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Sociocultural Impact of Reservoirs on Local Government Institutions

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Philip Drucker
University of Kentucky

Jerry Eugene Clark
University of Kentucky

Lesker Dianne Smith
University of Kentucky

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SOCIOCULTURAL IMPACT OF RESERVOIRS ON LOCAL GOVERNMENT INSTITUTIONS

Anthropological Analysis of Social and Cultural Benefits
and Costs from Stream Control Measures --- Phase 4

by

Philip Drucker, Ph.D.
Principal Investigator

Jerry Eugene Clark, M.A.
Lesker Dianne Smith, B.A.
Graduate Student Research Assistants

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ABSTRACT

This study of the probable sociocultural impact of a proposed reservoir in central Kentucky on the institutions of local governments of a community adjacent to the reservoir utilizes anthropological concepts of social values and cultural and social change as well as anthropological research techniques. Data on observed impact on the same institutions in communities adjacent to two recently completed Kentucky reservoirs permit inferences as to probable directions and extent of reservoir-related change. Specific aspects of impact considered include: effects of reduction of the county tax base due to Federal acquisition of lands, including necessity for increased severity of taxes and changes in assessments, problems related to effective planning and zoning, potential benefits from development or expansion of city and county potable water supply, effects of reservoir-caused highway relocation on county roads and county road maintenance, and effects of reservoir-created tourism patterns on local law enforcement. The overall purpose of the study is to recommend to the agency (Corps of Engineers) that is causing massive environmental change through creation of a manmade lake, improvements in policies and procedures that will increase sociocultural benefits and decrease sociocultural costs.

DESCRIPTORS: Assessments, highway relocation, law enforcement, local governments, roads, social change, social values, taxes, tourism, water supply.

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SOCIOCULTURAL IMPACT OF RESERVOIRS ON LOCAL GOVERNMENT INSTITUTIONS

INTRODUCTION

Project Description. This report describes and analyzes the socio-cultural impact of construction of dams and impoundment of reservoirs behind them on certain aspects of the culture of the local community: the human population of the area immediately surrounding the reservoir. The present project is part of a long-range program entitled "Anthropological analysis of social and cultural benefits and costs from stream-control measures" designed to test the basic hypothesis that major changes in the local ecosystems of the sort produced by formation of such reservoirs inevitably cause changes in local society and culture, and that such changes can be classed as "benefits" or as "costs" according as they decrease or increase tensions and stresses among the human population. Evaluation of effects of such constructions in terms of "economic benefits and costs," that is in dollars-and-cents ratings is a procedure of long-standing among economists, engineers, and others. The present program, however, is not in any way intended to simulate an economic model, but rather to develop an evaluation procedure in anthropological terms of social and cultural values. For this reason anthropological concepts are the principal tools, and anthropological research techniques provide the principal portion of the methodology.

Specifically, the present project focuses on impact of reservoir formation on local government, as the title of this report indicates.

The theme of the study was selected because these aspects of reservoir impact are of great concern to the community of the area of a proposed reservoir: Taylorsville Reservoir on Salt River, Kentucky. Not only community leaders but many other persons in the study area perceive the proposed reservoir as a threat to the orderly functioning of these particular institutions, despite the fact that many of the same persons believe that the reservoir when eventually filled will benefit the service sector of the local economy. In this study, considerable emphasis is placed on the perceptions of impact, actual and potential, by members of the community, for obviously their responses to a situation will derive from their perceptions of it whether these are impressionistically or pragmatically formed.

Geographically the center of interest of this study is the proposed Taylorsville Reservoir area. This is in keeping with the basic research program which it is hoped will be able to observe and document socio-cultural changes through the sequence of stages of the reservoir: pre-construction planning; land acquisition; actual construction of the dam; filling of the reservoir; development of recreational facilities. It is believed that the total body of data so collected will give special insight into the impact of the manmade lake and into the problems created by such impact. In addition, for control purposes comparative data were collected at two recently completed reservoirs in nearby south central Kentucky.

With the Taylorsville Reservoir area, the locale of intensive study was Spencer County and its county seat Taylorsville. The major portion of reservoir-affected lands lie in this county, and with the strong county orientation of the rural Kentucky lifeway it forms a definable sociopolitical

entity. The dam-reservoir complex has bulked large in the consciousness of Spencer Countians for some years, since they consider that it was leaders of their community, specifically leaders in Taylorsville, who influenced Corps of Engineers officials to make preliminary studies, which, after local popular approval was developed, led to authorization of the construction project by Congress. Both those who approve of the dam, and those who do not, agree on this view: Taylorsville Reservoir is considered to be mainly a Spencer County project. It must be added that this concentration of this one county as the prime study area did not preclude data collection in Nelson and Anderson Counties, but comparably intensive investigation was not carried out in those last-named political units.

Project objectives. The major objectives of the project is to determine perceived and actual impact of the proposed reservoir on the local government units of the study area and as well the impact of completed reservoirs in similar localities. Impact takes place, or can take place, in any of the areas of function of the governmental unit concerned: collection and expenditure of certain taxes, maintenance of law and order, construction and maintenance of certain roads and/or streets, sometimes supplying potable water, etc. These and other functions of local governments will be examined, reservoir impact on them will be analyzed, and adaptation made by local citizens to cope with the problems as they perceive them are to be reviewed. As a result of this process, it is anticipated that the major objective of the project, as of the entire program of research on reservoir impact, can be achieved: to translate the findings into practical results of direct applicability. This will be done by offering a series of recommendations to action agencies concerned with stream control devices, such

as the U.S. Army Corps of Engineers, for improvements in their procedures in dealing with communities of reservoir areas in such a manner as to decrease tensions and stresses attributable to the reservoirs. In other words, the ultimate goal of this project and in fact of the entire program of which it is a part is to determine and recommend improved procedures that will increase reservoir-related benefits and ameliorate reservoir-related costs.

The present report is designated "Partial Completion Report" (title page) because a companion study made as part of the same project (B-027-KY) concerned impact of a proposed reservoir on another local institution, the county school system. Results of the impact on the school system have been published separately as U.K. Water Resources Institute Research Report No. 60 (Smith, Chas. R., 1973).

Methodology. As indicated, not only were anthropological concepts of culture and culture change drawn on heavily in the design of this entire program, but anthropological field methods were utilized throughout. In the Taylorsville Reservoir area the researcher resided in the community during the main fieldwork period, having been formally introduced to various community leaders by a colleague who has a long period of familiarity with the community, so she soon could utilize the participant-observer role by taking part in many local activities in addition to her main task of interviewing city and county officials. In the Barren River and Green River Reservoir areas, because of limitations of time, the researcher could not carry out this role as fully, but nonetheless attempted to relate closely to the several communities he surveyed. That both

workers were able to establish good rapport was demonstrated by the cordiality with which they were received and the facility with which both were able to collect supplementary data during several brief return trips to their respective study areas. Both workers used brief questionnaires in first interviews with local officials. These schedules were more flexible and open-ended than the sort of questionnaires designed for quantification of results; they were designed to introduce the informants to the kinds of data sought by the fieldworkers. Subsequently, interviews were usually open-ended, occasionally directed, and in-depth.

A considerable amount of data came from documentary sources of various kinds. (Where documentary materials are available, anthropologic methodology includes their use, to check information otherwise derived.) Some were made available through the courtesy of local officials, county and city clerks, and county property valuation administrators. Others were provided by officials of the Commonwealth of Kentucky: State Archivists, staff of the Kentucky Program Development Office, and others. In addition important information was received from officials of the U.S. Army Corps of Engineers, Louisville District, whose assistance was authorized by the District Engineer. To all these persons we offer our sincere thanks.

In a very real sense, the research plan involving investigations of impact of recently completed reservoirs in Kentucky was derived from the comparative method in anthropology. Two kinds of impact patterns emerge from these data: similar effects, suggesting certain constant factors involved, and diverse effects suggesting inputs from a wide series of variables. As will be brought out in this report, the comparative data are of great value, vastly improving our ability to predict impact in the area of the proposed reservoir.

Field research, analysis of the data, and the preparation of this report were carried out as a team operation, although the Research Assistants carried out their investigations individually, Miss L. Dianne Smith in the Taylorsville area, Mr. Jerry E. Clark in Barren River and Green River Reservoir areas, (Mr. Charles R. Smith worked in the Taylorsville area and in Louisville on a separate aspect of the study, one concerned with potential reservoir impact on the public school system). However, since distances were not great, they met weekly with the Principal Investigator to discuss their findings, compare data, plan new approaches to study of certain problems, and so on. Similarly, they met frequently during the study of the data and for planning of the report. Their coordinated drafts of the report were discussed in detail with the Principal Investigator, who edited some sections and rewrote others.

A final point on methodology: This research project was designed to conform to the standards of ethics defined by the American Anthropological Association concerning respect for informants' privacy. Because of this protective device the project was given authorization to proceed by the University of Kentucky Committee on Human Investigations. Thus while information collected is non-sensitive, and methods of collecting it non-hazardous, no informants will be identified (except by a generality, such as "a county official," etc.). In this way we intend to protect the persons kind enough to give us the benefit of their knowledge and/or opinions from even the most minor embarrassment.

Study areas: Taylorsville Reservoir and Spencer County. This area has been described in considerable detail in earlier reports of the present

program (Smith, Charles R., 1970; Drucker, Smith, and Turner, 1972), so only a summary description will be given here. The proposed Taylorsville Reservoir has been planned by the U.S. Army Corps of Engineers as a multi-purpose project: for flood control, general recreation, fish and wildlife enhancement, and water conservation. The lands to be acquired for it and for an adjacent park include slightly over 14,000 acres in Spencer County, or a little more than 11.3% of the county's 123,520 acres, and as well, about 500 acres in Nelson County and some 3,500 acres in Anderson County. After the usual preliminary studies, the Corps recommended the dam be constructed and in 1966 Congress authorized its construction, without, however, voting appropriations for it. Small sums provided in fiscal 1972, and a larger amount in fiscal 1973, have not been used for various administrative reasons. It is believed that land acquisition and the beginning of construction will take place in calendar 1974.

Spencer County is essentially rural in economy and outlook. Its nearness to Kentucky's largest urban center, Louisville, creates special problems in predicting impact. Urban Louisville is only 25 miles from the county seat, Taylorsville, and the dam is to be sited 3 river miles farther on. Consequently, both the Corps of Engineers and local residents predict a huge number of man/day visits to the lake by Louisville people annually. The Corps of Engineers has predicted an annual visitation to Taylorsville Lake when completed of 680,000 visitor days initially, increasing to an annual average of 1,360,000 visitor days (U.S. Congress, House of Representatives, 85th Cong. 2nd sess., House Doc. 502: p. 67). Some Corps officials believe, so they told us, that the ultimate figure may come closer to the 2,000,000 visitor/day per annum mark. In addition,

the Corps predicts an influx of new residents who will establish homes in the vicinity of the lake and commute to the city. That commuting is practical is demonstrated by a growing number of Spencer Countians (21.4% of the work force, according to the U.S. Bureau of the Census, 1970, Kentucky), who commute to jobs in the urban center. The predicted numbers of visitors and new residents are perceived by local people as a force that will disrupt the cherished rural lifeway.

Study areas: Green River Lake, and Adair and Taylor Counties. The dam constructed to create Green River Lake is located at the confluence of Green River and Robinson Creek in Taylor County, Kentucky. This earth and rock fill dam is 26 miles upstream from Greensburg, Kentucky and about 90 miles south-southeast of Louisville. The dam is accessible from Highway 55 about 9 miles south of Campbellsville and approximately the same distance north of Columbia, Kentucky.

Slightly over half of the seasonal (summer) pool of some 8,200 acres is situated in Taylor County. The rest is in Adair County where the backwater along Green River extends for 21 to 25 miles upstream. At flood stage the extent of the reservoir is 19,100 acres. The U.S. Government through the Corps of Engineers owns a total of 32,343 acres and has flowage easement on 1,664 acres (U.S. Dept. of the Army: Corps of Engineers, Louisville District, 1971).

A multi-purpose project, the lake is designed to effect flood stage reduction on the upper Green River, and, in conjunction with other reservoirs, reduce flood stages on the lower Ohio River. Its storage capacity has been designed to permit low flow augmentation to improve water quality

below the dam. The project is also designed as a recreational lake and has 7 recreational sites completed, under construction, or proposed.

Green River Lake is one of Kentucky's newest. Construction began in April of 1964 and was completed in June of 1969, at an estimated cost of \$32,426,000 (U.S. Dept. of the Army: Corps of Engineers, Louisville 1969). Water was first impounded in the summer of 1969.

Adair County is located in south central Kentucky about twenty miles from the Kentucky-Tennessee border. It is surrounded by Green, Taylor and Casey Counties to the north, Russell County to the east, Cumberland County to the south, and Metcalfe County to the west.

The area of Adair County is 251,520 acres or about 370 square miles. It contained a population of 13,037 in 1970. This represents a 11.3 percent decrease from the 1960 census of 14,699 (Appendix I). Since the town of Columbia grew by about a thousand (2,225 in 1960 to 3,234 in 1970), there was a decrease in the rural population of nearly 2700 or about 20 percent (U.S. Bureau of the Census, Kentucky, 1970). This decrease reflects a long term decreasing trend in the Adair County population from a peak in 1940 of 18,566 (Bates 1969:54).

As in all of the counties surveyed the primary industry is agriculture. In 1960, of the 4,441 persons gainfully employed in Adair County, 1,963 were employed in farming; in 1971, the number had decreased to 1,208, or about 28% of the gainfully employed (U.S. Bureau of the Census, Kentucky, 1960; idem, 1970). This represents one of the highest percentages of agricultural employment in any of the counties surveyed. The next highest number of workers are employed in manufacturing industries. This is surprising given the small amount of industry in Adair County (the largest present industrial employer moved in since the 1960 census was taken).

However, in 1960, 10.3 percent of the workers were employed outside of the county, and in 1970 the number increased to about 20% (U.S. Bureau of the Census, Kentucky, 1960; idem, 1970), and many of these worked in the factories at Campbellsville, in Taylor County.

Other than the new Green River Reservoir there is little to attract visitors to Adair County. One Exception is the county fair in July. Adair County has one of the biggest fairs in the area. This week-long event attracts livestock exhibits, tractor pulls, and show horses not only from neighboring counties, but from neighboring states, and draws attendance from a quite large area.

Columbia is the only town of any size in Adair County. This county seat is the only part of the county that is growing. The community is located in the center of the county and is accessible by Highway 55 from the north or south and from the east and west by the newly constructed Bowling Green-to-Somerset toll road.

The major industry in Columbia is an "Oshkosh b'Gosh" clothing factory which employes about 170 workers, 90 percent of whom are women. Other industry includes feed and lumber mills and farm supply outlets. Another community institution is Lindsey Wilson College, a two year liberal arts college offering an Associate of Arts degree.

Taylor County is located just north of Adair County with Green County to the west, Larue and Marion Counties to the north, and Casey County to the east. It has an area of 181,760 acres or about 277 square miles.

The Taylor County population was 17,138 in 1970 as compared with 16,285 in 1960, and increase of 5.2 percent (U.S. Bureau of the Census, Kentucky, 1970). Campbellsville, the county seat, experienced a 9.1 percent increase from 6,966 to 7,598 (U.S. Bureau of the Census, Kentucky

1970 (Appendix I). Although Taylor County has more manufacturing industry than any other county surveyed, agriculture is still the major industry. Economically the most prosperous county surveyed, Taylor County had a median family income of \$6,532 as compared with \$4,493 for Adair County (U.S. Bureau of the Census, Kentucky, 1970). This is due largely to the higher industrial wages paid in Campbellsville.

Besides the several manufacturing plants in Campbellsville, which employ nearly four thousand workers, the community has a number of other positive features. Campbellsville College is a four year liberal arts school and offers a Bachelors degree. A new 42 acre park contains facilities for picnicking, tennis, baseball, swimming, basketball and golf. The city's 85 acre reservoir serves primarily as a water supply but offers recreational opportunities as well.

Study areas: Barren River Lake, and Barren and Allen Counties. Barren River Lake is created by a dam on Barren River about 13 miles southwest of Glasgow, Kentucky and 10 miles northeast of Scottsville, Kentucky. The lake is situated about 80 miles about the confluence of Barren and Green Rivers and is about 95 air miles from Louisville. A multi-purpose project, the lake is designed to effect reduction on flood stages below the dam, particularly of some 15,000 acres in the Barren River Valley (U.S. Army Corps of Engineers, Louisville District 1969).

The lake which backs from 21 to 33 miles up the Barren River during the summer pool, covers about 10,000 acres, and marks the common boundary of Allen and Barren Counties. Flood control extent is 20,150 acres providing drainage for 940 square miles above the dam.

Besides flood control the reservoir provides water supply for Glasgow. Barren River Lake also serves as a major outdoor recreational spot for south-central Kentucky. There are ten recreation sites located on the lake for launching boats. The state park is one of the better developed outdoor recreation facilities in the state.

The reservoir was begun in March of 1960 and completed in October of 1964. The 1965 season was the first summer in which water was impounded. The lake was built at a cost of \$28,604,500 and required a total acreage of 20,110 with a flowage easement of 4,563 acres.

Barren County is the largest of the five counties studied, covering about 468 square miles (U.S. Bureau of Census, Kentucky, 1970). It is primarily an agricultural county with a farm income of more than 23 million dollars annually. Barren County ranks first in the state in total dollars received from burley tobacco and has the largest number of dairy cows of any county in Kentucky. In addition to agriculture some 3,000 people are employed in 23 industries in the Glasgow area (Glasgow-Barren County Chamber of Commerce, 1971).

Barren County is located in the south-central part of Kentucky surrounded by Hart County to the north, Metcalfe County to the east, Monroe County to the southeast, Allen County to the southwest, Warren County to the west, and Edmonson County to the northwest. The Barren River Reservoir provides the boundary between Barren and Allen Counties. The major tourist attraction, however, is not the reservoir but Mammoth Cave National Park, situated in the northwest corner of the county.

The county population has shown a marked stability increasing by only 1.3 percent in the past decade, from 28,303 in 1960 to 28,677 in 1970

(Appendix I). An increase in the urban population of Glasgow is nearly matched by a decrease in the rural population (U.S. Bureau of the Census, Kentucky 1970).

Seven highways lead into Glasgow including the new Bowling Green-to-Somerset Parkway. Interstate 65 is located just ten miles to the west of Glasgow. Thus its accessibility for tourism is quite good, with Louisville only 100 miles away, Nashville, Tennessee, only 85 miles to the south, and Bowling Green less than 30 miles to the west.

Allen County, 351 square miles, is to the southwest of Warren County with Monroe County to its east, Simpson and Warren Counties to the west and the Tennessee Border to the south. It, too, relies heavily on tobacco and dairying as major cash products. Farming is done on a small scale for the most part. Several industries both in Allen County and surrounding counties provide a large number of jobs. In 1970, 21.8 percent of the employed population worked outside of Allen County. The industrial base is largely lumber, although a few assembly plants and a large distribution center for a major network of chain stores are located in Scottsville.

The population of Allen County has grown from 12,269 in 1960 to 12,598 in 1970, an increase of only 2.7 percent (Appendix I). Scottsville has a population of 3,584 in 1970 (U.S. Bureau of the Census, Kentucky, 1970).

Scottsville is located in the center of the county about ten miles from Tennessee and the same distance from the dam. Several new public buildings and schools attest to a building boom in the mid 1960's. One of its major landmarks and attractions is a large, wellkept hotel on the square which serves home-cooked meals. It is a favored stop for travellers in the area.

Comparison of study areas. For the comparative method to yield meaningful results of predictive value, the geographic-cultural entities compared must have a basic common denominator of similarities. At first glance Adair, Taylor, Allen, and Barren Counties may seem to differ considerably from Spencer County. They are larger in area, with larger populations. Taylor and Barren Counties are considerably industrialized, at least compared with Spencer County which has no non-agricultural industry at all. In addition, Spencer County's proximity to the major urban center of Louisville is a dynamic factor not duplicated in the other counties (Bowling Green, Kentucky, is not only much smaller than Louisville, but is expanding less rapidly, and is farther away.) Nonetheless, there are basic similarities of significance. All the counties are predominantly agricultural, and moreover the agricultural patterns are similar. As small, family-owned farms go nowadays, these are relatively prosperous, not near-subsistence level operations like many farms of Appalachia. Grade A dairying and burley tobacco production are key components of the farming patterns. Even in what might be called secondary industrialized patterns, Adair, Allen, and Spencer Counties are similar, all three having about 20% of their work forces commuting to industrial jobs outside their home counties. Finally, all five counties are to be classed as of the central Kentucky subcultural tradition, manifested by a lifeway and value system different from that of the eastern and western portions of the state. In other words the total weight of the similarities is great enough to make comparing effects and probable effects of the manmade lakes a significant exercise. Effects of the reservoirs on Adair, Taylor, Allen and Barren Counties can be expected to give us a preview of the patterns of impact of the proposed reservoir on Spencer County.

Local Government in Kentucky: Functions and Personnel. Since the concern of the present study is on the impact of a reservoir on local government institutions, the structure of local governments and the duties and responsibilities of local officials will be described briefly. In the Commonwealth of Kentucky, as is probably true in most, if not all other states of the Union, the structure of local governments and the duties of the various officials are quite precisely prescribed by the State Constitution. Consequently, all local governments are organized according to one of the few prescribed options, and are administered by essentially the same categories of officials.

County government. According to the State Constitution, a county must have one of two types of legislative and administrative bodies: "Counties shall have a Fiscal Court, which may consist of the Judge of the County Court and the Justices of the Peace...or a county may have three commissioners, to be elected from the county at large, who, together with the Judge of the County Court, shall constitute the Fiscal Court." (Commonwealth of Kentucky: Legis. Res. Comm. 1964, p. 20). The first system of structuring county governments, a Fiscal Court consisting of the County Judge and Justices of the Peace (Magistrates), is the preferred method throughout the state, and was the system used by all the counties surveyed in this study.

The Fiscal Court is the key legislative and administrative body of the county. It is responsible for approving the county budget and approving all claims against the budget. It manages the county road program, sets salaries of certain county officials and employees, approves the appointment of a number of county employees and exercises various other powers

of administrative and legislative nature (Commonwealth of Kentucky: Legis. Res. Comm. 1968, p. 32). The Fiscal Court has three primary functions or responsibilities concerning county finances. In each county of the state a county budget commission prepares the budget which must be approved by the State Local Finance Officer, but the Fiscal Court has the option of approving the budget as prepared or making changes in the amount and types of the Fiscal Court considers it necessary. The Fiscal Court also has the responsibility of setting the county tax levy and the school tax levy (except those of independent school districts in cities of the first four classes). "A school district submits to the Fiscal Court a general school budget and specifies the ad valorem tax and poll tax necessary to obtain the amount of money needed to maintain the budget. The court then levies the tax rates specified by the Board." (op. cit., p. 17). The school board, although it is composed of elected members and is the decision-making body for educational matters in a community, is not considered a part of county government. It is, therefore, not discussed in the Legislative Research Commission publication referred to above which lists and describes qualifications, election, and functions of county government officials.

In addition to these functions related to county finances, the Fiscal Court is responsible for the county road program. The county judge and Fiscal Court are responsible for employing and discharging road employees, and for working with the State Department of Highways in planning road construction and maintenance in the county each year. The State Constitution also delegates authority to the Fiscal Court to set salaries of county officials. These primary responsibilities and functions of the Fiscal Court are those described in the Legislative Research Commission's Duties of

Elected County Officials, but there are other functions of county government which may be determined by examining the county budgets.

Such an examination indicates that county governments also have responsibilities in the areas of public health; law enforcement, educational institutions such as libraries, and planning and zoning commissions if they have been set up in the county. The county's responsibilities in these areas usually consist of appropriating funds for the operation of, for example, the county health department and the county library and book-mobile, and maintaining the jail.

A look now at the county officials and their specific functions and duties will complete this review of county government structure and function. "The Kentucky Constitution, Section 99, requires each county to elect a Judge of the County Court, a County Clerk, a County Attorney, Sheriff, Jailer, Coroner, Surveyor, and Assessor, and in each Justice's District one Justice of the Peace and one Constable..." (op. cit., p. 2). In terms of importance and power, the two key officials in the county structure are the County Judge and the Sheriff. The County Judge in addition to presiding over the Fiscal Court presides over the County Court and the Quarterly Court. Quarterly and County Courts exercise both civil and criminal jurisdiction, and are part of Kentucky's system of minor courts. These courts try minor civil cases and misdemeanor cases. The county judge is also empowered to issue warrants of arrest, has responsibility for the juvenile court, and has a variety of appointive powers (for example, appoints members of building commissions and planning and zoning commissions). The county judge has in addition to these judicial and administrative responsibilities and powers, other duties and powers ranging from

performing marriages to changing speed limits in the county.

The county clerk's duties and responsibilities are in the areas of keeping records, issuing licenses, voter registration, conducting elections and property tax administration. The county clerk must attend all sessions of the county court, the juvenile court and the fiscal court and keep complete records of the proceedings of each of these courts. It is also the duty of the county clerk to issue licenses "for everything from catching a husband to netting a fish" (Issuing marriage licenses and fishing licenses), (op. cit., p. 44). He registers all motor vehicles owned by persons residing in the county and issues automobile license plates to residents of the county. Other licenses issued by the county clerk are hunting licenses, watercraft licenses, etc. The county clerk is also responsible for recording and keeping permanent records of the settlement of estates, wills, deeds, real estate mortgages, easements, real estate options, and other types of legal instruments. It is the duty of the county clerk to receive voter registrations, and he also assists the county board of election commissioners in the counting and certifying of ballots and results of an election. And finally, the county clerk has responsibilities in connection with property tax administration. For instance, he makes an annual report to the tax commissioner listing all mortgage notes, purchase money notes, etc., and he prepares the county tax bills. These are just some of the duties and responsibilities of the county clerk; the listing is not complete, but rather describes some of the more well-known of the county clerk's duties.

The county attorney must act as "a courtroom attorney" for the county and state, and must be ready to give legal advice whenever called upon by

various county officials, county boards, and other local agencies, The county attorney is also by law required to serve with the county judge on the county budget commission.

Sheriffs, coroners, jailers and constables are peace officers and possess the law enforcement power of such officers. "These powers include a broad grant of authority to make arrests." (op. cit., p. 67) In addition peace officers according to Kentucky law must seize untaxed cigarettes, aid in destroying diseased livestock, enforce truck weight-limit-and-size laws, and cooperate with the Kentucky Department of Public Safety in the fingerprinting and identification of prisoners. The sheriff in addition to his law enforcement duties is the collector of property taxes for the state, county and taxing districts, and has responsibilities during elections. He secures voting places in each precinct in the county and advertises the various elections.

County jailers have custody and charge of the county jail and all persons in the jail. They are also responsible for taking care of furniture and other property belonging to the courthouse and jail. Coroners must be notified of deaths which occur under certain circumstances (murder, drowning, or other deaths from unnatural causes, or without an attending physician.) Constables are law enforcement officers with broad powers of arrest and authority to serve court processes. They can, for example, execute warrants, summons, subpoenas, attachments, notices, and rules and orders of the court in all criminal, penal and civil cases.

The county property valuation administrator, formerly called the county assessor or the county tax commissioner, assesses all property in his county, except as may otherwise be provided by law, and he prepares the

property tax rolls according to taxing districts in his county.

This review of Kentucky county government personnel and functions should give an indication of the range and types of responsibilities that local officials assume when they are elected to a county office. It also should provide a starting point for determining which areas of county government functions are likely to be affected negatively or positively when a multi-purpose reservoir is constructed in a county.

City government.

Cities in Kentucky are assigned to one of six classes on the basis of their population size, and the class to which a city is assigned determines the form of city government it must have (Commonwealth of Kentucky: Legis. Res. Comm., 1970b, p. 1; idem, 1966, p. 1).

Taylorsville, a sixth class city because it has a population of less than 1000, is governed by a Board of Trustees of 5 members, who elect one of their number mayor. In Taylorsville the Board is usually referred to as the "town council." The town council consists of four part-time members, and the mayor who serves part-time also. Other elected officials are the city judge and the city attorney. (Smith: 1970: 70).

The town council's primary activities include providing water for the community, garbage collection, and providing police protection for the community. The town council not only provides water for the city, but has extended its service to provide water for most of the county. This will be discussed further in a later section on water systems.

The chief of police and his policemen, in charge of law enforcement in the city, are full-time employees. Other full-time city employees include the city clerk, the water and sewage systems manager.

Columbia, Adair County, is a fifth class city, although it may attain fourth class status on the basis of the 1970 Census reports. A fifth class city is one with a population ranging from 1000 to 2,999 persons. Such entities may have either a Mayor - council type of government, or a Commissioner type. In either case the elective functionaries are part-time employees of the city. In the first type, there must be a mayor and six councilmen. In the Commission form, three commissioners are elected, who then select one member as "mayor" or presiding officer. In either case a judge ("city judge," or "police judge"), must be elected also. There also is a city attorney. In all cases of elected officers, length of term served in each category is defined by statute, as is method of determining remuneration ("salary of not more than \$x," or in other cases, "salary fixed by ordinance," or "salary set by voters, but not to exceed \$x"). These details are specified for elected officials of all classes of cities up to at least third class. In addition to the elected officials there are various appointive ones, usually full-time employees.

Fourth class cities such as Campbellsville, Taylor County, and Scottsville, Allen County, with populations ranging from 3,000 to 7,999 have an added option, in addition to Mayor-council and Commission forms of government. They may have a City Manager form in which the mayor and a four man commission appoint the City Manager and fix his salary. Cities of this class adopting the Mayor-council form, have a mayor and from six to twelve councilmen; under the Commission form have a mayor and four councilmen; under the City Manager systems a mayor, four commissioners, and their appointee the City Manager. The police judge may be elected or appointed. In addition there are the various appointed employees, as necessary.

Cities of the third class (population 8000 to 19,999), which includes Glasgow in Barren County, have the same options as cities of the preceding class: Mayor-council, Commission or City Manager. An important difference is that in the Mayor-council and City Manager forms, the mayor and the police judge are full-time employees and apparently the City Manager is too.

It will be shown in our discussion that ordinarily city governments are less strongly affected by reservoirs than are county governments. However, there are certain fields of activity in which cities may feel an impact, and certain special circumstances (such as the proposed merger of city police and sheriff's office in Spencer County), which may augment reservoir impact on the city. When, some pages hence, these matters are discussed, the foregoing descriptions of forms of city government will be useful for reference.

CHAPTER I
RESERVOIRS AND COUNTY FINANCES

Spencer County

All Spencer County officials and concerned citizens who were interviewed made clear their conviction that for the "three or four" years, from beginning of land acquisition by the Corps of Engineers for the Federal Government until completion of the dam and impoundment of the reservoir, county government will be in dire straits financially unless some special solution or solutions can be found to bolster county revenues. It is clear that this concept has been discussed widely in the study community and is generally accepted. The "dire straits," it is said, will derive from the combination of two causal factors: a sharp decrease in county revenue, and a greatly augmented demand for services in such areas as water supply, road maintenance, law and order, etc. In this chapter the first factor: effect of dam construction on county revenue, will be considered. Succeeding chapters will discuss effects on the services that a county is required to deliver.

The anticipation of a sharp decrease in county revenue is based on the principle of intergovernmental tax immunity. The real estate tax levies, so important to county revenues, will be diminished as the Federal Government takes title to about 14,000 acres of Spencer County farmland. Since Spencer is a rather small county, removal of such an acreage from the tax rolls would appear to justify local apprehensions of significant loss, as the following brief tabulation shows:

Table I

Total acreage	Total farm acreage	Farm acreage to be acquired	% total acreage	% farm acreage
123,520	120,267	"14,000"	11.3	11.6

Table 1. Spencer County acreage, and reduction in acreage to be caused by Taylorsville Reservoir.

Primary sources of county revenue are tax levies receipts and the Truck License Distribution. The term tax levies receipts consists mainly of receipts from real estate taxes, supplemented by: tangible personalty tax, tax on bank shares, tax on franchise businesses, a poll tax (which has nothing to do with suffrage), and a timberland tax. In Spencer County where, for example, bank shares are held by few, and there are few franchise businesses, the non-real estate taxes are overshadowed by those on real property. In fiscal year 1970, for example, the tax levies receipts (all categories), totalled \$51,175,06, of which \$42,938.77, or 83.9%, came from real estate taxes. The truck license distribution consists of funds from the source indicated disbursed to the counties of the Commonwealth of Kentucky from the state capitol in Frankfort. In the year just referred to, Spencer County received \$32,064.96, or 32.5% of total revenue, from this source. This money goes into, or in Spencer County constitutes the Road and Bridge fund. Thus in the year stated the tax on real property and the Truck License Distribution combine to make up 76% of county revenues. All other sources of income combined: the non-real estate components of tax levies receipts, fines and forfeitures, property transfer tax, occupational licenses, legal process tax, dog licenses, etc., while contributing to the operations of county government, contribute far less than the tax on real property. Another expression of the importance of the tax on real estate

appears in Table II, which shows the real estate levy (real estate only), numerically and as a percentage of total county income from fiscal year 1960 to 1970 inclusive, "Total county income" includes the receipts of the Truck License Distribution, and all other receipts. The percentage of real property taxes runs consistently from 47 to 52%, except in 1970, when a reduction in the tax rate and an increase in other revenues lowered the percentage to 43.5, still a substantial part of total income. In brief, the figures on the levy on real estate demonstrably seem to support informants' assertions as to the levy's importance in county fiscal affairs, and accounts for their preoccupation over the inevitable loss due to Federal land acquisition.

The pessimistic expectations of informants were remarkably uniform. "It will be mighty rough (for county government) for four years or so, until the dam is built," was a thought expressed, though wording varied of course, by all county officials interviewed. There were a few variations on the theme of possibility of partial relief. While most persons foresaw no relief during the construction period except through extraordinary measures, a few suggested that purchase of land in the county and construction of homes by people from Louisville may generate additional taxes. The argument here is that the lands would be reassessed at values higher than the previous assessment which was based on agricultural, not residential values. The new residences, if built during the dam construction period, would add considerably to the new valuations. A very few informants pointed to the possibility that a substantial number of construction workers may move to the county during construction, as occurred when the levee was built around Taylorsville in 1948. If this should occur it obviously would

Table II

<u>Fiscal Year</u>	<u>Assessed Valuation Real Estate</u>	<u>Tax Rate</u>	<u>Real Estate Levy (only)</u>	<u>Total County Revenues</u>	<u>Real Estate as Percent of Total</u>
1960	\$5,762,780.00	.50	28,813.90	58,305.70	49.4%
1961	\$5,906,690.00	.50	29,533.45	60,082.03	49.2%
1962	\$6,048,500.00	.50	30,242.50	60,207.36	50.2%
1963	\$6,173,702.00	.50	30,868.51	62,705.02	47.6%
1964	\$6,278,420.00	.50	31,392.10	64,999.20	48.3%
1965	\$6,576,750.00	.50	32,883.75	68,436.61	48.0%
1966	\$7,767,885.00	.14	38,875.03	74,371.87	52.3%
1967	\$28,192,750.00	.14	39,469.86	77,587.16	50.9%
1968	\$32,149,183.00	.127	40,829.45	82,939.42	48.0%
1969	\$32,656,077.00	.127	41,473.22	88,003.35	47.1%
1970	\$39,035,454.00	.11	42,938.77	98,675.37	43.5%

Table II. Real estate revenues in relation to total Spencer County revenues, fiscal years 1960 through 1970.

(Commonwealth of Kentucky: Auditor of Public Accounts.
Spencer County Audit Reports. 1960-70, Frankfort, Kentucky.)

not affect the real property tax base, but these informants believe that the new income brought in by the workers would generate other kinds of tax and revenue for the county. Most persons interviewed, however, perceive the probable impact as creating the situation depicted in the beginning of this chapter: Major financial difficulties for county government during construction, to be followed by something of a boom afterward as new residents move in and tourism associated with water-borne recreation develops.

Informants tend to couple the county school system with the county government in discussing the fiscal effect of Federal land acquisition. While as stated previously--and as informants know quite well--the school system is not a part of county government, they are essentially correct in relating the two institutions at this level. The school tax is computed, as so much per \$100, on the same real property assessment as that used to compute the county tax. It is collected by the same county official (the sheriff) as the county tax, who then turns the total amount to the School Board. Land-taking to an extent that seriously affects county revenues would presumably affect the local revenue of the school system also.

The opinion that not only will the county real estate tax base be drastically reduced, but that the amount of the reduction is unpredictable was expressed by a number of informants, and seems to color the perceptions of many. If the amount to be lost is unpredictable, then county officials, so it is reasoned, cannot plan adequately. A vacillating policy on construction, and a communications gap between the Corps of Engineers and the community is blamed for the situation. Since first announcements of maximum extent of the reservoir, a series of changes in dam design, involving increases in height, have increased the maximum pool area, and thus

increased the amount of land to be taken by a substantial number of acres. Such increases become known when mentioned incidentally in occasional Corps press releases. The "communications gap" concept comes from the fact that precise figures on the extent of the buffer zone around the lakes are not made public, and the same is true of the proposed park of about 3,500 acres. Actually, both practices are said to occur commonly in these projects. To increase the floodwater storage capacity of a reservoir by carrying out a relatively low cost design change is regarded as an increase in engineering efficiency. Restricting information on precise limits of land-taking is considered by the Corps to be a means of controlling speculative land-buying which might inflate all local land prices making land acquisition within the "take-line" more difficult, and more expensive to the Government. Both practices are perceived by Corps of Engineers officials as devices for protecting the American taxpayer. To the affected community however, they contribute to the Corps' local image as vacillating, capricious, and quite unconcerned about the problems that its operations create in the community.

When county officials were asked how they plan to deal with the loss of revenue, minor difference of opinion appeared. Four possibilities were suggested, and commented pro and con:

1. Raise the tax rate,
2. Draw on the county emergency fund reserve,
3. Get a Federal grant,
4. Reduce delivery of services.

Informants' discussion of these "possible solutions" brought out an interesting point: all four seem to be conversational items, widely talked about in the community, but not systematically and objectively investigated.

Of the four, two are possible and practicable, one is impossible and one, if not impossible, is highly undesirable. A summary of opinions and facts on the four items follows.

1. Raise tax rate. Those informants who discussed their views in detail nonetheless were not enthusiastic about this solution, because, they maintain, raising the tax rate is difficult to accomplish, requiring approval at state level. A state official at Frankfort told us that obtaining authorization for raising the tax rate to produce more revenue than that received the preceding year is somewhat difficult, but to raise it the amount necessary to equal the preceding year's revenue is a simple matter. He cited a state law which according to him permits such a change. The law reads "...no county budget commission shall submit a budget which would require more revenue from local ad valorem taxes than would be produced by application of the preceding year's rate to the preceding year's assessment, exclusive of voted levies and net assessment growth..." (Commonwealth of Kentucky, 1971, 68, 245). What he was saying was that under the law, raises in ad valorem rates as necessary to equal the previous year's receipts are permitted. (This is of course only an opinion of a presumably well-informed bureaucrat; we did not search for a court decision verifying it.)
2. Use of emergency fund reserve. Spencer County had, at the end of fiscal year 1971, the sum of \$49,938.22 in "Emergency fund reserve." The emergency funds would suffice, said one county official, if the tax loss did not exceed \$3,000 per year for three years, and began to decline the fourth year. He did not explain how he derived the

\$3,000 figure, now how $\$9,000 + (\$3,000 - x) + (\$3,000 - y)$ (etc.), was the maximum amount that could be covered by an emergency fund the size of Spencer County's. The same state official who explained that a tax rate increase was possible stated that in his view raising the tax rate, leaving the emergency fund intact, would be the better way to cope with the tax loss.

3. Federal grant. Several informants suggested this as a possibility. Actually, there are no Federal funds available for aid to county governments.* Officials of both the state government and of the Corps of Engineers confirmed this fact. (Both noted that there is a special provision for supplementary Federal aid to county school system revenue in case of a loss 10% or more of school revenue due to Federal land acquisition [Public Law 874, 81st Cong. 2nd sess.]. However, it was reported that this law has been invoked in few instances since passage, because with substantial amounts of Federal and state aid to schools, losses in total revenue almost never reach 10%.)

Comparative data: Kentucky and Oregon

We have been able to find few studies of reservoir effect on county revenues with which to evaluate the Spencer County anticipations. One such study is that of Bates (1969). He attempted to analyze impact on county

*Note: At the time of the fieldwork and preliminary drafts of the report, this was true; at the final rewriting and editing of this report, spring and summer 1973, the new Federal procedure of "revenue-sharing" to states and cities was announced. It may affect the fiscal situation of county governments generally and resolve Spencer County's problems in particular, although it is not yet clear if, and how, county governments will participate in the program. Spencer Countians now anticipate regular and substantial sums from this new source.

revenues of counties affected by Barkley, Barren, and Green River Reservoirs (the two last named were restudied by the writers of the present report). His method consisted in analysis of county revenues, tax rates, and personal income of taxpayers in the affected political units, from which he attempted to determine "time trends in tax severity to determine the tax revenue effect on local governments." Tax severity he defined as follows: "The severity of local taxes is indexed by the ratio of property taxes to (1) the full market value of the tax base, and (2) the personal income of taxpayers in the affected jurisdictions. Time changes in these two ratios yield elasticity coefficients that are interpreted in terms of increasing, decreasing, or unchanging tax severity." Using this measure, Bates concluded "the burden of property tax did not increase as land was gradually removed from the tax rolls...no county governments and the school districts in only one county experienced any expenditure increases causally related to reservoir development" (Bates, 1969, p. vi).

Bates' approach has certain deficiencies that weaken his conclusions. He does not distinguish between the various states: pre-construction, land acquisition, construction-impoundment, post-impoundment. It is obvious that these stages have differential effects, short-term differences, perhaps, but ones which are crucial at the time. Thus Bates' statement that "Reservoirs improve the tax base by attracting industry and recreation," is meaningless for the land acquisition-construction-impoundment period. (His data on this topic from Green River Lake, filled in 1969, the year of preparation of his report, are sparse).

Another serious criticism is his failure to discuss effects of the 1965 Kentucky requirement for full value assessments on real property,

with a reduction of the tax rate, in 1966. There was a sharp increase in gross real estate levy in all the counties with which the present report is concerned except Taylor County (where there was nonetheless an increase in total levy, presumably from taxes on industry). (See Table III). This means that despite lowered tax rates, people actually paid more real estate taxes than previously from 1966 on (except in Taylor County where the tax rate was raised substantially, certainly increasing tax severity, in 1969). What increase in personal income Adair County citizens received during that year of dam construction, in order to balance the tax increase, is unclear.

Another study of the same problem was made by Smith, Hogg, and others who focused on the impact of construction of two dams in Oregon: Foster, and Green Peter. Their findings are diametrically opposed to those of Bates: "municipal expenditures rose sharply during construction," although those expenditures were offset by fines, forfeitures, and the like. Again, "schools experience great crowding during construction; and yet, schools show evidence of better quality following construction," an improvement which, they maintain, is "reflected in and mostly provided from the greater severity of local property taxes," (underlining supplied). (Smith, and Hogg 1971; Smith, Hogg, and Reagan, 1971;) The Oregon situations seem to reflect the incursion of large groups of construction workers. This parallels to some extent the situation in Taylor County, Kentucky, during building of the Green River dam, where construction workers also moved in during the building phase, and where, according to our information, there was some resultant pressure on the school system.

In the face of such conflicting conclusions, we assume that we are dealing with situations produced by interaction of numerous variables, all

Table III

Green River Reservoir - Adair County

Year	Assessed Valuation Real Estate	Tax Rate	Gross Levy Real Estate	Gross Levy Total	Percent Levy Real Estate
1959	\$ 6,059,668	@.65	\$39,387	\$ 68,621	57.4%
1960	6,147,409	@.65	39,901	70,616	56.5
1961	6,209,340	@.70	43,465	81,968	53.0
1962	8,176,740	@.70	57,237	92,786	61.6
1963	8,225,885	@.70	57,441	96,596	59.4
1964	8,333,877	@.70	58,023	99,167	58.5
1965	8,456,495	@.70	59,110	102,342	57.7
1966	49,912,738	@.135	67,372	106,140	63.4
1967	50,497,338	@.135	68,176	106,358	64.1
1968	49,954,833	@.1535	76,681	113,708	67.4
**1969	51,044,400	@.1525	77,842	120,530	64.5

Green River Reservoir - Taylor County

1959	\$ 9,535,770	@.70	\$ 66,750	\$117,180	56.9%
1960	10,034,120	@.70	70,238	131,201	53.5
1961	10,289,850	@.70	72,089	138,660	51.9
1962	10,875,502	@.70	76,115	136,727	55.6
1963	11,098,939	@.70	77,593	139,092	55.7
1964	11,428,931	@.70	80,003	137,869	58.0
1965	11,780,385	@.70	82,463	144,267	57.1
1966	59,851,441	@.131	78,406	158,107	49.6
1967	61,561,832	@.131	80,645	154,166	52.1
1968	63,228,003	@.134	84,725	163,100	51.9
**1969	66,607,502	@.231	153,863	230,370	66.7

Barren River Reservoir - Allen County

1959	\$ 6,092,184	@.56	\$34,116	\$ 65,106	52.4%
1960	6,328,722	@.60	37,972	73,430	51.7
1961	6,525,122	@.60	39,150	77,661	50.4
1962	6,806,424	@.60	40,838	81,289	50.2
1963	7,246,839	@.60	43,481	84,270	51.6
1964	7,537,409	@.54	41,154	77,936	52.8
**1965	8,115,000	@.54	43,821	79,871	54.8
1966	39,457,339	@.153	60,370	98,176	61.4
1967	40,768,687	@.152	62,208	96,404	64.5
1968	42,329,069	@.224	94,819	143,258	66.1
1969	43,927,689	@.222	97,643	149,269	65.4

Table III (continued)

Barren River Reservoir - Barren County

<u>Year</u>	<u>Assessed Valuation Real Estate</u>	<u>Tax Rate</u>	<u>Gross Levy Real Estate</u>	<u>Gross Levy Total</u>	<u>Percent Levy Real Estate</u>
1959	\$ 18,600,487	@.50	\$ 93,002	\$152,784	60.8%
1960	19,226,364	@.50	96,132	160,332	59.9
1961	19,839,363	@.50	99,197	168,654	58.8
1962	20,396,644	@.50	101,993	171,663	59.4
1963	20,873,777	@.50	104,374	178,409	58.5
1964	20,886,327	@.50	109,432	182,321	60.0
**1965	22,878,805	@.50	114,394	192,037	59.5
1966	118,049,098	@.132	152,406	227,000	67.1
1967	123,468,228	@.132	163,462	230,940	70.7
1968	128,119,366	@.131	167,236	250,848	66.9
1969	132,948,647	@.131	174,163	256,056	68.0

Table III. Real estate revenues in relation to total county revenues, Adair, Taylor, Allen, and Barren Counties, fiscal years 1959 through 1969.

(Commonwealth of Kentucky, Audit Report of County Fiscal Courts:
Adair, Allen, Barren, and Taylor Counties, 1959 to 1969.

[construction period.
**Year in which water impounded.

of which have not been properly identified, and for which a method of evaluation has not yet been devised. Consequently, each case must be considered separately, and on its own terms, until eventually a general pattern or patterns of impact can be defined.

Comparative data: Green River and Barren River Lakes

Data from Green River and Barren River Reservoirs in south central Kentucky will be discussed here, on the premise that observed effects of these recently built dams will provide some guides for predicting effects of the proposed Taylorsville Reservoir. It will be recalled that the counties concerned, Adair and Taylor Counties in the Green River Reservoir area, and Allen and Barren Counties in the Barren Reservoir area, are, like Spencer County, predominantly agricultural, although industry is important in Taylor and Barren Counties. These counties differ from Spencer chiefly in their lack of proximity to a burgeoning urban center. Bowling Green, Kentucky, the nearest, has nothing like the suburban expansion pressures of Louisville, a few miles from Spencer County.

The data reported here were collected from county officials, interested citizens, and from various documentary records. City officials do not have to face the same reservoir-produced problems in regard to administrative revenues and expenditures, although of course, as residents of the county, they consider themselves affected.

While local officials recall some apprehension over effects of reduction of tax base on county finances, they now generally agree that no serious difficulties occurred. Even without the revision of the tax base caused by full assessment (which came at a very convenient time for Adair

and Taylor Counties, and a fairly useful time for the two counties affected by Barren River Reservoir), and despite Federal land acquisition, the tax base tended to expand. One factor of course was the state and national trend toward increasing land prices, another, to be discussed in more detail later on, was the local effect of land purchases by persons displaced by the reservoirs.

Additional variables affecting county tax structure while a dam is under construction were noted. One such is the proportion of county lands acquired by the Federal Government in relation to total tax-producing lands in the county, and, as regards impact on the local agricultural economy, the percentage of farmlands acquired in relation to total farm acreage. Bates pointed out this fact but did not stress it as a key variable. This impact-affecting factor would seem to be self-evident, but it seems not to have been considered in planning attempts by county officials. Rather, it was noted in retrospect. Table IV shows amount of land acquired by the Federal Government in the two reservoirs and the four counties under present consideration. Obviously, if we assume a reasonably similar average per acre value of lands throughout the county, in counties like Allen and Barren with rather low percentages of total land and of farmland removed from the tax rolls, the impact on county finances should be less damaging. Of the four, Taylor County might be predicted to have had more problems from diminished revenue.

Table IV

<u>Project</u>	<u>Counties</u>	<u>Total Acreage</u>	<u>Total Farm Acreage</u>	<u>Total Farm Acreage Acq.</u>	<u>% Total Acreage</u>	<u>% Farm Acreage</u>
Green River Reservoir	Adair	251,520	194,481	15,241	6.5%	8.4%
	Taylor	181,760	154,102	17,102	8.8	10.4
Barren River Reservoir	Allen	240,428	196,158	7,512	3.0	4.2
	Barren	323,621	306,298	12,512	4.0	4.3

Table IV. County acreages, and amounts of land acquired by Federal government, Green River and Barren River Reservoirs.

Another significant variable is the rate of acquisition of reservoir lands by the Corps of Engineers for the Federal Government. According to Corps officials, the standard procedure is for appraisers to evaluate, and for buyers to work out agreements to purchase "at fair market value" the lands needed for the dam, spillway, access roads, equipment parking, etc., and then acquire the lands above the dam, beginning at the damsite and proceeding upstream in orderly fashion. This is the procedure that Bates describes and evaluates: "...the land was purchased piecemeal over an extended period of time allowing the counties to adjust property valuation." (Bates, 1969, p. vi) However, the rate of land acquisition was highly irregular, as shown in Table V. If reduction of tax base actually affects county government in these cases, no planning by county officials could be effective when acreages purchased varied from a few percent of the total acquired in a county in one year to 50% or more in another (Taylor County: Yr. 1964, 17%; yr. 1965, 52%). The figures in Table V clearly suggest that, for example, in 1965 major effort by the Corps to acquire land for the Green River Reservoir was directed to the Taylor County side of the area,

and to the Adair County side in 1966 and 1967. If this geographical pattern of purchasing was planned (for example, to reduce travel time and mileage

Table V

Green River Reservoir

<u>Year</u> <u>Acquired</u>	<u>Adair</u> <u>County (acres)</u>	<u>Taylor</u> <u>County (acres)</u>	<u>Total</u> <u>(acres)</u>
1963	0	766	766
1964	0	3,031	3,031
1965	1,328	8,959	10,287
1966	5,011	3,820	8,831
1967	7,748	416	8,164
1968	1,154	108	1,262
1969	0	2	2
	<u>15,241</u>	<u>17,102</u>	<u>32,343</u>

Barren River Reservoir

<u>Year</u> <u>Acquired</u>	<u>Allen</u> <u>County (acres)</u>	<u>Barren</u> <u>County (acres)</u>	<u>Monroe</u> <u>County (acres)</u>	<u>Total</u> <u>(acres)</u>
1960	159	200	0	359
1961	2,500	3,382	0	5,882
1962	4,255	6,373	86	10,714
1963	598	2,441	0	3,039
1964	0	11	0	11
1965	0	105	0	105
	<u>7,512</u>	<u>12,512</u>	<u>86</u>	<u>20,110</u>

Table V. Federal land acquisition, acres per year, Green River and Barren River Reservoirs. (U.S. Dept. of the Army, Corps of Engineers, Louisville District)

costs by Corps personnel), then it would seem possible for the Corps to inform officials of affected counties at least by the beginning of construction when to expect maximal impact on county real estate levies. It scarcely seems possible that the land acquisition program is not planned from the outset.

Another aspect of land-purchase procedures, if those of Green River and Barren River Reservoirs can be taken as typical, is that reduction of

the tax base begins gradually, then increases sharply to peak about halfway through the construction phase. Thus the maximal effect on county budgets does not prevail during the entire construction phase, but only during part of it.

A review of the valuations and gross levies on real estate over the period 1959 through 1969 (Table III) shows a constant growth in all four counties with no fluctuations that could be attributed directly to construction of the stream-control devices. Such changes as occur are either derived from the mandatory full value assessment on real estate in 1966 combined with change in tax rate, or other changes in the tax rate on real property. Other factors involved included the long continued state and national trend to rise in land prices, and the local factor of increased demand for land by persons dislocated or to be dislocated by the reservoir which creates a sellers' market forcing prices upward. We did not learn of a significant amount of speculative buying comparable to that which occurred in the Taylorsville Reservoir area that has contributed to sharp increase in land values (Drucker, Smith, and Turner, 1972). Even without such a stimulus, however, a moderate number of land transactions per year at higher prices per acre produce substantial changes in assessments because reassessments are normally made only when the new deeds are recorded. There is a noteworthy reluctance to reassess all properties of a county at regular intervals to keep valuations in line with the general inflationary pattern of the national economy. This pattern has been discussed as widespread in U.S. rural areas (Vidich and Bensman 1958); in point of fact it is not limited to rural counties. It is carried out whether or not a multi-purpose dam is to be built or is being built in a county, and serves to keep

property assessments and taxes derived from them slightly behind the national inflationary trends.

The few variants from the pattern of increasing assessments/increasing gross real estate levies must be discussed. Table III shows that in Adair County in 1968 after maximum Corps land acquisition in 1967, total land valuation decreased by \$542,505, but was compensated for by a \$.018 increase in the tax rate. In Taylor County, the full value reassessment in 1966 was accompanied by a tax rate, \$.131, which produced less real estate taxes, but there was a slight increase in gross levy, presumably from industrial sources. A substantial change in tax rate in 1969, greater tax severity, produced substantial increase in county revenues. In Allen County, where Bates found increased tax severity by his formula, the table shows no decrease in assessments or gross real estate levies, but a sharp increase in the tax rate in 1968 which augmented the real estate levy substantially. In other words, except possibly in the case of Adair County, the discernable variations from the pattern of consistent increase in gross real estate tax levies reflect poorly calculated tax rate adjustments to the mandatory full real estate valuation law of 1966, and in no way can be attributed to the reservoirs.

The impact of reservoirs on private aspects of the economy, by means of which there is created "an increase in the ability to pay taxes," a part of Bates' formula of rating tax severity, must now be examined. Proponents of multi-purpose dams designed with a recreation component always stress the benefits to the local economy from tourism associated with fishing, boating and other ~~water~~-related activities. Each reservoir (Green River and Barren River), is estimated to have about a million

man-days of visitors per year. Both county officials and private citizens interviewed in the reservoir areas, believe that tourism brings in substantial amounts of money to the reservoir-area communities. Of course this additional income began only after impoundment of the lakes. During the construction period no such benefits occur. Neither during nor after construction/impoundment was there an influx of permanent residents from outside comparable to that expected to form a sort of Louisville suburb in the Taylorsville Reservoir area.

There seems to be a consensus in the Green River-Barren River Reservoir areas that the reservoirs have had significant influence in attracting industry, and will continue to do so. Actually both Campbellsville, in Taylor County, and Glasgow, Barren County, the most industrialized centers, had taken the trend toward industrialization by actively and successfully seeking industries before the reservoirs were built. Of Glasgow's 21 industrial plants only two have been built since the filling of Barren River Reservoir; similarly, only two new industries have located in Campbellsville since the lake was formed (one soft-drink bottling plant was opened in 1964 when construction of the Green River Dam began; it had obviously been sited at an earlier date). The attractions for industry plainly consist in availability of labor, tax relief, access to transportation networks, and the like, not in access to water skiing.

Summary

So far we have reviewed, (a) the gloomy, or even alarmist perceptions of officials and others of Spencer County of the impact of the dam and reservoir on county finances: these perceptions are important because they

will provide the basis for plans and decisions; (b) earlier studies of this problem from widely separate locales in the rural U.S.: these studies proffer somewhat contradictory results, which does not invalidate them but which means that we are dealing with very complex situations; (c) data from two recently constructed south central Kentucky reservoirs that offer leads as to some of the significant variables to be considered. Assembling the foregoing facts and interpretations we derive the following primary conclusions:

1. Data from Barren River and Green River Reservoirs indicate that while loss of county revenue by Federal land-taking has a potential for a negative effect on county government operation, this negative effect may be inconsequential. This is because the loss may be outweighed by increasing revenue from reassessments from land sales at higher prices than the prior sales on which assessments are based. In the reservoirs referred to, such sales were made principally to persons dislocated by the reservoirs. An additional factor was the fairly steady economic growth not only locally but nationwide, which supported a constant trend toward increase of land prices. The special local dislocatee demand augmented this trend.

When this pattern is applied to the Spencer County situation, some special factors must be considered. Spencer County is considerably smaller than those affected by the reservoirs just referred to, and the total amount of farmland to be taken comprises a larger percentage of its area. These facts are significant in two special ways. One is that all the persons dislocated by Taylorsville Reservoir who buy noninundated lands in order to

continue farming may not find available land in the county. Therefore, dislocatee land-buying at high prices may add comparatively little to local tax revenues. Second, the higher percentage of tax loss may approach a critical point, in comparison to the larger counties with the lesser proportion of loss of farmlands. An additional point to be noted is that non-industrialized Spencer County lacks the tax resources of, in particular, Taylor and Barren Counties.

On the other hand, proximity to urban Louisville and the volume of land-buying by urbanites at prices above agricultural utility levels (for suburban residences, recreation sites, and speculation), is a resource not found in the other counties surveyed. This trend may be expected to compensate for the small volume of dislocatee land purchase, and in the long run, for the loss of tax revenue from the federally acquired farmlands. It is quite possible that this new trend may balance out the loss during the construction period.

Finally, even if the effect of residential land purchase in Spencer County on the tax base should be slow in coming about, there are realistic and practical solutions available to restore county revenues to the proper level. As we have seen, these are: raising the tax rate, or drawing on the emergency reserve. Raising the tax rate is viewed by elected county officials, who live in close contact with their constituents, as an unpopular activity. Nonetheless it can be accomplished, not only to restore losses in tax revenues, but to increase them, as perusal of Table III shows (rates were raised in Adair County, 1968; Taylor County, 1969; Allen County, 1968). But even if the reluctance to raise the tax rate is too great, the emergency reserve fund is available.

From the foregoing it would seem clear that losses to the county in real estate levy caused by Federal land acquisition need not cause insurmountable problems to county governments, although obviously the matter should not be ignored by the Spencer County Budget Commission and the Spencer County Fiscal Court, or by the corresponding budget-regulating bodies of any county in which a large reservoir is proposed. This is an important conclusion. It must be noted of course that county budgets are considered here only from the standpoint of receipts. If expenditures should be increased markedly simultaneously with Federal land acquisition in a county, fiscal problems must be expected.

The next point of significance is the pattern of the perceptions of impact of dam construction by officials of the county and persons conversant with operation of county government. Two aspects are noteworthy. One is the high degree of similarity of the views, the other is the unrealistic nature of many of them. As one reviews informants' statements on the subject one receives the impression that the problem has been discussed many times, and a set of facile answers agreed upon by consensus. In other words one is observing a body of recently emerged folklore. (This is not to imply that informants do not wish to answer properly, but that they give the responses they have been conditioned to accept as representing public opinion.) The unrealistic quality of many perceptions is easy to document:

One situation viewed as potentially crucial is that expected to be created in the County Clerk's office. It is argued that the many transactions resulting from Corps land acquisitions, plus dislocatee purchases, will completely swamp the office, which, unable to hire additional help because of diminished land tax levy, will be unable to function. The facts are these: the County Clerk, as will be recalled, has a multitude of

duties, and his office is a busy place. However, the less than 200 Corps of Engineers purchases (an estimated 135 families in the pool area plus about 50 in the park), plus the (probably limited number of) dislocatee purchases spread over a three or four year period does not appear to amount to an overwhelming workload. Moreover, on the occasion of land transfer, the seller pays a tax of \$1.00 per \$1,000 (0.1%) of the transaction, the buyer a recording fee of \$4.50 for each deed with one tract and one certification, plus \$0.40 for each additional tract and the same amount for each additional certification. The land transfer tax can be estimated as bringing in 0.1% of approximately \$4,000,000 (the source of this figure will be explained below), or about \$4,000. If the Corps pays the recording fee (none of the informants discussing this anticipated crisis was certain whether this would be done or not, although information could be obtained from the Real Estate Division of the District Office of the Corps in Louisville), this would add about \$900 to the amount. Amounts of transfer tax and recording fees paid by sellers to dislocatees and by dislocatees who buy in the county, is difficult to predict, but would add to the revenue generated by the transactions. The matter, viewed realistically, becomes not one of predicting collapse of the County Clerk's office, but rather of need for planning efficient utilization of the revenue from the added workload to pay supplementary or part-time assistance as necessary.

The often repeated complaint about the impossibility of estimating tax loss because of Corps of Engineers' failure to inform county officials of value of land to be taken, also has a mythical quality. One can arrive at a reasonable approximation of the amount by quite simple arithmetic.

(a) Total assessed value of farmland (1971)	\$32,154,048.00
(b) Total farm acreage	120,267 A
(a) ÷ (b) = average value per acre	\$ 267.36
(c) Land to be taken for reservoir and park	14,000 A
(c) x average price per A =	3,743,040.00
(d) Tax rate (1971) \$0.11 per \$100 value	
(d) x \$4,277,760.00 = approximate annual tax loss (when <u>all</u> land acquired)	\$ 4,117.34

The figure is manifestly approximate, not exact, but it could provide a working estimate for planning. A more sophisticated formula that would give an answer within limits of probable error could be devised but is not necessary. The amount represents of course the total depletion of tax revenue when all the land destined for the reservoir and park has been acquired, that is, after the three year period which the Corps of Engineers reckons for its land acquisition program. Clearly for a county whose annual budget is less than \$100,000 (\$98,675.37 in FY 1970, Table II) an eventual decrease in income of over \$4,000.00, nearly 4%, is of significance. But it must be noted, as it is not noted in the folkloristic accounts, that this depletion of tax revenue will occur only after all the land for reservoir and park has been taken: presumably after the third year. Meanwhile, for planning purposes, the rate of acquisition is important. This is where folklore ends and reality commences. Whether, for example, the Corps of Engineers acquires one third of the total land to be taken per year, or instead acquires 20% the first year, 60% the second, and the remainder the third, certainly will affect orderly planning. This is especially true if the solution of raise in the tax rate is used. The

Corps could contribute to orderly planning by county officials by advising them of the land acquisition schedule.

That there is a communications gap between the local community and the Corps of Engineers is factual, due as stated to Corps policy, not mythical. The 3500+ acre park area, which may affect as many as 50 families in addition to those residing in the pool area, is a case in point. Early announcements by the Corps concerning the proposed reservoir indicated a park was included in the recreation facility plans, but neither location nor size were mentioned, nor was there much emphasis on this feature. In fiscal year 1971 we were given a copy of a Corps of Engineers map showing the location of the proposed park of approximately 3500 acres, with two small outlying areas designated as boat ramps for fishermen. This map does not carry a date, so we do not know when it was prepared: at some years prior to our receipt of it, or immediately before that time. Later we learned that the map had accompanied a detailed land-use proposal concerning recreational facilities of various types, reforestation of certain areas, etc. The plan was that the Corps should acquire the land, develop it as a park, then transfer title to the Commonwealth of Kentucky for incorporation into the State Park system, with the state responsible for maintenance and operation. Legal technicalities concerning the proposed transfer delayed beginning of land acquisition and dam construction, so the Corps District Office announced, but even at the date of final editing of this report (summer 1973), no public announcement of the extent and precise location of the park has been made. This failure to disseminate information is of course, as previously stated, the Corps' procedure for preventing speculation and thus forestalling uncontrolled inflation of land prices. It is of course easy to fault

the organization for this policy, but it is not entirely fair to do so. The Corps' basic assumption is that sky-rocketing land prices could materially increase the total cost of the entire land acquisition program, unnecessarily adding to the burden of the American taxpayer. In other words, there is no easy solution to this problem.

Spencer Countians perceive no justification for this policy of limitation of information; they resent it bitterly. At this writing most of them know, some generally and some precisely, where the proposed park is to be situated. Many members of the local community aver that non-local persons, especially residents of metropolitan Louisville, had access to the map of the park at an early date. As proof, they maintain that no non-local person has acquired property within the proposed boundaries of the park, although numerous purchases of land for residential or investment purposes continue to be made in other parts of the county. (We have not had the opportunity to check these assertions by reviewing the records of recent transfers of land-title.) It is clear that the handling of the park issue has contributed to local resentment against the Corps of Engineers, and is supportive of less factual, more folkloristic expressions regarding the organization's policies and credibility. Consequently rumors, misinterpretations of such statements as are issued by the Corps and the like, are widely disseminated and accepted at face value.

Chapter II -
Planning and Zoning

Spencer County

Though Spencer County officials most often discuss potential impact of Taylorsville Reservoir on county government in terms of revenue-loss and increased expenditure, direction of growth for the community has received more realistic attention and planning. Many local persons are concerned about how the reservoir will change the community, and progressive leaders have sought programs that hopefully will direct the anticipated growth of the community in ways beneficial to local residents rather than to outside interests.

An incursion of urbanite residents, a flood of short-term (daily, overnight or few days) visitors, and an eruption of reservoir-related businesses (restaurants, motels, boat rentals, recreational supplies, bait houses, etc.) are the kinds of changes for the community that resident Spencer Countians foresee. One informant expressed this concern with such change by saying, "some businesses in town and some out in the county will benefit financially from the lake, but Spencer County will be a different place. I will feel like a stranger here." Certain community leaders, while considering some types of reservoir-induced change inevitable, sought for ways to control certain aspects of change, hoping to forestall developments of particularly undesirable types. Their goal was verbalized in terms of "improving the community, and making it a better place to live," which was not quite precise. They appear to have been motivated by observation of

and/or reports of reservoirs ringed by unsightly ancillary establishments: trashy ill-kept bait-houses, motor repair shops, small stores and the like. Thus their goal was really to prevent creation of such eyesores in the community. For this reason they brought the problem and their proposed solution to the attention of the Spencer County Fiscal Court which began the organization of a planning and zoning commission in early 1965. To this end they obtained advice on procedures, etc., from the Planning Board of the Kentucky Department of Commerce (subsequently this board became a separate unit of the state government under the designation "Kentucky Program Development Office"). The agency has as one of its functions that of providing information and assistance to any local government unit of the state, city, county, development district, etc. The agency does not, as a matter of policy, seek out "clients." Authorized local government officials must come to it with their problems. Incidentally this raises the question as to how these persons were able to find and work with the state agency when they could not, or reported they could not establish communication with the Corps of Engineers to resolve problems outlined in the preceding chapter. The answer is not clear, except as it goes to support the interpretation of deliberate restriction of communications by the Corps.

In 1964, the United States Corps of Engineers proposed to Congress that preliminary studies be made for the construction of a dam on the Salt River. In January of 1965 the Fiscal Court of Spencer County drafted a written request to the Taylorsville City Council, requesting that it join the Fiscal Court and Spencer County in establishing a Joint City-County Planning and Zoning Commission. In February the City Council approved a motion to join the Fiscal Court in this program. At the next official meeting in February

the Fiscal Court, therefore, authorized the county judge to "enter into, sign, execute, and deliver an agreement with the City of Taylorsville, whereby a Joint City-County Commission shall be established to regulate the physical development, including planning and zoning of the incorporated area of such city and the unincorporated area of such county" (Fiscal Court Record-4: February 9, 1965). No further official action was taken on the matter during 1965 by either the Spencer County Fiscal Court or the City of Taylorsville.

Both governing bodies considered the matter of a planning and zoning ~~commission~~ at their first meetings in January of 1966. The planning and zoning commission was discussed by town board members at their January 7 meeting, but no action was taken at that time. The Fiscal Court, in contrast, recommended in its January meeting a list of persons to serve as commissioners on the Joint City-County Planning and Zoning Commission. Discussions of the proposed commission were recorded in the minutes of both the Fiscal Court and the City Council during that year, but the agreement between city and county which established the Joint Planning Commission was not signed until October 1966.

The agreement signed by the city of Taylorsville and the Spencer County Fiscal Court specified that twelve members would be appointed to the Joint Planning Commission, and stipulated that the expenses of the commission were to be borne equally by the county and city. The purpose of the planning commission is described in the ordinance as follows, "in order to accomplish the maximum economic, physical and social welfare and a coordinated and harmonious development of land, buildings and transportation facilities."

At the first meeting of the Joint Planning and Zoning Commission officers were named and future meeting times were specified. A

representative from the City Planning Division of the Department of Commerce-Frankfort attended the second meeting of the Joint Planning and Zoning Commission held in February 1967. This city planning representative discussed duties and responsibilities of the commission and stated that the commission's function was "to conduct studies and to adopt rules and regulations necessary to carry out a comprehensive social planning for the city and county" (Minutes of Joint Planning and Zoning Commission: Feb. 21, 1967).

As related, Kentucky Program Development Office officials stated in interviews with us that their involvement with local community planning commissions is initiated by the local community. The former Planning Division's, and now K.P.D.O.'s function in such cases is to advise local governments as to legal requirements for various procedures, to tell them what Federal and State grants they are entitled to apply for, and explain how to apply for them. Legally, in order for a community to qualify for certain Federal and State assistance in connection with proposals made by its Planning and Zoning Commission, it must have a "comprehensive evaluation study" made, covering demography, housing, administrative facilities, economic resources, etc. Federal funds are available to complement local funds on a matching basis to pay for such a study. K.P.D.O. provides a community with a listing of consulting firms which do these "comprehensive studies" of communities, and handles the money from the Federal government that goes to the consulting firm. K.P.D.O. officials also visit the community periodically to monitor the work of the consulting firm and to advise community leaders on zoning problems. Officials of the (then) Department of Commerce, City Planning Division, Kentucky Department

of Commerce, met with the Taylorsville and Spencer County Joint Planning and Zoning Commission in 1967, and assisted in various ways, for example in preparing a temporary city zoning ordinance for the commission. The city zoning ordinance prepared by the city planning representative was adopted by the Joint Planning and Zoning Commission in November of 1967, but three further steps were necessary before the zoning ordinance could be put into effect. As the city planning representative explained to members of the commission: 1) a Zoning Board of Adjustment must be established by appointments by the mayor; 2) before the ordinances can be finally approved by the Commission a public hearing must be held; and 3) ordinances must be submitted to the Taylorsville City Council with recommendation for approval from the Planning and Zoning Commission.

The public hearing on the proposed zoning ordinance for the City of Taylorsville was held in February 1968 with the Department of Commerce representative present to conduct the question-answer session for the public. Planning and Zoning Commission members also voted to recommend to the City Council that they accept the proposed zoning ordinance and city map as prepared by the Department of Commerce officials. The commission also discussed sub-division regulations, and voted to extend the services of the Department of Commerce for a period of six to eight months at a cost of \$350 to the city and county. At a special session held in February 1968, the Council approved the provisional zoning ordinance as recommended by the Planning and Zoning Commission and selected four members for the Zoning Board of Adjustment. The sub-division regulations were accepted by the Planning and Zoning Commission and adopted by the City of Taylorsville and Fiscal Court of Spencer County in September of 1968.

In 1969 the Joint Planning and Zoning Commission discussed "the necessity of furthering the study of Taylorsville-Spencer County Planning

and Zoning with the state program development," and agreed to have Bost and Associates of Knoxville, Tennessee as the consulting firm to do the comprehensive study of the community at a cost of \$2,876 for the city and county. The Bost and Associates planning consultant met with the commission for the remainder of the year, and conducted a study of the housing situation in the community. The structure of the Commission was also a topic of consideration in 1969 because of the absentee rate of members at meetings. It was decided that a smaller commission would be more effective.

No action was taken to change the number of members on the Joint Planning and Zoning Commission until August 1970, and it was then agreed by the city and county to limit membership on the Commission to nine. Other actions taken by the Commission in 1970 were to approve the comprehensive plan as prepared by Bost and Associates.

Bost and Associates submitted a 92 page comprehensive study of Taylorsville-Spencer County with recommendations as to goals and objectives which the city and county should work toward during the next twenty years. Some of the recommendations of the study are as follows: that a new school be built, that a new library be built, that a new jail be built, that all county roads be improved, that land be purchased for recreation, that a summer recreation program be developed and a forty-acre park with swimming pool be constructed.

These and other changes are suggested by Bost and Associates, but there is no discussion of the cost of these programs, nor of how the city and county would be able to finance them. Finally, it is rather clear that these proposals for improvement are not related to residents' perceptions of desirable directions for change, but were taken in toto from theoretical treatises on urban planning which have little relevance to communities

such as Taylorsville-Spencer County. While the Planning and Zoning Commission gave generalized approval to the Bost and Associates study, the Fiscal Court of Spencer County discussed it in detail, deciding that it was not reflective of the problems and conditions of Spencer County.

In late 1970 a representative from the Corps of Engineers met with members of the Joint Planning and Zoning Commission to discuss the Taylorsville Reservoir project. At this meeting Commission members discussed county zoning, and the K.P.D.O. official present at the meeting discussed the necessity of proper zoning in the county. The county attorney and the city attorney were appointed by the Commission to write a preliminary zoning ordinance for the county. This preliminary zoning ordinance was prepared and read at the December Planning and Zoning Commission meeting. The ordinance was approved by the Commission members subject to a public hearing to be held in January 1971.

This public hearing was held on January 21, 1971, at which time a text for and map of the proposed zoning regulations for Spencer County were presented. A K.P.D.O. official was present to discuss the regulations with the public and to answer any questions that they might have concerning the regulations. The Joint Planning and Zoning Commission recommended after this hearing that the City of Taylorsville and the Spencer County Fiscal Court adopt this preliminary zoning ordinance. The preliminary zoning ordinance was adopted by the Fiscal Court and the City of Taylorsville and went into effect on July 1, 1971.

This zoning ordinance now in effect in Spencer County, according to a K.P.D.O. official is "an interim ordinance, a sort of stop-gap to prevent outsiders from developing land in Spencer County in a way not beneficial to

the county." He further explained that "another ordinance more specifically tailored to the needs of Spencer County will be drawn up and the Spencer County Planning and Zoning Commission will discuss, revise, and approve this final ordinance."

This interim ordinance which went into effect on July 1, 1971 consists of six articles. The first article is entitled, "Enactment, Title, Purpose." In this section the statement of purpose reads as follows: "it is the intent, purpose and scope of this order to promote and protect the health, safety, morals, and general welfare of the county and to protect existing agricultural and residential land uses by empowering it to regulate the location, height, size and use of buildings and other structures, and the use of land for trade, industry, residence, or other purposes. The objectives and goals of this ordinance are to provide for the harmonious and orderly development of Spencer County in accordance with the Comprehensive Plan" (Zoning Ordinance, Spencer County, Kentucky: p. 1).

Article II, "Establishment of Zones and the Official Zoning Map," specifies future land uses in the county by dividing the county into four types of zones which are the standard ones: agricultural, residential, commercial and industrial. Article III, "Regulations," describes the kind of land uses permitted in each of the four zones. In the agricultural zone, according to specifications of the ordinance, the uses permitted are: A. agricultural activities, B. single-family dwellings and such additional single-family dwellings as are necessary for occupancy by employees of the farm operation, C. sale of agricultural products produced on the premises, D. public, semi-public and private lands for open space reserves. Residential R-1 is zoned for single-family dwellings, while R-2 is zoned for

anything permitted in R-1 residential Zone plus two-family and multi-family dwellings. Residential R-3 is restricted to uses permitted in Zone R-2 and in addition mobile homes and mobile homes parks.

The areas zoned commercial in Spencer County are of two types, highway commercial and local commercial. The highway commercial zone is "established primarily to provide locations for businesses oriented primarily toward serving the motoring public and for those businesses which due to their nature are best suited to locations along streets or highways" (Zoning Ordinance, Spencer County: p. 14). The local commercial zone, on the other hand, is established for businesses in unincorporated villages designed primarily to serve the area involved. And finally, the industrial district is also divided into two zones, the light industry zone and the heavy industrial zone. Each of these zones in addition to use designations are also regulated with regard to building heights, lot areas, and yards required.

Article IV, "Administration," describes the appointment, powers and duties of the administrative official to be appointed by the Fiscal Court of Spencer County to enforce the Zoning Ordinance. The Board of Adjustment is established in this article, and its functions and membership requirements are specified. Article V specifies how the zoning ordinance may be amended, and Article VI contains a schedule of fees, charges and expenses for building permits and variance fees.

Though the Planning and Zoning Commission has accomplished its original purpose of getting an interim zoning ordinance into effect in Spencer County before reservoir-related outside interests develop land in ways considered not beneficial to the community, it is continuing its

involvement with the Kentucky Program Development Office. The Planning and Zoning Commission is now involved in the Capital Improvement Program which is "another step beyond the Planning Commission." A consulting firm has been hired by the Planning and Zoning Commission, and the firm will do a study of needed improvements in the community such as repairs on the courthouse, new firefighting equipment etc. and recommend priorities in beginning these improvements to the Planning Commission.

The fact that Spencer County has a zoning ordinance in effect is somewhat remarkable because only 28 counties in Kentucky (of 120), have such ordinances. It demonstrates that the local leadership is capable of seeking information when such information is available, of following guidelines to carry out complex procedures effectively where such measures are seen to be in community interest.

Up-dating planning and zoning. The foregoing paragraphs report the situation as of early Fiscal Year 1971. A few comments will be added here on accomplishments since that time, during the lengthy revision and editing of this report (end of Fiscal Year 1973). Following the decease of a prominent member of the community, the Planning and Zoning Commission almost ceased to function, making it apparent that it had been essentially one person who had been the motivating force in the program. Recently (mid-1973), interest has been resuscitated, so that it seems possible that some of the original goals may be achieved.

Green River and Barren River Lake Areas

In contrast to Taylorsville and Spencer County the counties in which

Green River Reservoir and Barren River Reservoir are located did relatively little planning in anticipation of the reservoirs. None of the county officials surveyed mentioned that the Planning Board of the Kentucky Department of Commerce, or its successor the Kentucky Program Development Office was ever contacted for any kind of study related to lake development or impact possibilities. Other than possible county revenue pressures, there seemed to be little official concern that the presence of a reservoir would cause any major adjustments for local governments. There are no county-wide zoning laws in any of the counties surveyed, and until recently there were no county planning commissions. The county seat towns have councils that make such plans and zoning restrictions as are necessary for the municipalities. Campbellsville and Glasgow have boards that deal with long-range planning and development. Each county's business is handled by its Fiscal Court, which does not directly involve itself in either planning or zoning.

Recreational planning. Planning for recreational facilities in certain counties did take place. In Taylor County 500 acres were leased from the Corps of Engineers for a county park on the Green River Reservoir. The park, opened in 1967, is not completely developed as yet but at present has two camping areas, one of which is heavily wooded; a boat ramp; and an elaborate marina that rents anything from rowboats to houseboats. There is a one dollar camping charge used to pay for a constable who maintains the park. Allen County has leased land from the Corps for a boat dock on Barren River Reservoir. They have sub-leased the land to a non-profit sportsmen's club which operates the dock. The manager of the boat dock indicated that there were plans for a camping area near the dock but as yet

no provisions have been made for water lines. Other than these two projects no other county-controlled recreation projects have been initiated, and except for water district development, no other projects of any kind have been planned.

Planning commissions. Two counties have only recently established planning commissions. Barren County instituted a Planning Board in the spring of 1971. At the time of the survey it had not yet defined its precise role and function regarding county operations. Its most immediate duties involve the procurement of state aid for various county operations. Most Barren County and Glasgow officials see the Commission's only function as securing state aid. Although it is seen by many local officials as eventually necessary, zoning is not viewed by the Commissioners as one of their immediate areas of interest. In fact some of the Commissioners are openly hostile to the concept of county zoning. In January of 1972 Allen County incorporated a Planning Commission. This was done in response to the desire of the North Allen County Water District to develop a new county water system. Their first duty will be to hire a firm to do a water-sewer projection survey for the county and to hire engineers for a water feasibility study. As in Barren County the Allen County Planning Commission does not intend to get involved in zoning. One of the Commissioners indicated that he favors county zoning, but his primary concern at present is with the water district and he will not jeopardize this project by pushing for something as unpopular as zoning.

In both Barren and Allen Counties the role of the Planning Commission is viewed in a somewhat narrow and restricted manner. They were created'

for specific projects and are not intended for comprehensive or long-range studies of county needs. The Barren County Planning Commission is the more open-ended of the two and is designed to initiate projects. But neither Commission intends to establish zoning codes that will restrict what can or cannot be done on private land. Neither Adair nor Taylor have developed planning commissions as such. Adair County has established a committee to plan and develop a county water system, but its function is limited to just that.

Private planning. To say that planning in regard to the reservoir did not take place in these counties would be misleading. A great deal of planning did occur at the private level. It was apparent that local officials were aware of these plans and were even a part of them, though not in an official capacity. Even much of the pressure and planning for water districts has come about through private initiative. The county boat docks in Both Taylor and Allen Counties are operated by private concerns. Most of the private planning has been in the form of retail outlets catering to tourist traffic. Markets and eating establishments have been built that depend on late evening and Sunday trade. Boat and bait shops have sprung up along all roads in the vicinity of the reservoirs. Local automobile and implement dealers have added new lines of campers, camper trucks, and boats. Many of the land owners with frontage on roads leading to the lakes have subdivided property for building homes. Many farmers fortunate enough to have lake front property have plotted lots for lake-side cabins, or have constructed private ramps and boat storage facilities. Private camping franchises such as K.O.A. Have built elaborate campgrounds with stores,

modern conveniences, and trailer hookups. Airports have lengthened their runways and established special charter flights for a view of the lake. Even churches near the reservoir have established come-as-you-are Sunday services for campers.

One of the more interesting developments is the conscious attempt on the part of a newspaper editor in Columbia to develop an area identification focusing on Green River Lake. Traditionally local resident identification in Kentucky is strongly tied to county political boundaries. The Green River Sprite is a weekly newspaper that is published "every Saturday for the Green River Country." It is basically a feature newspaper for the entire area. The paper contains no local gossip, marriage announcements, or obituaries. It focuses on reservoir related events, colorful biographies, local history and folklore, local tradition and homilies. The editorial intent is to create among the local populace an identification to an area that transcends county lines, using the reservoir as the focus of this identification. The Sprite is used as a vehicle for breaking down loyalty to what the editor considers inefficient governmental units.

Attitudes toward planning and zoning. The lack of large-scale centralized planning in the four counties surveyed is reflective of local attitudes regarding planning. Local officials prefer to maintain a "low profile" governmentally; if problems can be solved and planning can be accomplished outside of official governmental channels this is to be preferred. It is not the desire of local officials to get involved in something that can be handled by private initiative. In planning, county and city commissions go only as far as is absolutely essential in the performance of their tasks. Even major projects of community-wide significance will be handled locally

and with private means if at all possible. A good example took place at Scottsville in 1970. A damaged gasline created a crisis that left the city without gas. Instead of seeking state or federal aid \$122,000 was borrowed by the city from local businessmen to have the damage repaired.

This ideology of minimal governmental involvement and interference is also reflected in attitudes toward zoning. County officials are divided in their opinions regarding the need for county zoning laws. About half of those surveyed see no real need for zoning restrictions. They point out that each subdivision has its own rules and regulations regarding the type of structure that can be built. Any new structure has to meet minimum building and plumbing codes. Places that serve food must meet state health requirements. These officials do not feel that there have been any serious problems created, such as junky bait shops, that would warrant the establishment of zoning restrictions. Other officials feel that zoning laws, particularly in the reservoir area, are needed. One said, "We've been lucky that a lot of shanty bait shops haven't sprung up." Very few of shacklike structures exist at the present time. But as one city official noted: "there is nothing to keep anyone from building anything he wants on his own property." One situation does exist at one recreation area where a novelty-and-bait-shop has been created by cutting the back wall out of an old trailer house, which is located directly across from two new brick homes.

Rural attitudes are less divided in respect to zoning restrictions. Although a few farmers indicated a need for zoning restrictions around the reservoirs, the vast majority were opposed to any such laws. Some are already upset by building codes that dictate requirements for dairy

facilities. The prevailing attitude among farmers has been summed up by one farmer who stated, "Nobody's going to tell me what I can and cannot do with my own land."

Summary

At the official level Adair, Allen, Barren, and Taylor Counties did relatively little planning in anticipation of the reservoirs. Taylorsville and Spencer County appear to be much more progressive in terms for possible impact. County zoning, which is rare in rural Kentucky counties, makes for marked contrast between the Taylorsville Reservoir and those on the Green and Barren Rivers. Spencer County is leaving nothing to chance and is anticipating as many of the problems as possible before construction of the dam. The other counties surveyed left such planning to private interests. These counties have also relied on luck rather than zoning laws in determining the types of structures to be built on or near the reservoirs.

The reason for this difference is difficult to determine. One possible explanation might be in terms of the involvement of local people in promoting the reservoirs. In Taylorsville and Spencer County it is relatively easy to determine the local pressure group involved in promoting reservoir construction. In the other four counties it was not possible to do so. Most officials and leaders felt that the responsibility for the Green River Reservoir and Barren River Reservoir lay outside the communities. No local citizen or citizens were consistently mentioned as avid promoters of the lake. In fact most community leaders failed to mention any local citizens or group as being backers of either of these reservoirs. One might reason that with local promotion there would also likely be local planning and

anticipation. Both were present in Spencer County and notably lacking in the other counties surveyed.

Proximity to Louisville might also be a factor. The anticipation of impact of a reservoir within east commuting distance of the state's largest city is no doubt far more compelling than that in the more remote areas where Green River Lake and Barren River Lake are located.

CHAPTER III
WATER SYSTEMS

Taylorsville-Spencer County

A clean and dependable supply of water is one of the most important services provided residents of Taylorsville and Spencer County by the Taylorsville City Council. Formerly the City Council provided water only for residents within city limits. County residents had to depend on cisterns, and on water vendors hauling water purchased from the Taylorsville water treatment plant. The City Council since 1965 has worked toward extension of the city water system to include county residents, and in 1971 according to one local official has covered nearly 75% of the county with water lines.

The idea of extending the city water system into the county, explained a county official, initially came from a private engineer who discussed the proposal with City Council members sometime during 1965 or 1966. During the next two years the City Council wrote letters to federal funding agencies, had engineering feasibility studies conducted and made applications for federal loans. In October of 1967, the City Council received a "tentative commitment" letter from the Farmer's Home Administration for a loan to the city to construct a new water plant and extend the city water system into Spencer County.

A public hearing was held in April of 1968 to brief local residents on the county-wide water system which was in the development stage and to discuss tap-in fees to the water system. City Council members, an F.H.A.

representative, and engineers attended the meeting and explained that the total cost of the project would be \$1,450,000 and that a 40-year loan of \$1,335,000 was pending with the F.H.A. It was pointed out that the remainder of the cost of the project (\$115,000) would be paid by tap-in fees. (The Spencer Magnet, May 2, 1968.) Payment of tap-in fees was slow during 1968 and the local paper, The Spencer Magnet, supporting the efforts of the City Council members to provide a county-wide water system, ran front-page articles encouraging county residents to pay the tap-in fees. "Water Extension Depends on Public Action" and "Time Now for Water Tap-in Fees; Officials Say Payments Urgent" are examples of such front-page headlines. The tap-in fees or connecting fees for those who signed up during this pre-construction period were one-half the fees charged after the construction period was underway. For example, county residents who wanted a 5/8 inch connection and paid during the preconstruction period, paid only \$100. Those who waited until the end of this initial sign-up period paid \$200 for the same 5/8 inch connection. (City of Taylorsville, Minutes, January 6, 1970).

The F.H.A. loan of \$1,335,000 to the city to build a new water treatment plant and extend water lines into the county was formalized on March 17, 1970; and the extension of the water lines completed by April of 1971. Rural water customers began receiving first billings during June and July of 1971. City water customers pay a minimum \$2.65 per month (this is the fee charged for the first 2000 gallons or less of water), and the majority of rural water customers who have 5/8 inch meters pay a minimum of \$6 per month for their first 2000 gallons or less of water. Rural customers with 3/4 inch meters pay a minimum monthly charge of \$20 (for

10,000 gallons of water), and two dairy farmers who are hooked up to a one and one-half inch meter pay a minimum monthly charge of \$75 for the first 50,000 gallons of water. (City of Taylorsville, Minutes, January 6, 1970).

The first few months of billing and collecting monthly water charges were confusing to rural water customers who were not familiar with reading meters, and who had expected water rates to be lower. A few of these rural customers disconnected their meters rather than pay the rates which were higher than they had anticipated. For the most part, however, the rural customers were pleased with the water service, and in January of 1972, according to a city official there were 385 operating water meters in the county and 384 meters in the city. As of January 1973, there were approximately 66 miles of water lines outside the city limits, and this as city officials point out is effective coverage of approximately 75% of the county.

The new water treatment plant located in Taylorsville has a capacity of 1,200 gpm (gallons per minute) and is operating 14 hours per day. Before this new water plant was constructed, the capacity of the plant was only 168 gpm. (Commonwealth of Kentucky: Dept. of Commerce, and Spencer County Chamber of Commerce, 1970). When asked how close to capacity the water treatment plant was, one official stated that if there was a need the plant could operate 24 hours a day instead of the 14 hours it is now operating.

The City Council made application in April of 1970 for an additional grant and loan to further extend the city water system into the county. The total project cost for this extension would be \$1,903,000. The City Council applied for a Farmer's Home Administration grant of \$512,000 and a loan of \$520,000 with the difference to be met by local contributions.

If this grant and loan are approved by F.H.A., the Taylorsville city water system will "virtually be a county-wide system." The grant and loan application are currently being reviewed by F.H.A. officials.

The extension of the Taylorsville city water system into the county according to local officials has not been undertaken because of the proposed construction of the Taylorsville Reservoir. Officials explain that there was a definite need in the county for a dependable water supply and that this was the reason for the expansion rather than anticipation of an increasing population. The completion of the new water treatment plant and the extension of the water lines into the county, local officials believe will be sufficient to handle any increased need of water which might result from the Taylorsville Reservoir project and anticipated population growth. Therefore, local officials predict no increased expenditures or services will be necessary as far as the water supply is concerned during and after the construction of the reservoir. Local officials also explain that there are no plans to take water from the reservoir because the "foot flow per second at the plant (which is located on the Salt River below the proposed dam) is sufficient to carry the system and the proposed extension of the system."

Green River and Barren River Lake areas.

One impact of the Barren River and Green River Reservoirs experienced in all four counties surveyed has been the anticipation and realization of a usable water supply. Both Glasgow and Campbellsville have attained the security of an adequate water source for their municipal systems by utilizing the newly constructed reservoirs. Adair and Allen Counties are

in the process of establishing new county water districts. In the first two cases this development represented an expansion of an already existing water district. For the latter it amounts to a development of entirely new districts with primarily rural customers involved.

Need for rural water systems. The rural districts being developed in Adair and Allen Counties are somewhat innovative and represent a solution to the critical need for a water supply in rural areas. Where public water systems are taken for granted in urban and suburban areas they are almost non-existent in most rural farm areas. As late as 1960 the U.S. Department of Agriculture estimated that in communities of more than 25 inhabitants some 40 million people lacked public water facilities. In 1963, 62 percent of the almost 35,000 communities with populations under 1000 did not have public water systems (Report of the Secretary of Agriculture 1968:60).

The water problem in many rural areas is compounded by the fact that the water table is dropping. In a rural Mississippi county the water table decreased by 50 feet from 1900 to 1950. However, the increased demand for water by local industry and urban populations has caused a drop in the water table of 100 feet from 1950 to 1970. Though this decline was not as drastic in rural areas distant from the county seat, the water level throughout the county was declining rapidly (Peterson 1971:13). This would require a deepening of wells by those rural residents who rely on wells for their source of water. These costs are prohibitive for much of the rural population. In fact few of the rural farm and rural non-farm population in either Adair or Allen Counties have wells. They rely on cisterns which are filled by hauling water from the nearest town with a water system.

The Department of Agriculture has recognized this problem and has made funds available for community water and sewage systems. In 1965 the enactment of the Poage-Aiken community facilities program increased available funds and community water and sewage systems have expanded (Peterson 1971, p. 14). This funding has been handled through the Farmers Home Administration and the increase in assistance since 1965 can be easily seen in Table IX.

Table IX

Funding Level of Community
Water and Sewage Facilities

<u>Year</u>	<u>Families Assisted</u>	<u>Grants and Loans</u>
1960	648	\$ 710,000
1961	3,960	1,945,000
1962	10,190	10,002,000
1963	17,420	13,833,000
1964	34,418	33,369,000
1965	55,129	50,086,000
1966	125,528	130,811,000
1967	267,089	197,431,000
1968	246,046	186,203,000
1969	281,297	207,500,000

U.S. Dept. of Agriculture: Report of the Secretary, 1968.

The crucial problem, however, is in community leadership essential for the initiation of these projects. The lack of county planning commissions means that the leadership must come from the local community and neighborhood level and not from the county itself. This initiative at the individual rural community level was also typical of the rural counties surveyed by Peterson in Mississippi (1971; p. 17).

Each county has had a unique history in terms of water supply development and in each case it has been and is being handled differently. As a result each county will be described separately.

Adair County. In 1971 the Commonwealth of Kentucky approved a two million dollar county water system for Adair County. Funding for the project is presently being negotiated through the Economic Development Agency and the Farmers Home Administration. The Adair County system is somewhat unique in that the water district is being developed by the county and will sell water to the city of Columbia. The North Allen County water district is also a county system but it has no cooperation from the city of Scottsville and at present has no immediate plans to sell water to the city. The other water systems are city operated, some of which run lines into the county and sell water to rural customers.

Some advantages and disadvantages are apparent in a county operated water district. The most obvious advantage is that a county water commission is more likely to be responsive to the needs in rural areas. One complaint in Barren County, where Glasgow owns the water system, is that the city is moving too slow in constructing water lines to the outlying farmers and small towns. Whether Adair County can overcome this problem is yet to be seen. But a county district is more likely to give rural water lines some priority.

The possibilities of funding difficulties inherent for a rural water district has been solved in part through close cooperation with Columbia. For E.D.A. and F.H.A. to make available to water districts a need must be shown and possible industrial growth must be demonstrated. The latter would be more difficult for a county system. However, in Adair County the city of Columbia is actively involved in both the planning and funding requests. The city will help build it and will benefit by purchasing water from the county. Even though the present water system is normally adequate for

present use, a need can be easily demonstrated. There is only one industry in town, an Osh Kosh clothing factory. If more industry is to be attracted, more water is needed. The need in rural areas is even more evident.

Though some farmers have wells, most of them have cisterns, buy water from town, and haul it to the farm. During dry months many farmers have barely enough to keep livestock. One farm wife mentioned that she had to take clothes into town to a laundramat because there was not enough water for both the house and livestock.

A businessman who owns a farm between Columbia and the reservoir feels that a county water system is essential for growth. He has a well on his farm but plans to hook-up to the county system for future possibilities of subdividing frontage property into housing lots. Although some building has occurred, he feels that more subdivisions could be developed if there were an adequate water supply. The development of subdivisions has an obvious advantage in attracting new people, increasing land value, and increasing revenue for the county.

Once local official stated that the idea of developing the new water district had nothing to do with the presence of the reservoir, but it is apparent that he is the only one who feels that way. The local merchants, bankers, and farmers all feel that a new water system is one of the major advantages to be derived from the new reservoir. Columbia's mayor indicated that the new water system, to be constructed in 1972, was planned to use the reservoir as its source.

This county-wide water district is unique for rural areas. Although the Mississippi study indicates that rural water systems show a trend of general increase in size, from those serving a single neighborhood to those

organized around multiple neighborhoods (Peterson 1972:96), in Mississippi County, a total of seven rural water systems were organized and constructed between 1966 and 1970. Three of these systems lie entirely within the identified boundaries of a single rural neighborhood (1972:93). The difference here is probably due to the water source. Where the districts in Mississippi relied on wells for the most part, Adair County has the advantage of an unlimited supply of water through the use of the reservoir.

Many people of Columbia and Adair County do not feel that they have adequately taken advantage of the reservoir to attract industry. They feel both county and city have been overlooked in favor of Campbellsville, which has had excellent industrial growth in the past ten years. Town and county officials feel that the lack of good roads and an inadequate water supply have been major factors in this problem. Both of these deficiencies are now being corrected by the new water system and a new toll road from Bowling Green to Somerset. It is felt that the completion of these projects will have a positive effect on the economy of the county, both in terms of industry and tourism.

Taylor County. Except for a small section of Taylor County which obtains its water from a Green County district, the Campbellsville water district is the only system in the county. The city of Campbellsville has had its own water supply from a city reservoir constructed several years ago. This had been adequate even though the water level would drop during dry years. But with the increase of industry there has been a critical shortage of water during dry years. Union Underwear, a local industry, now employs a quite large number of workers and uses as much water as the rest of the industries and the city combined. During dry years local industries have

had to cut back operations. The city found it necessary to run a temporary line to a sportsmen's lake some five miles north of town to keep enough water in the city reservoir. Though this occurred only about every five years it proved to be costly and inconvenient.

When the Green River Reservoir was proposed the city immediately received permission to build an intake and lay a pipeline from the new reservoir to the city reservoir. This work was just completed in the summer of 1971, funded with city funds and a small government grant. This new line will be used only when the water level of the city reservoir is critically low. The city now is insured an adequate water supply even during dry years. Campbellsville has grown steadily in the past twenty years and this has also meant a steady increase in water consumption. New water lines have also been constructed along main routes into the county to some of the new subdivisions that have developed along roads leading to the reservoir. But as yet very little of the rural areas are tied into the water district. The city water superintendent feels that eventually a processing plant will be developed at Green River Lake that will supply much of the county with water.

The favorable water system that Campbellsville has developed has played a role in attracting industry to the community. Besides the Union Underwear factory, which has been in the community for twenty years, the city has a new industrial park which has been utilized for about ten years. Campbellsville Industries which has manufactured church steeples for ten years, Parker-Kalon company which makes metal screws, and Ingersoll Rand which manufactures air compressors, are located in this park. These last two have been in Campbellsville for only five and two years respectively. To attract such industry an adequate water supply is essential.

Increased construction, such as the laying of pipe lines has had secondary advantages as well. Several merchants mentioned an increase of business as a result of construction. Eating establishments and motels have been particularly aided by the influx of construction workers.

Campbellsville is the only water district surveyed that acted soon enough to have its intake facilities included in the final plans developed by the Corps of Engineers. The intake was constructed before the water was impounded. The line was completed in 1971. By anticipating the project soon enough Campbellsville saved a good deal of time and money. None of the projects in the other counties surveyed were initiated prior to final Corps of Engineer plans.

Barren County. Barren County is served by several water districts and associates. The Glasgow Water Company is municipally owned. It serves the city and is also responsible for the rest of the county not served by another district. North Barren Water Association is a county district which buys directly from the Glasgow system. The Green River Valley Water District covers the northern part of Barren County and Hart County. Both Cave City and Hiseville are a part of this district. The Park City Water System is a part of the Edmundson County Water District. The Barren River Water District is newly formed and will most likely tap into the Glasgow water system. As yet it has made no plans for obtaining water other than to organize.

The new Glasgow water plant on the Barren River Reservoir began operation in 1967. Prior to this the city obtained their water from a plant on Beaver Creek which has a capacity of about two million gallons per day. The Beaver Creek plant, utilized since 1927, depended on the

supply of the creek which was very unstable. In 1963 the city was forced to sue the Walhalla Oil Company which was using some 350,000 gallons per day from Beaver Creek for flushing processes. This reduced the flow of water creating a shortage for the city (Barren Circuit Court, case NO. 3346). The new facilities on the reservoir allow for six million gallons per day with the old plant still capable of about two million gallons. With more filters the reservoir facility is capable of treating and disbursing about twelve million gallons per day. Present use is only about two million gallons per day, well under its capacity (Glasgow-Barren County Chamber of Commerce, 1971).

In the past ten years water consumption for Glasgow has doubled. Figures for June of 1961 were 33 million gallons as compared with 66 million gallons in June of 1971. Factories have made the greatest amount of difference, consuming about 25 million gallons per month. A knowledgeable informant insisted that industry would not have been established there without the present water facilities.

The city has about 300 rural customers, most of whom live along the main water line between the reservoir and the city. Many of these are in the subdivision of Haywood, located on highway 31E about five miles south of Glasgow.

City officials and merchants feel that the water supply has been a definite benefit for the community. The Chamber of Commerce has successfully used it to attract industry. Adequate fire protection, mentioned by the city officials, was not always certain with the Beaver Creek facility only. There have been other economic benefits as well. The Water Company employs about 200 people, many of whom are hired to operate the new plant.

Some criticism of the city district has been leveled by county officials. They feel that the city has not been responsive to the needs of the county. Some have criticised the city as being too possessive of the water. "They have plenty of water but have been slow to run lines to the county." The county water district had federal funds rejected because the city, which was to supply the water, did not furnish it after originally having agreed to do so. Park City also needed water but were forced to go to the Edmundson County water district to get it because Glasgow was not willing to supply them. The advantage of an adequate water supply seems to be confined to the city of Glasgow and not to Barren County as a whole. However, it was said that there are plans to increase service to the county in the near future and that lines are now being constructed.

Allen County. The water situation is a highly volatile subject in Scottsville and Allen County. The city water district has always obtained its water supply from a spring. This has been a source of pride for many people in the community who value the pure spring water as a healthy source of the vital fluid. Two older citizens said that what the city takes hardly slows the flow at all. However, geological surveys have indicated that the source has been reduced to a bare trickle in the past during very dry years. Some local merchants mentioned that water rationing has taken place in the past years because of this.

The previous city administration obtained an Economic Development Agency grant of 1.4 million dollars and a four percent loan of another 1.6 million dollars to develop a water plant on the reservoir. This met with a great deal of local opposition and the present administration vetoed the

project. According to the merchants and rural Allen Countians the mayor felt considerable pressure from older citizens some of whom stated that they would not drink "stagnant lake water" when they had a pure spring to drink from.

The decision to drop the project left some bitter resentment. Merchants felt betrayed. Since they had raised some \$122,000 to repair a gas line break that place the city in a gas crisis in 1970, many felt that the city owed them an approval of the new water facility. The North Allen County Water District was particularly hard hit. It was established in 1965 and made plans to tap the reservoir and supply the northern part of the county with water. When Scottsville announced plans for a filtering plant on the lake which would supply the county as well, the North Allen District was dissolved as superflous. When, subsequently, Scottsville decided to scrap the plan, it left the county without water and without plans for getting it. The North Allen Water District has been organized again and will most likely get its water supply from the Glasgow Water District. In January, 1972, a County Planning Commission was incorporated which will hire a firm for a water-sewer projection study for the county and will hire engineers to do a feasibility study. The North Allen District forms a triangle from the Scottsville city limits to the Barren County line, and between Highway 31E and the dam. At the present time this new district will not serve the entire county. But, according to the chairman, in the future they may reorganize as an association which will enable them to extend service to Scottsville and the rest of the county.

The rural water situation is similar to Adair County where water must be hauled in tank trucks to fill cisterns. Some farmers have wells but the water table is low and 100 foot wells that require constant maintenance are too expensive for most.

It is felt by many that industrial expansion in Scottsville is not possible under the present water conditions. A member of the managerial staff of one of the local industries said that they would not consider expansion until a more adequate water supply was provided. He said that no new industries would locate in Scottsville under the present circumstances.

Glasgow and Campbellsville have water-supply systems tied in to the reservoirs completed and in operation. Adair County and Columbia have a proposed system well underway. At present Scottsville has not taken advantage of their resources but the North Allen County Water District may well reap the benefit of the Glasgow System.

Both of the less populous, less industrialized counties, Adair and Allen, have been slower to move toward realizing the advantage of the reservoirs as a source of water. This hesitancy is also apparent in lack of industrial growth, the demographic trends, and quality of services which lag behind those of Taylor and Barren Counties.

Problems seem to be shared by all of the communities studied regarding water supply and the development of water districts. One is the lack of district development in rural areas. The water systems in Allen, Barren, and Taylor Counties are geared to adequacy within the county seat communities but have not been very responsive to the needs of the counties rural farm and rural non-farm population. Adair County and Northern Allen County hope to overcome this by developing county water districts.

The lack of rural districts stems from a lack of planning and communication between the city and county. Only the Campbellsville system was planned and constructed prior to the impoundment of water. Even here the county itself was not involved. The lack of planning and zoning committees at the county level meant that there has been no institutionalized

means of working out these problems and anticipating benefits when opportunities present themselves. It is at this point that Spencer County seems far ahead of any of the other counties surveyed. The cities are also weak in planning and zoning but Glasgow and Campbellsville have Planning Boards. The advantage of planning commissions is reflected in the fact that these two cities have the only operating water systems tied into the reservoirs at the present time. This again points to the problem of community leadership mentioned above. Rural systems have relied on individual local leadership. Where such leaders are unaware of opportunities to develop rural water systems there is no means to provide this necessary focus to initiate such projects. Information, leadership and planning are crucial in rural areas. To get the project funded it is necessary to get commitments from a sufficient number of people to make the project economically feasible. Though this number is determined by the engineer for the project it is up to the initiators to obtain the required commitments (Peterson 1971:23).

The immediate needs of rural water systems have already been pointed out: the lack of wells, their prohibitive cost, and the declining water table; the necessity of hauling water to cisterns; the necessity of an adequate supply for both home and livestock consumption; etc. But just as water is necessary for industrial expansion and urban development in the cities, the development of rural systems affects life in rural neighborhoods. Peterson has pointed out that:

"...it changes water consumption rates within households; it encourages the development of commercial farming operations; it changes the way in which rural land owners perceive the uses to which their land may be put;..." (1972:97).

As has been noted, rate of water consumption has been found by Spaulding (1967) to be an indicator of social status in his study in Rhode Island.

Commercial farming operations such as dairying, which is an important part of the rural economy in south-central Kentucky, rely heavily on an adequate water supply (Peterson, 1972, p. 98).

The development of rural subdivisions would also be greatly facilitated by an adequate water system. Rural residents in Mississippi mentioned that a water system would encourage young people from the neighborhood to build new homes in the area and commute to nearby industrial jobs rather than settle in the nearby cities (Peterson, 1972, p. 99). With the attraction of the lakes in the Kentucky counties surveyed, an adequate water system would allow rural landowners to subdivide frontage property for homes and cabins near the lake.

One recommendation mentioned by several officials is that any community where a reservoir is proposed should begin making plans for water facilities immediately and not wait for the reservoir to be completed. Campbellsville is the only city of the four surveyed which did so and as a result made considerable savings in terms of time and cost. Here is one of the places at which the Corps, by pointing out this fact, could render a service. Corps of Engineers policy regarding reservoir use for water supply systems is not clear to the communities involved nor to many Corps officials themselves. One member of our team was informed by certain Corps officials at the District Office in Louisville that any plans for using water from a reservoir must be finalized and approved by the Corps before the final Corps dam and reservoir plans are confirmed. However, this was certainly not the case for the Glasgow water system nor the proposed Adair County system. Nevertheless from both cost and engineering standpoints it is preferable to install an intake system before impoundment.

Summary

The potential benefits that can be derived from multi-purpose reservoirs through establishment of potable water systems, or by expansion of existing systems to supply rural areas and/or industrial developments are much greater than ordinarily realized. In actual fact, the value of improvement of water quality, so emphasized in Corps of Engineers reservoir proposals, environmental impact statements, etc., becomes real only when the improved water is made available for consumption and is used. When these benefits are realized they can be appraised from various standpoints in addition to the purely economic one: that of public health, and a variety of other sociocultural ramifications. It seems obvious that if the Corps should effectively encourage installation or expansion of water systems the benefits of improved water quality could legitimately be emphasized even more than at present.

In our area of primary interest, that of Taylorsville Reservoir, the water supply problem is being resolved locally, thanks to the pattern of greater than usual cooperation between city and county. Nonetheless, it is worth noting that improvement of water quality resulting from the proposed reservoir and low flow augmentation will provide the Taylorsville water treatment plant with water of better quality than it now receives from the uncontrolled river.

The foregoing is not meant to imply that the Corps of Engineers should itself organize, design, and develop local water distribution systems. It does mean that the Corps could make an important contribution to reservoir area communities where water systems are inadequate by conferring with both city and rural leaders, pointing out in detail the potential for obtaining

good quality water from proposed reservoirs, and informing them of Federal and state agencies that do advise and assist in development of such systems.

The matter of conferring with rural leaders brings up a point concerning Corps public relations that is relevant not only to encouraging development of water supply systems but to other concerns also. Officials of the Corps have told us that they have great difficulty in identifying the leadership of the rural sector of the communities. From such statements and from our observations it is clear that from the outset the Corps establishes contacts with city officials and prominent local businessmen in the cities (the persons most likely to become interested in economic advantages from tourism, and in the case of towns like Taylorsville and they are not few in eradication of the flood problem). Yet there is no mystery, or should be none, as to how to find rural leaders. Most county officials, the County Judge, Magistrates, Sheriff, and others, are important figures in the rural sector, and are in contact with other leaders. Yet they describe themselves as being rarely if ever contacted by Corps officials for consultation or for assistance in disseminating information. There are other persons who could advise on effective ways to communicate with rural leaders: agricultural extension agents, Soil Conservation Service personnel, and in the private sector veterinarians, agricultural implement and feed dealers, etc. The problem is not insoluble, and is of general importance to public relations of the action agency.

CHAPTER IV

ROADS

Spencer County

County officials see reservoir effect on the road system as a potential problem area. Pessimistically, they predict that costs of maintenance of county roads may sky-rocket as result of wear and tear from the vastly augmented reservoir-related traffic.

To put the problem in perspective, the Spencer County transportation network will be described. Federal highways form a very minor part of the system. U.S. Highway 31E-150 crosses the southwestern corner of the county for a distance of only 2.4 miles. State highways provide the principal transit routes, connecting the more important population centers of the county, and connecting them as well with cities of neighboring counties, or with other highways connecting to the other centers and eventually the rest of the nation. Other roads of this category also form part of the secondary road net, supplemented by county roads. Of the major State roads, State Highway 55 traverses the county in a north-south direction, linking Taylorsville to State 155 and Interstate 64 to the north, and thus to Louisville, and to the south with the Blue Grass Parkway, providing one route to Lexington. State Highway 44 crosses the county in a roughly east-west direction, providing a more direct route to Lexington, while to the west it connects with Interstate 65 and U.S. 31W. Secondary State highways connect with and feed this primary net: State 248 intersects State 44, and State 48 links State 55 and U.S. 31E. State Highway 155 connects 55 to

Louisville. This State 55-155 route is to be straightened and widened to facilitate traffic between the major urban center and Taylorsville. This improved highway will junction with State 44 to route Louisville traffic to the reservoir over Main Street in Taylorsville, through the center of town.

County roads intersect State highways to provide access to other parts of the county. They come to more than 50 miles all told. Local officials know that roads and sections of roads to be inundated will be relocated by the Corps of Engineers, that is, the non-flooding ends will be rejoined by new sections built above flood pool level. However, once relocated, maintenance responsibility will revert to the county. The officials profess not to know the lengths nor locations of such sections. According to information from the Corps of Engineers, the entire Taylorsville Reservoir project will require relocation of 9.96 miles of county roads (and 17.28 miles of State highways.) A breakdown by counties was not given; presumably most of this work will be done in Spencer County.

At the present time all maintenance work on county roads (and their bridges) is accomplished by the county with monies made available by the State from the Truck License Fund. Pointing out that the heavy traffic will cause more road damage and thus heavier maintenance costs, officials of the county complain that Spencer County is now hard-pressed to keep the roads in good condition with the funds received for that purpose and with the six trucks and limited other equipment available. They also believe that a small county like Spencer would have difficulty obtaining larger Road and Bridge Fund grants from the State. (The amount made available to each county is reported to depend on numbers and sizes [load capacities, axles], of trucks licensed in that county.) Hence, they say, money for the

increased upkeep costs will have to be squeezed out of the county's limited General Fund. A tactic they propose is to cease maintenance on sections of roads to be inundated as soon as identified. This device for reducing expenses has been observed in other reservoir areas, where it invariably causes inconvenience to those who need the roads for access until the relocated sections are completed.

Green River and Barren River Lake areas

Traffic is a problem in the communities in these areas. This is particularly true during the holiday weekends in the summer when tourist traffic to the reservoirs is heavy. This situation is compounded by the lack of good roads, especially in the Green River Lake area. Local officials and businessmen are critical of the slowness of State Highway Department officials, claiming that highway construction and improvement projects are not carried out according to announced schedules to alleviate problems created by reservoir-related traffic. They complain too that maintenance programs on State highways are not adequate. In turn, criticism of county maintenance is leveled by rural residents. These same informants have not forgotten, and often mention that when authorization of the reservoirs was announced, there was a tendency to reduce or even to cease maintenance of those roads scheduled for relocation.

Almost everyone in Campbellsville and Taylor County mentioned that with the reservoir now completed, the greatest local need is good roads. State Highway 55, which is the only major road coming into Campbellsville, is narrow and winding. Since it is the only north-south route from Louisville to Green River Lake, it is heavily traveled during the summer

months. Slow bumper-to-bumper traffic is reported. Many local persons believe that the poor roads have hurt tourism. Tourists, they feel, prefer the more accessible lakes. Some local officials maintain that the situation has hampered industrial expansion, in which truck transport is an important factor. As far back as 1964 the demand for new roads was being publicized: "Parkways, parkways everywhere...but not one near Taylor County" (The Campbellsville News Journal, June 25, 1964).

Columbia and Adair County have also felt the need for new roads. East-west traffic is facilitated by State Highway 80. However, the best section of this road leads toward Lake Cumberland. Some local officials feel that Lake Cumberland gets many tourists that the Green River Reservoir could attract if there were better roads to the latter reservoir. Highway 55 from Columbia to the reservoir is not adequate for the amount of boat trailer and camper traffic that it has to handle.

Glasgow is better serviced by roads than other cities surveyed in this region. Several major roads, many of which have recently been improved, lead into Glasgow. State Highway 90 from Interstate 65 is a new road and U.S. Highway 31E leading to the reservoir and new state park has been improved.

Scottsville and Allen County, however, suffer from poor roads. U.S. 31E from the reservoir to Scottsville has not been improved and is not adequate for heavy traffic. Glasgow has managed to reap more of the benefits from tourism than has Scottsville. Allen County has done a commendable job of maintaining local access roads but the state and Federal highway system is not good.

According to the planning division of the State Department of Highways in Frankfort, road projects now underway or in the planning stage will alleviate many of these problems. The Bowling Green-to-Somerset Parkway, scheduled for completion in 1972, passes through both Barren and Adair Counties. This will solve the east-west traffic problem which has been particularly serious for Green River Lake. Both Glasgow and Columbia should benefit from this new toll road in terms of tourism and industry. It will make both Barren River Lake and Green River Lake more accessible, particularly from Bowling Green, Nashville, and Lexington.

Projects for Highway 55 call for a complete renovation in the next ten years. In addition to the stretch from Jeffersontown to Taylorsville, Highway 55 from the Blue Grass Parkway to Lake Cumberland will be rebuilt. By 1975 projects scheduled for completion include a five mile stretch south of Columbia, a Springfield by-pass, and a five mile stretch north of Campbellsville. A new road from the Blue Grass Parkway to Springfield has already been completed. These projects will greatly facilitate traffic from Louisville and Lexington to Green River Lake.

Scottsville will benefit from two proposed projects due for completion in the next five years. One is an improvement of Highway 231 from Scottsville to Warren County. This will be a direct link to Bowling Green which has had better access to Glasgow in the past. The other is more important in terms of the reservoir. Highway 31E is to be improved from the reservoir, through Scottsville, to the Tennessee state line.

As previously noted, it is the responsibility of the Corps of Engineers to relocate roads to be flooded. The organization also must built access roads for rural residents cut off from normal routes by formation of the

reservoir. The building of the Green River Reservoir required relocation of 12.4 miles of State highways, 8.6 miles of county roads, and five highway bridges. At Barren River Reservoir 14.5 miles of state highway were relocated as well as 6.4 miles of county roads and 14 highway bridges. Many localities were made more accessible than they had been before the lake was filled; the minister of a rural church in Taylor County reported that this was true of his church. Some county roads which had been gravel or dirt were blacktopped. These changes were based on projected roads use as a result of the presence of the new lake. All of these projects were completed at no expense to local (county) governments. A number of county roads, or segments of county roads, which became access roads to reservoir recreation facilities, so county officials reported, were reclassified as State roads after improvement by the Corps, and are now State-maintained. The procedure by which this was accomplished was not explained, but Barren County and Adair County officials were quite explicit in stating that no added cost-burden was felt by the counties due to reservoir traffic.

Summary

To summarize, the fears of Spencer Countians concerning heavy new maintenance costs for county roads seem largely unfounded. Also, they were not altogether realistic. A crucial point seems not to have been considered: What segments of the county road system will remain in service subjected to reservoir traffic? Obviously, county roads outside the lake network can be expected to carry but little more traffic than they did prior to dam construction. This information should have been provided by the Corps of Engineers. An additional body of data that should be made available consists

in plans to reclassify certain roads to make their upkeep State responsibility. Any county roads within the proposed park area that continue in use will presumably become State highways when title to the park is transferred to the Commonwealth of Kentucky, as reportedly is planned. Since information of the proposed park was not announced locally, county officials could not plan future road maintenance programs realistically. Reported plans to stretch the Roads and Bridges Fund dollar by neglecting upkeep on county roads slated for relocation (and information on this matter should be made available by the Corps of Engineers), are counterproductive and should not be carried out.

CHAPTER V
LAW ENFORCEMENT

Spencer County

Dam and reservoir-created demand for law enforcement services beyond normal local needs is a frequent topic of discussion by county officials and other local citizens. There is some difference of opinion on this topic, however. Some individuals dwell on the law and order problems to be created by the intrusion of a large force of construction workers during the building of the dam. Others argue the point, insisting that the construction hands who moved to Taylorsville during the building of the levee (completed 1949), caused few problems of this nature. Factually, with present day improved transit facilities, it is not at all certain that a large group of dam workers will move to the area: they may prefer to commute from Louisville. Still other informants revive the stereotype of urban tourists, popular with the anti-reservoir faction some short while ago (Drucker, Smith, Turner, 1972), as undesirables from the city who will disrupt the countryside by their carousing, littering, etc., etc., and even more heinous acts. In brief, all agree that the dam-reservoir complex will cause problems of law enforcement although they disagree on the nature of the problems and no one knows their magnitude.

County law enforcement is the responsibility of a full-time elected sheriff and his appointed deputy. Spencer County law enforcement officials utilize two vehicles which are radioequipped. A state trooper also patrols Spencer County and cooperates with the county sheriff's office on request.

The county jail located behind the court house is of concrete block construction and has been declared inadequate by a State commission. (Smith, 1970, p. 67). Facilities are provided for male prisoners, but no cells are provided for females who must be taken outside of the county. In discussions, local officials often mentioned the need for improvement of the county jail, but never discussed specific plans for the improvement.

At present city law enforcement and county law enforcement are separate with city policemen having jurisdiction within the city limits and the county sheriff and his deputy having responsibility for law enforcement in the county. For a time during the summer of 1971 the city employed four policemen with two on duty during the day and two on duty at night. Later this number was reduced to three. These policemen utilize a city-owned vehicle and operate out of the City Hall building located on Cross Main Street. "Generally speaking, breaches of the law are for drunkenness, disorderly conduct, parking violations, speeding, and so forth." (Smith: 1970:72).

County officials and city officials, anticipating increased law enforcement problems after the reservoir is completed, were working on plans in 1971 to expand and improve law enforcement facilities in both Taylorsville and Spencer County. The plans involved a proposal for Federal grant money to improve law enforcement communications, transportation, administration (office and records), and increase law enforcement personnel in Spencer County. This proposal was aimed at a merger of the county sheriff's department and the city police department. The Federal grant was requested under a Public Law providing for funding on a matching basis with the local facility paying 25% (from fines and forfeitures) and the Federal

government paying 75% for the law enforcement improvements. This proposed consolidation of the two law enforcement departments was still another effort (county-and-city zoning ordinances), on the part of Spencer County officials to anticipate and plan for predicted impacts of the proposed Taylorsville Reservoir. The merged county-wide police unit was to consist of six law enforcement officers, three working out of the sheriff's office (sheriff would still be elected and the deputies appointed by him), and three working out of the city police office. Under the proposal additional police cars were to be purchased and the radio system up-dated. The six law enforcement officers were to work as a unit under the direction of the county sheriff. However, the proposal was rejected, and the idea has been dropped as of 1973.

One problem confronting Spencer County planners is that they have not known the areal extent of their law enforcement responsibilities. Not informed about the plans for the large park, they have had to assume that their law force, hopefully with the aid of a State trooper, would have to patrol the whole area. They assume, not knowing of the State boat patrol program, that the Corps of Engineers would provide the waterborne patrol of the lake.

Green River and Barren River Lake areas

All local officials, including the law enforcement officers and private citizens as well from the reservoir areas were in agreement on the fact that law enforcement problems had increased markedly as a result of the opening up of recreational facilities at the lakes. That this situation had developed after filling of the reservoirs, and not during the construction

period was specified, even in Campbellsville where a group of construction workers had resided during the building of the dam on the Green River. The most frequent kinds of violations of the law reported as related to the lakes will be discussed after a brief summary of the several law enforcement agencies to which responsibilities have been assigned.

City police. Since the reservoirs are well outside the limits of any city, city police are not directly concerned with law problems derived from the manmade lakes, except insofar as they have to cope with increased traffic to and from the lakes that traverses city streets.

Sheriffs' offices. The sheriffs of the several counties and their deputies feel that they have borne the brunt of the increased workload of law enforcement. They are emphatic in stating that the great influx of tourists has increased their workload to the point where it is impossible for them to protect visitors adequately with the personnel available. Although additional personnel are needed if reservoir areas are to be patrolled effectively, realistically the sheriffs' forces cannot be increased. The austere budgets of the counties concerned cannot be stretched to provide the necessary additional personnel and equipment without drastic tax increases.

In one of the counties surveyed a "Constable" was reported as in charge of certain reservoir-related facilities. He was described as being essentially a custodian, however, with no power of arrest, who could only report incidents of violation of the law to the sheriff or the State trooper. If this information is correct, the title "Constable" is being

misused, for under Kentucky law constables are "law enforcement officers with broad powers of arrest and authority to serve court processes."

(Commonwealth of Kentucky: Legis. Res. Comm., 1968, p. 91).

State Park Rangers. At the State Park at Barren River Lake there is a park ranger force of four that is responsible for patrolling all the park facilities, a camping area, lodge, golf course, swimming beach, riding stable and bridle paths. It was reported that there have been few problems of law violations in the park. However, the rangers have no jurisdiction over other camping, etc. areas on the lake. Some county officials felt that on a cost basis, the funds supporting the ranger force if made available to the sheriff's office could provide an equally effective protection over the entire area of the county flanked by the reservoir.

Boat patrols. Aquatic patrols, that is boat operations on the lakes, have presented special problems. At the time of collection of data, on some reservoirs State highway patrolmen were assigned to boat patrol during the summer season of maximum waterborne activities. The troopers tried conscientiously, but not all were comfortable with this specialized duty. Subsequently, a special "boating division" has been formed by the State.

The Corps of Engineers maintains boats and boating personnel on the lakes in connection with operation of its installations such as those connected with water level control, etc. In the past such units had no police power. During the period of the research, however, the Nashville District, U.S. Army Corps of Engineers is reported to have experimented with a boat ranger system that had police powers. It was stated that the

system, designed to cooperate with any local law enforcement agencies, was considered so successful that plans were being made for expanding it.

Types of offenses. Reservoir-related problems with which law enforcement officers are concerned are varied. Heavy traffic to and from the lakes during the summer and on holiday weekends, with associated traffic jams, driving violations, and accidents (mostly of the minor "fender-bending" variety), augments the officers' workload, both that of the counties and of cities where improper planning has routed highway traffic through the population centers. In Scottsville and Columbia, principal highways junction at the town squares, causing vehicles, including numerous campers and cars towing boat-trailers, obviously going to or from the lake, to back up for blocks. The same thing occurs in Campbellsville where State Highway 55, the chief route from Louisville, traverses the center of the city. While, as previously noted, there are plans for improvement of some of the highways carrying lake traffic, there is no indication that the growth of traffic has peaked off. A transportation study of Campbellsville projects a marked increase in traffic for the two highways leading to Green River Lake through 1980 and 1990 (Municipal Engineering Company, 1969).

Local residents almost without exception complain bitterly of littering which they blame on the tourists. The logistics of picnicking and camping have been facilitated by the development of throwaway containers of all sorts, but this had meant headaches for those responsible for enforcing anti-littering laws and regulations, as well as for those who have to recover the materials. Some recreation areas do not have sufficient receptacles for trash, and obviously many campers, picnickers, and boaters are careless and

inconsiderate. But despite the fact that there is a law against littering along highway right-of-ways and other public areas, beer and soft-drink cans, plastic containers and other non-biodegradable products line roadways and cover camping and picnic areas. There are no records of arrests and convictions for littering.

Drinking alcoholic beverages is prohibited by law on State and Federal lands, and in addition the counties bordering on Green River and Barren River Lakes are "dry" under Kentucky local option laws. Nonetheless drinking does occur, often rather openly, in and about recreation areas, and even on the lakes. Local law officers are too few in number to suppress the drinking. It is, as a rule, only when an inebriated person becomes obstreperous and disorderly that arrests are made. It is not that the officers are not concerned with the matter, with its potential for creating dangerous situations in association with vehicular or boat traffic, but they simply cannot cope with the frequency of the violations.

It appears that many boat operators on the lakes do not know, or do not understand the "Rules of the Road for Inland Waters," a set of regulations covering proper procedures for operating watercraft. One person interviewed who considered himself well-informed on the subject appraised the situation as positively dangerous. As indicated previously, responsibility for patrolling the lakes has been variously assigned, but is limited in coverage. Leaflets on boating regulations are available for distribution at docks, etc., but apparently few persons give them serious consideration. Violations of boating regulations are reported to be abundant, including those of such seemingly self-obvious safety value ones as the requirement for one life jacket or life preserver for each occupant of the boat. Our self-styled

expert informant predicted eventual disasters on the lake, and argued for a mandatory boat operator's license system comparable to that for operators of vehicles on highways. While his position seems a little extreme, there is no question but that a hazard exists that requires a combination of public education and intensive patrolling, perhaps with well-publicized fines for gross violations.

More serious offenses such as major theft, breaking and entering of cars and campers, and the like, do occur but are not common. However with the multitude of persons moving through the recreation areas, and their anomie, culprits are very rarely apprehended.

Summary

To summarize, it is clear that law enforcement problems in reservoir areas may involve chiefly minor violations, but they are very frequent. There is a definite potential for development of serious situations, in the form of automotive and boating accidents, especially when carelessness may be compounded with illegal consumption of alcoholic beverages. If all, or even a large portion of responsibility for law enforcement in the Taylorsville Reservoir area be delegated to county facilities (the sheriffs' offices), and adequate protection for visitors be insisted on, it is obvious that additional financial support, to provide for additional personnel and equipment, as well as an expanded and modernized detention facility, must be made available. The flow of Louisville-Reservoir traffic through the center of Taylorsville (page 86) will add to the problems of the city police.

CHAPTER VI

SUMMARY AND CONCLUSIONS

This report has reviewed what appears to be the most likely areas of impact of a large reservoir on local government institutions. The procedure has involved comparing effects anticipated by local officials of a community in which the construction of a dam soon will commence, to the effects observed in the case of counties adjacent to recently filled reservoirs in a nearby region of Kentucky. As noted, these counties used comparatively are not precisely like the one of chief concern where the reservoir is to be built. There are differences of population size, area, degree of industrialization, and urban proximity. Yet all are primarily rural, and the legally prescribed functions of county government are alike in all.

The first problem, one considered by Spencer County officials as a threat to orderly administration, is the reduction of the county tax base due to Federal land purchase. Review of facts indicates that this procedure had no serious effect on Adair, Taylor, Allen and Barren County budgets due to general rising trends in land prices, local trends to tax increases due to reassessments of land purchases by dislocatees. In the case of Spencer County, probable increase of land purchase for residential purposes can be expected to compensate for probably limited dislocatee land purchase. While Spencer County's smaller size and higher percentage of proposed land-taking might tend to increase impact of the land-taking there are legally provided counter measures--(use of Emergency Fund, increase in tax rate)--to alleviate budgetary pressures, if the problem situation is evaluated in advance so

that a solution or solutions can be planned with adequate lead time. Another fact relevant to planning is that the land-taking is spread over a period of several years so that its maximum effect does not occur until near the time of completion of the dam. Here is a matter on which the Corps of Engineers could contribute substantially to effective planning by local officials: making available a firm schedule of land acquisition, by year, i.e., 1st year: x acres; 2nd year: y acres, etc. It is clear that such a schedule could not be maintained with absolute precision. Some residents will delay in selling, or hold out until condemnation procedures are completed. There are also "block purchases", in which a small portion of a property lies outside the pool-and-buffer zone area, so that the owner prefers to sell the entire farm. However, it is inconceivable in view of its experience in land acquisition that the Corps of Engineers could not predict, with small probable error, the year by year purchase of reservoir lands.

The recommendation that the Corps of Engineers make certain data available to local officials has to be extended to cover more than land purchase schedules. In view of the fact that planning continues over a long period at the District office, and changes, in case of Taylorsville Reservoir, in connection with size of flood control pool extent and that of recreation areas, the action organization should recognize its obligation to the local community by advising it, and especially its elected representatives who have to plan local administration, of all changes as they are developed and approved. Only in this way can the unsettling effects of the local "rumor factory" be dispelled, and only in this way can county officials make rational budgetary and operational decisions.

Planning and zoning, and development of potable water systems are of course local responsibilities. The information presented here brings out differences in local leadership and foresight rather than direct reservoir impact. The Corps of Engineers manifestly cannot set up such programs for cities and counties adjacent to proposed reservoirs. However, the agency can do more than it does. Its reservoir proposals invariably dwell on the potential economic benefits to the reservoir area from tourism, and the important benefit of improvement of water quality to be derived from the reservoirs. As a public service it could not only emphasize the possibility of maximizing these benefits, during meetings with local officials, but as well provide them with information on which state and Federal offices may be contacted for guidance and assistance in operationalizing such projects as planning and zoning, and establishment of water distribution systems. Again, ample information from the Corps to county officials including predictions of traffic-loads of county roads in the reservoir vicinity is essential for orderly planning of county road maintenance.

Finally, the survey has demonstrated a problem that is potentially greater, especially in view of the predicted high visitor rate at Taylorsville Reservoir, than local officials anticipate: law enforcement. That most violations of the law are minor offenses in the reservoir areas used for comparison is not to the point. They are committed with such frequency that in most areas they are beyond control of existing local law enforcement agencies, and they have a dangerous potential for needless and tragic results. Reference is of course to the reported frequency of violation of alcoholic beverage restrictions along with vehicular and waterborne traffic infractions. There is also the possibility of change of the pattern of offenses toward

more serious ones. There is no consideration of the problem in environmental impact statements, (except for an appended statement of regulations for areas under Corps of Engineers control, and the right of that agency to designate an undefined number of personnel with arrest powers). Yet the law enforcement problem is a reservoir-impact product, created by reservoir-caused social change--the vast numbers of visitors in formerly remote areas of low population density. Means for coping with this problem, that is of controlling law violations and adequately protecting the local communities and the visitors, should be included in every reservoir proposal and evaluated in every environmental impact statement.

The study has also brought out the fact that sociocultural benefits deriving from improvement of water quality in and immediately below the reservoirs could be maximized by a planned policy on the part of the Corps of encouraging installation or expansion of water supply systems, especially in rural areas adjacent to proposed reservoirs.

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APPENDIX I

Population Data for the Counties and Towns Surveyed

<u>Town</u>	<u>1960</u>	<u>1970</u>	<u>Percent Increase</u>	
Campbellsville	6,966	7,598	9.1	
Columbia	2,255	3,234	43.4	
Glasgow	10,069	11,301	12.2	
Scottsville	3,324	3,584	7.8	
Taylorsville	932	897	-4.3	
				<u>Sq. Miles</u>
<u>County</u>				<u>Land Area</u>
Adair Total	14,699	13,037	-11.3	370
Urban	(2,255)*	3,234	43.4	
Rural	14,699	9,803	-33.3	
Allen Total	12,269	12,598	2.7	351
Urban	3,324	3,584	7.8	
Rural	8,945	9,014	0.8	
Barren Total	28,303	28,677	1.3	468
Urban	10,069	11,301	12.2	
Rural	18,234	17,376	-4.7	
Spencer Total	5,680	5,488	-3.4	193
Urban	(932)*	(897)*	-3.9	
Taylor Total	16,285	17,138	5.2	277
Urban	6,966	7,598	9.1	
Rural	9,319	9,540	2.4	

*"Urban" population according to U.S. Bur. of Census definitions includes towns of 2500 or more. Columbia had only 2,255 in 1960; Taylorsville had less than 1000 in both 1960 and 1970.

Source: U.S. Bureau of the Census. Kentucky, General Population Characteristics, 1970.