Infrastructure Authority has the advantage of being guaranteed an A rating on its bonds. Therefore, the Authority pulls together various projects at a time to take to the bond market, and as a result, the cost of issuance and borrowing is lower.

Economic Development Bond Program

State Agency: Office for Investment and Debt Management
Kentucky Finance and Administration Cabinet
Room 318, Capitol Annex
Frankfort, Kentucky 40601

The 1988 General Assembly appropriated $30 million to the Economic Development Bond Program for 1988-90, and enacted KRS 152.052 to establish project selection criteria for the program. The Program uses bond proceeds to leverage private investment to fund projects which will create and retain jobs and promote overall economic development.

Project selection criteria include:

a) Job creation or retention potential ($5,000/guideline);
b) Degree of public, private and local participation (25% state participation guideline);
c) Potential project payback or contribution in retiring the debt. (Direct payback results in bonds being sold on a taxable basis.)

The amount for funding projects is contingent on the nature of the project, with each decision being made on a case-by-case basis. State agency projects are ineligible for funding, unless expressly provided in an appropriations act.

Following approval by the Secretary of the Finance and Administration Cabinet and the State Property and Buildings Commission, projects are submitted to the Capital Projects and Bond Oversight Committee of the Legislative Research Commission.

Thirty million dollars was allocated to the Economic Development Bond Program for 1988-90. A balance of $22,500,000 remained in uncommitted funds as of July, 1989.

Area Development Fund

State Agency: Department for Local Government
Second Floor, Capital Plaza Tower
Frankfort, Kentucky 40601

Area Development Districts within the Licking River Basin:

Bluegrass ADD
3220 Nicholasville Road
Lexington, Kentucky 40503

Buffalo Trace ADD
327 West Second Street
Maysville, Kentucky 41056

Northern Kentucky ADD
7505 Sussex Drive—Suite 8
Florence, Kentucky 41042

Gateway ADD
P.O. Box 107
Corner Main and Slate Streets
Owingsville, Kentucky 40360

Big Sandy ADD
Municipal Building-2nd Floor
Lake Shore Drive
Prestonsburg, Kentucky 41653

Kentucky's Area Development Fund is a capital improvement grant program for area development districts, established by the 1976 General Assembly. Area Development District boards of directors are responsible for selecting and recommending capital projects to the Department of Local Government.

Area Development Districts are regional planning and development organizations in which counties and cities combine efforts to accomplish common goals and receive shared benefits. ADDs are staffed by professional planners, management specialists and technicians.

Capital improvement projects eligible for ADF grants include:

a. Construction, reconstruction, renovation and maintenance of buildings and other improvements to real property;
b. Acquisition of real property and interests in real property;
c. Purchase of major items of equipment;
d. Development of industrial sites;
e. Extension or installation of water, gas, sewer and electrical utilities to public facilities and industrial sites;
f. Retirement of debts incurred within the last five calendar years.

ADF monies may not be used for feasibility studies, master plans, consumable supplies, salaries or other operating expenses of ADDs or local agencies. Also excluded are capital projects for schools, higher education institutions, roads, streets, highways and bridges.

A total of 245 project applications were received during FY 1987, for $4,626,911.45 in ADFs and representing a total capital outlay of approximately $45,296,139.23. In FY 1989, 235 projects were received, totaling $3,699,661.55 in ADFs, with capital outlay of $23,092,420.57. Five million dollars has been appropriated to the Area Development Fund for FY 1990.

From FY 1987 to FY 1989 there has been a decrease in state allotment to the Area Development Fund. In addition, there has been a decrease of approximately $22,000,000 in the amount of leveraging accomplished with the ADF monies.

Local governments in the Licking River Basin area are eligible to apply for ADF grants for projects relating to lake development.

Community Development Block Grant

Federal Agency: State and Small Cities Division
Office of Block Grant Assistance
Community Planning and Development
Department of Housing and Urban Development
451 Seventh Street, S.W.
Washington, D.C. 20410

State Agency: Department of Local Government
Division of Community Programs
Second Floor, Capital Plaza Tower
Frankfort, Kentucky 40601

The Community Development Block Grant (CDBG) Program was established by the Housing and Community Development Act of 1974 and has been administered by the U. S. Department of Housing and Urban Development. The CDBG Program is divided into two major categories: "entitlement" communities, those having populations of 50,000 or more, and "non-entitlement" communities, with populations under 50,000. The entitlement program is a direct allotment of funds to the larger urban communities. The non-entitlement program, or "Small Cities" program, is a competitive grant program which is administered by the state.

The Kentucky Small Cities Program allows communities to seek funding in the areas of Public Facilities, Housing, Economic Development and Special Projects.

Public Facilities Projects may include fixed asset financing, working capital and inventory, property/building acquisition and installation of infrastructure.

Special Projects can be anything at the discretion of the Commission, but must meet HUD guidelines for low- and moderate-income families, project need, reasonability of costs and overall project effectiveness. Housing projects improve the condition of housing and expand fair housing opportunities, especially for persons of low and moderate income.

For FY 1989, Kentucky's allocation of $24,953,700 was to be distributed among the various programs as follows:

Program Area	% of Allocation	Total Dollars
Economic Development	40%	9,981,480
Public Facilities	35%	8,733,795
Special Projects	15%	3,743,055
Housing	10%	2,495,370

Individual local governments or coalitions of governmental units could apply for funding under this program. Funds could possibly be available for the Licking River Basin under the Public Facilities, Economic Development or Special Projects programs for certain types of projects.

Sport Fish Restoration Program

Federal Agency: Division of Federal Aid
U. S. Division of Wildlife Service
Washington, D.C. 20240

State Agency: Department of Fish and Wildlife Resources
Arnold L. Mitchell Building, #1 Game Farm Road
Frankfort, Kentucky 40601

The current Federal Aid in Sport Fish Restoration Program was created by three major Congressional actions. These were: 1) enactment of the Dingell-Johnson Act (D-J) in 1950; 2) enactment in 1984 of the Wallop-Breaux Amendment to the D-J Act; and 3) reauthorization in 1988 of the Boat Safety Account of the Aquatic Resources Trust Fund, established by the 1984 Amendment.

Program funding is obtained from four sources: 1) excise taxes on fishing equipment; 2) duties on imported fishing tackle, pleasure boats and yachts; 3) a portion of the federal fuel tax revenues that are attributable to the sale of motorboat fuels; and 4) interest accrual.

The United States Fish and Wildlife Service, Division of Federal Aid allocates the Sport Fish Restoration Account monies among the states using the following formula:

40% according to the State's land and water area relative to the total land and water area in the U.S.;

60% according to the number of paid sport fishing license holders relative to all the paid fishing license holders in the U.S.;

No State may receive more than 5% of total funds; and

No State may receive less than 1%.

Sport fisheries research and management activities, boating access development and maintenance, aquatic resources education projects, lake construction and maintenance,

land acquisition, technical assistance, planning, habitat enhancement, administration and hatchery construction are all allowable types of projects.

According to testimony from the Kentucky Fisheries Division of the Department of Fish and Wildlife Resources, 90% of their budget is funded with Dingell-Johnson/Wallop-Breaux funds. Ten percent of these funds must be used for boat access sites and maintenance. At present, 10% of this funding is used for the management of fisheries in the Licking River drainage, which includes Cave Run Lake. Already the division has developed 2 access sites on the Licking, and it is looking for more potential sites. Due to the expense of building lakes, the division is concentrating on small fishing lakes, such as the planned dam construction on Fishtrap Creek in Nicholas County to benefit the Clay Wildlife Management Area. A requirement of the funding is that Fish and Wildlife have control of the land. It usually takes two years to meet the requirements for project approval.

Each year approximately $300,000 is available from the Division of Federal Aid for capital construction projects, most of which relate to access site development or facility development at the hatcheries. A small portion could be used for lake construction projects when monies become available.

Pooled Lease Financing Programs

Agency: Kentucky Association of Counties
390 King's Daughters Drive
P.O. Box 4207
Frankfort, Kentucky 40601

Kentucky League of Cities
P.O. Box 22736
Lexington, Kentucky 40522-2736

Both the Kentucky Association of Counties (KACO) and the Kentucky League of Cities have recently issued bonds for the purpose of creating a pool of funds available to local governments (cities, counties and special districts) for capital improvement projects at lower than regular market based rates, and for discounts in the other costs relative to such financial transactions.

The KACO program operates in the form of lease arrangements. The Counties Leasing Trust will maintain ownership of the needed capital property until all lease payments are made. This type of arrangement is necessary because county governments are restricted by Kentucky law from incurring long-term mortgaged debt. This program allows counties to finance projects requiring a long period of time without violating this law, and without incurring the costs of issuing bonds. The funds may be made available to special districts in the form of a lease or a direct loan.

All county governments and special districts in the Commonwealth of Kentucky are eligible to apply for these funds. During the Application Process, the applicant's ability to repay the debt to be incurred will be evaluated, based on certain Financial/Demographic

and/or Credit Criteria. Approval of an application will be based mainly upon this evaluation. Entities with an acceptable bond rating will be allowed to apply based on their own credit-worthiness. It may be necessary for some applicants, who do not have and cannot qualify for the required bond rating, to obtain credit enhancement in the form of a Letter of Credit from a local bank for 50% of the total lease/loan amount.

Capital improvement projects of every kind are eligible: public building construction or renovation, vehicle and equipment purchases, water and waste-water system upgrades and extensions are examples. The minimum lease amount for a county is $25,000; for a special district the minimum is $250,000. Amounts smaller than these requirements will be negotiable.

The Kentucky League of Cities program also operates a lease purchase agreement with the various participating cities. Lease payments to the KLC Corporation from the city will amortize bond principal and interest. Annual lease payments will include, as additional rent, the city's proportionate share of recurring program expenses.

The KLC Bonds have been assigned a rating of A1/P1 by Moody's Investors Service and a rating of A/A-1 by Standard and Poor's Corporation. In return for this favorable credit rating, Marine Midland Bank will play an active part in the credit analysis process of each applicant. The KLC program is designed to provide both equipment financing and staged project financing.

Kentucky statutes also restrict indebtedness for cities to the total of the annual budget appropriation, without a voter referendum. The lease purchase structure permits the city to enter into annually renewable leases that amortize the purchase of the equipment or cost of the project, subject to annual appropriation. While the city must be given the option to terminate the lease under this structure, it will allow acquisition of equipment through continued annual appropriations.

Funding for Licking River Basin projects may be available from these sources, either to individual local governments or to a consortium.

FOOTNOTES

1. U.S. Geological Survey, "Kentucky Surface-Water Resources, Water Supply Paper 2300 (no date) Louisville, Kentucky.

2. National Park Service, Nationwide Rivers Inventory, 1982.

3. The Census Bureau defines as urban all persons living in urbanized areas, and in places of 2,500 or more inhabitants outside urbanized areas. Inhabitants of smaller towns are classed as rural.

4. See minutes of March 2, 1989 Task Force meeting.

5. Telephone conversation with David L. Butcher, Advisor to Callensville Lake Committee, May 15, 1989; Public Meeting, January 19, 1989, 7:30 p.m., Pendleton County High School, Falmouth, Kentucky.

6. *Callensville Lake Project: Visions of Better Future*, prepared by McNeill Mohr Association for Pendleton County Industrial Foundation, 1988.

7. *Ibid*, p. 9.

8. Obtained from the Division of Fisheries, Department of Fish and Wildlife Resources, April 1989.

9. These totals exclude figures for Kenton County Water District #1, which can draw water either from the Licking or the Ohio River, and thus distort basin-wide trends.

10. Table, "Licking River Valley, Major Water and Wastewater Facilities, Water Withdrawal and Discharge 1988", provided to Task Force by Pamla Wood, Division of Water, Department of Environmental Protection, January 5, 1989.

11. Division of Water, *1988 Kentucky Report to Congress on Water Quality*, p. 77.

12. *Status Report, Governor's Water Supply Task Force*; Preliminary Recommendations and Future Directions, April 1989.

13. Average, June 9-July 20, 1988. Lowest monthly average on record: October, 1930. Data provided to Task Force by Mr. Bob Biel, U.S. Corps of Engineers, Louisville, February 2, 1989. See also U.S. Geological Survey, *Streamflow and Basin Characteristics at Selected Sites in Kentucky*; Open-File Report 84-704, 1984.

14. Assuming a surface area of 8,270 acres, and no return discharges to offset amounts withdrawn.

15. Reconnaisance Level Work Plan for Survey Investigation: Licking River Basin, Kentucky: April 1989, p. 3. This estimate is based on a 1971 survey, and will be reassessed as part of the Reconnaisance Study.

16. See Task Force minutes, November 3, 1988, or PL 99-662, the Water Resources Development Act of 1986. HR 1155, a bill introduced by Kentucky Congressman Larry Hopkins, would authorize Corps of Engineers funding for water supply as well.

17. Comments by Keith Crim, Division of Water, Department for Environmental Protection, at Task Force meeting December 1, 1989; a thorough but dated analysis of flooding in the basin can be found in the 1971 Corps of Engineers Reconnaisance Study, R December 1971.

18. U.S. Corps of Engineers, Louisville District, Cave Run Lake, F/C 70, 1986.

19. U.S. Corps of Engineers, Louisville District, *Water Resources Development in Kentucky, 1987*, pp. 35-40.

20. Soil Conservation Service, *Status of Watersheds: Kentucky* (map) 1988. See also Task Force minutes December 1, 1988.

21. Report on Salyersville project by Robert Ledford, Corps of Engineers, Louisville District, at December 1, 1988 Task Force meeting.

22. Kentucky Department of Travel Development, *Economic Impact of Kentucky's Tourism and Travel Industry: 1986 and 1987* (May 1988) p. iii.

23. Data from Structure Inventory, Kentucky Division of Water. The Division provided information on 74 dams in the basin.

24. U.S. Bureau of the Census, *County and City Data Book*, 1988; U.S. Government Printing Office, 1988, Appendix E.

25. U.S. Army Corps of Engineers, *Water Resources Development 1987*. Volumes for Ohio, Kentucky, and Indiana.

26. Kentucky Department of Local Government, 1984 Statewide Comprehensive Outdoor Recreation Plan (SCORP), Assessment and Policy Plan.

27. Commonwealth of Kentucky, Department of Parks, *Statistical Information: Calendar Year 1988*, pp. 9 and 15.

28. "Kincaid Lake State Park Resort Feasibility Study", prepared by the Center for Business and Economic Research for the Kentucky Department of Parks, May 1987.

29. *Report of the Task Force to Study the Taylorsville Lake Project*, Legislative Research Commission Research Memorandum No. 430, January 1986.

30. U.S. Army Corps of Engineers, *Water Resources Development, Kentucky, 1987*, p. 51. Figures for 1986-88, from the Park Manager Office: 1986: 587,143; 1987: 523,200; and 1988: 427,121.

31. A useful overview of Community Planning recommended to the Task Force is *Tourism USA: Guidelines for Tourism Development*, 1986, prepared for the U.S. Department of Commerce, U.S. Travel and Tourism Administration.

GENERAL ASSEMBLY

COMMONWEALTH OF KENTUCKY

REGULAR SESSION 1988

HOUSE CONCURRENT RESOLUTION NO. 69

WEDNESDAY, FEBRUARY 24, 1988

The following concurrent resolution was reported to the Senate from the House and ordered to be printed.

A CONCURRENT RESOLUTION directing the Legislative Research Commission to create a task force to study the water resource potential of the Licking River Basin and its tributaries in northern Kentucky.

WHEREAS, the necessity for flood control on the Licking River and its tributaries has long been of great concern to the citizens of northern Kentucky; and

WHEREAS, the citizens of northern Kentucky need to examine the potential of the Licking River Basin as an alternative source of water supply in anticipation of projected population growth in the northern Kentucky region, and as an additional source of potable water during periods of extreme pollution of the Ohio River; and

WHEREAS, the United States Army Corps of Engineers cannot commence a detailed evaluation of the Licking River Basin until late 1989; and

WHEREAS, the citizens of the northern Kentucky area should be afforded the opportunity to express their views in an organized and objective forum;

NOW, THEREFORE,

Be it resolved by the House of Representatives of the General Assembly of the Commonwealth of Kentucky, the Senate concurring therein:

Section 1. That there is hereby created the Licking

River Basin Task Force. The task force shall advise and make recommendations to the Legislative Research Commission on all matters relating to the Licking River and its tributaries in northern Kentucky, including:

1. The necessity for flood control;

2. The need for alternate potable water supplies;

3. The rationale for one or more impoundments;

4. The potential need for recreational development in the region;

5. The feasibility of economic development projects which could benefit the area, the effect on land and water resources; and

6. The overall level and commitment of community support for such projects.

Section 2. That the task force be composed of twenty-one (21) members, including the chairperson of the task force, and that all task force members be appointed by the co-chairpersons of the Legislative Research Commission. Membership on the task force shall be three (3) members of the House of Representatives from House districts in the area, to include: the sixty-first House district, the sixty-second House district, the sixty-fourth House district, the sixty-eighth House district, the sixty-ninth House district, the seventieth House district, and the seventy-fourth House district; two (2) Senators from Senatorial districts in the area, to

include: the eleventh Senatorial district, the eighteenth Senatorial district, the twenty-third Senatorial district, the twenty-sixth Senatorial district, the twenty-eighth Senatorial district and the thirtieth Senatorial district; one (1) county judge/executive of a county within each House district listed above; one (1) mayor of a city within each Senate district listed above; one (1) member of a water district board within the area comprised of the House districts listed above; one (1) member of a soil conservation district board within the area comprised of the House districts listed above; one (1) citizen member of the Northern Kentucky Area Development District and one (1) citizen member of the Buffalo Trace Area Development District.

Section 3. That the task force members be reimbursed for their actual expenses in attending meetings and the performance of other official duties.

Section 4. That the task force shall report its findings to the Legislative Research Commission by October 1, 1989.

Section 5. Staff services to be utilized in operation of the task force are estimated to cost twenty-five thousand dollars ($25,000). These staff services shall be provided from the regular commission budget and are subject to the limitations and other research responsibilities of the commission.

SENATE

KENTUCKY GENERAL ASSEMBLY AMENDMENT FORM

1988 REGULAR SESSION

Amend printed copy of GA Copy of House Concurrent Resolution 69

On page 2, line 17, by inserting after the first "task force" the following: ", who shall be appointed by the Legislative Research Commission".

Amendment No. 1

Committee Amendment ✓

Floor Amendment _____

Adopted: _____

Rejected: _____

Sen. Greg Higdon

Signed: [signature]

LRC Drafter: Daniel J. Risch

Date: 3/15/88

Doc. I.D.: 1940C

APPENDIX B

LICKING RIVER BASIN TASK FORCE

Minutes of the First Meeting of the 1988-89 Interim

September 29, 1988

The first meeting of the Licking River Basin Task Force was held on Thursday, September 29, 1988, at the Drawbridge Inn in Ft. Mitchell. Senator Nelson Allen called the meeting to order and the secretary called the roll.

Present were:

Members: Senator Nelson Allen, Chairman; Senator Art Schmidt; Representatives Adrian Arnold and Jon David Reinhardt; Judge Robert Aldemeyer, Richard Badger, Mayor George Carmack, Ed Currin, Mayor G. T. Harding, Mayor Rawleigh Havens, Leslie Herbst, Mayor Earl M. Linville, Judge Byron D. Martin, Judge Ken Paul, Judge David Pribble, Mayor Tom Prather, Mayor A. C. Sparrow and Judge Charles Swinford.

Guests: Mike Hale, KFCAC; James and Lois Wilson; Pamla Wood, Kentucky Division of Water; Doug Dunaway; Greg Bauerle; Bob Bathalter; Harold L. Matthews; Mary Lou Matthews; and David Butcher, Pendleton County Chamber of Commerce.

LRC Staff: Linda Kubala, Alice Downey, Mary Lynn Collins, Carolyn Kinman, and Diana Lynn Hill.

Press: Ray Schaefer, Cincinnati Enquirer.

The first order of business was the election of a vice chairman. Representative Arnold nominated Representative Reinhardt and Senator Schmidt seconded the motion. Judge Pribble nominated Judge Swinford and there was a second by Judge Martin. There being no further nominations a motion was made and seconded that nominations cease. The voting was done by secret balloting and Mayor Prather and Senator Schmidt certified that the vote count was accurate. There were 11 votes for Representative Reinhardt and 6 votes for Judge Swinford. Representative Reinhardt was elected vice chairman.

Senator Allen asked Representative Reinhardt to give a brief explanation of the need for House Resolution 69, which Representative Reinhardt sponsored during the 1988 General Assembly, creating the Licking River Basin Task Force. Representative Reinhardt said that there were a number of people throughout an eight or nine county region in northern Kentucky who realized the need for a good reliable water source for economic and recreational purposes. He said the task force would study all aspects of daming the Licking River and its tributaries. He said the resolution passed in the House without a dissenting vote. He said that as task force

members they should follow up on the resolution and look into current plans to see if there was any merit in harnessing the Licking River or any of its tributaries for people in the area.

Senator Allen pointed out the section in the resolution dealing with membership and financing. He said that staff would send members the guidelines for reimbursement of pay for members.

Senator Allen pointed out the information sheet in the folder on the Licking River Basin. He asked staff to check on a resolution that Congressman Hopkins filed regarding the Licking River. Linda Kubala, committee staff, said that the Corps of Engineers had appropriated $191,000 to begin the first stage of the feasibility study. She said the Corps is hoping to work with the task force in any way they can. Senator Allen asked if there were any comments.

Judge Pribble said he would be glad to give an update on what had been done throughout the Pendleton County region. He said two years ago county judges from Campbell County to Bath County decided it would be a good idea to ask the federal government to look at the feasibility of building a series of small dams on a tributary. They attempted to identify tributaries with very few houses and no major highways. They identified 28 lake sites within 10 counties and then went to Washington and requested money to start the reconnaisance study which would take a two years. The second phase would be the feasibility study of the effect of the dam. Money was appropriated from the Senate and the study should start the first of the year. An example would be for the Corps of Engineers to look at proposals for 7,000 acres of impounded water in the Pendleton County area.

The next item on the agenda was the presentation of the Callensville Lake Project given by Mr. David Butcher of the Pendleton County Chamber of Commerce. Mr. Butcher said that economic stagnation has become a significant problem for the people of the Central and Upper Licking River Valley, and for Pendleton County. He explained that the Callensville Lake is being proposed as a multi-purpose project designed to address both regional and statewide economic objectives for stimulation of economic opportunities and job creations in the upper Licking River Valley area. It has the potential to serve as the anchor for a much larger lake system spanning eight or nine counties.

Callensville Lake is located in southwestern Pendleton County and southeastern Grant County. Approximately 1200 of the 1600 acres would be in Pendleton County and the balance of 400 acres in Grant County. There would be 56 miles of shoreline and would be approximately 12 miles long with the dam being located on Fork Lick Creek, which is a major flood tributary of the South Licking River. It is 40 miles north of Lexington and 40 miles south of northern Kentucky and the greater Cincinnati area. He said the population of Pendleton is approximately 11,000. Over 2,000,000 people reside within a one hour drive of the Callensville site. Approximately 6,000,000 people reside within a three-hour drive. He said the lake would be very accessible as far as the highway network is concerned. Mr. Butcher pointed out the maps in the handout booklet and briefly

explained them. He told the members that the Callensville Lake site was suited for water based development and that approximately 75% of the area to be inundated is now nonproductive. There are no churches, schools, cemeteries or public institutions in the lake site area. Out of 1600 acres there are two barns and one house. Callensville Lake would provide approximately 15 billion gallons of clean water for public and private purposes. The lake would serve as an effective mechanism to impound seasonal rainfall excess, thereby reducing economic and human costs associated with flooding.

Callensville Lake would be the largest lake north of I-64 in the state, which would make it highly suitable for a broad range of resort and recreational development. Mr. Butcher said that in 1986, tourism was the third largest revenue producing industry in Kentucky.

Mr. Butcher pointed out that additional long-term employment opportunities would be generated in the services sector. Assuming that construction activity would be primarily concentrated in Pendleton County during a twelve-month period, 898 new jobs could be created.

In summary, Mr. Butcher stated that the Callensville Lake project would effectively address both regional and statewide economic development objectives through stimulation of economic opportunity and job creation in the central and upper Licking River Valley area. He said the lake site location is uniquely suited for water based development and that accessibility factors are unusually favorable. He said that an impact analysis study is recommended in order to substantiate previous findings. Finally Mr. Butcher asked, on behalf of individuals and organizations endorsing the Callensville Lake project, the task force's full and enthusiastic support for the lake project. He then asked if there were any questions.

Mayor Prather asked Mr. Butcher how many property owners were affected. Mr. Butcher said they conducted a survey by letter of all people affected by the project. In Pendleton County 44 property owners would be affected. Of those 44, 30 (68%) responded by stating they were in favor of the project; eight people (18%) said they were opposed and six (14%) property owners did not respond. Regarding acreage, 875 of 1,204 acres responded favorably (73%).

Mayor Prather asked if Mr. Butcher had an estimate of the cost for the project. Mr. Butcher said that just off the top of his head from talking to an engineer, that it would be approximately $5 million, but in reality it may double.

After no further questions, Senator Allen briefly highlighted House Resolution 69. He then stated that in November he had received a petition from property owners who were opposed to the Callensville Lake project. He asked if anyone in the audience would like to express their views.

Mr. Greg Bowerly from Campbell County stated that he owned property along the Licking River and would have land affected by the

project. His question was in regard to the method of funding for the project. He objected to taxpayers footing the bill and then private developers making the profit. He realized that tax money would be generated but that there would be a tremendous amount of windfall for developers.

Senator Allen explained that there were two ways to spend public funds, one by executive budget or discretionary funds that come through federal agencies. He said that the task force had not studied enough about the logistics of the lake to make a determination regarding funding.

Since Mr. Bowerly's property is north of the proposed dam, he asked who would regulate the flow of water impounded by the dam. Senator Allen called on Pamla Wood with the Kentucky Division of Water to respond. Ms. Wood said that water belongs to the state and that no one could dam a river without the approval of the Corps of Engineers. Senator Allen asked Mr. Bowerly to get with Ms. Wood and Alice Downey and they would get the information he needed.

Mrs. Lois Wilson from Falmouth told the task force that there was a letter in their folders addressed to Senator Allen expressing her and her husband's opposition to the Callensville Lake project. There was also an opposition petition signed by other landowners. She said that the dam would take one-fourth of their farm and that 300 acres was good tillable land. She explained that if the dam was built there would be people who would be land-locked and would have no access to their homes. She said the option application from the county says that no bridges would be built for land-locked owners. She also said that landowners would not be able to claim any damages incurred as a result of surveys or construction. She strongly supported the rural life and said that Kentucky has more navigable waterways than any state other than Alaska and that a supply of fresh water was not an issue in the area. She then thanked the members for their time.

Senator Allen asked what the timetable for the completion of the lake was. Mr. Butcher said that there was no way of really knowing, but he speculated it would take approximately ten years.

Representative Arnold asked Mrs. Wilson if the Fork Lick Creek was very wide. Mrs. Wilson said it was fairly narrow, but had a lot of good timber. Representative Reinhardt then directed staff to get a proper description of the Fork Lick Creek.

The next person speaking in opposition to the project was Mr. Doug Dunaway from Berry. Mr. Dunaway said that everything Mr. Butcher said was true, but that he wasn't telling the whole story. He said that Mr. Butcher was buying up land that would be to his advantage if the project went through. He also said that elderly people were being harassed.

Mr. Havens asked Mr. Butcher how far from the edge of water would the property owner be able to keep his land. Mr. Butcher said that the proposed easement would be 100 feet around the lake for the

property owner. He said the Pendleton County fiscal court would like for all property owners to be satisfied.

Representative Arnold asked who had the most land that would be affected. Mr. Butcher said that Mr. Dunaway and his mother would have the most productive land of any farm in Pendleton County. In Grant County Mr. Tebelman owns the most.

Senator Allen said he appreciated the speakers information. He then said that Mr. Duck and Mr. Jenkins of the Corps of Engineers would be invited to the next meeting to answer questions.

Representative Reinhardt stated that there was concern for the landowners and that the task force welcomed their views and concerns.

Senator Allen said that if someone could not attend the meetings the materials and information would be mailed to them. He said the task force could not endorse a project or concur in the project's objective. He said the task force was collecting data that would go into a report submitted to the LRC. Judge Aldemeyer questioned whether or not the task force would make recommendations. Senator Allen directed staff to get an interpretation of the resolution from Vic Hellard, Director of the LRC.

The next item on the agenda was the discussion of the task force's future agendas and the determination of a regular monthly meeting. As determined by a survey sent to all members of the task force, it was determined that the first Thursday of each month at 7:00 p.m. would be regular monthly meeting. It was also decided that at this time meetings would be held in Frankfort at the Capitol Annex. Senator Allen said the task force could also do on-site visits in other places. A tentative meeting was scheduled for October 11.

After brief discussion the question was raised as to whether or not a proxy could be sent in someone's place if they could not attend a meeting, and whether or not they could be paid. Staff was directed to look into the matter.

Senator Allen asked the members to think about any projects they may want to look at that would be germane to the Licking River Basin Task Force. He said members may want to invite the executive director of their Area Development District to future meetings.

Representative Reinhardt said the the task force should be concerned with the environmental impact and have someone in Frankfort to work with the task force on this issue.

Senator Allen asked if there was anything the members would like from the LRC, state or federal agencies in the utilization of the project.

Staff was asked to gather information regarding the Water Management Task Force and also the Taylorsville Lake project for the next meeting.

There being no further business, the meeting was adjourned at 9:00 p.m.

LICKING RIVER BASIN
TASK FORCE

Minutes of the Second Meeting
of the 1988-89 Interim

November 3, 1988

The second meeting of the Licking River Basin Task Force was held on Thursday, November 3 at 7:00 p.m., in Room 104 of the Capitol Annex. Senator Nelson Allen, Chairman, called the meeting to order, and the secretary called the roll.

Present were:

Members: Senator Nelson Allen, Chairman; Representatives Adrian Arnold, Clay Crupper, Jon David Reinhardt; Richard Badger, George Carmack, Ed Currin, G. T. Harding, Leslie Herbst, Earl Linville, Byron Martin, David Pribble, Mike Pryor, A. C. Sparrow, and Judge Charles Swinford.

Guests: Neil Jenkins and Jim Duck, Louisville Corps of Engineers; Robert L. Bender and Tom Engstrom, Department of Parks; Tom Hensley; Elmo Myers; Mary Sue Currin; Mr. & Mrs. James Wilson; Mike Hale and John Reed, Kentucky Flood Control Advisory Commission; and Todd Leatherman, Kentucky Resources Council.

LRC Staff: Linda Kubala, Mary Lynn Collins, Carolyn Kinman, and Diana Lynn Hill.

Senator Allen called for the approval of the minutes of the September 29 meeting. Motion was made by Representative Crupper and seconded by Judge Martin to approve the minutes. The minutes were approved by voice vote.

Senator Allen introduced Mr. Jim Duck, Chief, Plan Formulation Branch of the Corps of Engineers to give an overview of the planned reconnaissance study of the Licking River Basin and the restrictions which apply to projects funded through the Corps of Engineers. Mr. Duck said the findings of early studies which addressed navigation on parts of the lower Licking River negative. In 1932 further studies were made addressing potential for navigation, hydropower, and flood control, which also proved negative. In 1936-1938 early studies recommended Falmouth Lake, which was authorized for construction by Congress, but currently is innactive. In 1971 and a few years prior, the Corps was involved in studies with several agencies, particularly the Appalachian Regional Development Commission. The concept was to provide flood control protection for a new city, but Congress did not act on the recommendations of that report. In 1985 Congress appropriated funds to review the inactive classifications of Falmouth Lake and other projects to try and identify a feasible alternative, but no projects could be identified as economically feasible. Mr. Duck said that for the Corps to proceed with a project the benefit cost ratios would have to be 1.0

or greater, but the ratios ranged from .3 to something under .9. He said the cost of the Falmouth Lake project today would be approximately $200 million.

In 1985-1986 the Corps had discussions with representatives of the Department of Natural Resources and Environmental Protection Cabinet, Division of Water, and also with the Bluegrass Area Development District. In January of 1987 the Corps received a resolution of the Committee on Environment and Public Works of the U. S. Senate providing the Corps with the authority to do a study to investigate water resource problems within the Licking River Basin.

Mr. Duck then addressed the questions in the letter from Senator Allen. He said that funds have been appropriated for FY 1989 in the amount of $200,000. Once they receive the money the Corps will have 18 months to complete the reconnaissance study. The first step will be a document called the Plan of Study, which will be followed by hydrology and flood damage studies. He explained that in order for the Corps to get involved in a study there has to be one of two purposes, which are flood control and/or navigation. In this case it would be a flood control project with the addition of recreation. He said one of the first things to do is to identify the extent, nature, and location of potential flood problems within the basin. This would be a combination of hydrology and flood damage surveys. After a preliminary design and cost estimates are made, the Corps would evaluate the federal interest in the alternatives, the economics, environmental and social feasibility. They would also do preliminary environmental work to determine whether or not there is a non-federal sponsor willing, able and capable of cost sharing. The second phase is the feasibility study which could require 2-3 years depending on the size of the project. The key to the feasibility study is cost-sharing with a non-federal agency which needs to be 50-50. Following the feasibility are at least two years of preconstruction engineering and design, followed by preparation of plans and specifications for construction contracts.

Senator Allen's second question was whether or not the Corps could foresee areas of cooperation between the Task Force and the Corps. Mr. Duck said the Task Force could be helpful in several areas. The first area would be in helping to identify problems and needs relative to flood control and water supply. Secondly, any public forums the Task Force might hold would be beneficial. A third, and very significant area would be in the actual implementation of the feasibility stage.

The next question concerned restrictions, in funding, land or water use, or development options, which apply to lakes built by or with the assistance of the Corps of Engineers. Mr. Duck said that in order to get Corps funds it must first be established that the project is economically, environmentally, and socially feasible. The benefits have to exceed the cost. In other words, cost ratios must be greater than 1 to 1. In a multi-purpose project at least 10% of the total project benefits must be for flood control. Mr. Duck said the subject of restrictions relative to land use is complicated. Prior projects were developed under an old real estate acquisition

policy which left several shoreline lots where people can walk out their back door and walk down to the lake. He gave Green River Lake as an example. The policy that applies to lakes today is more similar to Taylorsville Lake, where it is very difficult to stand on private property and see the lake. He said at this point there were no real restrictions on water use.

The last question in the letter asked what criteria are used by the Corps to choose which projects to support. Mr. Duck said the benefits have to exceed the costs and the project needs to be environmentally, socially, and politically acceptable. He said one of the biggest problems was in finding a local sponsor willing, legally, and financially capable of cost sharing the project. Mr. Duck then opened the floor for questions.

Representative Reinhardt asked if Mr. Duck could make a copy of his notes available to the Task Force members. He also asked Mr. Duck if he felt the Falmouth Dam project could ever be resurrected. Mr. Duck said he could not say that the project is completely dead but it would be difficult to build a major lake project like Falmouth.

Representative Reinhardt asked what kind of major change would have to take place to get the ratio up more than one to one. Mr. Duck said he wasn't sure, but from a flood control standpoint there needed to be more flood control benefits.

Representative Reinhardt asked if a project was identified to be a multi-purpose project which may or may not involve lakes and/or projects along the Licking, and the flood control portion came up to at least a reasonably high ratio, would that be a 50-50 cost sharing situation with the local and federal government. Mr. Duck said it was possible but it would be difficult to attain.

Representative Reinhardt asked if there were projects where large pools were built within the river bed, like a reservoir. Mr. Duck said all reservoirs the Corps builds are built in the rivers.

Mr. Duck then introduced Mr. Neil Jenkins, Chief, Planning Division of the Corps of Engineers. Mr. Jenkins said he supported Mr. Duck's testimony, except that Green River Lake is more similar to Taylorsville Lake as far as shoreline property is concerned. He said that all the other projects in the state are under old policy acquisitions. In answer to Representative Reinhardt's question on the Falmouth Dam project, Mr. Jenkins said that Congress could change their rules, regulations, and policies. Therefore, a project can be resurrected anytime that a substantial element of the public wants it.

Senator Allen thanked Mr. Duck and Mr. Jenkins for their presentations. Next on the agenda was a history of the development of the Taylorsville Lake. Mr. Bob Bender, Deputy Commissioner of Parks presented a brief summary. Mr. Bender said the Parks Department and the Corps of Engineers have been involved with the master planning and development of Taylorsville Lake since the

1960's. A task force was formed to identify and solve problems related to the project. He said the working relationship with the Corps and the Department has been good except for a period of time when Governor Ford signed a contract with the Corps and the state did not provide any funding for any development at Taylorsville Lake. The first state funding was made available during Governor Brown's administration. The Corps of Engineers matched these funds for the development of a ramp access, parking, and utilities at what is known as Settlers Trace and other ramps. Mr. Bender said that after the initial infrastructure was put into place the Department of Parks then solicited proposals from the private sector for the development of the marina. The bid was awarded to the Smith Brothers. In exchange for the lease with the Smith Brothers, the Department receives 4% of their gross receipts. The Department of Parks solicited bids on two occasions from the private sector for development of a marina at the Chowning Lane location, but no bids were submitted. Mr. Bender said the 1986 General Assembly got the project moving again and provided $2.2 million to match with the Corps of Engineers for infrastructure development at the Possum Ridge location. Currently all utility phases are in the planning or construction phase. It is the intention of the Department, at the appropriate time, to solicit bids from private sectors for the development of a camping area at the Possum Ridge site at Taylorsville. Mr. Bender then opened the floor for questions.

Representative Crupper asked how much the Taylorsville Lake project cost. Mr. Bender said that initially the first state funding amounted to $743,000 to match the Corps for infrastructure development at the Settlers Trace area. The second funding from the state to match the Corps amounted to $2.2 million for the Possum Ridge development. He said the state has committed about $3 million to the project thus far.

Representative Reinhardt asked what the total ratio, state vs. Corp was. Mr. Jenkins said that he did not have that figure but that the lake was a flood control and recreation project which the federal government built and paid for because it was built prior to the 1986 Act which changed the rules on cost sharing for flood control. He said the total expenditures for Taylorsville Lake were over $100 million.

Representative Reinhardt asked what the management criteria was for the Department of Parks. Mr. Bender said that the only private development in the area of the lake is what has been developed on land that is leased by the Department of Parks and subleased to private developers. No private property is owned adjacent to the water around the lake.

Representative Arnold asked if any more development was needed at Taylorsville Lake. Mr. Bender said they had solicited bids for another marina. He said they could request, through the Corps, that the master plan be changed at any point in time. He said the Corps was going to solicit bids from the private sector once the infrastructure in the Possum Ridge area nears completion, for camping areas, office space, and restrooms.

Representative Arnold asked if the Parks Department was using private development more than in the past. Mr. Bender said there has been a change in policy and philosophy since the Taylorsville Lake project.

Representative Reinhardt asked Mr. Bender to make a copy of the Taylorsville Lake master plan available to the members. He then asked him if the Department would be receptive to private development building a lodge in an existing park. Mr. Bender said they would. He said the Department is now in the process of soliciting bids for a possible lodge complex at Green River State Park and also at Burnside State Park.

Senator Allen asked if the Taylorsville Lake project had been a good investment for Kentucky. Mr. Bender said it had because of the lake's proximity to Lexington, Louisville and surrounding areas.

Next on the agenda was Mr. Tom Engstrom, Director of Planning, Construction, and Maintenance. Mr. Engstrom asked Mr. Duck if the Corps was getting hints that the law, rules, and regulations might be changed over the upcoming years to allow more participation from the Corps from the water supply standpoint as opposed to flood control.

Mr. Jenkins said that speculating on whether a law would pass or not was difficult, but that Senator Ford and Representative Hopkins have introduced legislation to do just that.

Senator Allen thanked Mr. Bender and Mr. Engstrom for their presentations. The next item on the agenda was the proposed work plan. Senator Allen said the Task Force could have onsite trips with the approval of the LRC. He asked members to contact staff with any suggestions of places to visit. He also asked staff to provide members with a copy of the Louisville Corps of Engineers' publication entitled "Continuing Authority Program Information Brochure."

Representative Reinhardt asked staff to get an outline of the Licking River and how it runs; the communities that are drawing water from the river, their needs, size, who they are, where they are, what their current water supply is. He also asked staff to talk with the Corps to find out if there are similar situations in other states.

Judge Pribble said it would be helpful to have information on what cities have flood control.

Ms. Pam Wood, Kentucky Division of Water, offered to assist staff in any way she could.

Next on the agenda was the information in the folders. Ms. Linda Kubala, staff, briefly went over the material in the folders which members had asked for at the last meeting.

The next meeting was set for December 1 at 7:00 p.m. There being no further business, the meeting was adjourned at 8:30 p.m.

LICKING RIVER BASIN
TASK FORCE

Minutes of the Third Meeting
of the 1988-89 Interim

December 1, 1988

The third meeting of the Licking River Basin Task Force was held on Thursday, November 2 at 7:00 p.m, in Room 104 of the Capitol Annex. Representative Reinhardt, Vice Chairman, called the meeting to order, and the secretary called the roll.

Present were:

Members: Jon David Reinhardt, Vice Chairman; Clay Crupper, Richard Badger, George Carmack, G. T. Harding, Rawleigh Havens, Leslie Herbst, Earl Linville, David Pribble, Mike Pryor, Reese Smoot, and A. C. Sparrow.

Guests: Keith Crim, Pamela Wood, Department for Environmental Protection; Archie Weeks, Soil Conservation Service; Robert Ledford, Corps of Engineers, Louisville District; Todd Letherman, Kentucky Resources Council; Mike Hale, Kentucky Flood Control Advisory Commission; Elmo Mycers and Tom Hensley.

LRC Staff: Linda Kubala, Mary Lynn Collins, Alice Downey, and Diana Lynn Hill.

Representative Reinhardt called for the approval of the minutes of the November 3 meeting. The minutes were approved without objection.

Representative Reinhardt introduced Mr. Keith Crim with the Department for Environmental Protection, Water Resources Branch of the Divison of Water to discuss flooding locations, flood insurance, and flood management programs regarding the Licking River.

Mr. Crim referred to a map that the members had received which showed the outline of the Licking River Basin and also a booklet on the national flood insurance program. The three questions he had been asked to cover concerned the characteristics and the severity of flooding, actions being taken by communities to reduce flood damages, and also what benefits and restrictions would apply in communities which participate in the flood insurance program.

He said that the Licking River Basin covers about 10% of the state. It is a long and narrow basin susceptible to flash flooding, mainly on the tributaries. There has been some flooding on the Licking itself, but most of the flooding occurs in late winter or early spring. He said he had looked at three areas; one being at the headwaters of the basin near Salyersville, flooding around the Bourbon County area and at the lower end of the basin around Kenton County. Salyersville had significant flooding in March of 1962,

March 1963 and December of 1978, and also tributary flooding in 1981. Salyersville has an extensive amount of its land within the 100-year flood plain, which is the plain the Division of Water as well as the federal government regulates through its flood insurance program. Most of the Kenton County flooding results from either the tributaries or backwater flooding from the Ohio River. Mr. Crim said those areas have had little development and damange has been limited to bank erosion.

In doing research he found that numerous studies have been done on the basin going back to the authorization of Congress after the 1937 flood. He said the Corps has reported several basin and structure studies which resulted in dams and other structural projects. The Soil Conservation Service and the Corps have been active in flood control projects for several years with the Corps' activity being seen by the addition of Cave Run Lake; Soil Conservation by its numerous flood control structures usually identified by sub watersheds.

One study done by the Corps of Engineers in September 1971, concerning the Licking River Basin, resulted in non-structural measures being recommended, including the passing of zoning ordinances and improved building codes and building regulations addressing flood plains. The study called for the flood proofing of existing structures, the improvement of flood forecasting, the adoption of the national flood insurance program, and in extreme cases, permanent structure evacuation from the flood plain. The study found that with the construction of Cave Run, Falmouth Dam, Royalton Lake and the Midland Local Protection Project, they could recommend no further construction at that time.

Mr. Crim said as far as actions taken by local communities, that basically they have relied heavily on soil conservation and the Corps of Engineers to make their assessments and access federal monies needed for flood control projects. The National Flood Insurance Program has had a larger impact on local involvement.

He pointed out the brochures involving the National Flood Insurance Program. The figures were taken from a December 31, 1987 status report from the Federal Emergency Management Agency which indicated the number of policies and damages by county and cities. Mr. Crim said a community under the flood insurance program can be a county or incorporated city. He identified communities who had policies and communities who were flood-prone but chose not to participate in the program. He said the majority of flooding from an insurance standpoint, seemed to be at the headwater of the basin around Salyersville. Once a community joins the flood program they adopt a flood plain ordinace which controls what can be constructed and what can be placed in the flood plain. He explained that this did not prohibit construction but they still must meet state regulations. The program affords people in the 100-year flood plain and even those who live above it to have insurance, but if you are in a non-participating community you cannot get any flood insurance. A community will receive limited disaster relief from a major flood, but no reconstruction loans. A community may join the insurance flood program during the disaster.

Representative Reinhardt asked Mr. Crim to see that staff received a copy of all the maps for distribution to the members of the committee.

Next on the agenda was Mr. Archie Weeks, Water Resources Planning Staff Leader with the Soil Conservation Service to review Soil Conservation Service programs dealing with water resources. Mr. Weeks said that 25% of the Soil Conservation Service budget goes for four programs dealing with water resources.

The first, and main program, is the PL-566 Watershed Protection Program for flood control. Mr. Weeks distributed copies of the act which basically was for small communities with watersheds up to 250,000 acres. The Soil Conservation Service has implemented 36 projects in Kentucky, four of which are in the Licking River Basin. Mr. Weeks passed out a map showing the different projects. He explained that when a community has a flooding problem they go to their soil conservation district to request a study. The district then determines if the benefits exceed the costs and then try to come up with a solution which may be structures upstream, a channel downstream, or relocation of structures. If there is an economically feasible solution the Soil Conservation Service pays 100% of the construction costs and the local community pays for the land rights and administration costs, but they must pay at least 35% of the total cost.

The second program he explained was the River Basin Program, which is broken down into cooperative area-wide studies to determine the needs and programs to address the problem. He said there have been studies in Kentucky, but none on the Licking River. Basically a study is made to determine the problems and to see what U. S. agricultural programs or local programs can be developed to solve or reduce the problems. The Soil Conservation Service also has a flood plain management program to work with local people in determining possible flood solutions.

Mr. Weeks said there are programs in five areas of the state which are approved by the Secretary of Agriculture to address small community problems or rural development in communities. They are not approving any more at this time.

There is also an emergency protection program dealing with emergencies when a flood hits an area. This is a cost-sharing program with the community for local people to restore their agricultural properties.

Representative Reinhardt asked Mr. Weeks to explain the map showing the status of watersheds in Kentucky. Mr. Weeks went over projects that have been in some phase of planning, completed, under operations or construction, those in planning, and projects which have applications not serviced.

Representative Reinhardt asked what a multi-purpose structure was. Mr. Weeks said that a multi-purpose structure was for municipal industrial water, recreation, or irrigation, which has been paid for

by the Soil Conservation Service or by federal funds except for multi-purposes. Local people pay 50% of the storage for recreation.

Representative Reinhardt asked Mr. Weeks if most of the soil conservation groups in Kentucky are aware of the programs offered. Mr. Weeks said they were.

Mr. Weeks suggested that the committee take a tour of some of the projects so they could see what was being done and possibly to interview people at the projects.

Representative Reinhardt extended an invitation to Mr. Weeks to attend another meeting of the Task Force to show how dams operate. He also asked Mr. Weeks if he would attend a tour of some of the projects completed along the Licking River.

Representative Reinhardt asked Mr. Weeks if he felt there were areas along the Licking River that flood often enough to justify using farm land for other purposes. Mr. Weeks said he did not really know.

Representative Reinhardt asked if the conservation service ever did studies to determine whether or not it would be valuable to have a dam or water impoundment rather than for agricultural purposes. Mr. Weeks said the conservation service does make sociological studies of an area and talk to landowners when they are planning projects. He said that smaller dams are more popular and are accepted more readily by the public than large projects.

Representative Reinhardt thanked Mr. Weeks for his presentation. He then introduced Mr. Robert Ledford, Chief of the Special Studies Branch of the Corps of Engineers Louisville District to talk about the Salyersville study. Mr. Ledford distributed fact sheets and maps concerning Salyersville. One handout dealt with the Water Resource Development Act (PL 99-662), passed by Congress in 1986 showing the cost sharing and new rules for the Corps of Engineers dealing with local communities. He pointed out sections of the law pertaining to Salyersville on the rules for cost sharing for flood control. He also pointed out sections on the ability to pay, authorization for projects and additional authorized projects. He then went over briefing information on the flood control project at Salyersville. He said it was an $8.2 million project, of which $1.4 million is a non-federal cost share.

Mr. Ledford then explained a map showing the cut-thru plan for Salyersville and what that project would do. The Corp is finalizing a cost estimate and will then submit the project to the Division Engineer in Cincinnati. By the first of March, the report will go to Washington to the Office of Chief of Engineers and then back to the Secretary of Army who is required to report to Congress.

Mr. Ledford then went over a brochure entitled "The Planning Assistance to States Program" which involves the preparation of plans for the development, utilization, and conservation of water and related land resources of drainage basins located within the

boundaries of the state. He also explained another brochure called the "Flood Plain Management Services Program" which gives the U. S. Army Corps of Engineers the legislative authority to assist local communities, organizations, and individuals in matters pertaining to the identification, use, and management of flood plain areas.

Representative Reinhardt asked if the Corps of Engineers had done any studies on how to deal with backwater flooding problems. Mr. Ledford said that it is very expensive but could be done, although there is no guarantee to keep the water out.

Representative Reinhardt asked if the Licking River Basin was prone to annual flooding. Mr. Ledford said he did not know, but it would depend on the frequency and where the storms occur.

Representative Crupper asked why the Falmouth Dam project died. Mr. Ledford said there was considerable opposition from people in the lake area and also budget problems in Washington.

Representative Reinhardt thanked Mr. Ledford for his presentation. He then called on Judge David Pribble of Pendleton County, a member of the Task Force, to go over maps concerning what Pendleton County has done. Judge Pribble went over several maps showing the acreage and dwellings affected at each proposed lake site. Out of ten proposed lake sites they would be taking only five dwellings and a little over 200 acres of cropland. He said they had attempted to identify small tributaries that would not have opposition from landowners and they have held meetings to explain what the cost sharing is and what the landowners' benefits would be.

Representative Reinhardt asked Mr. Weeks if the Soil Conservation Service would be in a position to evaluate the proposed lake projects over the next several months.

Mr. Weeks said they would if they had a commitment, but as of yet it was not in their schedule. He said they have been discussing a request of the river basin study but they would need additional money. Mr. Weeks commended Judge Pribble for his work on the project.

Representative Reinhardt thanked Judge Pribble for his presentation and asked him to leave the maps with staff so they could send them to members of the committee.

The next meeting was scheduled for January 5. There being no further business, the meeting adjourned at 9:30 p.m.

LICKING RIVER BASIN
TASK FORCE

Minutes of the Fourth Meeting
of the 1988-89 Interim

January 5, 1989

The fourth meeting of the Licking River Basin Task Force was held on Thursday, January 5, at 7:00 p.m. in Room 104 of the Capitol Annex. Senator Joe Meyer, Chairman, called the meeting to order, and the secretary called the roll.

Present were:

Members: Senator Joe Meyer, Chairman; Representatives Adrian Arnold and Jon David Reinhardt; Richard Badger, George Carmack, Ed Currin, G. T. Harding, Rawleigh Havens, Leslie Herbst, Earl Linville, Byron Martin, Ken Paul, David Pribble, Mike Pryor, Reese Smoot, A. C. Sparrow, and Judge Charles Swinford.

Guests: John Reed and Mike Hale, Flood Control Advisory Commission; Pamla Wood, Ken Cooke, Susan Silverman, Department for Environmental Protection; Representative Jim Callahan and Representative Bill Donnermeyer; Roger Recktenwald, Big Sandy ADD; Larry Lawson, Cabinet for Human Resources; Todd Leatherman, Kentucky Resources Council; and Marketia Lynn, State Coordinator Clean Community.

LRC Staff: Linda Kubala, Alice Downey, Mary Lynn Collins, and Diana Lynn Hill.

Senator Meyer called for the approval of the minutes of the December 1 meeting. The minutes were approved without objection.

Senator Meyer explained that due to the fact that this was the week of the 1989 Organizational Session of the General Assembly, changes were made in committee assignments. He explained that because Senator Allen is chairman of the Education Committee in the Senate and a special session is likely in the near future, Senator Allen would no longer be able to serve on the Licking River Basin Task Force. He said that he had been appointed to serve as the new chairman by the Legislative Research Commission.

Senator Meyer then called upon Mr. John Reed, Executive Director of the Flood Control Advisory Commission to give a flood damage report on the Licking River Basin.

Mr. Reed pointed out an information sheet in the folders entitled "Characteristics of Basin." He said that there were three areas looked at in determining flood damages for the Licking River. The first area is the physical flood damage to public facilities, roads, bridges, structures, and utilities. The second area looked at would be non-physical damages such as the economic impact on the

area in terms of wages and income lost. The third category is actual costs spent on recovery from a flood, for which, for which, in some cases, local governments can be reimbursed.

Up until five or six years ago when a major flood occurred with a federal declaration of a flood disaster, public costs were 100% recoverable from the federal government, but that has been changed to 75%-25%. In most cases before the federal share comes in, the state and/or local government has to assure they will pay 25% of the disaster costs. The new rule places a greater strain on state and local governments.

Mr. Reed said that the Corps of Engineers would be looking at the ratio of costs to benefits of any flood control project. He said that the people with the best idea of the costs or potential flood damages are the local officials and residents of the area affected. He said that data used in the Station Camp Creek study was outdated and if the data had been more accurate and local people had been involved the project may have been more beneficial to the area.

Mr. Reed pointed out the different trends in flood plain management. He said that in the past the main ways of protecting people from floods were structural projects built with help from the federal government. In the 1960's, the National Flood Insurance Program was brought into effect, which held down the private sector cost of relief. In 1980, even though no additional funds were appropriated, the federal government transferred the responsibility for flood plain management to states and local governments.

Mr. Reed mentioned that according to the Corps of Engineers, the Cave Run Project reduced flood damages by $1.6 million last year. For the whole Licking River Basin, flood control projects averted a little over $2.1 million in annual flood damages.

Senator Meyer thanked Mr. Reed for his presentation. He then called on Ms. Pamla Wood, Supervisor of the Water Quantity Section of the Water Services Branch within the Department of Environmental Protection.

Ms. Wood explained the handouts in the folders regarding the Licking River Valley's major water and wastewater facilities. She went over the listing of the municipalities that are operating under water withdrawal or discharge permits. She explained where water was coming out of the basin for use and then going back in. She also talked about each site and where water shortages had been over the past few years. North Middletown and Cynthiana were the only two sites that have had serious water shortage problems.

Ms. Wood was asked to make a copy of her remarks available to all members of the Task Force.

Judge Swinford asked Ms. Wood where she had gotten her withdrawal and discharge figures. She said that every six months the Department sends out a form and the water plant operator fills in the average daily use for each month. The discharge figures were

taken from the discharge permitting system in the same department, and are reported by the discharge permitees.

Senator Meyer asked if irrigation was a significant cause of water shortages in the basin and how much water is drawn from the Licking River for irrigation purposes. Ms. Wood said that irrigation was a cause, but that water withdrawal was not required to be recorded. She said the Division of Conservation would probably be able to make a good guess.

Representative Reinhardt asked if Ms. Wood knew of any individuals going into the basin and creating pools of their own, and if so how a complaint would be processed. Ms. Wood said there had been reports from the field that this did occur. She said the water itself belongs to the state until the creek stops flowing, but on the other hand you cannot move things around in a creek bed because flood plain rules would come into effect. If a farmer creates an impoundment and then withdraws water the Department can require a water withdrawal permit.

Senator Meyer thanked Ms. Wood for her presentation. He then asked each member what their interests were in the the Task Force and what they would like to see the Task Force accomplish. It was decided that the main priority would be water supply, and secondly, to see if specific impoundment proposals that have been made meet the water supply, flood control and recreational functions that are intended.

Senator Meyer called upon Judge Pribble for an announcement. Judge Pribble informed the members that there would be a meeting of the Callensville Lake Development Committee on January 19 at the Pendleton County High School. The meeting will be to receive input from affected residents and/or landowners and also to explain to them how the Corps of Engineers and Soil Conservation people operate to develop the lake.

Representative Arnold asked Judge Pribble if he had a map of the proposed lake sites. Judge Pribble said he would provide a map to staff for distribution to the members.

The next meeting was scheduled for February 2. There being no further business, the meeting was adjourned at 8:00 p.m.

LICKING RIVER BASIN TASK FORCE

Minutes of the Fifth Meeting of the 1988-89 Interim

February 2, 1989

The fifth meeting of the Licking River Basin Task Force was held on Thursday, February 2 at 7:00 p.m., in Room 110 of the Capitol Annex. Senator Joe Meyer, Chairman, called the meeting to order, and the secretary called the roll.

Present were:

Members: Senator Joe Meyer, Chairman; Senator Art Schmidt; Representatives Adrian Arnold, Clay Crupper, Jon David Reinhardt; Richard Badger, George Carmack, Ed Currin, G. T. Harding, Rawleigh Havens, Leslie Herbst, Earl Linville, Byron Martin, Ken Paul, David Pribble, Mike Pryor, Reese Smoot, and A. C. Sparrow.

Guests: Fred Bennett and Bob Biel, U.S. Corps of Engineers; Don Hassall, Bluegrass Area Development District; Pamla Wood, Department for Environmental Protection; and Mike Hale, Flood Control Advisory Commission.

LRC Staff: Linda Kubala, Mary Lynn Collins, Alice Downey, and Diana Lynn Hill.

Senator Meyer called for the approval of the minutes of the January 5 meeting. The minutes were approved without objection.

Senator Meyer explained that this meeting would deal with problems of water supply in the basin. He introduced Mr. Fred Bennett, Assistant Chief of Planning, and Mr. Bob Biel, Chief of Water Management, of the Corps of Engineers Louisville Office to discuss the availability of supplies and drought experience of the Cave Run Reservoir. Mr. Bennett explained that the Cave Run Reservoir was impounded in 1974 at a construction cost of $74 million. He showed a schematic of the reservoir, showing storage allocated for sedimentation, recreation, water quality control, and flood control. No storage originally was allocated for water supply, but small amounts such as those required by Cynthiana or West Liberty, for example, would have very little effect on the level of the recreation pool. He said that Cynthiana and West Liberty have inquired about acquiring storage in Cave Run Lake. Mr. Bennett went through the cost allocation procedure for the case of Cynthiana. A city interested in obtaining water from the reservoir on demand must purchase storage in the reservoir. Cynthiana would need 1057 acre-feet of storage to meet its needs, a tiny amount of the 570,000 acre-feet of storage in the whole reservoir. To calculate the price of this storage, the Corps of Engineers takes the portion of the original cost attributable to this storage, calculated in current dollars. For Cynthiana, this amount would come to $233,000. This amount could be contracted over 30 years, or paid initially. If paid

up front, the Corps would subtract 10%. Additional amounts would be charged for joint use operations and maintenance, about $800 per year for Cynthiana's storage, and the municipality could be charged for its portion of a major replacement cost at some point. West Liberty's proposed storage would be considerably smaller than that for Cynthiana. Mr. Bennett explained that these amounts, added together, would comprise only about two inches of storage, which probably would not be considered significant. Small reallocations of reservoir storage can be made by the Corps, while larger reallocations would require Congressional approval.

Rep. Arnold asked whether additional water would be held to make up for allocations to cities. Mr. Biel said that water level was raised about 4/10 foot above the normal summer level to anticipate dry weather this year, but it would not be raised higher than that to provide extra storage.

Rep. Arnold asked whether any cities other than Cynthiana and West Liberty had asked about storage, and was told that none had. Mr. Bennett said, however, that some years ago information was asked on behalf of Lexington.

Rep. Reinhardt asked why updated construction costs were used. Mr. Bennett said he would supply that information.

Mayor Havens asked whether Flemingsburg must have a permit to withdraw water from the Licking. Mr. Bennett said the Corps does not regulate withdrawals from the river downstream of the reservoir, but Flemingsburg would have to get a permit from the state.

After some additional discussion of the concept of purchasing water storage, and why this was needed despite water quality releases downstream from Cave Run, Chairman Meyer asked Mr. Biel to procede with his presentation.

Mr. Biel said that Kentucky has had a rainfall deficit since 1985. Most of these deficits have occurred between January and May. However, while this string of dry years is unprecedented, none of these years have showed conditions as severe as those in 1930-1931. In 1988, the reservoir filled and operated as usual, and flows downstream, augmented by releases from the reservoir, remained higher than those in 1930-31. The summer releases from Cave Run are meant for the purpose of maintaining water quality and of diluting sewage discharges, not to supply water for downstream users. Cave Run, however, includes enough storage for this purpose to support much larger releases than those made this summer. The reservoir could have doubled those releases through a protracted drought such as that in 1930 without reducing the lake level significantly.

Rep. Reinhardt asked how the cost of storage in Cave Run Lake compares to the cost to cities of other supply options. Mr. Bennett answered that alternatives generally would be much more expensive. Rep. Reinhardt asked how water quality needs are estimated. Mr. Bennett explained that the estimates were made in the 1960's, and probably would be lower if made today.

Rep. Arnold asked how much evaporates from the lake, and was told that in a dry, hot year up to two feet of storage could be lost.

Rep. Reinhardt asked what effect a series of downstream reservoirs might have on Cave Run's operation, and was told there would be no effect. Mr. Biel briefly described drought management plans being developed by the Corps of Engineers. Rep. Reinhardt asked about the effect of a major new industry in the basin, and was told that the additional demand, even of an industry such as Toyota, would be minor compared to total current withdrawals.

Chairman Meyer then introduced Don Hassall, Director of Community and Economic Development with the Bluegrass Area Development District, to discuss implications for the Licking concerning central Kentucky's water needs. Mr. Hassell first reviewed for the committee the operations of the five water utilities in the Bluegrass Area Development District which draw water from the Licking River Basin. These are Carlisle, Cynthiana, Millersburg, North Middletown, and Paris. He noted that the price offered by the Corps of Engineers for water storage in Cave Run is extremely cheap compared to alternatives, if it indeed makes that water available when and where it is needed. He then turned to overall water usage in the Bluegrass region. This usage has increased, on average, 3% a year since 1972. During the past summer, demand did not jump, but that could be attributed to restrictions imposed and attempts to conserve rather than a lasting change. He noted that the increases since 1972 are higher than population increases, showing that per capita water use increased during that period.

Mr. Hassall then turned to two proposals to augment central Kentucky water supplies which affect the Licking River Basin. He said there was, in 1978, a broad study of water supply possibilities, including transfer of water from Cave Run. At that time, this was not considered a cost-effective option, but it might well be reconsidered at a future date. The second alternative, a pipeline to the Ohio River at Maysville, was floated as a trial balloon by the Kentucky American Water Company at a meeting this fall. Mr. Hassell said that the company has proposed to put up money for a comprehensive planning study, provided that this option is included.

Judge Pribble asked whether Mr. Hassell expects the rapid growth in water use of past years to extend into the future. Mr. Hassall replied that he expects the increases to slow and perhaps even to peak and begin to decline as per capita usage decreases.

Rep. Reinhardt asked whether Cave Run could supply the needs of Lexington without impacting other uses. Mr. Bennett noted that central Kentucky uses more than twice as much water as usual releases from Cave Run, so that potentially such usage could affect recreational use of the lake. He said that any large allocation would have to be approved by Congress.

Senator Meyer then asked staff member Linda Kubala to explain the information in the folders on population and stream flows. Mrs. Kubala said that, according to the state Division of Water, total permitted water usage in the basin, in 1987, was just over 21 million gallons a day. If Kenton County is removed, only 15 million gallons a day were withdrawn, which is less than 1/2 the amount released by the Corps of Engineers in dry periods to maintain water quality. She explained that the Kenton County Water District draws water from a pool near the mouth of the Licking River, which actually is part of an impoundment of the Ohio River. Mrs. Kubala then explained a series of tables showing typical flows at various points along the river. She said that, between 1980 and 1987, average monthly withdrawals in the Licking River Basin increased over 20%, while maximum monthly withdrawals increased 32.9%. As in the Bluegrass, these increases are very large compared to any increase in population. Mrs. Kubala also showed the committee a table of population figures for the counties in the basin, prepared by the Urban Studies Center, which show less than 1% population growth between 1980 and 1987, and project only modest population increases through 1995.

There being no questions, Senator Meyer thanked Mrs. Kubala and asked for any comments by the members. He then explained that he expects the task force to try to make recommendations about the various reservoir projects to the LRC at the end of its work. He said the next meeting would take the specific 28-dam proposal and have it explained to the group. He then plans to discuss the issues the group must look at before feeling comfortable making a recommendation about the project. He then announced that the March meeting would be held in Cynthiana, at the fiscal court room, 7:00 p.m. on March 2.

There being no further business, the meeting was adjourned at 8:50 p.m.

LICKING RIVER BASIN
TASK FORCE

Minutes of the Sixth Meeting
of the 1988-89 Interim

March 2, 1989

The sixth meeting of the Licking River Basin Task Force was held on Thursday, March 2, 1989 at Biancke's Restaurant in Cynthiana. Senator Joe Meyer, Chairman, called the meeting to order, and the secretary called the roll.

Present were:

Members: Senator Joe Meyer, Chairman; Senator Art Schmidt; Representatives Adrian Arnold, Clay Crupper, Jon David Reinhardt; Richard Badger, George Carmack, G. T. Harding, Rawleigh Havens, Leslie Herbst, Earl Linville, Ken Paul, David Pribble, and Charles Swinford.

Guests: Judge Dwayne Jett, Bracken County; Representatives Pete Worthington and Mark Farrow; Judge Billy Ross, Mason County; Mike Hale, Flood Control Advisory Commission; Pam Wood, Department for Environmental Protection; Don Hassall, Bluegrass Area Development District; Lowell Lovelace, Dry Ridge; Thelma Taylor, Cynthiana; Jerry Martin, Callensville Lake Task Force Committee; Mr. and Mrs. James Wilson; Tammie Holt, Cynthiana; Allen and Marjorie Stone, Carlisle; Jeff Rexhausen, Northern Ky. ADD; Calvin Henson, and Emmitt McConnell, Mt. Olivet; Doug Dunaway, Berry; Bobby Ishmael, Jackie Wayne Moore, Clarence and Virginia Wood, and Christopher Wood, Brooksville; and Wanda Ross, Mays Lick.

LRC Staff: Linda Kubala, Alice Downey, Mary Lynn Collins, and Diana Lynn Hill.

Senator Meyer called for the approval of the minutes of the February 2 meeting. The minutes were approved without objection.

Senator Meyer welcomed the members and guests to the meeting. He then explained that the purpose of this meeting was to find out more about the lakes other than the Callensville Lake which have been proposed for the region. He said each of the county judge/executives had been asked to provide information on projects in his county. He first called on Judge David Pribble to give an introduction and overview of the larger 28-lake project.

Judge Pribble explained that county judge/executives from nine counties in the basin got together a couple of years ago and identified 28 sites for reservoirs in the basin. He said a group of smaller lakes were perceived as a more palatable alternative to the controversial Falmouth Dam. He briefly described steps taken by the group to get the Corps of Engineers to conduct a reconnaissance study of the basin, which is scheduled to begin this month. Judge Pribble then listed the proposed lakes in each of the nine counties.

There being no questions for Judge Pribble, Senator Meyer then recognized Mayor Rawleigh Havens, speaking for Judge Ray Bailey of Bath County. Mayor Havens said that two of the three projects in Bath County, Mud Lick Creek and Prickley Ash Creek, were needed mainly for flood control. Prickley Ash Creek, particularly, has a steep slope and contributes to flooding. He said the third lake, on Mill Creek, would retard flooding in the larger Slate Creek, and also could serve as a future water supply for Owingsville.

Judge Dwayne Jett of Bracken County explained that two of the tributaries planned in his county, Willow and Pike Creek, could be constructed using a highway embankment as a dam. When asked by Senator Meyer about the major purpose of the projects, he stated that the main reason was for water supply, but that the dams also could protect bottomlands from flooding, especially in the Milford area.

Representative Pete Worthington spoke to the dams in Fleming county in the absence of Judge Bill Owens. He said he is not familiar with the reasons for selection of Mud Lick Creek, but that there is interest in building a reservoir on Elk Creek in the western part of the county. He said that while Mud Lick Creek lies in a good farming area, where many landowners probably would oppose a project, Elk Creek is in a barren and uninhabited valley. With a watershed of perhaps 2,500 acres, he estimated that a 100-150 acre lake could be built. Representative Worthington noted that his reservoir might provide some flood control downstream, but stated that the main reason was to provide a source of clean water for West Fleming Water District, which supplies water from the Licking River to many of the area's water utilities. He mentioned several nearby facilities which are polluting the river water now used by the water district. Representative Worthington also expressed support for creation of a large lake on Johnson Creek.

Representative Clay Crupper spoke to the situation in Grant County on behalf of Judge Byron Martin. He noted that the Williamstown Lake has developed a bad leak, which has been hard to fix. The Callensville Lake would extend to within a few miles of Williamstown, and could provide an alternative water supply for that area. He said he was not familiar with the other projects listed in Grant County.

Judge Swinford stated that, in addition to the six sites listed for Harrison County, he is working with the Soil Conservation Service on three more. He said most of the lakes identified in his county would be between 250 and 400 acres, and most are in the north and west parts of the county. He said a technician with the Soil Conservation Service is working on an initial assessment of these projects. Most of the lake sites, he noted, are in hilly and less productive terrain, but the projects could help control flooding on many of the small bottoms in the area. The SCS has installed a watershed project on Twin Creek for flood protection. Senator Meyer asked whether the recent flooding in Cynthiana would have been reduced if the lake projects had been built, and was told that these projects would have had no effect on flooding in Cynthiana, but that they could reduce flooding at Falmouth, further downstream.

Representative Adrian Arnold introduced Mr. Allen Clay Stone, a resident of Nicholas County, to comment on sites in that county. Mr. Stone noted that Stony Creek, one of the sites listed, has several houses on it, but that it also has lots of tributaries which easily could support 50-acre lakes. He said his main interest is a lake on Coon Creek, which he thinks, in conjunction with the adjacent game preserve, could be part of a major recreational development in the area. He said he had obtained information from the Corps of Engineers about this site in 1973; at that time, the Corps said the site would accommodate a lake of 1,400 acres, which at that time would have cost $5-7 million.

Mayor Linville of Mt. Olivet spoke briefly to the three sites listed in Robertson County. He said they would be valuable mainly for water supply and would provide negligible flood control. He said there has been no study of these sites so far.

The last scheduled speaker, Judge Billy Ross of Mason County, said he really did not know a reason for selecting Shannon Creek in his county as a project. He said he would prefer Abslom Creek, a tributary of Johnson Creek in the southwest portion of the county. The main reason for such a lake, according to Mayor Ross, is that they are looking for other sources of water, and also for possible recreational development.

There being no questions, Senator Meyer thanked the presenters. He then asked how long the Corps of Engineers would take to study the projects. Judge Pribble answered that the first phase will take a year or 18 months, which must be followed by a feasibility study. In all, it would take at least four years. Senator Meyer then asked whether any of these projects could be started prior to completion of the Corps' studies. Judge Swinford said he thought we have to wait for the Corps, since no one else can complete the projects.

Mr. Leslie Herbst asked what the popular reaction has been to the various projects. Mr. Stone said reaction to the Coon Creek project has been very positive, especially among the many sportsmen in the area. He said the Falmouth Dam became controversial and left a bad taste in people's mouths, and that more publicity is needed about these new projects. Judge Ross said that few people had heard of the project in Mason County, but those he talked to were in favor of the idea.

Ms. Pam Wood asked about the public reaction to Callensville Lake at a recent public meeting in Falmouth. Judge Pribble said that comments at the public meeting were evenly divided between pros and cons, but that in private conversations with landowners, he found that only 14-15 of 74 landowners opposed the project. He said he had had only good comments from residents near the other proposed lakes in his county. He also stated that the Northern Kentucky Area Development District endorsed the projects.

Representative Arnold asked whether the Corps of Engineers' funding applied only for flood control. Judge Pribble said generally it did, but that once a flood control purpose was established, the Corps also could look at other uses for a project.

Ms. Lois Wilson, Falmouth, stated that at least 40% of the landowners in the Callensville Lake Project, or at least 27 out of 63, oppose the project. She also said Judge Pribble had promised to drop the project if it ran into landowner opposition.

Senator Meyer announced that the next meeting would take place in Frankfort on April 6. There being no further business before the task force, the meeting was adjourned at 8:45 p.m.

LICKING RIVER BASIN
TASK FORCE

Minutes of the Seventh Meeting
of the 1988-89 Interim

April 6, 1989

The seventh meeting of the Licking River Basin Task Force was held on Thursday, April 6, 1989 in Room 104 of the Capitol Annex. Senator Joe Meyer, Chairman, called the meeting to order, and the secretary called the roll.

Present were:

Members: Senator Joe Meyer, Chairman; Senator Art Schmidt; Representatives Adrian Arnold, Clay Crupper, Jon David Reinhardt; Richard Badger, George Carmack, G. T. Harding, Rawleigh Havens, Leslie Herbst, Earl Linville, and David Pribble.

Guests: Russell Renaud, Department for Environmental Protection; J. P. Cahill, Hicks & Mann Inc.; Judge C. L. Glasscock, Taylorsville; Mr. & Mrs. Allen Clay Stone, Carlisle; Mr. & Mrs. James Wilson, Taylorsville; David L. Butcher, Falmouth; Jeff Rexhausen, Northern Kentucky Area Development District; Mr. & Mrs. Harold Matthews, Cincinnati; Mike Hale, Flood Control Advisory Commission; Don Oliver, Georgetown; and Jim Duck, Louisville Corps of Engineers.

LRC Staff: Linda Kubala, Alice Downey, Mary Lynn Collins, Ruth Billings, Carolyn Kinman, and Diana Lynn Hill.

Senator Meyer called for the approval of the minutes of the last meeting. The minutes were approved without objection.

Mr. Russell Renaud, Dam Safety and Floodplain Compliance Supervisor with the Kentucky Department for Environmental Protection presented a slide presentation on dam safety construction. The presentation pointed out how other states operated their dam safety programs and also how vital legislative support was to dam safety programs. Mr. Renaud said Kentucky's dam safety program has been around since 1966 when legislation was enacted. In 1975, very strict design criteria went into effect, and in 1979 there was a federal push for dam safety inspections where the federal government paid for dam inspection of several hundred dams in each state. In 1980 Kentucky had 66 unsafe dams, and at present there are only nine or ten that are being worked on. Kentucky has approximately 900 dams on inventory that are nonfederal dams, and in Kentucky they are non-coal as well. The coal industry has separated the inspection and permitting of dams having to do with coal operations into the Department of Surface Mining Reclamation and Enforcement. They have approximately 200 dams to inspect. The Department of Environmental Protection would like to inspect high-hazard dams once a year,

moderate hazard, once very two years, and low-hazard once every three years, but at the present this is not being done. According to Mr. Renaud, beginning in 1990, there are going to be public awareness workshops held all over the state with dam owners, interested parties, and people living downstream of the dams.

Senator Meyer thanked Mr. Renaud for his presentation. He then introduced Mr. Pat Cayhill with the consulting firm of Hicks & Mann Inc. in Williamstown to talk about preliminary cost estimates for Callensville Lake. Senator Meyer pointed out the document in the folders on the cost and construction estimates for the Station Camp Creek Lake in Estill County.

Mr. Cayhill said that Hicks & Mann Inc. had prepared the initial maps of Callensville Lake and the other proposed lakes throughout Pendleton County. The lake would cover approximately 1600 acres with a 56-mile shoreline, although there would be as much as 2000 acres affected. The height of the dam would be 85 feet and the impoundment of water at the dam would be 80 feet. The dam length is 1100 feet. The land acquisition cost was taken from the average acre price of $786 per acre, which included land and buildings. The total cost was $1.5 million for land acquisition using $750 per acre. Mr. Cahill went over other costs for the lake. The total amount estimated for the Callensville Lake would be $5,000,000.

Senator Meyer asked if Hicks and Mann had ever been involved with a project such as this before. Mr. Cayhill said they had not. Senator Meyer asked Mr. Cayhill why there was such a difference in the costs of the reconnaisance report by the Corps of Engineers and their costs. Mr. Cahill said this was the first project they undertaken and that prices were taken from other construction costs. He said he did not know how the Corps of Engineers operated and he really could not answer that question.

In response to a question from Senator Meyer regarding relocation of roads for the project, Mr. Cahill said possibly two roads would be relocated.

Senator Meyer asked if they had considered any spillway costs, to which Mr. Cahill said they had not.

Next on the agenda was Judge C. L. Glasscock, Spencer County Judge/Executive to give insight into what the Taylorsville Lake has meant to Spencer County. Judge Glasscock said that the lake had been a great asset to the county because of flood control and recreation. He said that Taylorsville and Shepherdsville would have had considerable flood damage due to recent flooding if the lake had not been built. The cost of the lake was approximately $100 million plus. He said the Corps of Engineers had taken 14,000 acres to impound a 3,000 acre lake.

Judge Glasscock responded to questions from Representative Reinhardt regarding the lake's completion date and any major developments since the lake. Judge Glasscock said the lake was completed about six years ago, and according to statistics Spencer

County was growing as fast as Shelby County. Judge Glasscock attributes some of the growth to the development of new roads in relation to Louisville.

Senator Meyer asked how much new tax revenue had been derived from developments around the lake. Judge Glasscock said when the lake was built they were getting around $73,000 and now the revenue is around $118,000.

In response to a question from Senator Meyer regarding the marina, Judge Glasscock said it is privately owned and operated, but is a state and federal joint venture. Senator Meyer also asked if there had been any new businesses to locate in Spencer County due to the lake. Judge Glasscock said there had not been too many that were directly connected with the lake. He said when people realized that they could not get close to the water, sale of land fell off.

Senator Meyer asked what the cost to the county was to run utilities to the marina and other developments around the lake, and also how many people on a yearly basis visit Taylorsville Lake. Judge Glasscock said the state paid for the utility costs, and that 1.2 million people had visited the lake.

In response to a question from Senator Meyer on the feeling of the local citizens regarding the lake, Judge Glasscock said that people had accepted it, and that people who were against it in the beginning are now glad it is there. The assessed value of the real estate at the beginning was $81.5 million and is now $103 million.

Senator Meyer thanked Judge Glasscock for his presentation. He then pointed out additional information in the folders.

A member of the audience asked how the Corps of Engineers would study lake sites with the $200,000 appropriated. Mr. Jim Duck with the Louisville Corps of Engineers responded. Mr. Duck said the Corps now had $200,000 in hand and work is now beginning. There is an additional $600,000 in the president's budget as proposed to Congress for FY'90. Until the budget bill is passed they won't have access to the funds. This is a total of $800,000 for an 18-month reconnaisance study. The money will be spent for flood damage surveys of a good portion of the Licking River Basin, including major tributaries, and for water supply studies. The primary dominant purpose has to be flood control. The Corps will go through a screening process to see how the lakes relate to immediate down-stream flood control problems and the nearest water supply needs.

Senator Meyer asked if the Corps of Engineers would get into preliminary cost estimates of a dam like Callensville. Mr. Duck said they would do cost estimates and designs on several lakes.

Senator Meyer asked how much time and money would be involved in doing a thorough study of a Callensville Lake project with soil borings and geologic analysis, and the details of the cost analysis. Mr. Duck said it would depend on the money and time you had to spend.

Representative Reinhardt asked if legislation such as proposed by Congressman Hopkins, had ever been introduced before, and if so, is it supported by the Corps. Mr. Duck responded by saying that with the Station Camp Creek project they were able to get an economically feasible project, but the problem was an administrative guideline that says between 10%-20% of the total project benefits had to be flood control, which they did not pass. The proposed legislation would make it much easier for local sponsors to pay their share.

Representative Reinhardt asked Mr. Duck if he could give a basic cost on Callensville Lake using the cost-curve based on the statistics given by Mr. Cayhill. Mr. Duck said the Corps had not used the cost-curve for at least ten years, but he would check and see what they had and get back to the task force.

The next scheduled meeting set for May 4 will involve economic issues regarding dams and impoundments.

There being no further business, the meeting was adjourned at 8:30 p.m.

LICKING RIVER BASIN
TASK FORCE

Minutes of the Eighth Meeting
of the 1988-89 Interim

May 4, 1989

The eighth meeting of the Licking River Basin Task Force was held on Thursday, May 4, 1989, in Room 104 of the Capitol Annex. Representative Reinhardt, Vice Chairman, called the meeting to order, and the secretary called the roll.

Present were:

Members: Jon David Reinhardt, Vice Chairman and Representative Clay Crupper, G. T. Harding, Rawleigh Havens, Leslie Herbst, Earl Linville, Mike Pryor, and Judge Charles Swinford.

Guests: Professor William H. Hoyt and Dr. Allan Worms, University of Kentucky; Jim Brammell, Corps of Engineers, Louisville District; Mr. & Mrs. Allen Clay Stone, Nicholas County; Mr. & Mrs. James Wilson, Pendleton County; Bethany Hanser, Falmouth; Sam Hamblin, Pendleton County; Mike Hale, Flood Control Advisory Commission.

LRC Staff: Linda Kubala, Alice Downey, John Hurter, and Diana Lynn Hill.

Since a quorum was not present, the approval of the minutes were held over until the next meeting.

Representative Reinhardt opened the meeting by calling on Professor William H. Hoyt with the Department of Economics at the University of Kentucky. Professor Hoyt gave a presentation on the recreational tourist and business development impact of a reservoir project. Professor Hoyt passed out a comparison of other lakes in the state. The chart showed 1988 overnight stays in state resort parks. He examined state resort parks having lakes to determine what might happen if a lake was located in the Callensville region.

Professor Hoyt pointed out four factors related tothe number of overnight lodgers at parks. They are: (1) access to 4 lane highway; (2) acreage of the lake; (3) proximity of other lakes; and (4) proximity to Ohio (Covington) and Tennessee (Bowling Green or Hopkinsville). One of the biggest determinants of the usage of lakes is access to a four-land highway. For every mile away from the highway there were 1,400 fewer overnight stays per year. The second biggest determinant was the acreage of the lake. For every additional 100 acres there were an additional 22 overnight stays. For every lake within 35 miles of a lake you would lose 840 overnight stays. This would be an advantage for the Callensville Lake proposed site since there are not many lakes in the area.

According to Professor Hoyt's formula the predicted overnight stays at the Callensville Lake would be 36,255 per year. The average number for all the resort parks he analyzed was about 27,000.

Professor Hoyt stressed that creating the Callensville Lake would increase the overall tourism in the state in terms of out-of-state tourists. There is a distinction between in-state and out-of-state users. The out-of-state users are people coming in who will be paying taxes who would not be paying otherwise.

Representative Reinhardt asked if activity would be added if there were a series of lakes within a 40-50 mile radius. Professor Hoyt said he believed it would increase the activity. The more water in the area the more popular the area becomes.

Representative Reinhardt asked if Professor Hoyt had ever tried to prioritize the most important features of a given lake that would attract both day and night use. Professor Hoyt said that in terms of the overnight stays the size of the lake was really important. Representative Reinhardt then asked what was attractive at small lakes. Professor Hoyt said he did not think the water would be the big draw. If he had more state parks to work with it would be easier to determine. Representative Reinhardt asked if the overnight stays were tied to lake acres and activities or to the body of water, hiking trails, and good food. Professor Hoyt said he could not answer that now, but he could consider parks with and without lakes and get some kind of idea.

Mayor Havens asked what was considered to be an overnight stay. Professor Hoyt said that they were all lumped together as lodges, cottages, and camping.

In response to a question from Mayor Harding regarding the impact of fishing on the lakes, Professor Hoyt said he did not know.

Mike Pryor asked if there were any figures on what each person would spend at the lake. Professor Hoyt said he had not established any dollar figures. He then referred the members to the fact sheet in their folders from the Tourism Cabinet on what 50 new tourism jobs mean to a Kentucky city. He said if he knew the number of tourism related jobs in that area he could come up with a prediction.

Next on the agenda was Dr. Allan Worms, a recreation and tourism specialist with the University of Kentucky who presented options for developing a recreational lake. Dr. Worms said a body of water, a small impoundment, a farm pond, a small lake, a larger reservoir, or something as large as Lake Cumberland or Dale Hollow has tremendous personality. He does not see a pattern of a particular reservoir or grouping of reservoirs at Callensville Lake that would tell him it constituted an automatic successful personality, but it does need careful study. He agreed with Professor Hoyt in terms of access being an important factor. He stressed that different people go to different areas for different reasons. Recreation and tourism has become a very sophisticated

business. Dr. Worms presented a slide presentation to show the different facets which draw people to certain areas. Water is a magnet for people because of the various outdoor activities involved. It takes the combination of the right kind of site, facility, elements, and the infrastructure of the business to create an opportunity for success.

Representative Reinhardt asked what could be accomplished on 1600 acres of land. Dr. Worms said you would have to deal with shape, depth, personality and characteristics of the reservoir. Sixteen hundred acres could provide a great deal of boating and possibily water skiing and other high speed boating, pontoons, and deck boat usage. Frequently you will get an overlap of usage. The shape of the lake would determine part of the usage.

Representative Reinhardt asked how much shoreline should be wooded. Dr. Worms said there would be two kinds of recreation on the lake, one being on the water and the other on the access sites, which needs levelness as well as accessibility in terms of roadways and utilities. Being wooded does not enter into the picture other than for appeal and watershed.

Representative Reinhardt thanked Dr. Worms for his presentation. Next on the agenda was Mr. Jim Brammell, Project Manager for the Licking River Basin Reconnaisance Study with the Corps of Engineers, Louisville District. Mr. Brammell gave an overview of the Corp's plan of study. Mr. Brammell said they have just started the study and look forward to working with the Task Force.

Mr. Brammell said there are four basic steps in carrying out a reconnaisance study. The first step is to scope out the problems, needs, and opportunities and to gather data. The study includes the entire Licking River Basin which includes 3,700 square miles, all or a portion of 23 counties in Kentucky. It is critical to find out from local people what their concerns are, which they are doing now. Mr. Brammell said they hoped to work with the Task Force, Division of Water, and the Flood Control Advisory Committee, along with every agency, every citizen, and every elected official who can have input. He pointed out that a public notice had been sent and emphasized that members should write or call him if there are any problems needing attention. The Corps cannot get involved unless a minimum amount of the benefits that would be derived from any project come from flood control.

A 12-member study team has been set up which consists of engineers, hydrologists, real estate specialists, environmentalists, economists, and a representative from their construction division and operations division. A team of surveyors are ready to begin field work to establish the flood damages.

The second step is to develop alternatives. There are already twenty-eight lake proposals and there will probably be that many more. They will look at channel improvements, levies, flood walls, and non-structural measures.

The third step is screening out the alternatives. The design and cost engineers will prepare the preliminary designs for each alternative and come up with some rough cost estimates and compare with the benefits derived from the project, until three to five series of projects at the end of the study which can be recommended.

The fourth step is preparing the report with all the information gathered. The report will either say that there are no projects which show potential of being feasible in the Licking Basin or they will find a multitude of alternatives which they would recommend for the feasibility study.

Representative Reinhardt asked how much impact the 1989 flood was going to have on the study. Mr. Brammell said the probability of any flood occurring again is about once every 10, 100, or 500 years. What they would look at in preparing stream profiles for a 100 year flood event at Falmouth is to see if the water was going to get to that elevation. After all information is gathered they can then tell which alternatives would lessen a flood.

When the Corps gets to the reconnaisance phase and prepares the report they then have three months to identify a local sponsor who is cost sharing. Then the Corps would enter into an feasibility cost sharing agreement with the local sponsor who would share as equal partners.

Representative Reinhardt asked if it would be wise for the Task Force to continue while the study is ongoing. Mr. Brammell said the Task Force could be of great benefit, not only now while they are gathering information, but also when they are attempting to locate a willing and financially capable sponsor. The Task Force could be valuable in that regard.

Representative Reinhardt said he would welcome Mr. Brammell to any and all future Task Force meetings. Mr. Brammell said he would be happy to. Representative Reinhardt asked Mr. Brammell to compile a list of things he feels the Task Force members could be helpful with. Mr. Brammell said what he was mainly wanting to find out now where the flood problems are and also what communities have had water supply shortages in the past.

Representative Reinhardt pointed out the public notice in the folder that contained Mr. Brammell's phone number and address. He asked Mr. Brammell to direct any recommendations he may have for the Task Force to Senator Meyer, who is the Task Force Chairman. He also asked Mr. Brammell to draft a letter to Chairman Meyer regarding the value of the Task Force while the study is being done. Copies of the minutes of previous Task Force meetings will be sent to Mr. Brammell.

Judge Swinford asked if the Corps would be looking at studies on dredging and widening channels or proposals for more dams either on the main Licking or the South Licking River for flood control as well as supplies of water. Mr. Brammell said they would to the extent that improving the channel would solve some of the flooding problems.

Mr. Allen Stone from Nicholas County representing Judge Smoot told the Task Force about the Clay Wildlife Management Area. He invited the Corps of Engineers to come in and see what could be done.

There being no further business, the meeting was adjourned at 9:00 p.m.

LICKING RIVER BASIN
TASK FORCE

Minutes of the Ninth Meeting
of the 1988-89 Interim

June 1, 1989

The ninth meeting of the Licking River Basin Task Force was held on Thursday, June 1 at 7:00 p.m., in Room 104 of the Capitol Annex. Senator Joe Meyer, Chairman, called the meeting to order, and the secretary called the roll.

Present were:

Members: Senator Joe Meyer, Chairman; Senator Art Schmidt; Representatives Adrian Arnold, Clay Crupper, Jon David Reinhardt; Mayor George Carmack, Mayor Rawleigh Havens, Mayor Earl Linville, and Judge David Pribble.

Guests: Dr. David French and David Brammell, Louisville Corps of Engineers; Mr. & Mrs. Allen Clay Stone, Carlisle; and Representative Woody Allen

LRC Staff: Linda Kubala, Alice Downey, Mary Lynn Collins, and Diana Lynn Hill.

Since a quorum was not present, the approval of the minutes of the two previous meetings were held over to the next meeting.

First on the agenda was a presentation on environmental considerations in the Licking River Basin, given by Dr. David French with the Louisville Corps of Engineers. Dr. French said the National Environmental Policy Act of 1970 brought a new era for federally funded actions with a strong focus on environmental issues. He stated that ignoring issues that may delay or stop development proposals could be extremely costly.

Dr. French said that the entire basin should be looked at instead of expending time and money on detailed investigation and engineering of specific sites early in the study. The data that has been gathered by the Task Force would be a good beginning for a data base that could be easily accessible. He suggested that the Corps, with the assistance of state agencies, county governments and communities, along with other federal agencies, should collect environmental data for the Licking River Basin. He noted many of the parameters that must be included if the study is to be meaningful, and urged the members to give him other suggestions for the list. Dr. French then pointed out examples of maps for an area in southwestern Ohio, displaying some of the environmental parameters mentioned. Many things can be learned by combining the overlays for environmental parameters. Advance knowledge would be available of environmental issues which must be dealt with before a project can be successful. Dr. French emphasized that this screening process

would not eliminate the need for additional environmental studies, but would "flag" significant areas of concern. He welcomed the views of the Task Force on dealing with the environmental concerns in the Licking River Basin.

Senator Meyer asked what type of specific environmental analysis would be required for the site after the preliminary planning, and how time-consuming and costly would it be. Dr. French said an archaeological reconnaisance would still be required of the area, and if a problem existed you would have to take steps to mitigate it. As far as the expense of the process, you would be collecting information that has already been collected and bring it together in a central place. It would probably cost approximately $20,000.

Senator Meyer asked how costly and time-consuming it would be if a possible archaeological site was found. Dr. French said it could be very expensive if a project was started before the problems are uncovered, but basically an archaeological study would not be expensive.

Senator Meyer asked about the implications of finding a wetland or rare and endangered species. Dr. French said a rare and endangered species could actually stop a project, but it is hard to determine what will bring a project to a halt.

Judge Pribble commented that in some instances the rare and endangered species may be moved to another area with the same habitat. Dr. French said that was true, and it would probably depend on the specific species and how the particular agency with jurisdiction would view the situation.

Senator Meyer asked Dr. French if he would also advise publicizing the findings after the preliminary analysis. Dr. French said that would be advisable because it would greatly reduce the potential for serious problems.

Mr. Allen Clay Stone, sitting in for Judge Smoot, asked if it would be wise for individual counties and areas to work closely with their historical society. Dr. French said that would be a very good idea.

Representative Reinhardt asked what impact an oil or gas well could have. Dr. French said that if they are properly capped there would not be a problem.

Representative Reinhardt asked Linda Kubala, staff person, what was meant by uncontrolled waste sites. Ms. Kubala said they were sites that have been identified for possible further investigation and possible inclusion of the super fund.

Senator Meyer thanked Dr. French for his presentation. He then pointed out the summary in the folder of the agencies' responses regarding environmental/cultural attributes of the proposed lake

sites. He asked the members if they were familiar with any other sites or problems in their counties that were not listed or identified.

Representative Reinhardt asked Dr. French about the difference between U.S. endangered and U.S. candidate for listing. Dr. French said that the fact it is on the endangered list means that it has been identified as an endangered species, and U.S. candidate for listing are ones that are proposed to be on the list, but the determination has not yet been made to add them to the list.

Senator Schmidt asked Ms. Kubala how many counties have a good listing of their environmental concerns. Ms. Kubala said that according to the agencies which responded, data for this area was spotty. Many of the tributaries never have been surveyed for the kinds of items which appear on the lists.

Judge Pribble asked if there was any way, after the study is made and an endangered species is found and a public hearing is held, that there be a certain time limit for any litigation. Dr. French said if there was an endangered species located they are required by law to work things out with the responsible federal agency. He is not aware of any time limit for litigation.

Senator Mayer pointed out the next item in the folders, which was basic population information graphs showing per capita personal income, manufacturing employment, farm employment, and population over age 60. There was also a report from the Department of Military Affairs on the expenditures made earlier this year attributable to the flooding that was experienced in February and March.

Representative Reinhardt asked Ms. Kubala to explain the per capita income graphs. Ms. Kubala explained that one of the per capita income graphs was for the entire Licking River Basin and the other excluded Kenton and Campbell Counties.

Senator Meyer said the next meeting would deal with potential funding sources for the Licking River Basin projects. Representative from the Department of Fish and Wildlife, Local Government, Soil Conservation and the Department of Finance will be asked to the next meeting, which will be held on June 29.

There was some discussion as to the need of holding a public hearing in August in Falmouth. It was decided that this issue would be discussed further at the next meeting.

There being no further business, the meeting was adjourned at 8:00 p.m.

LICKING RIVER BASIN
TASK FORCE

Minutes of the Tenth Meeting
of the 1988-89 Interim

June 29, 1989

The tenth meeting of the Licking River Basin Task Force was held on Thursday, June 29, 1989, in Room 104 of the Capitol Annex. Senator Joe Meyer, Chairman, called the meeting to order, and the secretary called the roll.

Present were:

Members: Senator Joe Meyer, Chairman; Senator Art Schmidt; Representatives Adrian Arnold, Clay Crupper, Jon David Reinhardt; G. T. Harding, Rawleigh Havens, Leslie Herbst, Earl Linville, Byron Martin, David Pribble, A. C. Sparrow, and Judge Charles Swinford.

Guests: Tom Craighead and Sally Hamilton, Department for Local Government; Allen Heard, Soil Conservation Service; Jim Ramsey, Finance Cabinet; Jim Axon, Department of Fish and Wildlife Services; David Brammell, Louisville Corps of Engineers, Mr. & Mrs. Allen Clay Stone, Carlisle; Mike Hale, Flood Control Advisory Commission.

LRC Staff: Alice Downey, Mary Lynn Collins, Ruth Billings, and Diana Lynn Hill.

Senator Meyer called for the approval of the minutes of the last three meetings. The minutes were approved without objection.

First on the agenda was Mr. Tom Craighead with the Department of Local Government. Mr. Craighead gave a general overview of Local Government funding sources for projects. Mr. Craighead told about the Appalachian Regional Commision Program in which Kentucky receives approximately $5 million each year appropriated by Congress. Those funds can be used for economic development, and water and sewer projects. Mr. Craighead named Fleming, Lewis, Clark, Powell, Estill, Bath, Montgomery, Carter and Greenup counties as eligible for Appalachian Regional Commission funding. Due to the small amount of funding, ARC cannot fund a project without other partnerships, such as the Farmers Home Administration, the Community Development Block Grant, the Economic Development Administration and various other agencies. He stressed the importance of timing for partnerships to come together. ARC funds are available under a 50% matching basis, but usually ARC goes for 20-25% or less.

In the fall of each year ARC pre-applications are submitted to the Department of Local Government and out of about 70-75 applications, the state may fund 20-25 projects. Some of the projects funded in the past have been for industrial development projects, utilities to a site, site preparation and access road

purposes. In order to use funds for industrial development the projects must be documented by a certain number of jobs. He said that many times, if a city or county is in need of water or sewer projects, ARC funds can provide basic services and not necessarily for industrial purposes. In certain distressed counties, the job requirement isn't necessary, but matching funds are required from the other programs.

Mr. Craighead introduced Ms. Sally Hamilton, with the Department of Local Government, to talk about the Community Development Block Grant Program. Ms. Hamilton said the state receives approximately $25 million and the Department of Local Government contributes about 35% or $9 million towards any kind of water projects. A requirement is that any project must benefit 51% of the low and moderate income. The main problem with the use of the block grant is the benefit to lower and moderate income. There is a ceiling of $750,000 on public facilities and special projects. She suggested looking into funding sources of the Farmers Home Administration.

Mr. Allen Clay Stone, sitting in for Judge Smoot, asked what kind of logistic problems would come from applications of a multi-county project. Ms. Hamilton said it would put quite a strain on the Department and realizing that there is only $9 million allocated statewide to put toward water and sewer projects, she did not feel her department could approach a project of that magnitude.

Senator Schmidt asked what moderate and low income was. Ms. Hamilton said that statewide it is $16,900.

Next on the agenda was Mr. Jim Ramsey with the Finance and Administration Cabinet to speak on the Kentucky Development Finance Authority and the Kentucky Infrastructure Authority. Mr. Ramsey said that basically, infrastructure is meant to include capital projects such as drinking water projects, waste water treatment projects, solid waste projects, gas and electric utilities, roads, bridges, etc. The University of Kentucky conducted a study and found that around $4 billion was needed for these projects. The 1988 session of the General Assembly established a program to address those needs in creating the Kentucky Infrastructure Authority (HB 217). The General Assembly appropriated $1.5 million to Fund A which would support about $15 million in bonds and with additional federal dollars could support $38.7 million. The Authority is made up of seven agency members and three citizen members. The Authority has four different programs that are offered to local governments. Fund A can only be used to finance waste water or sewage treatment plants and is a combination of federal and state dollars. All of the programs of the Infrastructure Authority are loan programs with attractive interest rates. The interest rates for the Fund A program are either 2 1/2% or 4 1/2 percent loans, depending on the income level of the county or community. The only projects that can be financed are sewer projects.

Mr. Ramsey said Fund B money comes from the general fund which can be used to finance any infrastructure project which promotes

economic development in the state. There is a lot of program flexibility in the fund but they are limited in the amount of dollars they have. This biennium the Department received $2.5 million in debt service which would roughly support $20 million in bonds. The interest rate of Fund B is slightly higher than Fund A at 3 1/2% for the low income counties and communities, and 5 1/2% for the high income counties. No federal monies are included in Fund B.

Ms. Hamilton said that there is a $5 million limit with Fund B which is targeted to economic development, but there are no strict eligibility guidelines.

Mr. Ramsey mentioned Fund C and Fund D briefly and stated that no state dollars are involved. However, the Infrastructure Authority has the advantage of being guaranteed an A rating on its bonds. Therefore, the Authority pulls together various projects at a time to take to the bond market, and as a result, the cost of issuance and borrowing is lower.

Mr. Ramsey mentioned a few other programs. The Kentucky Development Finance Authority makes low interest rate loans directly to businesses only. The Kentucky Rural Economic Development Authority was set up to help rural counties if their unemployment rate has exceeded the state average for the last four out of five years and 90 counties qualify under this program. This program is specifically designed to encourage businesses into a community through the use of tax credits. Another program that may be of benefit is the Economic Development Bond program. The Economic Development Cabinet has bonding authorization in this biennium for $30 million. Mr. Ramsey said that through infrastructure Fund B, potentially through Community Development Block Grants and through Economic Development Bonds, it is conceivable that the state has some funding sources that could participate in the financing of the projects being considered for the Licking River Basin. The Secretary of the Economic Development Cabinet determines which projects are to be funded through Economic Development Bonds.

The next speaker was Mr. Allen Heard with the Soil Conservation Service, speaking on funding sources for multiple purpose watershed projects, their established criteria and restrictions.

Mr. Heard briefly discussed Public Law 84-566, referred to as the Small Watershed Program. He stated that there are similarities between PL-566 and the program the Corps of Engineers operates, with the two programs complimenting and slightly overlapping each other. The Soil Conservation Service's program deals with watershed areas less than 250,000 acres and there are possibilities for many small watersheds in the Licking River area. Specified in the program are six eligible purposes: watershed protection, flood prevention, agricultural water management, nonagricultural water management, groundwater recharge and conservation and proper land use.

Mr. Heard said that one of the most important stipulations is that in small watershed projects planning is based on hydrologic boundaries. Another important factor is that the Soil Conservation

Service is prohibited from building a flood purpose dam more than 12,500 acre feet and an area not to exceed 250,000 acres. He stated that benefits must exceed costs, and the plan must include in its Environmental Impact Statement a purpose of watershed protection, flood prevention, irrigation or drainage, and that a project cannot be developed for any other single purpose. Watershed protection involves mainly farm practices, such as terracing and different cropping systems. There is also cost sharing to individuals similar to ASCS cost sharing except it is done on a project basis. The federal government pays for 100% of dam construction and other benefits, such as water supply are easily identified and separated for cost sharing purposes.

Mr. Heard stated that a recent exception in Soil Conservation Service policy allows for certain smaller projects to waive the benefit cost requirements. This occurs when flooding has made property values less than 75% of state average or three-year per capita income is less than 75% of national average, or the three-year unemployment is twice the national average. If these economic tests are positive, then the cost requirement can be lowered. He expressed that this is limited to relatively smaller projects that do not require congressional approval. Mr. Heard further stated that for nonagricultural water management, all such purposes are secondary. Water-based public recreation is cost shared up to 50% for dams, land rights, and basic facilities. Depending upon the size of the project area, up to three developments are allowed. Fish and Wildlife features can be included on the same basis of 50% cost share if they provide habitat improvement or public utilization. Other secondary purposes, such as municipal/industrial water, water quality management and energy and groundwater recharge are not cost shared with the federal government even though they are authorized for 50% cost sharing. In regard to municipal and industrial water supply, there is a provision in the program for loans to facilitate procurement for critical land rights, but there is a payback requirement of 10 years after you begin using the water.

Mr. Heard spoke about agricultural water management. He said that irrigation is not marketable in this area of the country due to our fairly abundant rainfall. The philosophy underlying anything that has been funded in irrigation lately is to make better use of the water already being used. Drainage is no longer viable because most drainage results in a deterrent to wetlands and wetlands are disappearing in this country. The current administration takes the position of not causing any net decrease in wetlands. Group Water Supply is also included under agricultural water management. Recently they have had an adjustment in policy that allows a loosening-up of policy about what rural community water supply is. In cases where certain low income levels are satisfied and when the water will be used by rural communities for primarily agricultural purposes, they can provide community water supply. Guidelines are set up in such a way that they favor communities of less than 2,500 people. The single purpose criteria still applies on this, and if there is not another principal purpose involved, there is not much chance to get authorization to do planning on a request for rural

water supply. Currently they are dealing with 15 requests. Most of them are strictly for water transmissions or for maybe a water tank and they are foreign to the philosophy of planning along hydrologic boundaries. These projects do not have priority for service under the program.

Conservation and proper utilization of the land is basically Soil Conservation Service's bread and butter, that being the reason for their existence. About the only feature that has much opportunity for cost sharing assistance is animal waste storage or treatment and that is cost shared basically the same way that ASCS would cost share, again on a project basis. A good example is a water supply system in a neighboring county that has fifty dairies that are contributing a heavy organic load to the community's drinking water supply. This is the type of project this program is directed toward.

The last topic Mr. Heard discussed was the planning process. The first procedure is a request, usually through a conservation district, after which a preliminary investigation is made which is similar to the Corps' Reconnaisance Study. If this investigation proves positive, a plan of study is developed along with a request for planning authorization. If authorization is approved, a planned environmental impact statement is developed to identify problems, develop solutions, compare costs, and environmental impacts to benefits, solicit public involvement and publicize the proposed administrative decision. If their project cost is greater than $5 million or the dam is greater than 500 acre feet or certain controversial issues are involved, they forward it to Washington. The Office of Management and Budget reviews, and if their decision is positive, then it goes through congressional committees. Whether it goes to the Public Works or Agriculture Committees is contracted by the size of the impoundments. If the committees are in agreement, this allows the Soil Conservation Service to commence design work. Once the design work is completed and the sponsor has obtained the proper amount of land acquisition for the project, then they can request "construction start". When that is granted, they must still wait until they obtain funding. Dollars are not appropriated to projects, but to programs, and the National Office allocates money based on nationwide availability and that is almost locked at present. They are receiving approximately $1 million per year for this program which would build two good lakes that are the size attributable to a PL-566 watershed. Not all of the money is currently going into dams; some is going into land treatment watersheds.

In summary, this is how the Soil Conservation Service program operates. They feel that they can compliment the Corps' of Engineers program and they are trying to keep their eyes and ears open as the Corps does their Reconnaisance Plan on the Licking River Basin.

Senator Meyer asked about the typical size of a lake constructed under this program and if there are cost limits on a specific program. Mr. Heard stated that 100 surface acres is a typical size and if the cost exceeds $5 million, then they must go

through the complicated review process. If the project is less than $5 million they have at least limited approval authority.

Senator Meyer asked if the Task Force came up with a $2-3 million project, would this be an unworkable project for the foreseeable future. Mr. Heard responded that if it required that amount of funding for a one-year period, it would be unworkable, although it is possible that you might have four or five projects scattered in the area that would apply. Mr. Heard also pointed out that the Soil Conservation Service begins by addressing the problem and then hunts for solutions.

Senator Meyer inquired as to the time frame of the completion of the construction project once approval is given. Mr. Heard stated that there are projects that have been operational for 20 years or longer. This has to do with the local sponsor's ability to buy their land rights. He also mentioned that Congress has held the appropriations level rather constant which means inflation has taken its toll each year. This has been going on for ten years and it has had a significant effect in shrinking the magnitude of the program.

Representative Reinhardt inquired as to the availability of monies nationwide for this program. Mr. Heard stated that approximately $150 million is available and about 40 states are participating. Representative Reinhardt asked Mr. Heard to give examples of recent projects and Mr. Heard mentioned the City of Erlington, a small community with a flooding problem. Two dams were constructed with 3/4 of a mile stream channel modification. Also, the SCS has just completed the last dam at Fox Creek watershed in Fleming County. This project is for agricultural protection plus a recreation facility at the watershed for fishing purposes.

Mr. Allen Clay Stone asked Mr. Heard if a more elaborate program in the amount of $50-60 million would be more effective for the region's needs. Mr. Heard stated that he doesn't envision a large program such as this being accomplished within 3-5 years, but would probably take 10 years to complete, and he recommended to the task force that funds should be sought wherever possible.

Mr. Stone inquired if the Soil Conservation Service has ever worked in coordination with the Army Corps of Engineers in a situation such as this or is this a totally new theory. Mr. Heard explained that it is new to the SCS. They are not pushing for a project but are willing to be as helpful as possible.

Senator Meyer asked Mr. Heard if restrictions on shoreline development are imposed such as buffer zones or limited access. Mr. Heard stated that in this particular program the Soil Conservation Service doesn't deal with land rights, but if an impoundment were developed strictly for drinking water purposes, then there would be some shoreline control imposed because of health requirements.

Next on the agenda was Mr. Jim Axon with the Department of Fish and Wildlife Resources, Fisheries Division. His testimony related to wildlife management areas, the Sport Fish Restoration Program, and small water impoundment funding sources.

Mr. Axon stated that as of this federal fiscal year, the Department of Fish and Wildlife has received $2.8 million in Dingell-Johnson/Wallop-Breaux funds (Federal Aid in the Sport Fish Restoration Act). These funds are heavily utilized in operating the Division of Fisheries with 90% of their projects coming from Dingell-Johnson/Wallop-Breaux Funds. He further explained that approximately $300,000 is now available each year for capital construction projects, such as lake construction, access site development for boat ramps and some shoreline acquisition, which they do on rare occasions to buy access sites for boat ramps. The Act, as amended in 1984 by the Wallop-Breaux Amendment, requires that 10% of this money be targeted toward boat access site development. Because of the dramatic increase in federal funding since 1984, the Department of Fish and Wildlife is spending a greater amount for development of these types of projects. He said that at present 10% of the funding is related to the management of fisheries at Cave Run Lake. Also, two boating access sites have been developed on the Licking River and they are looking for future sites on the Licking.

Mr. Axon further explained that one of the funding requirements is that the Department have control of the land and the lake purpose must be for sport fishing as public fishing lakes. He discussed the planned dam construction on Fishtrap Creek in Nicholas County to benefit the Clay Wildlife Management Area. This lake will be approximately 33 acres in size and his division is now in Phase B of the project through work with consultants. If the surveys find it a feasible project, then construction will begin. If not, then this will facilitate the department's long term plans in acquiring some land south of the Clay Wildlife Management Area for the purpose of constructing another small water impoundment. He said that the Department has a lot of ongoing land acquisition projects for the next few years. He explained that it is very expensive to build lakes and because of the amount of funds available for these kinds of projects, which include other things besides lake construction, the Department is limited in what it can do. For this reason, they are concentrating on small public fishing lakes.

Senator Meyer inquired about development limits placed on lakes owned and built by the Department of Fish and Wildlife Resources. Mr. Axon said that it has been a long while since the Department has constructed lakes, and due to the increased costs of lakes and funding now available, the Department is limited as to how much can be done on projects such as these. He stated that it usually takes two years in meeting the requirements for getting a project approved. Mr. Axon stressed the importance of feasibility and positive surveys showing the Licking River Basin can hold water. He mentioned the Department is looking into other sites that will tie up available monies for the next two or three years. He said that Kentucky is probably the most active state in the country in terms of boating access site developments. They are able to build twice as many as other states because the Department is responsible for construction instead of contracting out.

Senator Meyer also inquired about shoreline development restrictions. Mr. Axon said that for the integrity of the lake, the Department must have control of the buffer zone around the lake. This will probably be fifty feet, but can vary, depending on the slope. Mr. Axon stated that the Department is doing its best to develop fisheries and recreation in the Licking River.

Senator Meyer thanked the members of the panel for their presentations. He then informed the Task Force members that a draft report was being prepared by staff and would be sent out to members in mid-August. The next meeting will be in September for a review of the draft report.

There being no further business, the meeting was adjourned.

LICKING RIVER BASIN
TASK FORCE

Minutes of the Eleventh Meeting
of the 1988-89 Interim

September 7, 1989

The eleventh meeting of the Licking River Basin Task Force was held on Thursday, September 7, 1989, in Room 104 of the Capitol Annex. Senator Joe Meyer, Chairman, called the meeting to order, and the secretary called the roll.

Present were:

Members: Senator Joe Meyer, Chairman; Representative Adrian Arnold; George Carmack, Rawleigh Havens, Leslie Herbst, Ken Paul, David Pribble.

Guests: Jim Brammell, Louisville Corps of Engineers; Mr. & Mrs. Lois Wilson, Falmouth; Mike Hale, Kentucky Flood Control Advisory Commission; and Pam Wood, Division of Water.

LRC Staff: Linda Kubala, Alice Downey, Mary Lynn Collins, and Diana Lynn Hill.

Press: Kentucky Post.

Senator Meyer called for the approval of the minutes of the last meeting. The minutes were approved without objection.

Senator Meyer explained that the purpose of the meeting was to review the draft report of the task force and make recommendations to the Legislative Research Commission. He then called on staffperson Linda Kubala, to go over the technical changes that had been made in the report. After reviewing the changes, a motion was made and seconded to adopt the changes made in the report. The motion was adopted by voice vote.

A motion was then made and seconded to adopt the report as amended. The motion was adopted by voice vote.

Senator Meyer offered two recommendations to the Legislative Research Commission concerning the Licking River Basin: (1) The task force does not take a position concerning the feasibility or desirability of any of the proposed reservoirs in the basin at this time. Such conclusions should await completion of the Corps of Engineers' reconnaissance study of the basin, expected September 1990; (2) The task force should be reconstituted by the General Assembly to work with the people of the basin and with the Corps of Engineers, to evaluate the results of the Corps' study and to coordinate a state and local response.

Judge Pribble suggested that the two recommendations be combined into one. After brief discussion, a motion was made to adopt one recommendation as follows: "The task force does not take a position concerning the feasibility or desirability of any of the proposed reservoirs in the basin at this time, in order to await

completion of the Corps of Engineers' reconnaissance study of the basin, expected September 1, 1990. The task force should be reconstituted by the General Assembly to work with the people of the basin and the Corps of Engineers, to evaluate the results of the Corps' study and to coordinate a state and local response." The motion was seconded and was adopted by voice vote.

Allen Clay Stone, sitting in for Judge Smoot, asked if the Task Force needed more press coverage and exposure. Jim Brammell, with the Corps of Engineers, said that the Corps had sent out a notice to 150 to 200 people asking for feedback and had gotten no response. He said the Corps would support more coverage. After brief discussion, it was decided that staff would ask the Public Information office to prepare a press release to be sent to all newspapers.

Senator Meyer pointed out a letter in the folders from the Kentucky Resources Council in response to the Task Force report. He stated that there had been no other correspondence from anyone at this time. He then asked Jim Brammell to give an update on the status of the reconnaissance study being done by the Corps of Engineers.

Mr. Brammell said that the Corps started the flood control reconnaissance study in April and a report is scheduled to be completed in September of 1990. There are no results on specific projects due to the fact that they are still gathering data.

They have $200,000 for this fiscal year until October 1, and will receive the remaining $600,000 for next year. They have started a design and cost estimating effort on the Callensville Lake Project. A work order and meetings with the engineering division have resulted in the designing of a dam with two different size projects. Mr. Brammell said both the design and cost estimates are due to him by September 30. Although there are 30 lakes being talked about, there is not enough time, money, or manpower to design 30 dams, so they have decided to take the largest one with the most interest and design it. Those that appear to be feasible or marginal will be looked at. One problem with several lakes is that they are located downstream of any damage center, which means they will probably be screened out.

The Corps is not limited to the 30 lakes, and once more information is gathered they will probably see a need to look at different projects located in other areas. He said they may find the need to look at some levy projects in certain communities. Channel improvement is another structural alternative.

Flood damages and benefits are comprised of two areas, agricultural damages and communities which get flooded. Mr. Brammell said they had one person who had spent a lot of time looking at land use in the basin and what crops are raised in the flood plains. There have been two surveyors in the field who have been doing urban flood plain survey work. The flood damage and survey work will be completed by November of this year. Once that data is gathered, the Corps can identify other projects that need looking into.

As far as environmental work being done, the Corps is required by law to get the U.S. Fish and Wildlife Service involved, which they have done. There is a report due from them now discussing the general environmental characteristics of the basin, which will be used as a "warning report" to flag possible problem locations.

The last major area of work is water supply needs. The Corps will do a comprehensive evaluation of water supply needs in the basin and project water demand in the basin for the future, and then compare that to the existing water supply in the basin to determine where there are deficits and where there will be deficits. They can then, in considering a lake, increase the storage of the lake to include the amount of water supply needed in the future. The Corps has two contracts going in the water supply study. They have contracted with a consultant who is an expert on a computer model of water supply studies. They will also get contracts with five area development districts to gather data on water supply.

Representative Arnold asked if the lake would be developed solely for flood control. Mr. Brammell said that if a lake was developed in the Licking River Basin it would have have recreational development, but shore development would be limited.

Senator Meyer stated that this was the final meeting for the task force. He thanked all of the members for their time and interest.

There being no further business, the meeting was adjourned at 8:00 p.m.

APPENDIX C
ENDORSEMENTS

The following groups and individuals who have endorsed the 1600 acre Pendletton-Grant County Lake Project is a representative sample of the broad base of support this proposal enjoys.

PENDLETON COUNTY

Pendleton County Fiscal Court
Pendleton County Planning Commission
Pendleton County Industrial Foundation
Pendleton County Chamber of Commerce
Judge-Executive, David Pribble
County Attorney, C. Donald Wells
Circuit Clerk, Marvin Sullivan
County Clerk, Carol Ockerman
Property Valuation Administrator, James Kimble
Sheriff, Don Mays
Superintendent of Schools, Clifford Wallace
Pendleton County Farm Burea
Falmouth Lions Club
Kentucky National Bank of Pendleton County
First National Bank of Falmouth and Butler
City of Falmouth
The Falmouth Outlook
Kincaid Park Board Association
Farmers Bank of Butler

GRANT COUNTY

Grant County Fiscal Court
Grant County Chamber of Commerce
City of Williamstown
Grant County Farm Bureau
Grant County Deposit Bank
Bank of Williamstown
Grant County News

CAMPBELL COUNTY

Campbell County Judge-Executive, Ken Paul

KENTON COUNTY

Kenton County Judge-Executive, Robert Aldermeyer
Kentucky National Bank of Kenton County

BOONE COUNTY

Boone County Judge-Executive, Bruce Ferguson
Kentucky National Bank of Boone County

INDIVIDUAL ENDORSEMENTS

Ronnie Mann
Glenn Caldwell
Julian Wills
Jerry Hicks
David Butcher
Frank Ammerman
Gene Flaugher
R. Edward McCandless
John McCandless
Jeff Carson
Herman Hornbeek
Donald Browning
Robert Bathalter
Harold Adams

MULTI-COUNTY ORGANIZATIONS

Northern Kentucky Chamber of Commerce
Northern Kentucky Area Development District

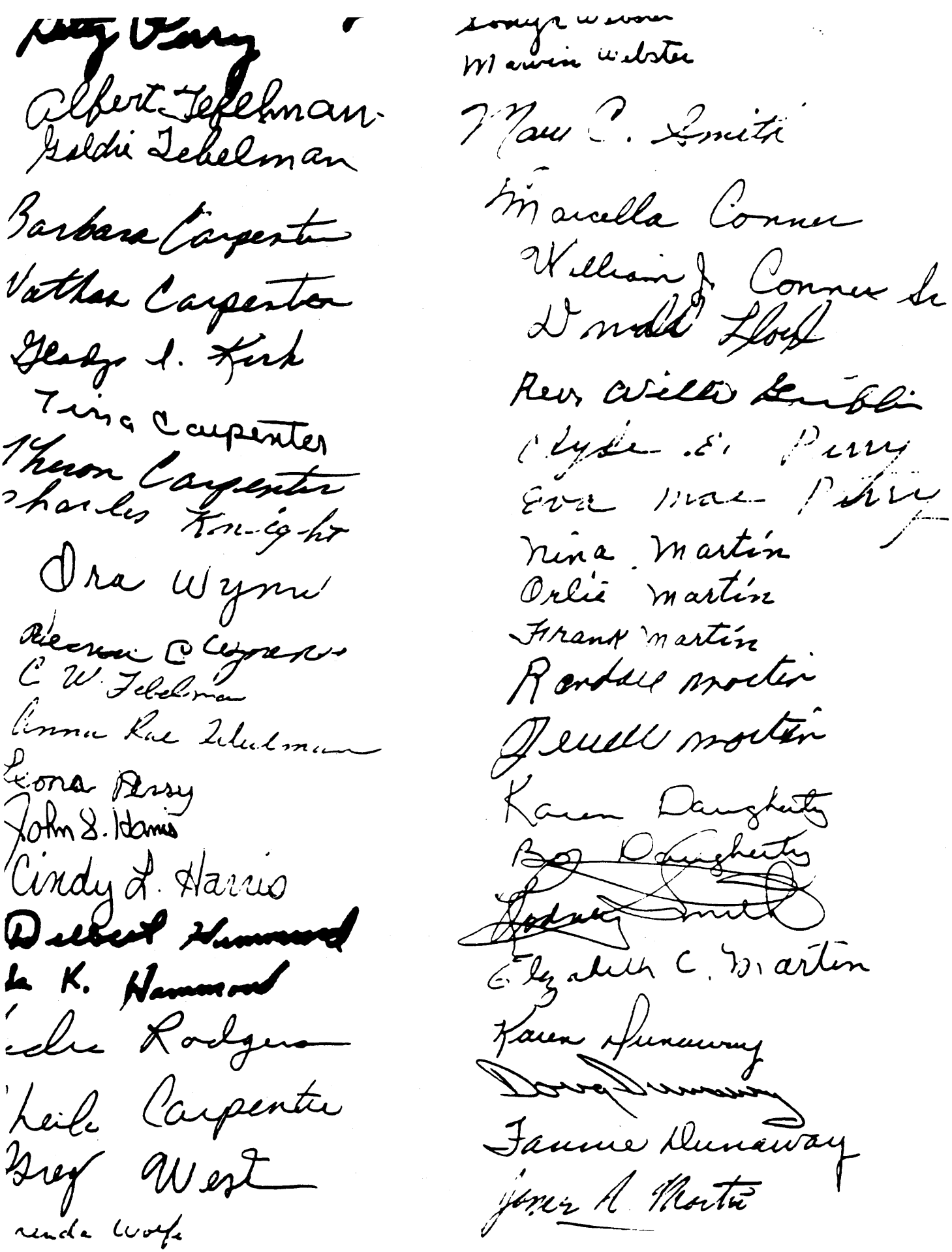
SOURCE: "Callensville Lake Project: Visions of a Better Future" - 1989 Appendix B

We, the undersigned landowners affected directly and their families and other landowners and concerned residents of the immediate area, are opposed to the proposed Callensville Lake project in Pendleton and Grant Counties.

Minnie Wainscott
Vick Wainscott
Richard Wainscott
Wanda Wainscott
Bill Wainscott
Danny Wainscott
Robert Wainscott
Teresa Wainscott
Janet Wainscott
Gayle Wainscott
Jimmy Wainscott
Tony Wainscott
James A Antrobus
Ann Antrobus
Virginia F Cummins

[illegible]
Toni Wilson Riley
Lois C Wilson
B Gail Wilson
Huber Clemons
Lula Clemons
Walter Clemons
Larry Clemons
Cathy Clemons
Russell Jackson
Betty Jackson
Raymond Ashcraft
[illegible]
[illegible]

photocopy



Anna R. Wainscott
Stanley Wainscott
Tony Colley
Ric Brown
Mitch Jones
Leroy Wainscott
Mike Wainscott
Sharon Wainscott
George P. Hughes
William McMullen
Lula Grace Livengood
H.T. Livengood
Danny Livengood
Teresa Livengood
Robert L. Vendler
Dale L. Vendler
Gladys Vendler
Donald Wayne Wainscott
Betty Yazell
George Yazell
Linda Dalton
Ricky Dalton
Lolin Oliver

Matthew Yazell
Ralph Thompson
Dolly Plummer
Delia D. McCandless
Louise Thompson
H. A. Thompson
Charles H Thompson

photocopy

SOURCE: Sent to Task Force Chairman with letter dated September, 1988.

APPENDIX D

DETERMINANTS OF LAKE USAGE:

PROCEDURE: USE 1988 OVERNIGHT REGISTRATION IN STATE RESORT PARKS WITH FISHING RENTALS.

TABLE 1: LAKE ACREAGE AND ACCESS TO 4 LANE HIGHWAY

Case	PARK	TOTAL	LAKE ACRE	ACCESS
1	BARREN RIVER	23642	10000	11
2	BUCKHORN	6929	1230	15
3	CARTER CAVES	25003	45	5
4	GENERAL BUTLER	38680	30	6
5	GREENBO	15090	225	15
6	KENLAKE	22525	128807	25
7	KENTUCKY DAM	55795	128807	3
8	LAKE BARKLEY	41818	57920	13
9	LAKE CUMBERLAND	41580	50250	5
10	PENNYRILE	11403	47	8
11	ROUGH RIVER	17638	5100	21

TABLE 2: DECOMPOSITION OF OVERNIGHT REGISTRATION BY STATE OF ORIGIN

	PARK	KENTUCKY	INDIANA	OHIO	TENNESSEE
1	BARREN RIVER	14582	1962	1306	2130
2	BUCKHORN	3376	620	1793	116
3	CARTER CAVES	8360	685	6556	161
4	GENERAL BUTLER	16502	3951	9863	579
5	GREENBO	6569	340	4745	68
6	KENLAKE	6970	1717	942	2845
7	KENTUCKY DAM	18014	5838	2061	3562
8	LAKE BARKLEY	13685	3967	1503	7140
9	LAKE CUMBERLAND	20407	3846	10366	950
10	PENNYRILE	5842	1458	437	767
11	ROUGH RIVER	10552	2627	1611	448

TABLE 3: PARK DISTANCE FROM MAJOR CITIES AND ROUTES TO OTHER STATES

	PARK NAME	TOTAL	LOUISVILLE	LEXINGTON	COVINGTON	BOWLING GREEN
1	BARREN RIVER	23642	108	146	207	36
2	BUCKHORN	6929	212	101	200	229
3	CARTER CAVES	25003	172	94	128	245
4	GENERAL BUTLER	38680	49	36	56	162
5	GREENBO	15090	183	112	144	226
6	KENLAKE	22525	230	208	309	42
7	KENTUCKY DAM	55795	175	230	299	53
8	LAKE BARKLEY	41818	210	247	300	31
9	LAKE CUMBERLAND	41580	137	115	198	102
10	PENNYRILE	11403	167	265	267	86
11	ROUGH RIVER	17638	79	131	191	59

WHAT DOES THE USE (OVERNIGHT STAYS) OF A PARK DEPEND UPON?

1) ACCESS TO 4 LANE HIGHWAY-- FOR EVERY MILE FROM THE HIGHWAY 1440 OVERNIGHT STAYS ARE LOST.

2) ACREAGE OF THE LAKE -- FOR EVERY 100 ACRES AN ADDITIONAL 22 OVERNIGHT STAYS ARE RECEIVED.

3) PROXIMITY OF OTHER LAKES -- FOR EVERY LAKE WITHIN 35 MILES 840 OVERNIGHT STAYS ARE LOST.

4) PROXIMITY TO OHIO (COVINGTON) AND TENNESSEE (BOWLING GREEN OR HOPKINSVILLE)
   -- FOR EVERY MILE FROM COVINGTON 190 OVERNIGHT STAYS ARE LOST.
   -- FOR EVERY MILE FROM BOWLING GREEN 163 OVERNIGHT STAYS ARE LOST.
   -- PROXIMITY TO LOUISVILLE AND LEXINGTON ARE NOT IMPORTANT.

WHAT WOULD WE PREDICT THE USE OF CALLENSVILLE LAKE TO BE?

ACREAGE = 1600
DISTANCE FROM 4-LANE (75) = 6
OF LAKES WITH 35 MILES = 1 (KINCAID)
DISTANCE FROM LEXINGTON = 34
DISTANCE FROM COVINGTON = 46
DISTANCE FROM LOUSIVILLE = 87
DISTANCE FROM BOWLING GREEN = 185

PREDICTED USAGE (OVERNIGHT STAYS) = 36,255

OVERNIGHT STAYS = 79053 + .22x(# OF LAKE ACRES) + 119x(MILES FROM LOUIVILLE)
- 11x(MILES FROM LEXINGTON) - 190x(MILES FROM COVINGTON)
- 163x(MILES FROM BOWLING GREEN) - 1440x(MILES FROM 4-LANE)
- 840x(# OF LAKES WITHIN 35 MILES)

Presented to Task Force by William H. Hoyt, University of Kentucky, May 4, 1989.