



9-1976

Dams and People: Geographic Impact Area Analysis


Digital Object Identifier: <https://doi.org/10.13023/kwrrri.rr.97>

Vance E. Arnett
University of Kentucky

Sue Johnson
University of Kentucky

Right click to open a feedback form in a new tab to let us know how this document benefits you.

Follow this and additional works at: https://uknowledge.uky.edu/kwrrri_reports

 Part of the [Community-Based Research Commons](#), [Environmental Indicators and Impact Assessment Commons](#), [Geography Commons](#), and the [Water Resource Management Commons](#)

Repository Citation

Arnett, Vance E. and Johnson, Sue, "Dams and People: Geographic Impact Area Analysis" (1976). *KWRRRI Research Reports*. 103.
https://uknowledge.uky.edu/kwrrri_reports/103

This Report is brought to you for free and open access by the Kentucky Water Resources Research Institute at UKnowledge. It has been accepted for inclusion in KWRRRI Research Reports by an authorized administrator of UKnowledge. For more information, please contact UKnowledge@lsv.uky.edu.

DAMS AND PEOPLE:
GEOGRAPHIC IMPACT AREA ANALYSIS

BY

Vance E. Arnett
Graduate Assistant

Sue Johnson
Principal Investigator

Project Number A-056-KY (Completion Report)
Agreement Number 14-31-0001-5017 (FY 1975)
Period of Project July 1974 - August 1976

University of Kentucky
Water Resources Research Institute
Lexington, Kentucky

The work on which this report is based was supported in part by funds provided by the Office of Water Research and Technology, United States Department of the Interior, as authorized under the Water Resources Research Act of 1964.

September, 1976

ABSTRACT

This report attempts to determine the efficacy of using geographic impact areas as analytical sub-groups for the assessment of the impact of multi-purpose reservoir projects on target communities. The impact areas utilized are: the take area; the below-the-dam area; the urban area; and, the adjacent area. Each area is described in detail and each is analyzed for differences in knowledge, previous experience, and perception of impact on community and family.

Data for this study originated from structured and open-ended interviews in Johnson County, Kentucky. Information was collected during two field efforts, the first in February, 1974, the second in August of the same year. Frequency of response and content analysis are the chief analytical devices.

Descriptions of the life styles of each region indicated significant differences exist between impact areas. In addition, findings concerning the key variables of knowledge, previous experience, and perception of impact support the efficacy of impact area analysis. Different impact areas represent different orientations to reservoir projects. These differences must be considered for a better understanding of the social impact of such reservoir projects.

Descriptors: Community Development, Social Aspects*, Social Impact*, Social Change, Planning, Multiple-Purpose Reservoirs, Attitudes*, Water Resources Development.*

Identifiers: Impact Area Analysis

PREFACE

This report, an adapted version of Vance Arnett's thesis for a Master of Arts degree in Anthropology, is part of a series of studies, funded through the Kentucky Water Resources Research Institute, which have focused on the social effects of reservoir development. Most of these studies have focused on the most obviously-impacted group, those who have to move. However, this study and an earlier one have taken the entire affected community as its reference point. Paintsville was studied by Dr. Rabel J. Burdge in 1970, using an earlier version of the interview schedule on which the current research is based. Perhaps the most striking finding of the earlier study was that hardly anyone interviewed had heard about the reservoir, so, in essence, it was a naive population that was interviewed. Nonetheless, the majority of respondents were in favor of the Paintsville Reservoir construction. This continues to be true in the 1974 restudy as Arnett's research shows. However, he has added needed insight into not only the dynamics and content of attitude formation in this specific community but he also has made a methodological contribution by dividing the respondent population into impact groups. His analysis shows that knowledge about the reservoir, previous experience with floods, and perceptions of the reservoir's impact vary with the kind of impact group. Methodologically, he has shown that those who are marginally affected by the reservoir, i.e. the part of the community which stands neither to directly benefit or lose by the reservoir, mirror the views of the overall community. Statistical aggregation which ignores the role of impact groups, then, presents a less accurate view of community dynamics than does the kind of analysis presented here.

Sue Johnson
Principal Investigator

ACKNOWLEDGEMENTS

I wish to express my sincere gratitude to the many individuals who assisted me in the preparation of this thesis. I would like to offer special thanks to the members of my committee, Dr. Philip Drucker, Dr. Lathel Duffield and Dr. John VanWilligen for their continued guidance and encouragement. I would also like to thank Dr. Sue Johnson, Dr. Rabel Burdge and Mr. William Schweri for their assistance in all phases of this research effort. Special thanks go to my wife, Mary, for her support, guidance and technical assistance, and to my son, Gabriel, for his unending patience. Finally, I would like to thank the people of Johnson County; without their cooperation this project could not have begun.

TABLE OF CONTENTS

	<u>Page</u>
Introduction	1
Theoretical Perspective	8
Methodology	32
Research Setting	39
Research Findings	63
Conclusions	105
Appendix A	111
Appendix B	112
Notes	117
Bibliography	118

List of Tables

		<u>Page</u>
Table 1	Comparative Literature on Water Project Impact	10
Table 2	Knowledge as a Variable	25
Table 3	Response Distribution for Question: What Do You Like About the Area?	41
Table 4	Occupational Breakdown Below-the-Dam Sample	46
Table 5	Educational Experience: Below-the-Dam Sample	48
Table 6	Occupational Breakdown: Urban Sample	52
Table 7	Occupational Breakdown: Adjacent Sample	56
Table 8	Education: Community as a Whole	58
Table 9	Family Income: Community as a Whole	59
Table 10	Community Age Distribution	59
Table 11	Occupational Breakdown: Community as a Whole	60
Table 12	Perceived Impact on Community Take Area	67
Table 13	Reservoir Development Scale Below-the-Dam Sample	73
Table 14	Possible Effects on Community Below-the-Dam Sample	76
Table 15	Possible Effects on Family Life Below-the-Dam Sample	78
Table 16	Positive Effects of Reservoir Below-the-Dam Sample	79
Table 17	Additional Comments on Project Below-the-Dam Sample	80
Table 18	Percentage Rankings for Purposes of Reservoir: Urban Sample	82
Table 19	Reservoir Development Scale: Urban Sample	83
Table 20	Response Set for Origin of Information: Urban Sample	85

		<u>Table</u>
Table 21	Possible Effects on Community: Urban Sample	89
Table 22	Positive Effects of Reservoir: Urban Sample	90
Table 23	Reservoir Development Scale: Adjacent Sample	95
Table 24	Response Set Origin of Information: Adjacent Sample	96
Table 25	Possible Effects on Community: Adjacent Sample	99
Table 26	Community to Geographic Impact Area Comparison	102

INTRODUCTION

This research is designed to produce descriptive data on the potential social impact of a proposed reservoir project in Johnson County, Kentucky. An analytical scheme utilizing sub-group distinctions concerning issues of knowledge, experience, and perceived impact on the part of County residents is the main framework of the study. Sub-group categories are intended to produce a comparative frame of reference that will allow testing of hypothesized variations in thought concerning the impact of the proposed project. This form of analysis and information derived from this type of descriptive approach should produce more clearly-defined areas for consideration in the assessment of the social impact of public works projects.

Each specific sub-group is defined for this study in the following way?

Group A: Take Area Population

This group is comprised of those individuals within the sample who reside within the area subject to eminent domain proceedings for the construction of the project. In the traditional language of water resources research, they are the "take" area residents and comprise the relocation population.

Group B: Below-the-Dam Population

This group consists of those individuals within the sample who reside in an area sensitive to flooding from the Paint Creek. The flood plain is defined by those limits suggested by federal surveyors in assessment of typical flood prone regions. The residents of this area stand to benefit from the increased flood protection provided by the project.

Group C: Urban Population

This group is composed of those individuals who reside within the city limits of Paintsville, Kentucky. These individuals stand to benefit from increased flood protection and tourism which would create added employment and capital flow for the county. Flood protection for this region would mean lower flood insurance rates and possible zone changes which would allow for development of areas now considered too hazardous by federal standards for development.¹

Group D: Adjacent Population

Those individuals within the sample who reside in adjacent areas of the county not outlined above comprise the last population.

The major referent for community in this study is Johnson County. Previous research (Becker: 1971; Korsching: 1972) utilized this approach and the people seem to use the county as their referent for homeplace, thus only individuals within Johnson County are utilized for this research.

Each of the four sub-groups was surveyed for the following areas of inquiry:

- 1) knowledge of the proposed reservoir
- 2) previous experience concerning reservoirs, their purposes and knowledge of the agencies involved.
- 3) perceived impacts of the Paintsville Lake Project as seen by the individuals themselves.

In addition to the above data, a description of each impact area including information on settlement patterns, transportation and road networks, waterways, and economic and subsistence patterns was utilized in an attempt to give as complete a picture of each sub-group

as possible. This should not be construed, however, as an attempt to define four specific and different community sub-systems within Johnson County. The delineation of the separate groups is merely a heuristic device for the purpose of qualitative comparison. There is no evidence to suggest that these impact groups exist as well-integrated subsystems within the greater context of the community. Previous researchers have suggested impact group analysis as a tool for greater qualitative description (Drucker: 1972; Baur: 1973). It is the delineation of groups as an analytical tool that is at issue with this research effort.

The underlying hypothesis for this proposal is:

Variations will exist among impact groups in their perception of the project and its community and family impact.

Sub-hypotheses for Impact Groups are:

Group A: Take Area Sample

Inhabitants will perceive negative aspects of the proposed project with an emphasis on loss of land, disruption of social and family ties, and destruction of traditional homeplace.

Group B: Below-the-Dam Sample

Inhabitants will perceive positive aspects of impact oriented mainly toward flood control.

Group C: Urban Sample

Inhabitants of the urban area will perceive positive aspects of impact utilizing a combination of flood control and developmental issues.

Group D: Adjacent Area Sample

Inhabitants will be ambivalent about the perceived impact of the project with a slight positive emphasis on the positive aspects of the project.

The Study Community

Johnson County is located approximately 124 miles east of Lexington, Kentucky. The county is characterized by intersecting streams which drain into the Big Sandy River. The terrain is characterized by narrow steep valleys or "hollers" as they are referred to in Eastern Kentucky. The economy is based on extractive industry, i.e., coal, natural gas and some coal. At present, agriculture figures only minimally as a contribution to the county's economy.²

The chief urban area is Paintsville, Kentucky, which is the county seat. It is located almost in the geographic center of the county and is ranked as a Kentucky Fourth Class City with a population of approximately 7,000. Recent discussion with officials at City Hall and the Chamber of Commerce indicate that Johnson County's population is on the increase. At the time of the research in August 1974 there was a slight housing shortage for middle income dwellings. The county's only major industrial concern is an American Standard plant located approximately five miles south of Paintsville. The plant manufactures plumbing supplies.

The majority of the population for the county is rural with approximately three rural residents for every one urban dweller. Johnson County is considered by state and local officials as well as by local inhabitants as a rural county.

The Paintsville Lake Project

The Huntington, West Virginia District Office of the U.S. Army Corps of Engineers characterizes the Paintsville Lake Project as a multi-purpose reservoir providing flood control, improved water quality and pollution control and increased recreational benefits for the county residents. Secondary benefits of increasing economic opportunity are also cited. Only with the combination of all three major objectives can the project be justified for the expenditure of 33.2 million dollars (based on August 1974 Corps estimate). The project as described in the Final Environment Impact Statement submitted by the Corps to the Council on Environmental Quality in 1971, will necessitate the purchase of some 13,954 acres of land in Johnson and Morgan Counties. This will result in the destruction of some 200 dwellings, destroy three small communities, seven churches and five commercial buildings. It will also require the relocation of seventy-six cemeteries containing approximately 1800 graves.

The major opposition to the project is centered in Morgan County, but Johnson County relocatees form a portion of the membership as well. The organization has proven itself active in a suit which filed for injunctive relief on the grounds that the Corps had not complied with National Environmental Policy Act guidelines in the preparation of the Final Environmental Impact Statement.³ The main proponent group is composed of Paintsville residents who are seeking flood protection and

and increased opportunity for development. The debate is heated and the subject delicate. During the data collection phase of this research, the nature and the intensity of the debate sometimes made it extremely difficult to gain the cooperation of the community residents.

The Areas of Inquiry

Knowledge

Essential to any understanding of how people relate to a specific stimulus is an assessment of what they know about issues according to what they feel is true concerning that issue (Cole and Scribner: 1974). This can be manifest in either what is actually true or what is believed to be true about the issue. In the case of this research effort, the stimulus is a dam project. An assessment of what people know about a project's physical aspects, i.e., location, cost, and accessibility can be obtained by asking a representative sample these specific questions. Knowledge of the project is here defined as what the individuals within each impact group believe to be true concerning the physical presence of the dam, its accessibility, its builders and decision makers, and how the agency goes about compensating those to be relocated.

Experience

Previous experience is usually viewed in water resource research, as previous flood experience. To get more complete data on all elements of experience associated with such projects, it was necessary to elicit responses concerning experience with the agency involved and experience with other reservoir projects. In Johnson County there is ample opportunity for residents to draw comparisons between this project and the Dewey Dam which is located ten miles south of Paintsville in the Jenny Wiley State Park.

Perception of Impact

One aim of this study is to elicit information from the population concerning their perceptions of the project's impact on their community and their family life. By approaching the total population through impact group analysis it is hoped that variations as to what people in different parts of the county feel to be the positive and negative aspects of the project will come to light. The National Environmental Policy Act of 1969 requires that all agencies conducting projects with a likely significant effect on the environment research the possible results of their actions. This leads agencies to project the possible impacts of developmental programs by analyzing previous research on similar cases. Many times, however, what the people feel in regards to possible impact is much more inclusive than planned projections and all too often the people's fears and expectations are disregarded. By looking at the responses concerning perception of impact one can determine what the people feel the impact of the project will be.

By approaching the total population through impact group analysis it is hoped that some of the variation in knowledge, experience and perception of impact can be explained. It is to this end that this research is directed. By providing descriptive data on the above areas, a better assessment can be made of factors affecting attitude formation in a community, and some of the dynamics of social impact can be comprehended.

THEORETICAL PERSPECTIVE

General Orientation

This research is concerned with the different reactions to a water development project as expressed by members of different geographic sub-groups within a community. The geographic sub-areas have been delineated by the author based on their association with the projects physical location within a community. The theoretical perspective of this research suggests that individuals who reside in the take area of a dam project will express different response sets than those individuals who live just below the dam in the normal flood plain, those living in the nearest town, or those living in adjacent areas within the target area.

In an attempt to view the possible variation between these sub-groups this research will concentrate on response sets keyed to the variables of knowledge, previous experience, and perceived impact of the project on family and community life. Content analysis of data concerning the above three variables should indicate if, indeed, there are differences in response patterns which co-vary with geographic groupings.

Utilization of heuristically-derived geographic impact areas, while having been suggested in the field of water resource research (Drucker: 1972 and Baur: 1973), has yet to be tested adequately in a real situation. The key variables, however, have been previously researched with regard to their relation with attitudes concerning such projects. The following literature survey concerning the three key variables is offered as a background for the present research.

Review of Related Water Development Research

The purpose of this review is to acquaint the reader with the general field of social impact and water development literature. It is easier to perceive the significance of this project if one has insight into what has gone before. To facilitate this task, the author has developed a comparative chart. (See Table 1) In Table 1, the reader can survey and compare previous research as to the nature of the population studied, research tasks, key concepts, methodology, (both the collection phase and the analytical phase) and conclusions.

In addition to the overview presented by the chart, each of the key variables, i.e., knowledge, previous experience, and perceptions of impact, will be discussed individually in order that the reader may gain insight into how these variables have been defined and characterized in previous work.

Population	Research Task	Key Concepts	Methodology		Conclusions
			Data Collection	Analysis	
Rural & urban residents of water-development project areas	<p>To determine:</p> <ol style="list-style-type: none"> 1. Attitudes of people toward project 2. Characteristics of people with favorable attitudes 3. Knowledge level of people 4. Perceptions of project's weak and strong points 	<ol style="list-style-type: none"> 1. Attitude 2. Rural vs. urban 3. Age 4. Knowledge 5. Land tenure 6. Education 	Questionnaire survey with some open-ended and some scale response sets.	Statistical	<ol style="list-style-type: none"> 1. Non-farm people more in favor of project. 2. Better educated more in favor of project. 3. Knowledge relates to positive attitude, however there was a low level of knowledge. 4. Older (over 65) persons less in favor of project-- younger individuals (under 35) more in favor.

*For source citations refer to Bibliography.

Table 1
Comparative Literature on Water Project Impact
Selected Sources*

Wilkenson 1966

Population	Research Task	Key Concepts	Methodology		Conclusions
			Data Collection	Analysis	
<p>Community defined by location and functional integration toward common cause in community matters.</p> <p>Two communities compared; both with water-development projects under way.</p>	<p>1. Determine attitudes and opinions toward project...</p> <p>2. Determine effectiveness of project...</p> <p>3. Determine degree of community integration and participation in project.</p>	<p>1. Perceptions of impact</p> <p>2. Knowledge</p> <p>3. Participation</p> <p>4. Functional integration</p>	<p>1. Combination of survey schedules with scales and open-ended questions</p> <p>2. Indepth interviews</p>	<p>Statistical analysis of survey data.</p> <p>Content analysis and comparison of interview data.</p>	<p>1. Low level of knowledge and participation on community level.</p> <p>2. Community which was better integrated resisted outside agency's procedures to a greater degree than did less-integrated community</p>

II

Table 1 continued

DASGUPTA 1967

Population	Research Task	Key Concepts	Methodology		Conclusions
			Data Collection	Analysis	
Rural landowners in water development districts	<ol style="list-style-type: none"> 1. Delineate factors which relate to favorable attitudes toward project. 2. Compare communities facing similar projects 3. Determine role of knowledge in attitude development 	<ol style="list-style-type: none"> 1. Education 2. Organizational participation* 3. Knowledge 4. Size of farm 5. Level of living 	Survey containing 22 attitude statements which comprise attitude scales.	Statistical analysis of scales	<ol style="list-style-type: none"> 1. High organizational involvement, high level of living, high education score, and non-farm occupation correlated significantly with positive attitude. 2. High level of knowledge correlated with positive attitude. 3. Age and nature of farming did not significantly relate to attitude.

*organizational participation was figured on the basis of the number of service organizations an individual belonged to.

TABLE 1 continued

SMITH 1970

Population	Research Task	Key Concepts	Methodology		Conclusions
			Data Collection	Analysis	
Rural and urban inhabitants of a county facing watershed development.	Baseline study of county residents as to existing socio-culture system with emphasis on anticipation of change.	<ol style="list-style-type: none"> 1. Perception of impact 2. Anticipation of change 	Participant observation utilizing un-structured interview techniques.	Temporal comparative analysis.	<ol style="list-style-type: none"> 1. Projects may produce a certain amount of dis-integration within the target community. 2. Rural residents were wary of unwanted changes. 3. Low level of knowledge created anxiety. 4. Businessmen perceived positive economic impact.

TABLE 1 continued

BURDGE AND LUDTKE 1970

Population	Research Task	Key Concepts	Methodology		Conclusions
			Data Collection	Analysis	
Relocatee	Factors affect attitude toward migration	<ol style="list-style-type: none"> 1. SES 2. Vested interest 3. ID with place 4. Knowledge 5. Separation 	Survey techniques with attitude scales	Statistical analysis of scales	<ol style="list-style-type: none"> 1. Migration produces stress 2. Knowledge does not necessarily relate to positive attitude 3. Those with more of a "vested interest" are less apprehensive

TABLE 1 continued

BECKER 1971

Population	Research Task	Key Concepts	Methodology		Conclusions
			Data Collection	Analysis	
Urban and rural segments of a county facing watershed program.	Identity factors which were associated with peoples attitudes toward a reservoir project prior to construction.	<ol style="list-style-type: none"> 1. Socio-economic status 2. Age 3. Residence 4. Familism 5. Traditionalism 	Survey research with attitude scales, to produce qualitative data.	Blalock model and statistical analysis.	<ol style="list-style-type: none"> 1. Familism found to associate with socio-economic affluence. 2. Socio-economic status and experience of flood damage were associated with positive attitude toward the dam project.

TABLE 1 continued

PETERSON AND ROSS 1970

Population	Research Task	Key Concepts	Methodology		Conclusions
			Data Collection	Analysis	
Rural land-owners within watershed area and prescribed radius.	<ol style="list-style-type: none"> 1. Assessment of the degree to which changes, if any, have occurred in attitudes of local land-owners. 2. Types of attitudes most subject to change. 3. Examination of factors which might account in attitudes. 	<ol style="list-style-type: none"> 1. Attitude toward project 2. Attitude change 	<ol style="list-style-type: none"> 1. Interview schedules 2. Survey 3. Structured questionnaires 	Diachronic comparison based on statistical data.	<ol style="list-style-type: none"> 1. More knowledgeable--more in favor of project. 2. Direct experience with project favorable to positive attitude. 3. Favorable attitudes increased after program implementation concerning some aspects and decreased with others.

TABLE 1 continued

DRUCKER 1972

Population	Research Task	Key Concepts	Methodology		Conclusions
			Data Collection	Analysis	
Cross-class population of an impact community with urban and rural in a rural county.	Impact on local community and especially landowners.	<ol style="list-style-type: none"> 1. Perception of land 2. Land value 3. Project effects 	<ol style="list-style-type: none"> 1. Anthropological field techniques of participant observation and indepth interviews. 2. Analysis of existing land sale documents. 	<ol style="list-style-type: none"> 1. Content analysis of interviews and written records. 2. Statistical analysis of land sales records utilizing regression and simple correlation. 	<ol style="list-style-type: none"> 1. High levels of anxieties among traditionally oriented people by such projects. 2. Land values begin to vary soon after announcement of project. 3. There are different perceptions of impact among different segments of the target population.

TABLE 1 continued

BURDGE AND JOHNSON 1973

Population	Research Task	Key Concepts	Methodology		Conclusions
			Data Collection	Analysis	
<p>3 populations:</p> <p>1. In a pre-construction phase the urban and rural segments of a county facing development.</p> <p>2. A population scheduled for relocation from a project.</p> <p>3. Two populations which have been relocated.</p>	<p>To analyze and describe the process of re-locating individuals and families who must move due to reservoir construction.</p>	<p>1. Anxiety</p> <p>2. Psychological stress</p> <p>3. Social stress</p> <p>4. Economic stress</p> <p>5. Material costs and benefits</p>	<p>Questionnaire using scales and open-ended responses designed to produce quantitative and some qualitative data.</p>	<p>Statistical and content</p>	<p>1. Knowledge of a project is not necessarily an indication of positive regard for a project, particularly among those who must move.</p> <p>2. Long delays in project create increased anxiety.</p> <p>3. The old, retired individuals on fixed incomes are usually harder hit by relocation.</p>

TABLE 1 continued

DRUCKER, CLARK AND SMITH 1973

Population	Research Task	Key Concepts	Methodology		Conclusions
			Data Collection	Analysis	
Two counties located adjacent to recently completed reservoirs.	Study the probable socio-cultural impact of a proposed reservoir on the local government of adjacent communities.	Social change, impact, social values, planning, anticipation of change.	Participant observation utilizing indepth personal interview techniques to produce qualitative data.	Comparative content analysis	<p>1. Rising trends in land prices produced by project somewhat offset the loss of tax base deficit.</p> <p>2. Misinformation creates false deductions. Better agency active information programs are needed concerning all aspects of project.</p> <p>3. Projects may produce strains on existing law enforcement systems.</p> <p>4. Agencies could be more effective in coordinating water control with specific water needs for target areas.</p>

TABLE 1 continued

DRUCKER, SMITH AND REEVES

1974

Population	Research Task	Key Concepts	Methodology		Conclusions
			Data Collection	Analysis	
<p>Two communities:</p> <p>1) Facing reservoir development;</p> <p>2) With completed project.</p>	<p>Population required to relocate</p>	<p>1. Social change</p> <p>2. Impact of project.</p> <p>3. Anticipation of change</p>	<p>Participant observation, open-ended in-depth interviews to produce qualitative data.</p>	<p>Comparative content analysis</p>	<p>1. Disruption of kin and social ties was not linked solely to water project.</p> <p>2. Low level of communication, and project knowledge was tension producing.</p> <p>3. Perception of economic loss was a strongly voiced negative impact.</p>

TABLE 1 continued

Knowledge

Knowledge has often been observed as a variable in water research. However, as can be surmised from Table 2, conclusions concerning the role of knowledge in attitude formulation do not agree.

Photiadis (1960) was one of the first to utilize knowledge as a variable in water development research. Photiadis conceptualized knowledge as the amount of correct information a respondent displayed concerning actual facts of a project. Responses were measured according to the number of correct answers to five essay questions concerning the structure and goals of the water development project in two community situations. Analysis of this data indicated that there was only a small percentage of individuals in either community who possessed a considerable amount of information [correct] concerning the projects. In addition, those people who knew something seemed to exhibit more favorable attitudes toward the project. One final interesting observation Photiadis made was that regardless of the amount of information or the quality of the knowledge possessed by individuals, attitudes seemed to be well fixed. In other words, the people of the community did not necessarily have to have correct knowledge of the project to formulate an attitude. They could make up their minds concerning the project utilizing any information, correct or not.

Wilkenson (1966) observed two communities faced with watershed development to determine if the degree of community integration affected the acceptance or rejection of watershed development projects. As part of this study, Wilkenson observed the level of knowledge concerning the objectives of the water development programs, and the roles of the different agencies involved in the development of the project.

Analysis indicated that knowledge of the facts of each project existed at a low level in each community. In addition, Wilkenson observed a low percentage of public participation for both communities.

In 1967, Dasgupta defined knowledge as the extent to which the landowners in the study population could describe the objectives of the water project and could name the agencies involved in the project. Dasgupta found two categories concerning knowledge of the project. One category consisted of persons who knew something about the project, the other of persons who knew nothing about the project. Of those who knew something, there was a significant correlation between the level of knowledge and high scores for organization involvement, level of living, and education. Further analysis revealed that those individuals in the community who had higher knowledge scores seemed to be more in favor of the project. Thus, Dasgupta concluded that the more informed person will be most likely to form favorable attitudes toward a project.

Burdge and Ludtke (1970) developed a measure of knowledge based on the number of correct responses to a twelve-item knowledge "test." The test was designed to determine the level of information concerning reservoir construction and the Army Corps of Engineers' land acquisition procedures. Working entirely with a relocatee population, the two authors determined that knowledge of the project had little or no effect on increasing willingness to relocate.

Burdge and Johnson (1973), utilizing a similar measure, determined that knowledge was not necessarily a positive indication of favorability in relocation populations.

Peterson and Ross (1971) researching changes in attitudes toward projects over a six-year period conceptualized knowledge scores based

on the number of correct answers to a six-question knowledge indicator. The summated scales produced data which indicated that the greater the level of knowledge the more favorable an individual was toward the water development project.

While not utilizing knowledge as a specific variable, Smith (1970) found that the level of information was low in a rural target community. From his observations Smith asserted that this low level of information produced a "fear of the unknown" in certain segments of the population, i.e., the aged, relocatees, rural landowners, etc. This lack of knowledge produced an increased level of anxiety in the target population.

Drucker, Clark and Smith (1973), utilizing descriptive anthropological procedures, found a similar lack of knowledge in target populations. In this case, the agency involved followed a policy which limited information. This forced a void of credible knowledge in the community which in turn gave rise to local rumor. In other words, the population was deriving its own set of project facts based on what little information had been given them by the agency and hearsay.

This is consistent with the position held earlier by Photiadis (1960). Photiadis felt that because of poor informational practices, agencies were forcing population to rely on individual contact as an educational medium. After pointing out that the interactional contact situation is a very strong educational setting, Photiadis offered the notion that teaching the population about the project will increase the percentage of positive attitude bearers in the target group.

In 1974 Drucker, Smith and Reeves offered similar suggestions when it was determined by their study that the low level of information was creating anxiety in the target population. The suggestion here was

that the agency involved should reassess and possibly change the existing public relations procedures for target areas to take existing cultural situations more into account. Thus, by designing knowledge statements which could be understood, and, then, by actively helping the different individuals within the population to adjust to the new situation, the agency could improve its public image and, at the same time, develop the project with less negative impact. Revisions in agency-community communication procedures could bring a higher level of knowledge concerning the project procedures to the community.

To assist the reader in summarizing the utilization of knowledge as a variable concerning water development, Table 2 outlines previous research concerning knowledge as a variable.

Previous Experience

There are several measures of previous experience which have been utilized in the existing literature. One common operationalization has been to determine the amount of previous flood experience in a given research area. A second factor to be considered under the rubric of previous experience is the amount of prior contact with water development programs. Finally, the third element to be considered when dealing with previous experience as a variable is the amount of previous contact with agencies that carry out such projects. All three of the above measures of previous experience have been considered in the literature and all have shown some form of co-variation with attitude concerning water development projects.

TABLE 2
KNOWLEDGE AS A VARIABLE

Author/Date	Definition of Knowledge	Conclusions
Photiadis 1960	Amount of Correct information concerning the structure and organization of project.	<ol style="list-style-type: none"> 1. Knowledge related significantly to positive attitudes. 2. Attitudes seemed fixed even in those individuals with low knowledge scores.
Wilkenson 1966	Amount of correct information concerning the goal of the project and the role of each agency involved with the project	There was a low level of knowledge and of public participation in target communities
Dasgupta 1967	Extent to which the population could describe the objectives of the project and name the agencies involved with the development.	<ol style="list-style-type: none"> 1. High knowledge scores correlated with high scores in organization involvement, education, and level of living. 2. High knowledge scores correlated with favorable attitude.
Burdge & Ludtke 1970 and Burdge & Johnson 1973	Level of information concerning the construction of the project and the agency's land acquisition procedures as reflected from a twelve item test.	High level of knowledge did not show significant effect on attitude toward relocation or willingness to move in relocatee settings.
Peterson & Ross 1971	Knowledge on number of correct responses to factual knowledge indicator.	Knowledge correlated significantly with favorable attitudes toward project

TABLE 2 continued

Author/Date	Definition of Knowledge	Conclusions
Smith 1970	Level of information concerning project	Low levels of information produce higher levels of anxiety in certain segments of the population.
Drucker, Smith, & Clark 1973	Level of information concerning project.	Limited information on project as offered by the agency involved produces a void of knowledge which is filled with misinformation and rumor.
Drucker, Smith & Reeves 1974	Level of information concerning project.	Low level of information reflects the poor communication patterns between the project agency and the target population.

Dasgupta (1967) found that previous flood damage did not correlate highly with positive attitude toward a project. In addition, data from this study showed that individuals with prior technical contact, or input in the planning of the project displayed a higher degree of favorability toward the project.

Peterson and Ross (1971) found that those individuals who had experienced severe flood damage or less severe but constant flood damage were more in favor of watershed projects. Peterson and Ross also determined that those individuals who did not have any previous flood experience still considered increased flood protection as a primary benefit of watershed programs.

Previous experience when used as a referent to prior contact with watershed programs has also provided insight. Wilkenson (1966) found that there was very little contact, technical or otherwise, between project officials and the communities involved in the study. In addition, 72% in one community and 38% in a second agreed with the statement: "Landowners have little opportunity to express their opinions in planning watershed programs." (Wilkenson: 1966:15)

Burdge and Johnson (1973) found that many individuals were gearing their ideas of perceived impact according to what they had heard about other projects. In other words an individual does not have to live through an experience to use experiential data as a factor in attitude formation. Positive as well as negative attitudes can be formulated by mental comparisons based on the previous experience of others. This theme runs through much of the social impact literature.

Much of the anxiety over perceived impact as reported by Smith (1970), Burdge and Ludtke (1970), Drucker (1972), Drucker, Clark and Smith (1973), and Drucker, Smith and Reeves (1974) is based on "rumor factory" information. This type of knowledge is based to a large extent on hearsay evidence on the experiences of others confronted with similar projects.

Previous experience as it relates to the agencies involved with the construction and development of water projects is a factor in social impact assessment and attitude formulation. As stated earlier, Dasgupta (1967) found a much higher percentage of favorable individuals among those who had been included in technical and planning aspects of project development. On the negative side of this issue, Burdge and Johnson (1973) speculated that poor procedures for land acquisition had increased the negative feelings and heightened the level of anxiety over the project. Drucker, Smith and Reeves (1974) discussed this issue as well. These authors concluded that the poor communication linkage between the agency and the people increased anxiety and harmed the public image of the agency involved. The public image of an action agency is largely based on previous contact with communities. Previous experiences with agencies is a prime factor in attitude formation and social impact.

Perceived Impacts

Of all the variables utilized here, the most frequently reported has been perceptions of impact. A variety of methods ranging from quantitative scores to qualitative descriptions has been utilized to find out how the individuals in a community feel a project will benefit or harm their existence.

Photiadis (1960) found that the people in the study area were concerned about the cost of the proposed watershed project. Linked to this idea was the feeling that the new irrigation possibilities might create a surplus of agricultural products. Inhabitants of the target community were also concerned that they did not know enough about the project and had been allowed only limited access to decision situations. The strong points of the project were perceived as increased industrial possibilities, higher level of living, and population growth. Some individuals also looked forward to an increase in the number of family-owned farms that the increased irrigation might provide.

Wilkenson (1966) found his population to be in favor of the watershed project because they perceived increased economic benefits. The study population in this case was wary of the implementation of the program and the methods used to finance such a project.

Burdge and Ludtke (1970) found that a high percentage of relocatees perceived relocation as a threat to their existence. Forced migration brought about by such projects produced stressful situations based on the perception of economic loss, disruption of family and social ties, etc. Burdge and Johnson (1973), studying populations before, during and after relocation, found that individuals perceived economic loss, lower quality of life, and, in some cases death as possible results of having to relocate.

In 1970 Smith studied a rural community facing the development of a large reservoir-recreational complex. Smith's descriptive data reflected real fears concerning the unknown elements of the project. Individuals within the community and especially the rural segments of the population did not know what to expect. These individuals perceived

economic loss, loss of traditional home sites, hardships for the aged, and, in some cases, death again was associated with anxiety produced by impending projects. Benefits were mainly outlined as increased economic opportunities. The projects were depicted by the business segment of the population as the "shot-in-the-arm" the town needed to survive. Thus, increased revenue flow from tourism, and development were perceived by a certain segment of the population as a definite benefit of the project.

Peterson and Ross, (1971) found that the overwhelming benefit, as perceived by individuals in the study population, was increased flood protection. For those individuals who had negative feelings about the project the reason most given was that the project was located too far away to do them any personal good.

Drucker (1972) found that rural inhabitants of the study population perceived the project as a threat to their traditional way of life. These individuals also perceived increased land prices and potential modification of traditional land use patterns as negative impacts of the project. Traditional farmers would be forced to find employment in other, more wage-oriented form of subsistence. This would bring about an unwelcome change in the existing socio-cultural subsistence pattern.

Drucker, Clark and Smith (1973) were interested in the impact on local government agencies. The authors found that local government officials had low levels of information or misinformation to utilize in their decisions. Expected problems with water systems, roads, planning and zoning, and law enforcement, while not based totally on factual information, were real perceived impacts. In addition, the above authors found that local governments expected hardships on local offices and a loss of local revenue due to the confiscation of taxable property by the

federal government. Again, while the authors point out that these were not insurmountable problems, they were still perceived areas of concern to the individuals involved.

Drucker, Smith and Reeves (1974) determined that individuals in a dislocatee population did not perceive the project as a causal factor in disruption of family organization. The people instead perceived the project as hastening a phenomenon that was already in existence due to rapid out-migration. In addition, this population perceived negative aspects of projects based on economic loss via loss of land and livelihood through forced migration. In this case, the agency's reputation concerning land acquisition had preceded it and the inhabitants of the take area were quick to resist any effort on the part of the agency.

Summary

Knowledge, previous experience, and perception of impact are all variables which have been analyzed before in the social impact setting of planned water projects. The utilization of these variables for this study will be to determine if any variation exists between different geographic impact areas within a given target area of a reservoir project. If, indeed, it appears that different locations within the target community have different information, appear to have different experiences, or perceive the impact of the project in different ways, then the test of geographic impact area variation will have been borne out. Being cognizant of the variation of the above three variables in different geographic impact areas will enable agencies and researchers to develop alternative procedures and evaluative measures concerning such projects.

METHODOLOGY

Data for this study originated from two sources. The major portion of information was collected in August of 1974 under the direction of Dr. Sue Johnson, Dr. Rabel Burdge, and the author. This study is the primary data source for the present research. Due to randomness of the sample selection, however, the take area portion of the county was all but excluded, with only one cluster (five interviews) actually falling within the take region. In addition, time limitations prevented any further supplementary data collection specific to this portion of the county. As a result, a secondary source of data will be utilized for this geographic impact area. This data was produced by a survey conducted in February of 1974 under the direction of Mr. David Stoloff.⁴ It is uncertain how much the six-month delay between the two collection efforts affected the actual results of the data. Comparison of the take area to the other geographic impact areas is somewhat hampered by the fact that the questions were not identical in the Stoloff study to those framed in the primary survey. However, the primary objective of the present study is to describe each impact region and how the people perceive the coming project, what experience they have had with other projects, and what they know about the reservoir. Since the methodology of this study does not rely on statistical comparisons of each area, but rather on the subtle differences as expressed by the people themselves, the data generated in the February study by Mr. Stoloff adequately meets the above needs, and thus serves the general purpose of the present research.

The Sample

A. The February 1974 Study

Under the direction of Mr. Stoloff, interviews were obtained from a sample of take-area residents of the Paintsville Lake project in February of 1974. A previous study, (Hochstrasser: 1973), had surveyed almost the entire population on a house-to-house basis using key-informant interviews where necessary. Utilizing the same dwellings, a twenty percent sample was randomly selected and surveyed by the Stoloff study. In total, twenty-eight households were interviewed with a ninety percent response rate.

The take area for the Paintsville Lake project includes portions of both Johnson and Morgan Counties. Since this report deals with Johnson County as a referent for community, only those dwellings which fell within the Johnson County boundaries were utilized in the present research. The total number of response sets for Johnson County totaled seventeen. This reflected a twenty percent sample of the total dwellings (85) in the take area and was randomly distributed throughout the Johnson County section of the acquisition region.

B. The August 1974 Study

Previous research (Hochstrasser: 1973) and a preliminary field inspection and pre-test revealed that most residents of Johnson County perceived the county as their homeplace. Drucker (1972) had found in a previous study that county residents perceived the county as the main referent for a home place. Along these lines, the present study chose to limit the community boundaries to the Johnson County area.

To select the sample, clusters were constructed which contained fifteen domestic structures each as depicted from a United States

Geological Survey topographic map of the Johnson County area. From a total of 370 such clusters, sixty were chosen by use of a table of random numbers. From each cluster, five interviews were obtained using only those individuals 18 years of age or older. In this manner a total of three hundred interviews were obtained.

Within Johnson County there are approximately three rural residents for every urban resident. The only urban center within the county is Paintsville, Kentucky. To maintain the above ratio, 100 interviews were obtained from Paintsville according to the following selection procedure. On a city map, each intersection was numbered. Using a table of random numbers, twenty intersections were selected. The interviewer would start at the northeast corner and work to his or her left skipping every other house until a total of five interviews had been collected and from each urban sector.

For both the rural and urban sample, replacement clusters were drawn at the time of the original sample selection. A high refusal rate and some regional inaccessibility necessitated the use of seven rural replacements and four urban alternates.

The rural portion of the sample generated data for two of the geographic impact areas:

1. The flood sensitive area: (Group B) was derived from ten rural clusters which fell within the normal flood zones affected by the Paint Creek. A total of fifty interviews comprise this sub-sample.

2. The adjacent area: (Group D) was derived from those areas of the county which did not fall within the take area, the flood plain, or the urban section. A total of fifty clusters comprising some 250 interviews is utilized as the adjacent area sample. This unusually large

number of respondents is reflective of the actual population distribution as it relates to the dam. Only a very small portion of the population is directly affected in the take area. A somewhat larger group is affected by proposed flood relief, but the majority of individuals are not directly affected by the project.

Data Collection

A. The February Study: Secondary Data Source

Data from the Stoloff study which is utilized for the present research effort was generated by personal interviews with seventeen households within the Johnson County portion of the take area. The actual questions utilized for this research effort are contained in Appendix A (attached) of this report. There were no refusals during the February field session.

Descriptive data of the physical area of the take region was derived from personal inspection by the author, 1970 census data, and some descriptive data from the February study.

B. The August Study: Primary Data Source

Data for this portion of the present research was generated by personal interviews and on-sight inspection of all sections during the August field season in 1974. Actual interview questions can be found in Appendix B of this report (attached).

Each interview took approximately forty to sixty minutes and included open-ended as well as limited response questions.

As has been stated earlier, there was a high rate of refusal during the August field session. In two cases, interviewers were unable to secure any interviews within the cluster. People in the county were reluctant to discuss the dam project. In some cases interviewers were

told that too many surveys had come through. In addition, even though the opening statement for the interview stated that the respondent's identity would remain confidential, individuals were reluctant to state their views to an outsider. During the pre-test which was conducted in late July, officials at the Chamber of Commerce stated that many people might not want to discuss the dam issue with surveyors because of the large number of surveys that had been conducted in the area with commercial interests in mind. A final determination of the reasons for the high refusal rate would be pure speculation. Suffice it to say, a higher percentage of replacement interviews appears in this sample than is normal for a research effort of this type.

Another limitation which was placed on the primary research effort was imposed by local officials. The county sheriff's office suggested that the interviews be limited to the daylight hours. No reasons were given for this suggestion other than some of the areas were fairly remote and visibility was very poor after dark. Working only during the daylight hours had a significant effect on the sample. Fewer males were at home during these hours and as a result, a slightly larger percentage of females were interviewed than males. In addition there was a tendency for older individuals to be at home during the day rather than younger residents who were away at work. Even though it has been reported in previous work in Johnson County, (Becker: 1971: Stoloff: 1975) that the population seems to reflect a trend toward older retired individuals, it is reasonable to assume that some bias was introduced by the necessity to interview during daylight hours.

Call-backs were intended to reduce a good number of the refusals based on lack of time at the particular moment the interviewer knocked on

the door, or in attempts to gain more male respondents. However, a call-back was only agreed to on three occasions, and, of these, two refused to respond when the interviewer returned.

For both surveys utilized for the present research effort, strict guidelines were followed in order to preserve the integrity and anonymity of the respondent. All interviews began with a statement which told of the aims of the research, the uses of the information, and assured the respondent that his or her name would in no way be associated with specific answers. All guidelines imposed by the University of Kentucky Human Investigations Committee were followed.

Upon completion of the collection phase, all responses were coded and punched on data computer cards for analysis.

Analysis

A. The February Study of the Take Area

Since the sample size was so small for this particular impact area, all data were content analyzed and manually correlated. Percentages of responses were noted and frequency of repeated responses were tabulated to determine the commonly-shared ideas concerning possible relocation, previous experience with such projects and agencies, and perceptions of what was to come. In addition, background data and descriptions of the area were analyzed in order to provide a backdrop for the information on knowledge, previous experience, and perception of impact.

B. The August Study

All samples previously mentioned were analyzed for background data such as age, occupation, educational levels, income and number of years in residence in the area. This combined with personal observations of the individual areas, was utilized to provide the description of each individual geographic impact region.

All responses to the questions regarding knowledge, previous experience, and perceptions of impact were coded for computer analysis. These were then tabulated according to frequency and percentage of the total responses from that population in order to determine the major issues, beliefs, and perceptions which might be commonly shared by the population of an impact area.

The underlying goal was to determine if indeed individuals in different geographic impact areas possessed different degrees of knowledge, amounts of previous experience, or differences in the perception of impact. By noting the frequency of common responses it is possible to determine the key issues for any given geographic impact group.

RESEARCH SETTING

A detailed description of each geographic impact area is included in this chapter to facilitate an understanding of the findings concerning knowledge, previous experience and perception of impact of the Paintsville Lake Project. The description for each area includes settlement patterns, communication systems, subsistence patterns, physical setting, and social statistics. By using these descriptive elements it is hoped the reader can gain some insight into the "way of life" of each area and thus better understand the response statements concerning the key variables at issue.

Group A: The Take Area

The acquisition region for the Paintsville Lake Project follows the Paint Creek encompassing the area from ridge top to ridge top. The Paint Creek basin is similar to most of the rural portions of Johnson County. It is a narrow valley with high heavily-wooded banks. Only a small portion of the actual area, mostly bottom land, seems suitable for agricultural production.

Since there is no public water service to the take area of Johnson County, the majority of residents depend upon wells for their water supply.

State roads 580 and 689 provide the main access from the east and Paintsville. They are medium duty, low surface roads in good repair but narrow in some portions. County road 1409, located in the western portion of the take region, is also a low surface road. It originates from State Road 580 and heads west toward Magoffin County. Like many of the paved surfaces, however, it trails off into a gravel surface and ends as an unimproved dirt path.

According to the Final Environmental Impact Statement (Huntington Corp of Engineers: 1971), three small communities, Fuget, Win, and Relief, will cease to exist. On-site inspection of the area indicates, however, that there are several additional small hamlets located along the major access routes. Individuals within the take area, as with most of the rural sections of Johnson County, tend to reside in clusters along "holler" roads or main access routes. Adequate television, telephone, and radio communication systems exist within the take area to provide contact with the remainder of the county. Stoloff (1974:40) reports 17 mobile homes in the take area; however, in August 1974 the author counted approximately 17 mobile home units in the Johnson County portion of the take area alone. Therefore, it is probable that there has been an increase in the number of such units over the six-month period. Individuals faced with possible relocation might invest in homes which could be easily moved, rather than in improvements on existing dwellings.

Most of the individuals interviewed enjoyed the area as a place of residence and preferred it to any other. Of the sample interviewed, 97% stated they like living in the area. When questioned as to what they like about it, 41% replied that it is just home; 18% replied they have lived in the area all their lives and like their neighbors; and 24% like the area because it is quiet. (See Table 3) When asked what they did not like about the area 47% indicated there is nothing they do not like about the region; 36% referred to the inaccessibility of the area in winter or difficulties in getting to and from the store because of their age. Only 12% indicated they had any problem with high water in the area.

Table 3

RESPONSE DISTRIBUTION FOR QUESTION:
WHAT DO YOU LIKE ABOUT THE AREA:

N=17

	Frequency	Percentage
Good neighbors	3	18
Church is here	1	6
It is only place for me	2	12
Everyone likes it here	1	6
Lived here all my life	3	18
Like to live out my days here	1	6
It is home	7	41
I built this place	1	6
It is quiet	4	24
It is secluded	1	6
No water pollution	1	6
Close to school bus	1	6
No response	1	6

Source: Re-analysis of Johnson County Portion 1974
Stoloff Household Study.

From the above data it is apparent that the Johnson County portion of the take area residents like their surroundings and are comfortable in their lifestyle there.

Twenty-four percent of the sample derive their main income from farming, while 18% work in industrial concerns. Forty percent were retired or totally disabled. For income, 60% of the take area residents had family incomes less than \$5,000 a year; 24% refused to answer; and 18% made above \$5,000. It is important to take into consideration, however, that 97% of the sample grew a vegetable garden and 41% raised animals for food. This high percentage indicates that the majority of take area residents are supplementing their cash income with home gardening and husbandry practices. This finding becomes particularly important when considering the possible impact of a project. Individuals who seem to be of low income status, i.e., low cash income, sub-standard

housing, etc., might seem the easiest individuals to move. However, the areas' rural residents utilize what is available to supplement their income, specifically, the land. When one talks of moving a family, one talks of moving a life style, a household economy, and a system that has been functioning for some time. To a rural family living on a limited budget by national standards, a garden is capital in reserve, and cannot be taken as mere rural Americana. Finding a home is one thing, finding a home with enough good land to sustain a medium size family is another.

Sixty-two percent of the sample had less than 50 acres of land. Only one individual rented land, while 11 respondents, comprising 64% of the sample, owned their dwellings and surrounding property. When asked to rate the quality of their land, 35% did not respond, 35% considered their land good, and 30% considered their land fair for agricultural purposes.

The mean length of residence on the property was 26 years, with a range of from 1 year to 60 years. When asked where they had lived before, 97% of the sample gave locations within Johnson County. In addition, 97% indicated that they had a family cemetery located within Johnson County.

The population for the Johnson County take area reflected a mean age of 53, with a range of from 20 years to 83 years. The findings of Stoloff (1975) indicate that the economics of the area and the county as a whole are not lucrative enough to retain younger individuals. For the take area in particular, farming does not produce a sufficiently high income in most cases to act as a lure for younger inhabitants to remain on the farms. During the August field study, discussions with local Chamber of Commerce officials indicated that the county was ex-

periencing an increase in immigration. The newest residents interviewed in February, 1974, had been there one year, and had returned for other than economic purposes.

Based on the above information, one can characterize the take area as rural but not isolated. The region is populated by older individuals who, at least partially, sustain their living from their homesteads, and, for the most part, by individuals who enjoy living in the area because of the opportunities rural life provides them. As one might expect from an older population, the residents have lived in the area for some time.

Group B: The Area Below the Dam

Below the proposed dam site, the Paint Creek winds eastward in close proximity to U.S. Highway 460; south of Staffordsville; and on through the southern portion of Paintsville. On the eastern edge of Paintsville, the creek joins with the Levisa Fork of the Big Sandy River. Flood conditions are created when the Levisa Fork is unable to carry the overflow from Paint Creek. As a result, both crest, causing the creek to overflow at all junction points with smaller creeks and streams, and at the major juncture with the Big Sandy in Paintsville. Overflow occurs along the banks of the creek in many locations; however, the heaviest damage usually occurs in Staffordsville and in Paintsville's business district. To the south, flooding conditions occur in some areas of the small communities of Hagerhill, and West Van Lear.

The major east-west highway is U.S. 460 which connects Salyersville, Kentucky with Paintsville. The major north-south roadway is U.S. 23 connecting with Ashland, Kentucky in the north and Prestonsburg to the south. Both are high surface federal highways.

Most individuals in this area live along the major highways mentioned above or just off the major roads. As a result, the population density is much higher for this group than for the take area residents. Many small communities dot the highway's edge. Of these, Staffordsville is the largest. Accessibility to the area is relatively good and communications with Paintsville poses no problem. During the flood stages of the Paint Creek, however, U.S. 460 has become blocked at Barnett's Creek just west of Staffordsville, in Staffordsville, and near the junction of U.S. 460 and 23. This is the only major problem of accessibility for residents in the area east of Paintsville. Below Paintsville and the junction of the Paint Creek and Levisa Fork, flooding has blocked low lying access roads. U.S. 23, however, is raised above the normal flood level, and a bridge spans the low flood-prone district near Hagerhill and West Van Lear. In a portion of this region just south of U.S. 460 and east of Staffordsville, the terrain climbs rather abruptly away from the valley floor. Interviewers were advised not to venture into some sections due to muddy roads.

The area has good electrical, telephone, and natural gas connections. City water and sewage services exist only in those areas located close to Paintsville. Drilled wells provide other water sources.

Most structures in this area are wood frame, brick or mobile homes. The area's general appearance indicates a more urbanized life style than in the more rural sections. It is interesting to note that the highways follow the major waterways (in this case, the Paint Creek and the Levisa Fork of the Big Sandy River). The population and density seems more concentrated along these roadways. Thus, the flood-prone area seems more populated than the rural areas which follow smaller stream flows. In

addition, the major urban area is located directly at the high flood-prone area by the junction of the Paint Creek and Levisa Fork, with the Creek actually running directly between the business district and a more expensive neighborhood of Paintsville. This quite possibly reflects the historical settlement pattern of locating communities along major water communication routes. It is important to understand the population-to-water relationship when evaluating the factor of urbanism as a variable in attitude formation and perception of impact. It has been hypothesized (Becker: 1971) that those individuals with an urban outlook, and higher socio-economic status are more in favor of such projects and perceive benefits over costs. In the case of Paintsville, this conclusion becomes highly suspect as a general statement. The more urbanized areas which include the greater proportion of higher socio-economic groups in Johnson County, are located directly in the major flood sensitive zone. This is the very area in which the maximum positive impact will be felt in the community.

Of the fifty interviews taken, 43 were obtained from rural non-farm dwellings; 2 from what appeared to be active farming operations; and 5 from an urbanized community outside the Paintsville city limits. It is interesting that no respondents indicated farming operations as their chief source of income. The area's economy is much more attuned to a wage-labor system than to agricultural subsistence. Some gardens were present, though not of the magnitude of those of the rural section, and, generally speaking, tended to be larger where cash incomes were smaller. Within the area several dwellings were estimated by interviewers at a value exceeding \$50,000. A more complete breakdown of the area's occupational distribution is contained in Table 4, which in-

dicates that many of the families interviewed live in the area and work in nearby industrial mining, and commercial concerns within the county.

The mean family income in this area was approximately \$6,500 with 26.8% of the sample making less than \$5,000; 34% making between \$5,000 and \$10,000; and 6% earning between \$10,000 and \$15,000. Roughly 20% of those interviewed had a family income in excess of \$15,000 per annum.

TABLE 4
OCCUPATIONAL BREAKDOWN
BELOW-THE-DAM-SAMPLE

N=50

Occupational Code Description	Respondent		Spouse	
	Frequency	%	Frequency	%
Housewife	19	38	10	20
Retired	1	2	2	4
Disabled	3	6	2	4
Students	3	6	1	2
Professional, Technical and Kindred	3	6	5	10
Managers, Officials, Proprietors	2	4	4	8
Sales, Clerical & Kindred	5	10	3	6
Craftsmen, Foremen & Kindred	2	4	5	10
Operators and Kindred	1	2	0	0
Service (incl. private)	4	8	0	0
Labor (incl. farm & mine)	6	12	6	12
No information	0	0	9	18
			Spouse Deceased	3
				6

Source: 1974 Paintsville Study: Arnett Subfile: Below Dam Impact Group

For education, only 12% of the sample had less than an eighth grade education; 18% had finished the eighth grade; 24% had completed high school; 10% had attended a trade school; and 12% had been to college at

least three years. Table 5 gives a more elaborate breakdown for respondent and spouse education.

The mean age of respondents in the impact area below the dam was approximately 43 years old. Of all individuals interviewed there, 52% were above the age of 50, and 20% fell between the ages of 55 and 60 years old.

To determine how indigenous respondents were to the area, each was asked the length of residence in Johnson County and the length of residence in Appalachia.⁵ For Johnson County the mean length of residence was 33.1 years. The sample mean for length of residence in Appalachia was slightly higher at 40.6 years. The range of Johnson County residence ran from 1 year to 70 years while the range for Appalachian residence ran from 5 years to 72.

Looking at the area as a whole, it appears that it is much less remote than the more rural sections of the county. Because of the physical relationship of the Paint Creek and Levisa Fork of the Big Sandy River to the major access routes of U.S. 460 and U.S. 23, the area is much more populated than rural sections.

The area's economy is much more oriented toward a wage-labor system rather than an agricultural base with the majority of individuals working in Paintsville and the surrounding area. Family income is higher in this rural section than in other more remote portions of the County.

This area stands to gain the most obvious benefit from the construction of the Paintsville Lake Project. Moderate to heavy seasonal flooding along with the several catastrophic floods (1958 and 1963) have sensitized all individuals to the Paint Creek's flood potential. The dam would produce considerable flood control in this area.

TABLE 5
EDUCATIONAL EXPERIENCE:
BELOW-THE-DAM-SAMPLE

N=50

Grade Completed	Respondent		Spouse	
	Frequency	%	Frequency	%
Completed 6th Grade	6	12	5	10
Completed 8th Grade*	9	18	7	14
Completed High School	12	24	12	24
College up to three years	2	4	5	10
Completed four years of College or four years + graduate work	4	8	3	6
Trade School Attendance	5	10	5	10
No Information	0	0	13	26

Source: 1974 Paintsville Study: Arnett Subfile: Below
Dam Impact Group

*7th Grade collapsed to 8th Grade category

Group C: The Urban Impact Area

Paintsville is the County Seat for Johnson County and the main point of articulation for county residents with the state. It is a fourth class Kentucky city with a population of approximately 7,000. (A discussion during the August field session Chamber of Commerce officials and the mayor's office indicated that the population of the county was on the increase for the first time in several years).

Paintsville resembles most small Kentucky seats in Eastern Kentucky. The courthouse is situated in the center of the business district and appears to be the hub of activity. At any given time of day one can find individuals of all ages mingling around the building either passing time in conversation or stopping to talk with old friends on their way to the county offices located in the building.

The central business district is a mixture of old and new architecture. Several respondents indicated that the newer buildings were actually renovations which had been undertaken during repair of flood damaged structures. The Paint Creek runs directly in back of the buildings on Main Street, some 50 yards away at the nearest point.

Residential neighborhoods border the business district. The streets are pleasantly shaded and the structures appear in excellent repair in this sections most central to the town. As one moves away from the city's center into the more suburban sections, streets are less well developed. In these sections housing is more concentrated and appears to be lower quality. Two exceptions are the newer King Addition and Richmond Addition, both composed of new, middle to upper middle-class homes. A second business and residential district has grown south of the Paint Creek along the U.S. 23 and 460 By-pass. Located in this area are the major motels, many businesses, banks, restaurants, and the Paintsville Park and Playground which contains a municipal pool, ball field, and tennis courts.

The county and city maintain two municipal housing areas for low income families. One is located in the southwest section of town off the 23-460 By-pass; the other off Stafford Avenue in the southeast portion of the city.

The city has public water and sewage service with natural gas, oil, and electricity supplied by regional companies. The Chesapeake and Ohio Railroad runs through the eastern portion along the Levisa Fork of the Big Sandy River. In addition to the park already mentioned, there is a private golf and country club to the east of town.

Educational facilities in the area consist of the county and city school systems, and the Mayo Technical Institute, a vocational school with a considerable enrollment. The city also maintains a library which, according to respondents, is widely used.

Paintsville has its own radio station and supports a weekly newspaper. Other newspapers frequently referred to were from Ashland, Lexington, and Louisville. In addition, they receive television transmission from Ashland, Lexington, and, in some cases by cable, from Cincinnati and Charleston, West Virginia.

Paintsville supports the annual Apple Festival which draws regional and state attendance. The festival, held in October, includes sports, mountain crafts, country and western entertainment, a beauty contest, and a parade. It is Paintsville's one large contribution to the state's festival entertainment.

City, county, and state agencies compose the law enforcement agencies within the county. City officers maintain order within the city limits, and the county bureau handles most problems in the rural as well as fringe urban regions. State Police patrol most of the main highways. A large group of state transportation officers were also observed, during the August field season, monitoring the many coal trucks in the area.

Most city streets are fairly narrow. In the northern section there are neighborhoods located on hillsides with steep roads that are difficult to negotiate. In these situations a combination of restricted parking and the use of one-way traffic flow have helped reduce traffic hazards.

Several of the community's younger residents indicated there is a scarcity of recreational opportunity in the area. There are several

meeting places usually situated around drive-in restaurants. Many high-speed, high-performance automobiles were observed with youthful drivers or, in some cases, pilots. Several youthful respondents stated that there is nothing to do in Paintsville except drive around, and many commuted to places such as Prestonsburg, Ashland, and even Lexington for entertainment. The county is dry as far as alcoholic beverages are concerned, but there seems to be a well-established link between Lexington, Kentucky and Paintsville to help fill the void for those who partake occasionally. A review of the newspapers indicate an active vigilance against bootlegging operations in the county. The local paper prints news of a confiscation in almost every issue. In addition, the news reflects a trend in high-speed lethal auto accidents on secondary roadways as well as on the main roads.

The urban population appears to be largely indigenous to the region with a mean length of residence in Johnson County of 33.5 years, and, for the Appalachian region 39.8 years. Of the urban sample, 64% indicated they had lived in a rural area before, and the mean length of residence for these people was 10.4 years.

Only one individual indicated that farming was an important source of income. Gardens were mostly for flowers and few vegetables were observed growing except for some tomato plants and possibly a row of beans. As can be observed in Table 6, most individuals in the sample derived their income from wages earned at companies in and around Paintsville.

The mean family income for the urban area was \$7,500. Nineteen percent of the sample earned below \$5,000 per annum; and 22% earned between \$5,000 and \$10,000 a year. The fact that 42% of the urban population earned in excess of \$10,000 a year, with 27% of that figure having made

over \$15,000, however, reveals the most significant figure for income.

TABLE 6
OCCUPATIONAL BREAKDOWN:
URBAN SAMPLE

N=100

Occupational Code Description	Respondent		Spouse	
	Frequency	%	Frequency	%
Housewife	32	32	17	17
Retired	7	7	6	6
Disabled	4	4	2	2
Students	4	4	2	2
Professional, Technical, and Kindred	13	13	15	15
Managers, Officials and Proprietors	6	6	2	2
Farmer/Farm Land Owner	0	0	1	1
Sales, Clerical and Kindred	11	11	7	7
Craftsmen, Foremen and Kindred	5	5	6	6
Operators and Kindred	5	5	9	9
Service (incl. Private)	6	6	1	1
Labor, Farm & Mine	4	4	4	4
Unemployed	0	0	1	1
No Information	0	0	9	9
			Deceased	13
				13

Source: 1974 Paintsville Study: Arnett Subfile: Urban Group

Education is high for this group. Only 14.4% had not finished the eighth grade, and 22% had finished high school. Seventeen percent of the sample had attended college, with 3% of that figure attending the full four years. Twelve percent had done graduate work of some kind. Respondents indicating trade school experience compose 11% of the sample. Spouse education was also high. Only 4% had not attended the eighth grade, and 18% finished high school. Some 13% attended college, with

6% finishing four years, and 8% attending graduate study. Finally, 10% of the spouse sample had been to trade school.

The mean age for the urban sample was approximately 43 years old. Fifty-five percent of the population was under the age of 50, and 21% over the age of 60. Twenty-five percent was under the age of 30.

There can be no doubt that Paintsville is the major hub of activity for Johnson County. It is the nearest urban area and serves the entire county in governmental, commercial, and recreational services. The sample reflected a high percentage of professional individuals, higher family income, and educational experience. Most residents were long-term. Since Paintsville is the business center for the county, many individuals have substantial investments in retail and service operations. Finally, it must be emphasized that a good portion of Paintsville's central district is subject to periodic flooding.

Group D: The Adjacent Area

The adjacent area is composed of those rural sections of the County not in the take area or flood-sensitive region. There are four different sectors within this sub-group. The area to the southwest of Paintsville is the largest. It is mainly accessible via State Road 825, a low-surface paved road. A second sector to the northwest above the take area has much better roads. State roads 172, 201 and 689, as well as many county roads, crisscross this area making travel easier. The third sector is located in the county's northeast portion. The major access is State Road 581, and U.S. 23 North. Finally, in the fourth, southeast sector, travel becomes extremely difficult after leaving the main roads. In all sectors, the low surface roads are narrow sometimes permitting only a single vehicle passage. Once off the low-surface roadways the

pavement soon gives way to gravel which usually changes to packed dirt after a few hundred yards. Most of the non-state roadways, including some of the county roads, are unimproved. It is also possible to be cut off from a settlement by water. In the case of Whitehouse, in the northeast sector, one can travel by car up State Road 581, but must walk across a foot bridge to get into the community. The only alternative is to go back to Paintsville, travel east on State Road 40 to the Hammond Creek cutoff, then drive up behind the settlement. This is characteristic of many locations within the county's rural sections. To facilitate travel, land owners will sometimes agree to sell coal on their land with the understanding that the company will leave or cut roads which can be used to save time in linking up with major roads.

A second measure of the area's remoteness, as indicated by many respondents, concerns the problem of getting the children to the school bus pickup points. Children usually have to walk out of the "holler" to a main road.

Many small country stores, often incorporating the local post office, can be found in the rural sections. These stores supply various goods for the inhabitants of the immediate region and also serve as a community information center and meeting place.

In all sectors, individuals live along creek roads or access ways to major highways. Settlement along small tributaries is traditional for Eastern Kentucky and each small valley (holler) forms a tiny hamlet in itself. Many times, in talking with respondents, the reference to the creek instead of the road number or nearest access way was used as a referent for location, e.g., John's Creek, Tiny Branch, Pigeon Roost, etc. There were several small communities in each sector usually located on the

major road. In this case individuals would refer to those regions by the town name, e.g., Elna, Tutor Key, Meally, etc. In the northeast sector interviewers found that the highway map, used for location of clusters, was labeled with what local inhabitants referred to as "the new names." They promptly helped re-label the map with the traditional names. Informants remarked that the name changes had occurred with the widening and improvement of U.S. 23 North, but were quick to point out that long-term residents still used the old nomenclature.

Only three structures did not have electricity. Water was supplied by drilled wells and sewage was supplied by septic tank service. Only seven dwellings visited by the author did not have indoor plumbing. Likewise, most of the dwellings had telephone and television communication and all had radios.

The nature of the houses themselves varied from three-room shacks to ante-bellum style homes. The latter were recent constructions and located mainly along the paved access routes. There was a surprising number of mobile homes. Both single and double mobile homes were in good supply in all sectors of rural Johnson County. In discussion with many inhabitants, the author was told that "Black Lung" settlement money, pensions, and new loans had provided the finances to replace old buildings with modern trailers complete with indoor plumbing and contemporary furnishings.

When asked if they had ever lived in town with a population over 2,500, 42.8% indicated they had not, and 56% stated they had. For those who had lived in an urban area of the indicated size, the mean length of time spent was 4.5 years. The mean length of time for residence in Johnson County was 39 years. For Appalachian residence, the sample

showed an average of 45 years. Most respondents indicated that they were long-time residents of the region. Some indicated they had left, but had returned home (Johnson County) to settle down.

In regards to employment, Table 7 gives the complete breakdown according to Census classification. There was a slightly higher percentage of retired and disabled informants than in the other areas. The previously mentioned restriction of limiting interview work to daylight hours accounts for the large percentage of housewives interviewed.

TABLE 7
OCCUPATIONAL BREAKDOWN
ADJACENT SAMPLE

N=250

Occupational Code Description	Respondent		Spouse	
	Frequency	%	Frequency	%
Housewife	90	36	82	32.8
Retired	24	9.6	10	4.0
Disabled	11	4.4	8	3.2
Students	3	1.2	0	0.0
Profession, Technical, and Kindred	13	5.2	10	4.0
Managers, Officials & Proprietors	6	2.4	6	2.4
Farmers	16	6.4	4	1.6
Sales, Clerical & Kindred	13	5.2	14	5.6
Craftsmen, Foremen, and Kindred	23	9.2	26	10.4
Operators and Kindred	6	2.4	16	6.4
Service, incl. private	18	7.2	3	1.2
Labor, farm and mine	26	10.4	26	10.4
No information	0	0	40	16.0
			Deceased	
			5	2.0

Source: 1974 Paintsville Study: Arnett Subfile: Adjacent Group

Of the adjacent sample interviewed, 19.8% had below an eighth grade education. Sample figures reveal that 29.6% had attended high school, with 14.4% actually completing the twelfth grade. Only 6.8% attended

college, with .8% completing four years, and 1.6% going on to graduate work. The trade school figures indicate that 8.8% had been to some form of additional vocational training beyond high school. Spouse figures show 16.1% below an eighth grade education; 28% attending high school, with 13.2% graduating; and a 4% figure for college attendance. Only 1.6% graduated from college, with .8% continuing on to graduate work. The sample shows that 6% of the respondents had attended some form of trade school.

For family income, 48.6% replied that their income was under \$5,000. Those respondents who listed family income between \$5,000 and 10,000 compose 27.6% of the sample, and 16.8% earned over \$10,000 per annum. Of the latter figure only 5.2% brought home in excess of \$15,000 a year.

The sample reflects a mean age of 46 years. Those over 60 years old compose 30.4% of the sample, and those under 30 compose 7.6%. This again could be due to the daylight interview restriction, but interviewers agreed that there was a scarcity of younger individuals in the hollers.

The Community as a Whole

Adequate description of the physical setting has already been included in the preceding sections. For comparative purposes, however, total community data is available for the area below the dam, the urban group, and the adjacent region taken as a whole. To facilitate presentation of this data, the information is incorporated into tables similar to those already presented. (See Tables 8-11).

Conclusion

This chapter has dealt with describing each geographic impact area according to physical setting, population statistics, and patterns of life including subsistence and occupational practices. The effort was not directed at pointing out any one specific comparative aspect as being specifically characteristic of a single group. Instead, it is hoped that by describing the areas as mentioned, two tasks will be served. First and foremost, the reader will be acquainted with the types of lifestyles in the area, and the nature and problems of the populations who live there. Secondly, it is hoped that possible patterns will emerge that will help account for some of the responses concerning knowledge, previous experience, and perception of impact discussed in the next chapter. Several trends do come to light.

TABLE 8
EDUCATION:
COMMUNITY AS A WHOLE

N=40

Grade Completed	Respondent		Spouse	
	Frequency	%	Frequency	%
1-7	75	18.7	134	33.4
8	102	25.5	90	22.5
9-11	59	14.7	47	11.7
4 years high school	70	17.5	59	14.7
4 years college	3	0.7	12	3.0
5 years + college grad.	17	4.2	10	2.5
Trade school	38	9.4	30	7.4

Source: 1974 Paintsville Study: Johnson, Burdge: Community Sample

TABLE 9
 FAMILY INCOME:
 COMMUNITY AS A WHOLE

N=400

Income Level	Frequency	Percentage
No Answer	60	15.0
Under \$5,000	135	33.7
\$5,000 - \$10,000	108	26.8
\$10,000 - \$15,000	47	11.7
\$15,000+	50	12.5

Source: 1974 Paintsville Study: Johnson and Burdge:
 Community Sample

TABLE 10
 COMMUNITY AGE DISTRIBUTION

N=400

Age Range	Frequency	Percentage
No Answer	2	0.5
18 - 24	35	8.7
25-29	39	9.7
30-34	36	9.0
35-39	30	7.5
40-44	24	6.0
45-49	28	7.0
50-54	42	10.5
55-60	59	14.7
60+	105	26.2

Source: 1974 Paintsville Study: Johnson and Burdge:
 Community Sample

TABLE 11
 OCCUPATIONAL BREAKDOWN:
 COMMUNITY AS A WHOLE

N=400

Occupational Code Description	Respondent		Spouse	
	Frequency	%	Frequency	%
Housewife	134	33.5	114	28.5
Retired	75	18.8	33	8.2
Disabled	30	7.5	18	4.5
Students	12	3.0	5	1.2
Professional, Technical and Kindred	37	9.2	31	7.7
Managers, Officials and Kindred	24	6.0	21	5.2
Sales, Clerical and Kindred	29	7.2	25	6.2
Craftsmen, Foremen and Kindred	26	6.5	33	8.2
Operators and Kindred	50	12.5	50	12.5
Service, incl. Private	18	4.5	9	2.2
Labor, incl. Farm and Mine	25	6.2	12	3.0
Unemployed	0	0.0	1	0.2
No Information	0	0.0	58	14.5
			Deceased	21 5.2

Source: 1974 Paintsville Study: Johnson and Burdge:
 Community Sample

For the take area the wide-spread use of gardens to supplement low cash incomes is significant. In addition, there is a high percentage of families deriving their income from farming practices. Finally, it is apparent that individuals like the area they live in for aesthetic as well as economic reasons.

The close association between the major highways and the flood-prone Paint Creek and Levisa Fork of the Big Sandy River present a different situational setting for those individuals in the area below the dam site. This group is much more urban in orientation with a greater density of population. The family incomes in the area are derived more from a wage-labor system than from agricultural practices. It seems to be an area somewhat between the rural and urban life style. Also, seasonal flood problems have heightened sensitivity to water control problems. In many cases floods block roads, cause damage to property, and lower land values.

The urban impact group presents a different picture. The major professional, industrial, and commercial resources are located in Paintsville. Education, income, and quality of housing is higher in this area. In addition, a good portion of the urban area is subject to seasonal flooding as well with the damage mainly concentrated in the central business district and nearby high-income neighborhoods.

The adjacent area manifests still another pattern. The main problem in the areas, outside those mentioned above, in the county is accessibility. Much of the county still travels on unimproved roads, though progress is being made in this area of county development. Respondents are older, with a higher percentage of retirees and disabled. Housing varies from small shanties to large-upper income homes, with a

number of mobile home units. The education, income, and occupational distribution reflect a somewhat lower trend than in the more urban sections.

To grasp the forthcoming data on the key variables, it is important to keep the preceding descriptions in mind. New projects are evaluated according to existing life styles. Knowing the subtle differences in the way people of different areas live is helpful in understanding some variations in project-related responses.

RESEARCH FINDINGS

In the preceding chapter each individual impact area was described in an attempt to give the reader as much background as possible for the forthcoming discussion of the key variables. Knowledge, previous experience, and perceived impact all take on special significance when viewed in the particular regional settings suggested in this report. To facilitate the presentation, each impact area will be discussed in regard to the key variables. Finally, results for the entire community concerning the key variables will be included as an evaluation of the impact area form of analysis. If a more thorough understanding of what is happening in Johnson County can be gained from a more specific breakdown of the population into geographic impact groups, it will be reflected in differences between groups which are masked in the community data.

Group A: The Take Area

Knowledge

To begin, all 17 individuals interviewed by the Stoloff study in February of 1974 knew of the Paintsville Lake Project. Responses indicated that the population sample had learned of the project in various ways, but the greatest percentage (47%) had been informed through the gossip network in the area. A total of 35% had learned of the project from Corps personnel. Only one individual had attended a Corps-sponsored meeting. Two of the 17 respondents had learned of the project over the radio and one had come by his information via the television.

Concerning informants' knowledge of the project, interviewer notations on the questionnaires offered the widest range of information. There appeared to have been some confusion concerning a meeting held by the Corps of Engineers. Some residents felt they had been misled about the purpose of the meeting and did not know it concerned the reservoir issue. Confusion seems to have been the key word as far as the dissemination of information was concerned. The first public hearing concerning the reservoir was held in November of 1963. It was interrupted by news of President Kennedy's assassination. The second was somewhat less publicized and less well attended.

Many of the respondents were convinced that the flooding was caused by the Big Sandy River and not the Paint Creek. They could not see how the dam on the Paint Creek would help in flood control. In addition, residents could not understand the argument for increased economic benefits. Finally, some respondents voiced the opinion that only Paintsville residents wanted the dam.

At least one individual was concerned about the problem of plugging oil wells in the area. This respondent indicated that the Corps would be hard-pressed to find the wells, let alone plug them all.

In conclusion, knowledge concerning the dam project was at a low level. The original public hearing was held in 1963. The Final Environmental Impact Statement required by the National Environmental Policy Act of 1969, was filed in 1971. Yet in February of 1974 and even later in August of the same year, most respondents knew nothing more than the dam might be built and that sometime in the future they might have to move. Most did not believe the dam would prevent flooding. Some characterized the residents of Paintsville as adversaries and most felt the dam was a

threat to their existence. One informant stated that if they were going to build the dam, he hoped they would do it soon because land prices were skyrocketing and places in the county were becoming scarce.

Previous Experience

Only two of the 17 respondents reported flooding as a problem. Indeed, it seems that flooding, when it did occur, was considered a fact of life. Most buildings were located on high ground. The major problem caused by high water in the area is road blockage, but damage from flooding does not occur on a scale equal to Paintsville.

Previous experience with the Corps of Engineers was evident in several interviews. As has already been stated, some individuals felt the Corps were responsible for the confusion concerning a meeting. In addition it appeared from the responses that many inhabitants did not know what to expect in the way of relocation help. A total of seven respondents did not know of any benefits or aid that was given by the Corps. One individual stated the government did not help people to relocate at all. There was some anxiety concerning obtaining a fair price for land and most wanted a life style equal to the one they would be forced from. Residents were also concerned over the relocation of cemeteries in the area. Most felt they should not be tampered with.

When asked how the government could aid in relocation, 41% indicated they would need financial assistance. Others felt that help in finding another place and in the actual moving process would be necessary.

Only one individual indicated any previous experience with the project procedures. This respondent stated that such projects usually purchase from ridge top to ridge top to provide for a recreational park.

The above information was derived from the Stoloff Study of the Take

Area conducted in February of 1974. During the August field session, the author returned to some portions of the Take Area. Activity against the dam had picked up somewhat and many of the higher-income families had joined in alliance with the anti-dam group based in Morgan County. By and large though, activity of the poorer inhabitants and especially the older residents concerning the dam was much the same as reported above. Many did not know what to expect.

Perception of Impact

The major concern of the take area residents was the loss of their homes. Only two individuals in the sample felt the dam would be a good thing. Major reasons given for not wanting the dam were the destruction of the communities, disruption of neighborhoods, and fear of having to move to a strange place. Many of the residents were long-term, some never having been outside the county. The thought of leaving the home place created considerable anxiety. Responses centered around problems in finding a new place, moving large families, loss of agricultural life style, and moving from the general area. Special fears were harbored by the aged who felt they had lived and worked their land for some time and had the right to live out their days in peace. Many were concerned over the disruption of family cemeteries. Others were worried that they would not be able to find a place comparable to the one they had. The major reaction was concern over being forced to leave their homes and enter into new behavior patterns in strange surroundings.

The threat of being uprooted caused many antagonistic statements towards the project's proponents. Some felt Congressman Carl Perkins was to blame. Others felt the city of Paintsville wanted flood protection and more money at the expense of the take area residents.

Many were under the impression the dam would do no good at all. A total of 59% stated they were concerned about moving and likewise 59% did not know where they would go. Some 29% stated they would try to relocate within Johnson County. For the total range of responses concerning perceived impact see Table 12.

TABLE 12
PERCEIVED IMPACT ON COMMUNITY
TAKE AREA

N=17		
Response Classification	Frequency	Percent of Responses
Anxiety of Moving	14	82%
Anxiety over finding a new place	5	29%
Anxiety over leaving neighbors	4	23%
Anxiety because of age	2	11%

Source: Arnett Reanalysis: Stoloff Household Study: 1974

The data indicate that the take area residents were not worried about flood control. They were not concerned with increasing the recreational benefits of the county, nor were they concerned with better economic consequences of the project. They were worried about having to leave their homes and find new places to live. They were concerned about new lifestyles they will have to learn. For the

most part they knew little about procedures, facts or figures. Much of the information they did have resulted from the local rumor factory, as has been hypothesized by Photiadis, 1960; Drucker, Clark and Smith, 1973; and Drucker, Smith and Reeves, 1974.

The author's suggested hypothesis for this impact area is as follows: Inhabitants will perceive negative aspects of the proposed project with an emphasis on loss of land, disruption of social and family ties, and destruction of traditional homeplace.

This hypothesis substantially withstands the test of this research situation. The disruption of family ties, however, was rarely suggested by the sample. No data was gathered as to why this was so. A review of the descriptive data, however, did show a proportion of children still living at home either in school or working at jobs in Paintsville and helping to support elderly parents. In any case, family disruption was rarely alluded to in the interviews.

The August Study

During the August, 1974 study, only seven interviews were obtained from within the acquisition area. Analysis of these interviews indicates similar trends in all three key variables to those already presented. The fact that these residents seemed somewhat better informed was the only exception. Further analysis of these seven individuals showed that they were much more active in the anti-dam movement than those individuals studied by Mr. Stoloff in February, 1974. As a result, they seemed much better informed on the project and had experienced more contact with the Corps.

In an attempt to present as much data on the take area as possible, the entire August Sample (400 response sets) was analyzed to determine

those individuals who owned or rented land in the take area. A total of 15 individuals stated they owned land within the acquisition area. Of the 15 owners, 8 were absentee owners. Of the 8 absentee owners, 6 were in favor of the dam project. These 6 individuals included one aged respondent, who was more than happy to get rid of his holdings; one individual who lived a considerable distance from the take area and owned land of low value, two residents of the flood sensitive area who placed more emphasis on flood relief and the extra income the land exchange would provide, and two urban owners who were likewise interested in flood protection and profit from the land sales.

The August study corroborated the February study conducted by Mr. Stoloff. The samples were both small but the data derived from them are not contradictory. The take area residents perceive the project as a threat to their livelihood and security. The project represents a loss of land and way of life which to the inhabitants of the area overshadows any good the project might accomplish.

Group B: Below the Dam Area

Knowledge

Of the sample collected in the area below the dam, 68% indicated they knew where the dam would be located, as opposed to 32% who stated they had no idea. Of the locations given, 48% responded with a place name in close proximity to the location of the actual dam site. A small percentage of individuals (6%) merely stated that it would be located somewhere on the Paint Creek. Finally, 10% referred to the area adjacent to U.S. 460 at Barnett's Creek where the main access way to the construction site is located. The Corps of Engineer's project sign is visible to passing motorists at the entrance to the service road. Only

30% of the sample knew that the project would take in portions of Johnson and Morgan Counties, with 22% stating that some of the reservoir would extend into nearby Magoffin County as well. Twenty percent of the sample did not know the counties to be affected by the reservoir.

A total of 92% of the sample did not know how much land would be acquired for the project or flooded by the reservoir. Of the four individuals who ventured a guess, only one was within the range of the actual 13,954 acres as listed by the Corps' Final Environmental Impact Statement. Likewise, only one individual responded within the range for the actual cost of the project, with 96% of the sample indicating they had no idea of the expenditure required for completion of the reservoir and surrounding park.

A slightly higher percentage (36%) of individuals knew that Congress had the final say as to whether or not the project would be built, but, again, 40% indicated they were not certain. Sixty-six percent of the sample, however, were correct in stating that the project would be constructed by the State and Federal government jointly.

Seventeen percent felt that no private beach or boat landing facilities would be allowed, while 27% indicated they were uncertain as to whether or not private uses would be indulged. Likewise, 16% of the sample felt the reservoir would not be used to water livestock, while 26% indicated they did not know if animals would be allowed within the vicinity of the reservoir. As to any hydro-electrical function, 66% indicated they did not know, while 30% indicated, correctly, that the dam would not be used to generate electric power.

In order to determine how the people felt toward the possible uses of such a reservoir, each respondent was asked to rank the following

four purposes for building such projects: 1) flood control; 2) water quality and pollution control; 3) fish and wildlife management; and, 4) general recreation. Each of these reasons were incorporated in the justification statement for the Final Environmental Impact Statement submitted by the Corps of Engineers. Ninety percent of the sample ranked flood control as the primary reason. General recreation was ranked second, and fish and wildlife development third. The fourth most important reason was water quality and pollution control. The last observation is somewhat surprising. Several individuals referred to a water quality problem in the area. Many did not see, however, how a dam could help the situation. Eighteen percent of the sample did not rank this purpose at all, and of those who did, many showed surprise at its being included as a facet of a multi-purpose reservoir.

In summary, it appears that the population of the impact area located below the dam site has some information, but only of a general nature. For example, they know who will be building the project and that both state and federal funds are involved in the project's development. Only a small percentage, however, has any more specific information concerning the dam other than what is listed above. Indeed, the one apparent element is that people in this impact area believe the dam will help with the flooding problem. This was their major orientation to the project.

In response to the reservoir development scale, the results in Table 13 were obtained. It should seem apparent from the interviews that the majority of the population sampled below the dam area felt that reservoir construction and land acquisition was justified by increased flood protection, but not for less critical purposes such as wildlife development.

In conjunction with the data in Table 13, 72% of the sample indicated they personally favored the construction of the project while 16% stated they were against it. A total of 12% refused to respond to the question.

Previous Experience

In order to determine how long the dam project had been known to the people in the area, each respondent was asked when they had first heard about the project. The range of answers went from 1 year to 15 years. Approximately 18.2% stated they had known about the project for a year, while the same percentage felt they had first heard of the dam 2 years prior. The remaining responses were spread out over the 15 year range. A good proportion of respondents, 45.5% learned about the project from the radio. The newspaper had informed 13.6% and television 4.5%. The remainder of the sample, 34%, had been informed by less official means, i.e., gossip, friends, relatives, and other links in the rumor chain.

To determine the number of individuals involved directly with project development through ownership of property, each respondent was asked if they owned or rented any property in the area they knew as the take region. Only two individuals indicated they owned land in the take area and only one rented property within the region.

Flood damage had been experienced by 58% of the total sample. Forty-two percent stated they had never experienced flood damage to their property, but had been stranded by flood conditions. The proximity of the area to the Paint Creek and Big Sandy River gives most individuals in this impact area first-hand knowledge of flood conditions. Many expressed the fear that the next flood might take the house or car. One

individual in the Staffordsville area stated that he had moved his mobile home three times during the 1972 flood season. When asked why he did not locate the structure in a safe place permanently, he replied that he was never quite sure where the water would reach, and that at different times he was sure the water had covered every portion of his property.

TABLE 13
RESERVOIR DEVELOPMENT SCALE
BELOW-THE-DAM-SAMPLE

Statement	N=50				
	Percentage of Response*				
	SA	A	U	D	SD
1. More dams are being built today than are necessary for flood control.	0	22%	6%	34%	4%
2. Reservoir construction often floods land that is worth more than the land it protects.	0	28%	28%	44%	0
3. Reservoirs should only be constructed when they won't take people's homes or good farm land.	6%	28%	10%	54%	2%
4. Fish and wildlife development alone provide good reasons for reservoir construction.	2%	30%	12%	56%	0
5. Since floods only occur once in a while, it is foolish to give up good land for reservoir construction.	2%	18%	10%	70%	0

Source: 1974 Paintsville Study: Arnett Subfile: Below the Dam Impact Area

*SA - Strongly Agree
A - Agree
U - Undecided
D - Disagree
SD - Strongly Disagree

To determine the quality and amount of knowledge concerning the agency, in this case the Corps of Engineers, each respondent was asked a series of questions concerning key procedural issues. A surprising number, 76%, knew the Corps relocated cemeteries in the area. There was a wider range of responses concerning what happens to buildings in the take region. The largest percentage, 34%, felt the buildings were merely torn down, while 32% had no idea what happens to structures. Only 8% responded that at the owner's decision the structures are either torn down, sold, or moved depending on value. In regards to the moving assistance provided by the Corps, 52% felt the agency did provide such services, while 38% were not sure. Ten percent responded with a definite no. Only three individuals in the sample attended a meeting and in all three cases the meeting was sponsored by the Corps of Engineers.

Only one individual in the sample was a member of any group related to the reservoir issue. This respondent was a member of the Johnson County Sportsmen Club. A small number of respondents, 16%, knew of the opposition group in Morgan County, but the greatest percentage of these only knew of the group and nothing more specific. Five respondents knew individuals active in the reservoir discussion but all had only friendly relations with the members.

Interviewer notes indicated that many respondents were comparing the Paintsville Lake Project to the policies of nearby reservoirs. Often, the respondent would make such references as "if they do it like they did at Jenny Wiley," or, "if it's the same as up at Fishtrap." This observation becomes particularly important when considering that Becker, in 1970, suggested that the people of the county had little abstract conceptualization of what a dam was. It is clear from the present data,

that, indeed, with several reservoirs in the area, the nearest of which is only 10 minutes away, the population knows quite a bit about what a dam is and how such a project operates.

In conclusion, it appears that most respondents have had either first-hand experience with flood damage or witnessed it on a regular basis. Likewise, it is sound to conclude that many respondents know what such a project looks like and, in some cases, how it operates within the community. A smaller percentage knows how the agency develops the project within the community.

Perception of Impact

A total of 80.4% of the sample felt the community would be affected by the construction of the dam project. A smaller proportion, 19.6% felt that the project would have no effect on the community. The possible effects are listed in Table 14. The largest percentage felt that flood control would be the major beneficial effect with increased tourism, cash flow, and employment were third among the concerns. On the negative side, the major concern was for those individuals within the take area who would lose their homes. Only 30% felt that the project would affect family life. Most felt that the increase in recreational benefits would be the most important impact on the family with the majority of responses feeling that the dam would force people from their homes. (See Table 15).

When asked if any good would result from the project, 70% responded positively, while 6% said no. Again, for the positive impact, individuals ranked flood prevention the highest, with increased recreational opportunities second. (See Table 16) Of the Sample, 34% felt there

TABLE 14

POSSIBLE EFFECTS ON COMMUNITY
BELOW THE DAM SAMPLE

N=50		
Response	Frequency	Percent
1. Prevent flooding	20	40%
2. Increase Tourism	11	22%
3. Bring in more money to community	10	20%
4. Increase recreation	8	16%
5. Destroy lifestyle for those who must move*	3	6%
6. Increase employment	1	2%
7. Has divided community.*	1	2%

*Negative Impacts

Source: 1974 Paintsville Study: Arnett Subfile:
Below the Dam Area

would be some negative effects of the project. The major effect was loss of home and property for take area residents. In an attempt to determine if the formal questions had missed any points that were apparent to respondents, each was asked if they had any other comments concerning the project. These responses are summarized in Table 17. As can be surmised from the table, most individuals elaborated on what they had previously stated.

In conclusion, the sample below the dam site reflects some general knowledge but only a small percentage had any specific information about the project. Experience with flood damage was apparent and was linked to flood prevention as being the most perceived impact of the project. The hypothesis for this sub-group is as follows: Inhabitants will perceive positive aspects of impact oriented mainly toward flood control. The hypothesis seems to be supported by the data. It must be noted, however, that individuals in the sample perceived positive impact from increased tourism and recreational benefits as well. Negative impact was oriented mainly to the relocation of families within the take area and the subsequent loss of property and hardships incurred.

Group C: The Urban Area

Knowledge

Roughly 35% of the urban sample stated they did not know where the dam would be located. Most individuals placed the project at Fishtrap which is the approximate location of the main dam structure. In addition, 9 individuals located the dam at Barnett's Creek, also within the general vicinity. Others knew the dam would be located somewhere on the Paint Creek. Thirty percent of the sample knew that Johnson and Morgan Counties were affected by the project. Twenty-six percent did

TABLE 15

POSSIBLE EFFECTS ON FAMILY LIFE
BELOW THE DAM SAMPLE

N=50

Response	Frequency	Percent
1. Increase Recreation	7	14%
2. Force families from homes *	5	10%
3. Help prevent flooding	1	2%
4. Kill elderly who must move *	1	2%
5. Drownings will increase *	1	2%

* Negative Impacts

Source: 1974 Paintsville Study:Arnett Subfile:Below
the Dam Area

TABLE 16

POSITIVE EFFECTS OF RESERVOIR
BELOW-THE-DAM-SAMPLE

Response	Frequency			Percent		
	1st	2nd	3rd	1st	2nd	3rd
1. Prevent flooding and loss of life.	23	4	0	46%	8%	0
2. Increase recreational facilities.	6	7	3	12%	14%	6%
3. Increase tourism.	4	4	2	8%	8%	4%
4. Provide more employment.	1	1	1	2%	2%	2%
5. Protect wildlife.	1	0	1	2%	0	2%
6. Bring more money to community.	0	0	1	0	0	2%

Source: 1974 Paintsville Study:Arnett Subfile:Below
the Dam Area

TABLE 17

ADDITIONAL COMMENTS ON PROJECT
BELOW-THE-DAM-SAMPLE

Response	Frequency	N=16 Percent Responding
1. Endorse, it will be good for the community.	4	25%
2. Should only be constructed for flood control.	4	24%
3. Morally wrong to move cemeteries.	3	18.8%
4. Not worth the money it will cost. Money runs out but the land is lost forever.	1	6.3%
5. Will prevent flooding	1	6.3%
6. More recreational facilities	1	6.3%
7. Kentucky doesn't need another lake.	1	6.3%
8. People just don't want to change	1	6.3%

Source: 1974 Paintsville Study: Arnett Subfile:
Below the Dam Area

did not know the counties involved, and 16% believed that Johnson County was the only one affected.

Forty percent of the sample did not know who would be building the project while 33% correctly identified both the state and federal governments as developers. Most of the people did not know who had the final decision. Of those who did venture a guess, 32% answered correctly that Congress was the final decision maker.

More specific information, such as total acreage and estimated cost of the project, showed a lower level of information. Knowledge of total acreage of the project was similar to that of the group below the dam with 92% of the sample not able to even guess at the amount of land needed. Likewise, only one individual was within the correct range. Concerning the cost of the project, 88% did not know, and only 5 respondents replied within the range of the estimated cost.

When ranking the four purposes for the reservoir, it is interesting to note not only the order of ranking, but the percentage of respondents who did not rank each particular purpose. As can be surmised from Table 18, flood control was the significant purpose for this sample. In the case of the other purposes, while responses were adequate enough to gain a ranking, the percentages for ranking were nearly equal for the percentage of individuals who did not rank those characteristics at all.

When asked if the reservoir project would be used for generating electric power, 66% of the sample did not know. Only one individual answered affirmatively, with 32% answering, correctly that it would not. Regarding accessibility, 68% did not know if private boat landing facilities would be allowed, while 14 respondents replied, correctly that they would not. Seventeen percent of the population incorrectly

TABLE 18

PERCENTAGE RANKINGS FOR PURPOSES OF RESERVOIR:
URBAN SAMPLE

N=100		
PURPOSE	% OF SAMPLE RANKING	% NOT RANKING
1. Flood protection	86	10
2. General recreation	34	32
3. Fish and wildlife control	43	36
4. Water quality and pollution control	41	41

answered that accessibility for private concerns would be allowed. As to accessibility for watering livestock, 66% stated that they did not know, while 24% answered correctly that no livestock would be allowed within the area for such purposes.

Table 19 outlines the distribution of responses for the resource development scale. From this, one can conclude that most individuals in the urban sample are in favor of reservoir development for flood control purposes regardless of the cost. The sample, interestingly enough, was split as to the justification for developing a reservoir for fish and wildlife management alone.

When asked if they personally favored the project's construction, 74% replied affirmatively. Only 9 individuals of the 100 interviewed did not want the project; however, 17% refused to give their opinion.

The residents sampled in the urban impact area seemed to have a high level of general information concerning the project, but, again, the more specific data on the reservoir was unknown to most. The population showed a high positive trend toward reservoir development for flood control purposes, and flood protection was the top ranked purpose for the project.

TABLE 19
RESERVOIR DEVELOPMENT SCALE:
URBAN SAMPLE

Statement	N=100				
	Percentage of Responses				
	SA *	A	U	D	SD
1. More dams are being built today than are necessary for flood control.	0	12	24	59	5
2. Reservoir construction often floods land that is worth more than the land it protects.	0	19	30	50	1
3. Reservoirs should only be constructed when they won't take people's homes or good farm land.	1	22	16	59	2
4. Fish and wildlife development alone provide good reasons for reservoir construction.	0	36	26	38	0
5. Since floods only occur once in awhile, it is foolish to give up good land for reservoir construction.	0	16	15	68	1

Source: 1974 Paintsville Study:Arnett Subfile:Urban
Impact Group.

- * SA - Strongly Agree
- A - Agree
- U - Undecided
- D - Disagree
- SD - Strongly Disagree

Previous Experience

The sample data concerning how long the population sample had known about the project ranged from 1 year to 25 years. Roughly 49% had learned about the project within the last five years. Some 14% of this portion had only known about the project for a year. Surprisingly, 18% stated they had known about the project between 10 and 25 years.

Table 20 summarizes the responses concerning the source of project information. As can be seen in the data, 45% found out about the dam from mass media sources, while 35% were first informed through the local informal news network. Only 9% of the population indicated they had found out about the project through official means, and 11% failed to respond to the question.

The flood damage problem is a chief concern in the urban area. The Final Environmental Impact Statement prepared by the Corps Huntington District (1971), stated that the flooding on the Paint Creek contributes to damage along the lower eight miles of the Creek, the Levisa Fork of the Big Sandy River, and the Ohio River. Including all these regions, the Corps estimated that the project would create monetary savings attributable to flood reduction on an average of \$245,000 annually (Corps of Engineers: 1971:3).

For the total sample in the urban area, 46% stated that they had suffered flood damage to their home and property, and 56% stated that, while they had witnessed flood destruction, they themselves had not suffered loss. Many informants in the urban area lived in the flood-sensitive zone which lies on either side of the Paint Creek. Several respondents produced family albums for the author that visually depicted the totality of the damage done to their homes and property. In some

TABLE 20

RESPONSE SET FOR ORIGIN OF INFORMATION:

URBAN SAMPLE

N=100

Response Set	Frequency	Percent
Mass Media		
Radio	21	21
Newspaper	19	19
Television	5	5
Total	45	45
Official Contact		
Cong. Carl Perkins	4	4
Gov. Louis Nunn	1	1
Group with Petition	1	1
Union Meeting	1	1
Chamber of Commerce	2	2
Total	9	9
Unofficial Contact		
Friends	12	12
Gossip Around Town	13	13
Relatives	9	9
Real Estate Agent	1	1
Total	35	35
No Response to Question	11	11

Source: 1974 Paintsville Study:Arnett Subfile:Urban
Impact Group.

cases, respondents indicated that water stood 52 inches deep in their living rooms. Others talked of their automobiles only visible by their antenna, or traveling down Main Street in a rowboat. The impact of flooding in the Paintsville area is pronounced and a definite concern to most residents.

Previous experience with the agency building the dam was not quite so widespread. Concerning Corps procedures, only 45% thought the Corps assumed moving costs, while 46% could not say. Sixty-three percent knew that cemeteries in the area would be relocated. This is probably due to the discussion on the radio concerning this matter. Only 35% did not know the fate of the cemeteries. As to what happens to buildings in the area, 19% stated that it was the owner's option. Fifty-five individuals of the 100 did not know what happened to structures in the take area, while 14% felt they were merely torn down.

Only five out of the 100 people interviewed had attended meetings concerning the reservoir project. Only 1 of the 5 knew the sponsor of the meeting and, in this case, it was the Big Sandy Development Committee. The sample contained only 4 individuals who were members of any group. Each belonged to a different group ranging from the Chamber of Commerce and Big Sandy Development Committee to the Johnson County Fish and Game Club and an un-named group in favor of the reservoir.

Concerning the movement against the dam in Morgan County, 27% said they had heard of the group. Most individuals stated that they only knew of the group's existence and nothing specific concerning activities against the dam. Most of the specific responses to this question, obtained from individual informants are listed below:

1. Both sides of the dam issue have hired attorneys.

2. Home owners in the take area don't want to move and are fighting it.
3. Some people are opposed to flooding oil and gas wells.
4. Neither side is considering the other's position.
5. Senator Cook opposes the dam.
6. The folks against the dam cannot get a local (Paintsville) lawyer. They had to go to Louisville for legal counsel.

One might notice the subtle reference to the dam being a political question. Many individuals gained previous experience and knowledge of this project through political commentaries and editorials concerning the issue.

The greatest proportion of previous experience in this impact area was with flood damage. The public debate over the dam had helped raise the level of general knowledge in the urban area, but specific information was still at a low level.

Perceived Impact

When asked if they felt the reservoir would affect the community, 76% answered positively. A total of 73 individuals from the urban sample responded with community impact statements. These findings are summarized in Table 21. As can be determined from that table, most individuals perceived flood control as a major project impact for the community with benefits of increased recreation and tourism about equal. Greater economic gain for the community was mentioned as well.

Negative impacts were perceived by 11 individuals. The majority were concerned about family dislocation and loss of farm land. Two individuals were concerned about the ecological destruction, and two were convinced that the dam would not stop flooding in the area. One person mentioned that the dam could attract undesirable people into the community.

Only 34% of the sample felt that there would be any impact on family life. The positive impact responses were oriented mainly to increased recreational benefits and flood prevention. The major negative impact on family was the dislocation of take area households. The response rate for this set of questions was very low.

Thirty-six individuals gave statements concerning positive impact. The major findings are summarized in Table 22. The data shows that flood prevention and increased recreation were the two most frequently stated positive impacts for the area. During interviews, and especially during the ranking of purposes for reservoir construction, individuals in the urban area referred to their poor water supply. They described it as hard and often, bad tasting. Paintsville derives its water from a water company which treats and purifies water and distributes it for domestic use through its own closed system. Whether the improvement in water quality caused by the dam would affect the potable water supply of Paintsville is unknown at this point. References made in the Final Environmental Impact Statement do not refer to an increase in potable water, merely a betterment of existing natural flows. In discussion with local officials, no one indicated that there had been any communication concerning the possibility of designing potable water systems into the project to provide a more stable water supply.

The majority of the sample had no comment on the reservoir's negative effects. Of those who did respond, 14 individuals perceived no negative impact, while twenty-eight respondents did perceive negative effects. The main concerns were for those individuals who had to be relocated. A small number of respondents were worried about the increase in drownings and a possible invasion of less desirable people, but these statements were infrequent in the sample.

TABLE 21
 POSSIBLE EFFECTS ON COMMUNITY:
 URBAN SAMPLE

N=100

Response	Frequency of Responses			Total Times Mentioned
	1st	2nd	3rd	
<u>Positive Impact:</u>				
1. Prevent flooding.	40	7	0	47
2. Increased recreation.	10	7	2	19
3. Increased tourism.	8	6	1	15
4. Bring more money to all.	5	6	2	13
5. Build up community.	4	3	2	9
<u>Negative Impact:</u>				
1. Good farm land lost.	1	1	3	5
2. Destroy the Ecology of area.	1	1	0	2
3. Force people from homes and lifestyles.	1	1	0	2
4. Will not control flooding.	1	1	0	2

Source: 1974 Paintsville Study: Arnett Subfile: Urban
 Impact Group.

TABLE 22

POSITIVE EFFECTS OF RESERVOIR:
URBAN SAMPLE

N=36

Response	Frequency of Responses			Total Times Mentioned
	1st	2nd	3rd	
1. Prevent flooding and loss of life.	20	1	0	21
2. Increase recreational facilities.	8	6	2	16
3. Increase tourism.	5	4	2	11
4. Better water con- servation.	2	2	0	4
5. Bring more money to community.	1	2	2	5

Source: 1974 Paintsville Study:Arnett Subfile:Urban
Impact Group.

When asked if they had anything to add concerning the dam issue which had not been touched on, only 26 individuals replied. Most statements were affirmations of what had previously been said. There were some statements which bear special discussion. Several individuals stated they were afraid the dam would break because of its location on a geological fault. Many felt that it would be wrong to move the cemeteries in the area. Others felt that it would be hard on the elderly. Some felt that the news media had only presented the project's good aspects and had not given enough discussion to the negative impact on the people who must move. One individual noted that the reservoir would become polluted from strip mining operations in the area. A cross check of the data revealed that this interview was taken in the southeast sector in the vicinity of Floyd County. This location is extremely close to Jenny Wiley State Park and Dewey Dam. That reservoir, after approximately 25 years of service, now bears signs that warn visitors to swim at their own risk due to caustic salts in the water. Many dead fish were visible along the shore. As revealed in discussion with area residents, it is believed the pollution comes from run-off salts created by the intense strip mining of coal in the region.

The hypothesis which had been suggested for this impact area was as follows: Inhabitants of the area will perceive positive aspects of impact utilizing a combination of flood control and developmental issues.

This hypothesis is substantially supported by the data from this research effort. Most positive impact statements were geared to flood prevention, increased recreational benefits, increased tourism, and more money for the community. It should be noted, however, that only with flood protection did any significant proportion of individuals

respond. For the five perception questions, an average of 61.4% did not respond. It is unclear whether they did not perceive such things as costs or benefits, or if they merely did not want to make their ideas public to an outsider.

Group D: The Adjacent Area

Knowledge

Most respondents in this group stated that they knew where the dam would be located. Ninety-four percent stated it would be in the vicinity of Fishtrap, or just above Barnett's Creek. A total of 31 individuals (12.4%) said the dam would be somewhere on the Paint Creek, while 6.8% guessed it would be somewhere along U.S. 460. In regards to the counties involved, 44.4% knew that Johnson and Morgan were the only two affected by the project. Twelve percent felt that Magoffin was also within the impact area.

Only five individuals in the sample came within the range of total acreage for the project, with most respondents (92.4%) unable to even venture a guess. A total of 210 respondents (84%) were unable to quote the project's cost, and only 7.2% had estimates within the range of the Corps' estimated cost. Thirty percent of the sample knew that Congress had the final say on project construction, with slightly over half the sample (50.4%) indicating they did not know who made the final decision.

In regards to more specific information, 61.2% did not know if the project would be utilized for electric power generation, while 39% gave a definite negative response. Approximately 30.8% stated they did not know who would build the dam, while 42.4% knew that both the state and federal governments would be building it. A majority of 52.4% knew that individuals would not be allowed to water their livestock at the

reservoir. The sample seemed a bit vague as to whether private boat landing facilities would be allowed, with 61.6% responding that they did not know if private access would be allowed. Only 23.2% knew that such access was forbidden.

The question concerning the ranking of purposes proved very characteristic for this particular impact group. The only purpose ranked with any consistency of order was flood control which was ranked first by 75.6% of the sample. The other three purposes, water quality and pollution control, fish and wildlife development, and general recreation, showed such similarity in figures that it was difficult to place them in any order. Fish and wildlife development tended to be ranked third, but the frequency was so low when compared to the other purposes that it would be speculative to say it reflected any consistent finding. This factor substantiated what was apparent in many of the interviewer's marginal notes. Most individuals in this area seemed unconcerned about the project because they were not directly involved with it, either as possible benefactors or as dislocatees. The fact that flood control was the only consistently-ranked purpose might indicate it was the most visible effect to these otherwise unaffected members of the community.

The results for the reservoir development scale are contained in Table 23. These findings show a particular orientation to reservoir development not so characteristic of the other impact areas. For example, most respondents disagreed with statements which inferred that reservoir construction was not justified in flood control cases. (See Response Statements 1 and 5, Table 23) The majority, however, felt it wrong to take someone's land (Response Statement 3, Table 23), and the responses as to the land loss vs. the flood relief gained were fairly

well split. (See Response Statement 2, Table 23). In response to the fish and wildlife statement, many qualified their answers by stating that it would be sufficient enough reason on its own, but only if people's land were not taken away.

When asked if they personally favored project construction, 56.4% responded affirmatively, and 24% responded negatively. Approximately 19.6% refused to give their opinion. Marginal notes indicated that many respondents refused to answer this opinion question because they felt it was none of their business.

In summary, this group and the other impact areas showed little difference in knowledge level. This finding is significant in itself; it points out the low level of specific knowledge for all areas involved. If the individuals involved with the project know roughly the same amount of information as those who are not involved with the project, then the information dissemination system has failed to inform those most closely related to the project.

Previous experience

The modal response for how long residents had known about the project was 3 years. The range of responses for this question was from one year to forty years. Actually, anything over twenty years was an incorrect estimate for this particular project. It is entirely possible that the respondent had confused the Paintsville Project with another project in the area, i.e., Yatesville, Dewey Dam, or Fishtrap.

When asked from whom or where they had learned of the project, the following response range was obtained (See Table 24). A total of 68 individuals composing 27.7% of the sample, indicated that they had experienced previous flood damage to their homes and property. It must

TABLE 23

RESERVOIR DEVELOPMENT SCALE:

ADJACENT SAMPLE

N=250

Response Statement	Frequency				
	SA	A	U	D	SD
1. More dams are being built today than are necessary for flood control.	15	66	43	119	7
2. Reservoir construction often floods land that is worth more than the land it protects.	12	84	70	82	2
3. Reservoirs should only be constructed when they won't take people's homes or good farmland.	23	110	24	91	2
4. Fish and wildlife development alone provide good reasons for reservoir construction.	3	113	36	86	12
5. Since floods only occur once in awhile, it is foolish to give up good land for reservoir construction.	13	70	43	119	5

TABLE 24
 RESPONSE SET ORIGIN OF INFORMATION
 ADJACENT SAMPLE

N=250

Response Set	Frequency	Percent
Mass Media		
Radio	64	25.6
Newspaper	47	18.8
Television	8	3.2
<hr/>		
Total	119	47.6
<hr/>		
Official Contact		
Cong. Carl Perkins	2	.8
Land Surveyor	1	.4
Group with petition	1	.4
Local Official	1	.4
Corps of Engineers	2	.8
Real Estate Agent	1	.4
<hr/>		
Total	8	3.2
<hr/>		
Unofficial Contact		
Gossip around town	50	20.0
Friends	26	10.4
Relatives	10	4.0
Teacher at school	1	.4
4-H Council	1	.4
Kiwanis Club Meeting	1	.4
<hr/>		
Total	89	35.6

Source: 1974 Paintsville Study:Arnett Subfile
 Adjacent Impact Area

be pointed out, however, that many of these respondents did not suffer flood damage from the Paint Creek. Many creeks in the area back up during the spring and early summer months. In addition, several respondents indicated that the damage had occurred at homesites other than the ones occupied at the time of the interview.

Of this sample, 11 individuals (4.4%) indicated that they owned land within the take area, while 2 individuals rented land within the project boundaries.

Concerning information particular to the Corps' procedures, 86.8% of the sample indicated that cemeteries would be relocated. The question regarding moving expenses showed a lower knowledge level, with 46.8% unable to answer whether the Corps paid for relocation. Forty-eight percent of the sample, however, did indicate that the Corps was responsible for moving the families. When asked what would become of the buildings in the take area, only 4% stated that the option to move or destroy them belonged to the owners, with 33.2% stating the buildings would be destroyed, and 43.2% indicating that they did not know.

Concerning group participation, only 14 respondents indicated they had attended a meeting concerning the dam issue. Of these, nine individuals had attended a meeting sponsored by the Corps of Engineers, while the remainder had attended anti-dam meetings. Only 3 respondents indicated they were members of any active group in the reservoir issue, and all of these were members of anti-dam organizations. When asked if they knew any members of the active organizations, 24 respondents answered in the affirmative, with the majority having only friendly relations with the active member. Thirty respondents indicated that they knew something about the opposition movement in Morgan County, but the

majority of these stated that they only knew the group existed and nothing specific. The most frequently mentioned aspect of knowledge concerning the group was that both sides had hired attorneys.

Perceived Impact

When asked if the reservoir would affect community life, 154 respondents, composing 61.6% of the sample, answered affirmatively, while 27.6% answered that they felt the project would have no effect on the community. The major statements concerning how the project would affect the community are summarized in Table 25.

As shown in Table 25, the major impact was increased flood protection, with increased recreation and tourism mentioned as well. The major negative impact was that individuals would be forced to give up their homes. A total of 44% did not respond to this perception question.

Impact on the family was indicated by 40.4%, with 47.6% feeling that families would not be affected. The majority of those who perceived an impact on family life, felt it would be negative. Their answers ranged from destruction of family lifestyles, hardships on the elderly, and ruination of family ties, to the dam attracting undesirables, and increasing drownings in the area. The few positive statements were oriented to increased flood protection and recreational opportunities.

When asked to give the project's positive impact, 63.2% responded. Most respondents cited increased flood protection, recreational benefits, and increased tourism as the chief positive impacts. Additional impacts were perceived in increased money flow, improvement of roads, and few individuals indicated increased property values. Most individuals responded to the question concerning negative impact by outlining loss of property and lifestyle as the project's primary bad effect. Among

TABLE 25
 POSSIBLE EFFECTS ON COMMUNITY:
 ADJACENT SAMPLE

N=250

Response	Frequency of Response Choices			Total Times Mentioned
	1st	2nd	3rd	
<u>Positive Impact:</u>				
1. Increased recreation.	17	5	1	23
2. Increased tourism.	19	6	4	29
3. Prevent flooding.	43	6	1	50
4. Build up community.	13	1	0	14
5. Bring more money to all in community.	12	2	3	17
<u>Negative Impact:</u>				
1. Destroy lifestyle for those who must move..	16	3	2	21
2. Hard on elderly.	3	2	0	5
3. Destroy ecology of area.	2	0	1	3
4. Good farmland lost.	2	0	0	2
5. Increased taxes.	1	2	2	5
6. Destroy community.	2	0	0	2
7. Dam will eventually break.	2	0	0	2

Source: 1974 Paintsville Study:Arnett Subfile:Adjacent
 Group.

the negative statements, were references to the fact that Kentucky does not need another lake. Others referred to an increase in drownings and undesirable individuals in the area. There was also a certain amount of concern for the loss of a 4-H camp located in the take area. Many residents had spent time at the camp as children and the loss of this traditional summer playground was mentioned several times during the interview sessions.

When asked to give any other opinions concerning the issue, most individuals reasserted what they had previously stated in the perception questions. Several statements, however bear special mention. A small percentage of respondents alluded to the fact that the dam will be constructed over the Paint Creek fault and projected that the dam would eventually break. Many respondents referred to the movement of cemeteries in the area as being morally wrong no matter how necessary it was. Others referred to the notion that land did not really belong to a person if the government could come and take it.

The impact most often perceived by residents of this area was flood protection. Increased recreational benefits and increased tourism seemed the next most widely perceived impacts. The hypothesis for this impact area was as follows: Inhabitants will be ambivalent about the perceived impact of the project with a slight positive emphasis on the positive aspects of the project.

The notion of ambivalence to the project was reflected in the actual data. It had been hoped that some trend in the willingness to respond to the perception questions would indicate that one area did not care what happened concerning the dam. No single area displayed this lack of attention. As has been stated in the previous sections,

the response rate for the perception questions was fairly low for all areas. In the adjacent region, however, interviewers agreed that most individuals did not feel any pressure from the dam project. Many stated that since the dam did not concern them, they felt they did not need to express opinions one way or another. Thus, the statement that adjacent area inhabitants were ambivalent toward the project must be amended to say that the data reflected a trend in that the adjacent respondents did not appear to be as concerned as in other areas.

The positive perception of flood control was significant. It is interesting to note, however, that this group perceived impact on families in a more negative sense than the other impact groups. To summarize, most respondents, while not involved themselves, showed concern not only for the families in the flood prone area, but also for those rural families who would be relocated. Many times statements such as, "I know it would be hard on me to have to move," indicated that empathy was felt for both sides of the issue.

The Community

To test the efficacy of the impact area breakdown, several selected comparative factors were analyzed to determine if regional differences appear. The results are contained in Table 26. Comparative data was only available for a small sample of individuals in the take area. To overcome this, all statements concerning the comparative factors were content analyzed and percentages were based on frequency of like responses, rather than responses to specific questions. The community sample figures were obtained from the total 400 responses collected in August, 1974.

The reader is cautioned that direct comparison is limited by the

TABLE 26

COMMUNITY TO GEOGRAPHIC IMPACT AREA COMPARISON

Comparative Factor	N=400	N=17	N=50	N=250	N=100
	Community*	Take**	Below***	Adjacent***	Urban***
Experienced previous flood damage.	33.7	8.5	42.0	27.2	46.0
Will dam affect community?					
Yes	66.7	100.0	74.0	61.6	76.0
No answer.	12.7	0.0	8.0	10.8	20.0
Will there be good effects?					
Yes	62.7	3.0	70.0	68.8	44.0
No	10.0	97.0	6.0	14.5	1.0
No answer.	27.2	0.0	24.0	16.8	55.0
Will there be bad effects?					
Yes	47.5	97.0	34.0	54.4	37.0
No	29.0	3.0	44.0	32.0	14.0
No answer.	23.5	0.0	22.0	13.6	49.0
Will the dam affect family life?					
Yes	37.5	100.0	30.0	40.4	34.0
No	48.2	0.0	56.0	47.6	46.0
No answer.	14.2	0.0	14.0	12.0	20.0
Do you favor construction of the reservoir?					
Yes	62.5	3.0	72.0	56.4	74.0
No	19.2	97.0	16.0	24.0	9.0
No answer.	18.0	0.0	12.0	19.6	17.0

*1974 Paintsville Study:Johnson and Burdge Community Sample.

**Arnett Re-analysis, Johnson County Portion, 1974 Stoloff Baseline Study.

***1974 Paintsville Study:Arnett Subfiles for Below, Adjacent, and Urban Impact Groups.

fact that the figures in Table 26 are derived from several different sources. The data has been presented, however, to illustrate the different response trends for the different areas. In doing so, several factors become noticeable.

Flood experience is concentrated in the urban and below the dam impact areas. Since the data indicated that flood protection was the most important positive impact, knowing who will be benefitted by increased protection is an important factor.

The take area group differs in many ways from the rest of the community. These residents are most directly influenced by relocation or, at the very least, the possibility of relocation. The sample reflects high scores against the dam, indicating a perception of negative impact on community. This sample is also the only population which consistently felt that there would be an effect on family life. The majority, of course, are against the reservoir project.

There is a fairly close correlation between the below the dam group and the urban sample. It is interesting to note, however, that the urban sample had a lower response rate than any other areas.

Finally, the adjacent group most closely reflects the attitudes expressed by the community sample. This would indicate that approaching the analysis of reservoir impact on the basis of general random samples within a specified geographic area produce information which approximates the mass of unaffected individuals in the area. The fact that differences are apparent in Table 26 is an indication that the geographic impact area form of analysis offers a much clearer view of the problems and situation of a community facing reservoir development. This research effort supports the notion that geographic impact area analysis is an

efficient approach to the understanding of community dynamics involved
in reservoir impact.

CONCLUSIONS

The primary finding of this research effort is that different lifestyles exist within a target community which must be taken into consideration when researching and analyzing the possible impact of a water resource project.

Individuals within the acquisition region of the Paintsville Lake project, constitute the relocation population. They comprise a specific type of population different from the remainder of the community and county. The majority derive their income from farming practices and home gardening activities. To them, relocation means separation from their traditional homeplace, financial hardships, and disruption of a way of life which has been adapted to a specific type of existence.

In the area just below the dam project in the traditional flood sensitive area of the county, a different picture is apparent. These individuals because of a particularly close association with major roadways are somewhat more urban in orientation. The majority commute to jobs in the city, and derive less of their income from agricultural practices. They are also seasonally plagued by floods. In addition to flood protection many are interested in developing the recreational and economic resources of the county.

The urban area presents a different picture. In the case of Paintsville, a large portion of the town lies within a flood sensitive area. Included in this portion is a high percentage of the valuable property of the county, mainly businesses and high income residential homes. The urban residents are less rurally-oriented and many are concerned about the development of the area and community.

The adjacent area presents a paradoxical picture. The inhabitants maintain a lifestyle close to the rural take area residents who must move but they also have observed the destructive force of floods on the Paint Creek. While feeling that increased flood protection is necessary they are careful to point out that the rights of the rural inhabitants should be observed as well. Even though they are unaffected they are important as an impact area in that they comprise the majority of the population within the target community.

Much research concerning the community impact of such actions as the Paintsville Lake Project has been based on the idea that a random sample of individuals within the community will serve best to illustrate the dynamics of impact. This research, however, shows that the type of data produced by such a method approximates more the feelings of the majority rather than illustrating the actual issues and problems within the community. Indeed such projects do not affect the majority of residents. Those who are directly affected are masked in the community sample. Individuals within specific areas which are affected diversely will react and perceive such projects in differential ways, and it is these differences which are critical to the understanding of reservoir impact.

Concerning Knowledge

None of the impact groups showed any difference in the amount of knowledge nor in quality of knowledge. The only individuals who seemed to show any high degree of knowledge of the project were those who were involved in group activity either for the project or against it.

The major portion of information was being disseminated via the mass media in the below, adjacent, and urban sample with informal gossip networks being the second most significant source of information. Within

the take area, however, a larger proportion of individuals were informed through the local gossip chain. The old adage, bad news travels fast, certainly holds true in the relocation area.

Several observations can be made concerning what county residents knew about the project. The question concerning the fate of cemeteries in the take region showed the highest correct score in all areas. This is probably due to open debate and publicity contained in the newspaper and on the local radio. Most individuals who replied to where the dam was located were correct as to the general vicinity. Few, however, knew the approximate size or the estimated cost of such a project. Of those individuals who responded to the question concerning who had the final decision, the majority were correct indicating the Congress. In addition the majority of those who ventured a response on moving expenses felt the Corps did not provide for moving expenses. Excluding those individuals who stated they did not know, the majority felt that both the state and federal governments were involved with building the project.

Previous Experience

Very few individuals in the county including the take area had previous experience with the Corps of Engineers. The official contact for dissemination of information was very low. In addition few individuals knew about Corps policy or expressed any previous experience with Corps personnel. The highest percentage of project contact was in the take area. More than 50% of this contact was either through formal meetings or with land survey personnel.

Residents of the urban and below the dam impact groups showed the highest percentage of previous flood damage experience. However, many respondents indicated that they had seen the destruction caused by floods.

Finally, it appeared from marginal notes and content analysis of statements concerning the reservoirs that individuals in the area did have previous experience with reservoirs. This is not hard to understand in light of the fact that several similar completed projects are located within one hour's driving time of the County. Many residents referred to Dewey Dam or Fishtrap when speaking of reservoirs. Thus it appears that the local residents do have a good idea of the physical configuration of such reservoir projects.

Perception of Impact

For take area residents, the dam represented a threat. They perceived that the project would create hardships for them economically, socially and personally through forced relocation, disruption of traditional economic practices and destruction of friendship ties.

The individuals in the below-the-dam region and the urban sample felt that flood control was the primary positive impact from the project. In addition, increased recreational facilities and tourism resulting in an increase in cash flow, employment, and development were perceived by these groups. The major negative impact was oriented to the dislocation of individuals from their homes.

Throughout the entire county a small percentage of individuals felt the dam would cause an increase in the number of undesirable people in the county. Some also felt that drownings would increase as well.

In general, the perceptions of impact were very much geared to the particular situation of each impact area. The individuals in the take area obviously were concerned about forced relocation. Those individuals in the flood sensitive zones were concerned about more flood protection. The individuals in the adjacent area, when concerned, were cognizant of

both the need for increased flood protection and concerned for the welfare of those individuals who had to move.

Suggested Further Research

This effort has only indicated trends in the many possible differences which exist between segments of a population confronted with the development of a reservoir. More research needs to be conducted to develop a methodology which would gather more specific and complete information on each impact group. Of primary importance is the need to gather good descriptive baseline data on how individuals in different areas live.

Agencies which develop such reservoir projects must be provided with the knowledge of the dynamics of community reaction. Agencies must know what is going on and they must be told in ways they can understand. Approaching different impact areas as ecosystems in themselves, finding out how they integrate with each other and what significance the differences have toward project impact is an essential first step.

There is a need to emphasize existing research on the problem of getting reservoir-related information to those who most need to be informed, namely the people. Agencies cannot depend upon individuals within the community to seek out such knowledge but must take the initiative to instruct the local target population as to procedures and effects of such projects. This not only includes informing possible relocatees, but includes informing local governmental officials as to possible changes which might occur as a result of the project and working with those responsible for local planning to reduce any negative impact as well as increase any possible benefits.

Finally, there must be a more logical approach to relocation. Informing the take area population that they must move, arranging and appraising land transactions and providing moving expenses, is not enough when the project produces drastic alterations in traditional lifestyles. Such considerations as providing enough land for borderline economic families to produce a portion of their income from home industries as they have done in their traditional homes, easing the stress to the elderly, and locating homes and moving families with special problems such as large extended families, families with special health care problems, etc. must be included in relocation procedures. Research needs to be conducted to provide alternative relocation programs utilizing the maximum amount of social services available. In reservoir projects where large amounts of land is acquired forcing families from their homes, a situation exists where some in the area will benefit and some in the area will pay. The object of research into new programs should be to reduce the problems for those who must give up something as precious as a home and lifestyle for those who need protection for the very same thing.

APPENDIX A

Information Input:

Stoloff Data Utilized

Background Information

Sex:

Age:

Marital Status:

Occupation:

Occupation, Spouse:

Education:

Education, Spouse:

Income (family)

Do you own or rent your place of residence?

How many acres do you have?

For growing things would you say the land is good ___
fair___ poor___?

Do you have a vegetable garden? Do you raise any
animals for food?

Areas of Inquiry

1. How long have you lived in this house?
2. Where did you live before?
3. Do you have a family cemetery in this area? Where?
4. Do you know about the dam?
5. How did you learn about it?
6. Would the proposed dam be a good thing for you? Why?
7. Would you be worried if you had to move? If yes, what worries you?
8. If you had to move, where do you think you'd go?
9. Could the government help you in any way if you had to move?
10. How do you feel about living out here?
11. What do you like about it?
12. What do you dislike about living here?

APPENDIX B

Questions Utilized From the
1974 Paintsville Study

APPENDIX B

Background Information:

Sex:

Place of Residence:

1. Urban
2. Rural Non-Farm
3. Rural Farm

Marital Status:

Occupation:

Occupation Spouse:

Education:

Education Spouse:

Income (family):

Age:

Length of Residence:

1. Have you ever lived in a town of over 2,500 people?
How many years did you live in places of this size?
2. (If Urban residence) Have you ever lived in a town
of under 2,500 people? How many years?
3. How many years have you lived in Johnson County?
4. How many years have you lived in the Appalachian
area? (If unclear, specify mountainous region of
Ohio, Pennsylvania, Kentucky, West Virginia,
Virginia, and Tennessee.)

Areas of Inquiry:

Knowledge:

1. Can you tell me where the proposed dam would be
built? Yes___ No___ Where? (Indicate site
described by respondent.)
2. What counties have land that would be affected by
the reservoir if it is built? _____
3. Is the proposed dam supposed to be used as a source
for generating electric power? Yes___ No ___
4. Who will be building the dam, the federal govern-
ment, the state, or both together? _____
5. How many acres of land approximately would be flooded
for the reservoir? Acres _____ Don't know _____
6. Will people who own land that borders the reservoir
be able to build private beaches and boat landing
facilities? Yes___ No ___ Don't know _____

7. Do you know how much it will cost to build such a reservoir? _____
8. Will everybody have open access to the reservoir to water livestock or will other arrangements have to be made?
9. Who is responsible for the final decision as to whether or not to build these reservoirs? _____
10. How would you rank the following four purposes which are connected to the building of reservoirs such as the one planned for this area?

Flood Control _____
 Improvement of Water Quality and Pollution Control _____
 Fish and Wildlife Development _____
 General Recreation _____

Previous Experience:

1. Do you own any land in the area which will be flooded by the Paintsville reservoir? 0 No
 answer Yes _____ No _____
2. Do you rent any land in the area which will be flooded by the Paintsville reservoir? 0 No answer
 Yes _____ No _____
3. When did you first hear of the Paintsville Reservoir? _____
4. From whom or where did you first hear about it?

5. Have you ever experienced flood damage to your home or property? _____
6. What will happen to the cemeteries that are located in places that will be flooded by the reservoir?

7. Does the Army Corps of Engineers provide for moving expenses for everybody affected? _____
8. What is done with the buildings purchased by the Corps of Engineers? _____
9. Did you attend any hearings or meetings about the reservoir? If yes who sponsored the meetings? _____

10. Are you a member of any of the groups that either supported or opposed the reservoir? If yes, which one?
11. Do you know anything about the groups opposing the dam in Morgan County?
12. Do you know anyone who is a member of these groups? Relationship? _____

For comparative purposes the following Likert scale was included in collection materials for this study.

I am going to read a series of statements to you concerning reservoirs. I would like you to tell me whether you strongly agree, agree, strongly disagree or disagree, or if you are uncertain about the statements.

1. More dams are being built today than are necessary for flood control.
SA A U D SD
 1 2 3 4 5
2. Reservoir construction often floods land that is worth more than the land it protects.
SA A U D SD
 1 2 3 4 5
3. Reservoirs should only be constructed when they won't take people's homes or good farmland.
SA A U D SD
 1 2 3 4 5
4. Fish and wildlife development alone provide good reasons for reservoir construction.
SA A U D SD
 1 2 3 4 5
5. Since floods only occur once in awhile, it is foolish to give up good land for reservoir construction.
SA A U D SD
 5 4 3 2 1

Perceived Impacts:

1. Do you think the reservoir will affect the community? Yes_____ No_____ 0 No answer
2. How do you think the reservoir will affect the community? _____
3. Do you think the reservoir will have any effect on family life? Yes_____ No_____ 0 No answer
4. How do you think the reservoir will affect family life? _____
5. The reservoir may have good and bad effects. Do you feel any good will result from the reservoir? Yes_____ No_____ 0 No answer
6. What do you think these good effects will be? _____
7. Do you feel the reservoir will have any bad effects? Yes_____ No_____ 0 No answer
8. What do you think these bad effects will be? _____
9. In general do you personally favor construction of the reservoir? Yes_____ No_____ Don't know_____
10. Would you like to express any other feelings or opinions about the reservoir?

NOTES

1. See United States Code Annotated, Title 42, Sections 4013, 4101, and 4102.

2. This information is contained in baseline data collected by Mr. David Stoloff during the 1974 February Field Season in Johnson and Morgan Counties. The project was sponsored by the Huntington District Office, United States Army Corps of Engineers.

3. On July 15, 1975, a Federal judge handed down a decision in Federal District Court, Catlettsburg, Kentucky, to permanently enjoin the construction of the Paintsville Lake Project as proposed on that date. The decision was based on evidence that the Corps of Engineers had failed to comply with the National Environmental Policy Act (1969) guidelines for the preparation of an Environmental Impact Statement.

4. The information utilized in this presentation was in raw data form from the material collected by Mr. Stoloff in February of 1974. Permission was gained to use this data so long as all conclusions of this author were noted and specified. All conclusions made in this report are this author's. For a summary of Mr. Stoloff's findings see Stoloff (1975) referenced in this report.

5. For the purpose of this study, Appalachian Region was defined as the mountainous areas of Ohio, Pennsylvania, Kentucky, West Virginia, Virginia, and Tennessee.

BIBLIOGRAPHY

Baur, E. Jackson

- 1973 Assessing the Social Effects of Public Works Projects, Department of the Army, Corps of Engineers. Resident Scholar Program Research Paper No. 3. Fort Belvoir, Virginia.

Becker, Catherine J.

- 1971 Factors Associated with Attitude Toward Reservoir Construction. Unpublished Masters Thesis. University of Kentucky, Sociology Department. Lexington, Kentucky.

Bennett, John W.

- 1974 "Anthropological Contributions to the Cultural Ecology and Management of Water Resources." In Man & Water, L. Douglas James (ed.). Lexington: University Press of Kentucky.

Burdge, Rabel J. and K. Sue Johnson

- 1973 Social Costs and Benefits of Water Resource Construction. University of Kentucky Water Resources Research Report No. 64. Lexington, Kentucky.

Burdge, Rabel J. and Richard L. Ludtke

- 1970 Factors Affecting Relocation in Response to Reservoir Development. University of Kentucky Water Resources Research Report No. 29. Lexington, Kentucky.

Cole, Michael and Sylvia Scribner

- 1974 Culture and Thought: A Psychological Perspective. New York: John Wiley and Sons Inc.

Dasgupta, Satadal

- 1967 Attitudes of Local Residents Toward Watershed Development. State College: Mississippi State University Social Science Research Center in Cooperation with Water Resources Research Institute. Preliminary Report No. 18.

Drucker, Philip

1972 Impact of a Proposed Reservoir on Local Land Values. University of Kentucky Water Resources Research Report No. 51. Lexington, Kentucky.

Drucker, Philip. Jerry Eugene Clark and Lesker Dianne Smith.

1973 Sociocultural Impact of Reservoirs on Local Government Institutions: Anthropological Analysis of Social and Cultural Benefits and Costs from Stream Control Measures, Phase 4. University of Kentucky Water Resources Research Report No. 65, Lexington, Kentucky.

Drucker, Philip. Charles R. Smith and Edward B. Reeves

1974 Displacement of Persons by Major Public Works: Anthropological Analysis of Social and Cultural Benefits and Costs from Stream Control Measures, Phase 5. University of Kentucky Water Resources Research Report No. 80. Lexington, Kentucky.

Fried, Morton

1963 "Grieving for a Lost Home." In The Urban Condition, L.J. Duhl. New York: Simon and Schuster. Pages 151-172.

Goodenough, Ward H.

1970 "The Growing Demand for Behavioral Science in Government." In Applied Anthropology: Readings in the Uses of the Science of Man. James A. Clifton (ed). Boston: Houghton Mifflin. Pages 215-225.

Gould, Peter and Rodney White

1974 Mental Maps. Baltimore: Penguin Books.

Hargrove, Michael B.

1971 Economic Development of Areas Contiguous to Multi-Purpose Reservoirs: The Kentucky-Tennessee Experience. University of Kentucky Water Resources Research Report No. 21. Lexington, Kentucky.

Hochstrasser, Donald

- 1973 Primary Baseline Study of the Human Cultural Characteristics of Three Eastern Kentucky Counties Where Reservoirs are to be Constructed.

Kluckhohn, Clyde

- 1959 "Values and Value-Orientations in the Theory of Action: Explanation in Definition and Classification." In Toward a General Theory of Action. Talcott Parsons and Edward A. Shils (eds). Cambridge: Harvard University Press. Pages 434-465.

James, L. Douglas

- 1972 A Perspective on Economic Impact. University of Kentucky Water Resources Research Report No. 37. Lexington, Kentucky.
- 1974 Man & Water. Lexington: University Press of Kentucky.

Korshing, Peter F.

- 1972 The Effects of Mass Media of Communication on Attitudes Toward Change in an Eastern Kentucky County. Unpublished Masters Thesis. University of Kentucky, Sociology Department. Lexington, Kentucky.

Peterson, John H. and Peggy J. Ross

- 1971 Changing Attitudes Toward Watershed Development. State College: Mississippi State University Water Resources Research Institute.

Photiadis, John D.

- 1960 Attitudes Toward the Water Resources Development Program in Central South Dakota. Department of Rural Sociology Extension Service and Water Resources Commission. Brookings: South Dakota State College. Preliminary Report No. 1.

Piddington, Ralph

- 1970 "Action Anthropology." In Applied Anthropology: Readings in The Uses of the Science of Man. James A. Clifton (ed). Boston: Houghton Mifflin. Pages 127-145.

Redfield, Robert

1960 The Little Community & Peasant Society and Culture. Chicago: University of Chicago Press.

Smith, Charles Robert

1970 Anticipation of Change: A Socio-Economic Description of a Kentucky County Before Reservoir Construction. University of Kentucky Water Resources Research Report No. 28. Lexington, Kentucky.

1973 Social and Cultural Impact of a Proposed Reservoir on a Rural Kentucky School District. University of Kentucky Water Resources Research Report No. 60. Lexington, Kentucky.

Spicer, Edward H.

1952 Human Problems in Technological Change. Russell Sage Foundation.

Steward, Julian H.

1955 Theory of Culture Change: The Methodology of Multilinear Evolution. Urbana: University of Illinois Press.

Stoloff, David and Judith G. Stoloff

1975 Social Impact Assessment: A Tool for Project Planning. Presented 58th Annual Conference Planning 75: Innovation and Action. American Institute of Planners, San Antonio, Texas. (MIMEO)

Triandis, Harry C.

1964 "Cultural Influences Upon Cognitive Processes." In Advances in Experimental Social Psychology. Leonard Berkowitz (ed) Vol I. Academic Press. (Bobbs-Merrill Reprint No. A-463)

U.S. Department of the Army, Corps of Engineers,
Huntington District

1971 Environmental Statement, Paintsville Lake Project. Filed with CEQ, 30 April 1971. (MIMEO)

U.S. Department of the Army, Corps of Engineers,
Huntington District

1972 Guidelines for Assessment of Social, Economic
and Environmental Effects of Civil Works
Projects. Cincinnati District Office
U.S. Army Corps of Engineers. (MIMEO)

Warren, Roland L.

1972 The Community in America. 2nd Edition.
Chicago: Rand McNally and Company.

Wilkenson, Kenneth P.

1966 Local Action and Acceptance of Watershed
Development. State College: Mississippi
State University Water Resources Research
Institute.