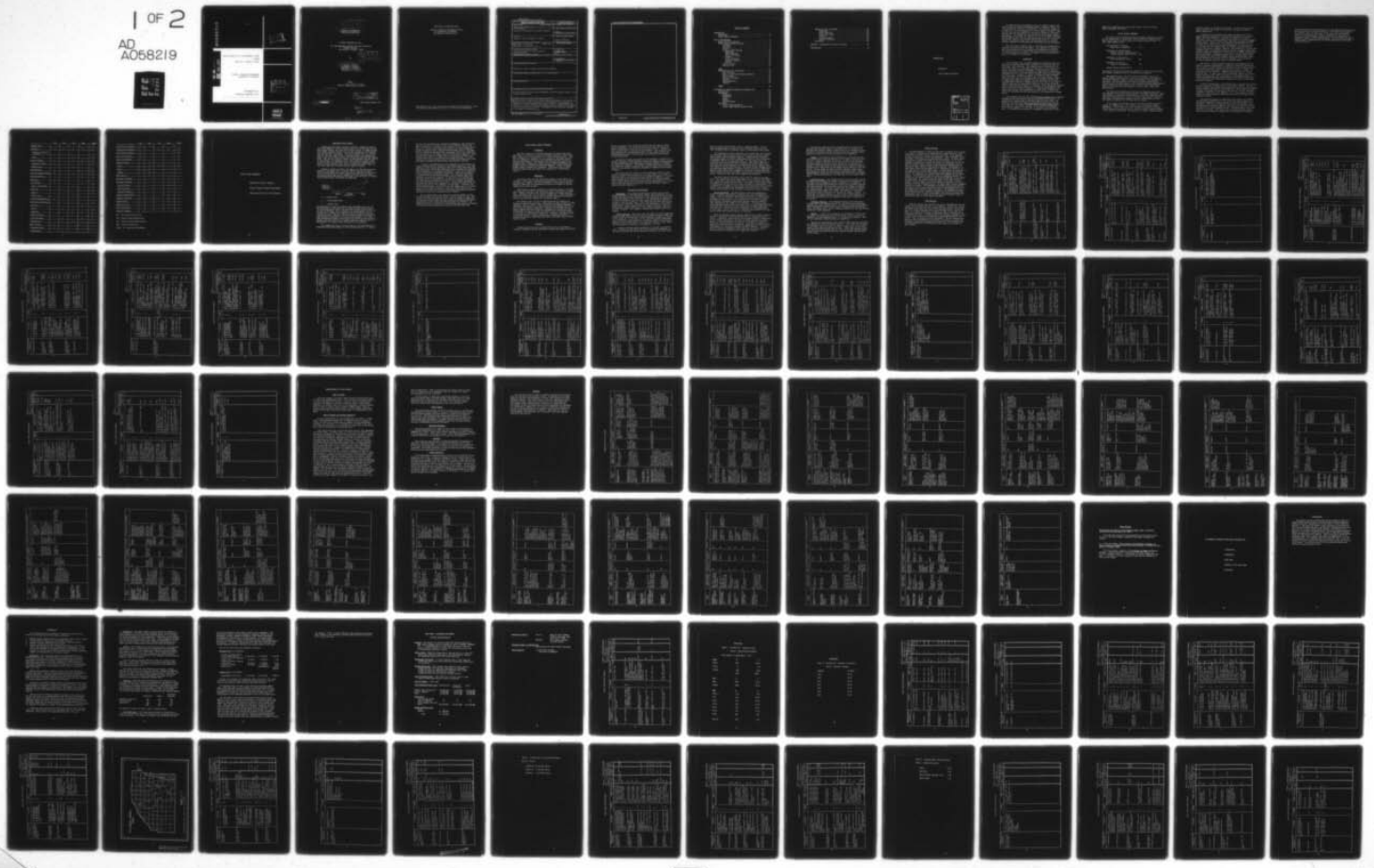
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The first step in doing an SIA (Social Impact Assessment) is to profile the impacted area in terms of specific social variables. This handbook is designed to show how impacted areas can be quickly and inexpensively profiled. The crucial variables are identified and the sources of information for these variables are located. An example of this profiling technique is included for illustration.

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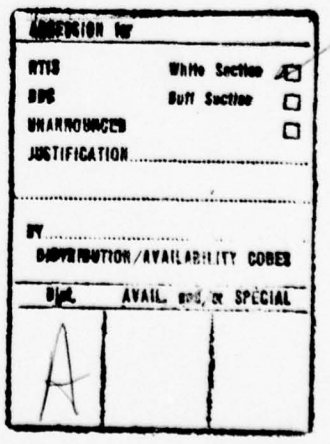
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INTRODUCTION

Background

Social Impact Variables



The 1969 National Environmental Policy Act (NEPA) requires that federal agencies prepare Environmental Impact Statements (EIS's) before construction projects are undertaken. One important element of a complete EIS is the preparation of a Social Impact Assessment (SIA). The SIA gives special attention to the social impacts of alternative projects and thus complements the economic and environmental impact assessments. Since 1969, the number of EIS's has increased regularly and the manuals outlining the form and content of the EIS's have also multiplied. However, the existing manuals that deal with SIA have several limitations (Flynn, 1977), and especially fail to provide practical guidance to constructing a scientifically valid assessment.

The first step in making a SIA is to profile the impacted area in terms of specific social variables. This handbook is designed to show how impacted areas can be quickly and inexpensively profiled. The crucial variables are identified and the sources of information for these variables are located. An example of this profiling technique is included for illustration.

BACKGROUND

At the present time, personnel charged with preparing SIA's are given little guidance about which variables to include, or where to find data on the variables. The primary source of profile data is the Census, which is a good place to begin since it is easily accessible. But Census data are inadequate in many respects; they are quickly outdated and often unavailable in detail for the appropriate geographical areas. The most readily available Census data are given in county units. However, the county is seldom the most meaningful unit within which to measure impacts for a specific project. More often the impact area is a subcounty unit or several subcounty units. In urban areas, data are available for some variables at the level of enumeration districts. However, the source of much of this data is computer tapes rather than printed format so that access to sophisticated assistance and equipment is required. Other information sources, such as crime statistics, may not be available for geographical areas which correspond to Census boundaries. An additional limitation of Census data is that some information for small areas is either surpressed or unavailable in the same detail as that presented for larger areas.

The resources cited in this handbook <u>do not include</u> Census materials although in many cases Census data are appropriate and adequate. Accessibility of Census data is guaranteed and relatively easy. The Bureau of the Census publishes its own handbook and users would undoubtedly find the volume, <u>Environmental/Socioeconomic Data Sources</u> (U.S. Bureau of the Census, October, 1976) a useful introduction. There does not appear to be any need to reproduce this information here. This handbook was designed to complement Census data by cata-

loging and evaluating other, often more useful, sources of social impact assessment information.

SOCIAL IMPACT VARIABLES

The first step in determining which non-Census variables to include in this handbook was to examine the social variables actually used by those federal agencies which produce the largest number of EIS's. In 1975, those agencies were:

The Department of Defense	
Army Corps of Engineers	273
Department of Transportation	
Federal Aviation Administration	
Federal Highway Administration	229
Department of Agriculture	
Soil Conservation Service	189
Department of Interior	
Bureau of Reclamation	67
Federal Energy Administration	5

Each agency instructional manual was examined to insure that all social and economic variables would be included in this Handbook.

Some agencies list a few very specific variables, such as the Federal Highway Administration's list of various groups that might be especially impacted: elderly, school-age children, those dependent on the public, the handicapped, illiterate, non-drivers, pedestrians, bicyclists and low income people. Both the Federal Energy Administration and the Federal Aviation Administration classify direct and indirect impacts, the latter being such impacts as noise, dust, stress, and water quality.

The Bureau of Reclamation and the Corps of Engineers use a general approach rather than listing specific, measurable indicators. Since their guides are conceptual and preliminary to variable identification, they leave the preparer of the SIA with very little specific direction. The Federal Aviation Agency suggest a group of generalized but helpful sources in addition to the survey and the Census.

If we compare the variables used by the various Federal agencies, several are commonly used. For instance, all the agencies measure employment. On the other hand, some variation in specific variables results because the agencies look for specific kinds of impacts related to the nature of their work; for instance, the Federal Aviation Admin-

istration focuses on displaced populations. We have included all the common variables and as many of the specific variables as seem to warrant general use.

A review of the literature shows that many examples of social impact assessment concentrate on an in-depth analysis of one area of impact, such as population or utilities or community facilities (Hitchcock, 1977). A better approach would seem to be a review across several areas of possible impact using indicators designated as high priority items. Many writers have suggested comprehensive lists of variables to be used in social impact assessment. To name just two, T. W. Fookes with the Huntly Social and Economic Impact Monitoring Project, University of Waikato, Hamilton, New Zealand has a list of nine parameters which are designed to monitor an entire range of social and economic impacts resulting from construction of a 1,000MW thermal power station in Huntley. Recently, in a new book on social impact assessment, Merwin and Olsen posited another list of variables which have been modified for use in this handbook (Finsterbusch and Wolf, 1977). We have divided the variables into six parameters, and priorities have been assigned across the areas of possible impact.

The lists of social variables included in this Handbook are designed to provide a comprehensive, though not necessarily exhaustive, list of social variables which are affected by water resource projects. The economic and social impacts of such projects are not always obvious nor easily perceptible. Impacts may be indirect, cyclic, unrecognized, or the result of a stimulus which may occur at a later point in time. In some cases social and economic impacts can be documented; in other cases, they are suspected. The present levels of social methodology and data collection do not generally provide sufficient qualitative nor quantitative information to allow accurate predictions of impacts.

In these circumstances, the following list of variables was created as a basic outline to measure social and economic impacts. The variables indicate those areas where impact might occur; not all variables would be expected to apply for every project. The existence and amount of impact will depend on the phase of the project, its size and type, extraneous activities in the community, (i.e., the existence of other projects or large industry), and spurious variables which may hide or exaggerate impacts.

The potential benefits of measuring social impacts are immense. By conducting an examination of the social and economic impacts affecting the community, a better picture of costs and benefits can be developed. There will be immediate effects for the community since the information concerning negative and positive impacts will be made available to all the interested parties. Potential crises can be prepared for or averted. The project can be modified through cooperation within the community; problems with the potential of inciting

hostility among the local residents can be anticipated and solutions can be arrived at before hostility builds up. The benefits are positive for planners since the monitoring of the social and environmental impacts of one project will assist in planning for other projects. Also, much of the information gathered will benefit planners in the immediate community, since decision-making, cost accounting and policy-making facets of administration are always facilitated by such additional information.

	SCS	FEA	FAA	BOR	CORPS
Economic Base					X
Employment	X	X	X	X	X
Business & Industrial Activity					X
Taxes			X		X
Level of Income	X		X	X	X
Sources of Income	X			X	X
Monthly Rent			X		
Land Ownership	X				X
Land and Property Values	X		X	X	X
Housing Conditions				X	X
Population	X				
Projections	X			X	X
Chars. of Displaced			X		X
Mobility					X
Density					X
Family Size			X		
Growth Characteristics	X				
Facilities and Services					X
Religious			X	X	
Health		X	X		X
Education			X	X	X
Public Utilities			X		X
Fire and Safety		X		X	X
Recreational		X	X	X	X
Types of Farms	X				
Principal Crops	X				
Productivity		X			

	SCS	FEA	FAA	BOR	CORPS
Accessibility to Roads	X	X			
Transportation Patterns			X	X	X
Archeological Resources	X				X
Historical Resources	X				X
Scenic and Aesthetic	X				X
Indirect Impacts		X			
Noise		X	X		X
Dust		X			
Stress		X			
Water Quality		X	X		
Attitudes to Project				X	
Government Services				X	
Law and Justice				X	
Social Services				X	
Cultural Resources				X	
Informal Organizations				X	
Community Viability				X	
Communications				X	
Quality of Life				X	
Social Well-Being				X	
Community Cohesion					X

SCS: Soil Conservation Service

FEA: Federal Energy Administration

FAA: Federal Aviation Administration

BOR: Bureau of Reclamation

CORPS: U.S. Army Corps of Engineers

USE OF THE HANDBOOK

Measuring Social Impacts

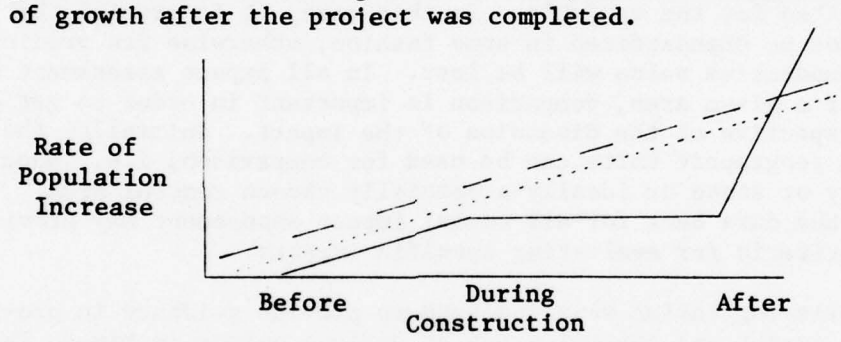
Social Impact Design Variables

Characteristics of the Sources

MEASURING SOCIAL IMPACTS

Measuring social impacts actually involves a comparison between what would happen to social variables given the proposed plan and what would happen without any plan--the "no-plan" option. A common mistake is to equate baseline "before" construction measurements of variables with the "no-plan" alternative. But social systems are in a constant state of flux and, even without a proposed project, they change over time so that the "no-plan" option will differ from the baseline measurements. How can the "no-plan" changes be distinguished from the impacts of the project? One suggestion is to gather data for control areas as well as data for the impact areas. By comparing standardized measures of social variables over time for impact and control areas, we can better learn how to predict project-specific impacts.

Suppose we wished to measure the impact of a dam project on population in the impact area. We could collect data for the impact area, the surrounding county(ies), and for an identified control area. It may be that the data in this example would show that the impact area growth stabilized during construction, then continued at a higher rate of growth after the project was completed.



———— Impact Area

— — — Surrounding County

..... Control Area

An examination of county and control area data might show that the rate of growth in both areas did not change during the dam project. If similar population data is measured for all dam projects--that is, the pattern of normal rate of growth, then stabilization, then increased rate of growth--that population pattern would be associated with dam projects. However, such speculation regarding the impact of a dam project on population is just that-speculation. As the data bank on population growth in the impact area of dam projects develops, specific objective criteria of expected population impacts will be established. At present, these criteria are not available.

This example can also be used to point out the precariousness of predicting unqualified impacts to other planned projects. To simply

say that the population will increase is inadequate; such predictions must be related to the phases of the project--before, during, and after construction. They must also be related to the size and type of project: a multi-million dollar dam project will affect population growth differently than a $250,000 levee-building project. The existence of extraneous variables must be negated, such as the completion of a new factory in the impact area which may attract employees. Thus, predicting the impact of a dam project on population requires a substantial data bank of information from previous studies. It is necessary both to know general patterns of population change and to know what other circumstances might affect those patterns, and how.

In order to generalize beyond the findings of a few studies, relevant variables must be measured by consistent indicators. For this handbook, we have chosen indicators which are the best available, the most accessible, and the most meaningful ways to measure the variables. Where appropriate, the indicators are given as rates or per capita in order to facilitate standardized comparison. Items may be modified or supplemented for particular projects. For instance, some areas, counties, or states may have data which does not exactly match the indicator cited for the variable. In this case, it is crucial that the indicator be standardized in some fashion, otherwise its predictive and comparative value will be lost. In all impact assessment or profiling of a given area, comparison is important in order to get an overall perspective of the dimension of the impact. Initially, the surrounding geographic units can be used for comparison; i.e., another county, city or state or ideally a specially chosen control area. Eventually the data bank for all social impact assessment may provide objective criteria for evaluating specific impacts.

The following tables were designed to provide guidance in profiling both impact and control areas at various points in time. They include not only variables that con be used, but guides to measuring the variables (Social Impact Design Variables) and finding sources of information for data collecting (Characteristics of Sources). An example of baseline profiling for the Hillsdale Dam Project is included to illustrate how the generalized guide has actually been used.

SOCIAL IMPACT DESIGN VARIABLES

Variables

The first column of the Design Variables form lists those variables which are theorized as possible dependent variables, those which might change due to the existence of the water resource project. This list was compiled by combining our own experience, variables derived from the theoretical literature and practically derived by others assessing social impacts. The variables are arranged according to Six Parameter Files: Demography, Public Services, Social Well-Being, Ecm Economy, Social Structure, and Community Response. These six define general areas of theoretical importance. Within each file, we have listed variables which are likely to be impacted by a construction project.

Indicators

The second column has the indicators thought to best depict the variables. These can be modified if available data is not in precisely the same form. However, too much modification of the indicators will impede the intention of standardization which is necessary to develop comparability across studies.

When using the design variables for a baseline profile, the ideal time reference for most of the indicators will be the previous calendar year. However, some data will only be available for earlier time periods, and others only for the current calendar year. Other appropriate years for the baseline study would be the year the project was authorized or the year that planning for the project began.

We recognize that the list of indicators does not address the question of qualitative measures. These would be more critical for some parameters than for others. Social Structure and Community Response obviously could benefit from a more descriptive accounting than is possible using quantitative indicators. However, the variables listed should suggest areas which might be supplemented by qualitative work. In addition, the Sources listed will often be able to provide qualitative as well as quantitative information. Therefore, although the list is intended only as a guide to quantitative information sources, it provides direction to researchers who wish to use other types of information as well.

Priority

Variable priorities must be established in case it becomes necessary to eliminate certain indicators or reduce the range of the study.

Priority indicates those variables for which the most project impact can be anticipated. Of course, priorities will vary from project to project, depending on local and project characteristics. Therefore, the priorities must be adjusted for each project. The priorities have been estimated for the generalized list; for the sample profile (the Hillsdale Dam Project), the priorities are reassessed and justified in the introduction.

Criteria for rating the priority of the variables is difficult to specify precisely. Those indicators having the highest priority ratings are more quantifiable and summarize the greatest amount of information as concisely as possible. The highest priorities would go to indicators which are thought to have the most extreme impact from the project itself or that provide information necessary to discover the existence of impact.

The lowest priority would go to those indicators which are less helpful in describing the nature of the social impact of a project, or which are likely to be affected only in uncommon situations. If the researcher does not anticipate that there will be an impact on a particular variable given the nature of the project, the variable should have a lower priority than is indicated in the generalized list. Information yield and extent of impact are therefore the major criteria used to rank the indicators.

Priority Justifications

Demography. The parameter demography is almost always a high priority parameter. The composition, number, and distribution of population are very sensitive variables and the indicators are very likely to show some impacts from the project. The "percentage of population in cities of 20,000 or more" may not change substantially; however, if it does it will be significant. Many areas may not have large cities, therefore, the indicator, "percent of total population in the largest urban areas," is more important and of a higher priority. Some indicators may respond slowly and be less useful as priority indicators for water projects. The category, "communicable disease rate" is an example.

Public Services. Mean class size, and number of unused classrooms, receive a high priority because they will quickly indicate whether the school system can be expected to absorb additional students or whether it is saturated. If the latter is true and the parameter demography depicts the school-aged population as growing, negative impact may be expected on the school system. The range and severity of such impacts can be mitigated by planning and preparation, of course.

A similar justification is applicable to hospitals and hospital beds. If there are only sufficient facilities for the community at the baseline period and further needs are indicated, then some action

must be taken to avoid various levels of negative impact. If the number of physicians per capita is low, recruitment must occur--but this information must be available before a heavy patient load occurs.

The indicators of police protection, fire protection, and utilities are rated with high priorities because such services can not be overloaded without serious negative impacts. Further research may show that certain types of projects cause higher levels of use in the areas of ambulance service or fire protection. At the present time such predictions are not scientifically reliable. What must be done is to anticipate that projects may cause increased use of such public services and that if the community is already performing at capacity then the quality of servixes may decrease. The point is that although we can only speculate about whether a specific project will have a measurable impact on these facilities, a priori we can argue for monitoring such crucial public services since their functions are critical to the community. Therefore, they have been assigned high priorities.

The lower priority indicators often relate to financial information. This information is not unimportant, but it may be a slow indicator; it may take a relatively longer time to reflect impacts than some than some of the higher priority items. The number of sanitation workers is quantifiable but may not be the best indicator of public health. It is similar to the number of taxi licenses and professional social service workers; these variables may demonstrate some impact but it is anticipated that they may not be as helpful as some of the other variables.

Social Well-Being. The high priority items are indicators relating to crimes, work absences, hospital stay, and discrimination ratios. They are quantified sufficiently and relate to aspects of the community that are crucial. These indicators may or may not reflect any impact of the project but at a minimum they represent variables which should be monitored continuously during a project because of their implications for change in the community. If violent crimes, school dropouts, people under the poverty line, or fires begin increasing coincident with a project's growth, some type of problem confrontation can occur. But if there is no recognition of the problem until it has become a crisis, not only is a solution more difficult, but the project itself may become an object of hostility.

While the parameter Public Services employed the concept of availability of resources, Social Well-Being looks at the use of the resources. Indicators reflecting this are average hospital occupancy/day, use of preschool facilities, and ratio of water consumption to water supply. If the availability if resources is depleted too rapidly, the social well-being will be decreased. Also these variables can be examined in light of expected population inmigrations as in the case of large numbers of construction workers and their families. If anticipated use exceeds availability (such indicators are in the Public Services section), problems can be flagged and prevented.

Low priority items are time to criminal and civil trials; students/special education class, educational level of teachers, and housing units without plumbing. These items do not necessarily react directly to a project, nor do they give us the most important information in recard to the social well-being of the community.

Economy. The number of jobs available is a high priority indicator since jobs are a good indicator of the impact of any project in the area. Overall indicators for percent of labor force employed, percent of women in the labor force, and percent of persons over 65 are needed baseline indicators which should also be monitored for changes. Sales tax/capita, income spent/capita, number of businesses and percent of retail trade are all guages of the economy of the community. If more money is coming into the community, income spent may increase, as might the total volume of business trade. Special characteristics of an area may influence the priorities; for instance, Federal Revenue sharing may be very important in a low income urban area.

Social Structure. The parameter social structure groups several variables which describe the extent of interaction characteristic of the people in the community, and the stability of the community. Educational attainment and percentage of high school graduates approximate characteristics of the social structure which might be impacted by a water project. The type of housing and the length of occupancy are variables which might also change: apartments or mobile homes may replace single family units as the mode of living. Further, people may turn over property at a faster rate during a project. The percentage of eligible persons who vote is also a good indicator of political participation in the community which might be impacted by the project.

Community Response. This parameter depicts the issues and activities within the community as well as the existence of government programs and a planning department. The number of organizations making public statements as well as the number of petitions and initiatives filed, and whether there exists a planning program were the high priority variables in this parameter.

Summary. A total of 54 indicators are designated as first priority items. The indicators have two qualities: they are crucial to community life and especially sensitive to manifesting impacts. They are not necessarily balanced among the parameters.

Based on our experiences, first priority items should be collected as a minimum for even the smallest projects. Where more time and money are available, and the project is larger in scope, data for the lower priority items should be gathered as well. These lower priority items will provide a more complete picture of the actual and expected social impacts and may provide the basis for improved methods and indicators in the future.

Source and Unit

For each variable a source and the unit of analysis will be given; i.e., Board of Education, by school district; State Bureau of Vital Statistics, by state, county and cities over 2500. It is important to show for what unit the data are available. Some information may be available in different units from different sources. In these cases, the choice of source will depend on the unit desired. If it isn't available in precisely the unit one needs, the researcher can use the priority of indicator to decide if he wants to interpolate from one unit to another. Higher priority items would use interpolation if necessary; lower priority items would be omitted. Unfortunately, in some cases there is no reasonable way to interpolate in order to obtain data for the defined impact area. In cases where the indicator is of high priority, the best data should be given and the actual unit noted. As a reminder, the sources within the handbook are non-Census sources. We particularly wanted to note all available sources in addition to the Census because of the obvious weaknesses of the Census in some areas. But in many cases the Census is the best source of secondary data; frequently no current source of the data is really needed. In other cases, current information is essential, but is not available from any secondary source. In these cases, we have suggested the use of a survey. The information provided by the survey may far outweigh the costs and inconvenience since the information will be for the proper area, accurate, and to the point. The assumption in most data gathering is that secondary information is convenient and economical; however when the identified impact area does not coincide with a government unit, a survey may provide the only reasonable means of meeting the needs of social impact assessment.

Time and Cost

Often the sources will not have the data in standardized form and the per capita figures will have to be computed. Usually this will be reflected in the time and cost columns which are the last two columns. The fifth column gives some idea of the estimated time to collect the data. It is quite difficult to estimate the time it will take for a particular researcher to gather a particular piece of information for a particular project. The figures given are therefore intended to give an idea of the relative time involved in gathering alternative indicators. They are based on our own experience. The cost figures will vary even more substantially from project to project, so we have not attempted a generalized estimate for column six. The estimated costs of gathering data for the Hillsdale Dam case study are included in that section.

SOCIAL IMPACT DESIGN VARIABLES

Project _____

Date _____

Parameter Demography

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	TIME TO COLLECT	COST
1. Population Size of Community	No. of inhabitants by Age, Sex, Race	1	1.Survey: exact impact area 2.Planning Dept.: county, city 3.Regional Planning Commission: county, township, census tracts 4.State Dept. of Econ. Dev.: county, city, region	4 Hours	
2. Amount of Growth	a. Births/yr. for 10 years b. Deaths/yr. for 10 years c. Migration/yr. for 10 yrs. d. Rate of growth for 10 yrs	2	a.+b.State Annual Summary of Vital Statistics: county, city, state c.Subtraction: population for 2nd yr.- population for 1st year-births (1st yr.) + deaths (1st yr.) = Migration for 1st year d.Increase(Migration + Births) of 1st Year ÷ Population of 1st year	1 Day 1 Day 1 Hour 1 Day	
3. Turnover of Property (see Social Well-being 16, Economy B)	Number of persons selling per capita per year	1	1.Recorder of Deeds: county, city, plat 2.Regional Planning Commission: county, city	1 Hour Per Section	
4. Urbanization of Community	Percent of pop. in cities of 20,000 or more	4	City Directory, Chamber of Commerce, Planning Dept.: city. Divide this figure by total pop. (see variable 1.)	1 Hour	
5. Population Density	Number of persons per sq. mile	2	1.Planning Dept.: county, city 2.State Planning and Research: state, county, city 3.Survey Results: measured area 4.Regional Planning Commission: county, city	1 Hour	
6. Population Concentration	Percent of total population in the largest urban area	3	Same as variable 4, only using largest city	1 Hour	

SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter Demography

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	TIME TO COLLECT	COST
7. Age Dependency	a. % of the Population Over 65	1	a.+b. 1.Survey Results: impact area 2.Planning Dept.: county, city 3.Community Action Agency: area covered 4.Regional Planning Commission: county, city region	Given D1, 1/2 Hour	
	b. % of the Population under 18	1			
8. Sex Ratio	Ratio of Males to Females	3	1.Survey Results: impact area. 2.Planning Dept.: county, city	Given D1, 1/4 Hour	
9. Ethnic Population (see Social Struc,4)	a. % of Population, Non-white.	3	a.+b. 1.Survey Results: impact area 2.Planning Dept.: county, city 3.Community Action Agency: area covered 4.Regional Planning Comm.: county, city, region	Given D1, 1/4 Hour	
	b. % Foreign Born	3			
10. Family Size in the Community	a. $\bar{X}$ No. of Persons/Household	1	a.+b. 1.Survey Results: impact area. 2.Planning Dept.: county, city	Given D1, 1 Hour	
	b. $\bar{X}$ No. of Dependent Children/Household	2		1 Hour	
	c. Ratio of Schoolage to Total Population	2	c.1.Board of Education for total no.of school age ÷ population of area (var. 1)	Given D1, 1/2 Hour	
11. Marital Status (see Social Well-being 9)	% Of People Married, Divorced, Separated, Widowed single.	3	1.Survey Results: impact area. 2.State Annual Summary of Vital Statistics: state, county	Given D1, 1/2 Hour	
12. Household Composition	% Households: single parent, unrelated individuals, nuclear fam., individual-single	1	Survey Results: impact area	1 Hour	
13. Births	Births/1000 Women By Sex, Age, Race	3	State Annual Summary of Vital Statistics: county, city, state	1 Day	
14. Morbidity	Communicable Disease Rate	4	County Health Department	1 Hour	

SOCIAL IMPACT DESIGN VARIABLES

Project _____

Date _____

Parameter Demography

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	TIME TO COLLECT	COST
15. Deaths	Deaths/1000 Pop. By Sex, Age, Race	3	State Annual Summary of Vital Statistics: county, city, state	1 Day	
16. Migration	Immigrants/1000 Pop. By Sex, Age, Race	3	Subtraction: Population Time 2-Population Time 1(Births-Deaths in intervening time period)	1/2 Day	

SOCIAL IMPACT DESIGN VARIABLES

Project _____

Date _____

Parameter Public Services

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	TIME TO COLLECT	COST
1. Public Education (see Social Well-being 10)	a. Mean Class Size	1	a.+b. State Department of Education Report: county, school district	1 Hour	
	b. Mean Student-Teacher ratio	2		1 Hour	
	c. Unused Classrooms/Cap.	1	c.Board of Education: each school district by school	1 Hour	
	d. Total Educational Expenditure/Student/Yr.	2	d.Board of Education: each school district	1 Hour	
	e. $/Cap. By Source of Income	4	e.+g. Board of Education: each school district	2 Hours	
	f. $/Cap. By Expenditure Type	4		2 Hours	
	g. Total Sq. Ft. of Classroom Space/Student	2		1/4 Hour	
	h. Req. Sq. Ft. Classroom Space/Student	2	h.State Department of Education	1/4 Hour	
	i. Schools by Type	1	i. Board of Educ.: each school district		
2. Medical Care (see Social Well-being 5, 6, 7,)	a. Hospital Bed/Cap.	1	a.-c. 1.Health Planning Agency: area covered, county	1/2 Hour	
	b. No. of Hospitals/Sq. Mi.	2			
	c. No. of Mental Health Clinics/Cap.	2	2.Chamber of Commerce: city	1/2 Hour	
	d. Total Hospital Expenditures/Cap./Yrs.	3	3.City Directory: city	1 Hour	
			4.Bureau of Health Planning, State Department of Health and Environment: by hospital, county		
			b.State Department of Economic Dev.: city, county, state	1 Hour	
			d. 1.Survey of Hospitals: Individual hospital		
			2.Hospital Association: by hospital		
3. Medical Personnel	a. No. of Physicians/Cap.	1	a.Board of Healing Arts: state,county	2 Days	
	b. No. of Dentists/Cap.	2	a.-c. Telephone Book: under physic., dentists, psychiatrists, psychologists	2 Hour	
	c. No. of Psychiatrists/Cap.	3	a.-d. 1. Bureau of Health Planning, State Dept. of Health and Environ: state, county	1/2 Hour	
	d. No of Nurses/Cap.	3		1/2 Hour	
	e. No. of Paramed/Cap.	4	2.Professional Assoc.: by area covered by organization only. county	1/2 Hour	
	f. No. of Private Practices/Cap.	2			
	g. No. of Patients/Practice	2	e.-g. Survey of Physician's practices	4 Days	

SOCIAL IMPACT DESIGN VARIABLES

Project _____

Date _____

Parameter Public Services

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	TIME TO COLLECT	COST
4. Ambulance Service	a. No. of Calls/Cap. b. No. of Personnel/Cap. c. No. of Vehicles/Cap.	2 2 2	a.-c. Survey of Actual Ambulance Unit or Emergency Medical Service: county b.-c. Regional Planning Commission: region, county, city	1 Hour Total	
5. Public Health (see Social Well-being 6)	a. No. of Public Health Workers/Cap. b. No. of Sani. Worker/Cap. c. Local Gov. Exp./Cap./Yr.	3 4 2	a. Public Health Dept.: county, city b. Public Work: county, city c. Clerks Office: county, city	1 Hour 1/2 Hour 1/4 Hour	
6. Fire Protection (see Social Well-being, 19)	a. No. of Fire Workers/Cap. b. Total Local Gov. Expenditures/Cap. c. Fire Protection Classification of community d. No. of Trucks and Equipment/Cap. e. Labor Hours/Fire f. No. of Existing Engine Companies	1 2 2 1 2 2	a. Survey of Fire Protection Unit: county, city, rural b. Clerk: county, city c.-f. Survey of Fire Protection Unit: county, city, rural	1 Hour 1/2 Hour 1 Hour 1/2 Hour 1 Day 1/2 Hour	
7. Police Protection (see Social Well-being 1, 2)	a. No. of Police/Cap. b. Mean No. of Police/Cap. for Similar Areas c. Total Local Gov. Expenditures/Cap.	1 2 2	a. Police Protection Unit Survey: county (sheriff), city b. Uniform Crime Report: counties c. Clerk: county, city	1/2 Hour 4 Hours 1/4 Hours	
8. Legal Services	a. No. of Attorneys/Cap. b. Total Budget of Legal Services Centers/Cap. c. No. of Persons Staffing Centers	3 3 3	a. 1.Professional Assoc.: whatever unit area covers 2. Telephone Book: area covered by telephone company 3. County Attorney: county jurisdiction b.-c. Legal Service Center Itself	1 Hour 1 Hour 1/2 Hour	

SOCIAL IMPACT DESIGN VARIABLES

Project_____

Date _____

Parameter Public Services

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	TIME TO COLLECT	COST
9. Social Services	a. No. of Professionals/Cap	4	a. Professional Association: whatever unit it covers	4 Hours	
	b. No. of Agencies/Cap.	2		1 Hour	
	c. No. of Volunteer Service Agencies/Cap.	2	b.-c. 1.Volunteer or Referral Clearing Houses: City	2 Hours	
	d. Total Budget From local Gov./Cap./Yr.	3	2. Community Action Agency: area covered	1/4 Hour	
	e. Budget From United Fund/Cap.	2	d. Clerk: county, city		
	f. $ Amt. Spent on Disaster (related to projects)/Cap.	2	e. United Fund Agency: local area covered	1 Hour	
			f. Survey of Service Agencies: whatever areas disaster covered	3 Hours	
10. Public Transportation (see Social Well-being 20)	a. Total Expenditure/Cap./Yr.	2	a. 1.Transportation Authority	1 Hour	
			a.+d. Clerk Office: county, city	1 Hour	
	b. No. of Mi. of Bus Routes/Cap.	1(urban areas)	b.-c. 1. Bus Company Interview: city	1/2 Hour	
	c. No. of Buses/Cap.	1	2. Regional Planning Commission: county, city, region		
	d. Total Expenditure on Street Maintenance/Cap./Yr.	2	3. Public Works: county, City	1/4 Hour	
			e. 1. State Dept. of Transportation: county	1 Hour	
	e. Maps of Routes & Roads	1	2. Post Office: mail routes		
			3. Rural Farm Directory: townships, plats		
	f. Mi. of Road by Type/Cap.	3	f. 1. Engineer or Public Works: city, county	2 Hour	
	g. No. of Taxi Licenses/Cap.	3	2. State Department of Economic Dev.: city, county	1 Hour	
	h. Ft. of Airport Runway/Cap.	2	g. 1. Clerk: city or county		
	i. No. of Trains Stopping/Cap.	2	h. 1. Airport Authority: local area		
			2. Federal Aviation Adminis.: state, county, city	1 Hour	
			3. City Directory: city		
			i. Chamber of Commerce: city	1 Hour	

SOCIAL IMPACT DESIGN VARIABLES

Project_____

Date _____

Parameter Public Services

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	TIME TO COLLECT	COST
11. Outdoor Public Recreation Facilities (see Social Well-being 13)	a. Swimming Pool/Cap. b. Picnic Tables/Cap. c. Mi. of Hiking/Cap. d. Mi. of Biking/Cap. e. Acres of Public Park/ Cap.	2 2 2 2 1	a.-e. 1. State Department of Econ. Dev.: county, city, state 2. City Directory: city 3. Chamber of Commerce: city 4. Parks and Recreation Dept.: county, city e. 1. State Dept. of Parks and Recreation: state, county, city 2. Regional Planning Commission: region, county, city, census tract	1/2 Hour 1/2 Hour 1/2 Hour 1/2 Hour 1/2 Hour	
12. Public Recreation Expenditures	a. Total Local Gov. Expenditures/Cap./Yr. b. Total Local Gov. Expenditures For Recreational Programs/Cap./Yr.	2 2	a.-b. Clerk: county, city	1/4 Hour 1/4 Hour	
13. Private Recreation	a. No. of Sporting Events/ Cap./Wk. b. No. of Drinking Establishments/Cap. c. No. of Restaurants/Cap.	2 2 2	a. 1. Chamber of Commerce: city 2. Tourist Bureau: city b. 1. Clerk: county, city - liquor licenses 2. Survey of Establishments c. Restaurant Association	1 Hour 2 Hours 2 Hours	
14. Cultural Facilities (see Social Well-being 12)	a. No. of Books in The Public Library/Cap. b. Total Budget of All Major Museums/Cap./Yr. c. No. of Publicly Sponsored Cultural Courses/ Cap.	2 3 2	a. 1. City Directory: city 2. Survey of Museums c. 1. Chamber of Commerce: city	1/4 Hour 1 Hour 2 Hours	

SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter Public Services

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	TIME TO COLLECT	COST
15. Community Facilities	a. No. of Churches/Cap.	1	a. 1. Chamber of Commerce: city	1/2 Hour	
	b. No. of Community Owned Buildings/Cap.	2	2. City Directory: city	1/2 Hour	
			b. 1. Planning Department: county, city		
			2. Public Works or Engineer: county, city		
			3. Regional Planning Commission: region, county, city		
16. Water (see Social Well-being 21)	a. Mi. of Water Lines/Cap.	2	a., c., d. Water Company: city	2 Hours	
	b. No. of Wells or cisterns/Cap.	1	b. Survey: impact areas	1/2 Hour	
			b.-d. Rural Water District: county		
	c. Cost Per 1000 Gal. of Water	2		1 Hour	
	d. Water Purification Capacity/Capita	1		2 Hours	
	e. Mi. of Storm Drainage/Cap.	2	e.-g. Public Works: county, city	1 Hour	
	f. Mi. of Sewer Line/Cap.	2		1 Hour	
	g. No. of Septic Tanks/Cap.	2		1 Hour	
17. Gas (see Social Well-being 21)	a. Mi. of Gas Line/Cap.	2	a.,c.,d. Gas Company: city	1 Hour	
	b. No. of Propane Tanks/Cap.	2	b.-d. Propane Gas Company: county	1 Hour	
	c. No. of New users/No. of Existing Customers	2		1 Hour	
	d. Cost/Cubic Meter	2		1 Hour	
18. Electricity (see Social Well-being 21)	a. Mi. of Powerline/Cap.	2	a.-c. Electric Power Company: area covered	4 Hours	
	b. No. of New users/No. of Existing Customers	2		1 Hour	
	c. Cost/Kilowatt Hour	2		1/2 Hour	
19. Mail Service	Volume of Mail Handled/Capita /Day	3	Post Office: for routes covered	2 Hour	

SOCIAL IMPACT DESIGN VARIABLES

Project _____

Date _____

Parameter Public Services

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	TIME TO COLLECT	COST
20. Telephone Service (see Social Well-being 21)	No. of Telephone Connections (New)/No. of Existing Customers	2	Telephone Company: for areas covered	2 Hours	

SOCIAL IMPACT DESIGN VARIABLES

Project_____

Date _____

Parameter Social Well-being

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	TIME TO COLLECT	COST
1. Crime and Delinquency (see Public Services 7)	a. No. of Violent Crimes/1000/Yr.	1	a. FBI Uniform Crime Reporting System: county, city, state, police or sheriffs district	1 Hour	
	b. No. of Property Crimes/1000/Yr.	1	b.-d. 1. Police Dept.: city	1 Hour	
	c. No. of Delinquency Violations/1000/Yr.	2	2. Sheriffs Dept.: county	4 Hours	
	d. % Of All Cases Cleared by Making Arrest	3		2 Days	
2. Justice System (see Public Services 7)	a. Mean and Median Months to Criminal Trial	4	a. County Attorney	2 Days	
	b. Mean and Median Months to Court Trial	4	a.-b. FBI Uniform Crime Reporting System: county, city, state by cross referencing information	2 Days	
3. Public Violence	a. No. of Riots or Similar Events/Yr.	2	a.-b. 1. Newspaper of local area 2. Police Dept.: city	1 Day	
	b. No. of Resulting Deaths and Injuries/Cap./Yr.	2	3. Sheriff Dept.: county		
4. Alcohol and Drug Abuse	a. No. of People Treated for A and DA by Hospitals/Cap./Yr.	2	a. 1. Health Planning Agency: area covered, county	3 Hours	
	b. No. of Contacts with A and DA Programs/Cap./Yr.	3	2. Client History Data File, State Dept. of Social Rehabilitation Services: county b. 1. Survey of Specific Programs: impact area 2. Volunteer or Referral Clearing Houses: local areas	4 Days	
5. Physical and Mental Health (see Public Services 2)	a. Hospitalization Rate for Illness/Cap./Yr.	2	a. State Dept. of Social Rehabilitation Services: client history data file: county	1 Day	
	b. Hospitalization Rate for Mental Illness/Cap./Yr.	2	b. State Dept. of Health and Environ.	1/2 Day	
	c. No. of Disability Days Per Cap./Yr.	2	c. State Dept. of Soc. Rehabil. Serv.: county	1 Day	
	d. Suicide Rate/Yr.	3	d. State Bureau of Vital Statistics: county, city, state	1/2 Day	
	e. Work Absence/Worker/Yr.	2	e. Survey of Local Factories	1 Day	

SOCIAL IMPACT DESIGN VARIABLES

Project_____
Date _____
Parameter Social Well-being

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	TIME TO COLLECT	COST
6. Quality of Med. Care (see Public Services, 2, 5)	a. No. of Patients Seen/Wk.	2	a.-c. 1. Survey: Impact Area	1/2 Day	
	b. Mean Time Between Actual Appt. Time and Consultation	3	2. Survey of Physician Practices		
	c. Mean Time Between Calling and Getting An Appointment	3			
	d. Public Health Visits/ Cap./Yr.	2	d. Public Health Department: county	3 Hours	
7. Quality of Hospital Care (see Public Services 2)	a. No. of Doctors Staffing Emergency/Cap.	2	a.-c. Survey of Hospitals in Impact Area	1 Hour	
	b. Mean Hospital Stay/Person	1	c. 1. Regional Planning Commission:	3 Hours	
	c. Ave. Occupancy/Day or % Occupied	1	region, county, city 2. Health Planning Commission: county, area covered		
8. Racial and Sexual Discrimination (see Economy 3)	a. Ratio of Black to White Unemployment	1	a.-d. 1 State Dept. of Employment Security: county	1 Hour	
	b. Ratio of Female to Male Unemployment	1	2. Survey: impact area	1 Hour	
	c. Ratio of Black to White Income	1	a., c. Community Action Agency: local area covered	1 Hour	
	d. Ratio of Female to Male Income	1		1 Hour	
	e. No. of Civil Rights Suits Filed	2	e. Fed. Dist. Court: for entire district or part of a state	1 Day	
9. Family Disruption (see Demography 11)	a. No. of Divorces Filed/ Cap./Yr.	2	a. 1. State District Court: county 2. State Bureau of Vital Statistics: county, city	2 Hour	
	b. % of One Adult Families	1	b. 1. Survey: impact area 2. Parents without Partners	1/2 Day	
10. Education (see Public Services 1)	a. Rate of School Dropouts/ yr.	1	a.,e. State Department of Education: Annual Statistical Report: school district, counties	2 Hours	
	b. Mean Score of Students on National Achievement Tests	3	b.-d. Board of Education: school district	1 Day	

(cont. next page)

SOCIAL IMPACT DESIGN VARIABLES

Project _____

Date _____

Parameter Social Well-being

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	TIME TO COLLECT	COST
10. Education (see Public Services 1)	c. Ratio of Mean Score to National Mean	3		1/2 Hour	
	d. Students/Special Education Class	4		1/2 Hour	
	e. Accreditation Rating	4		1/2 Hour	
	f. Mean Education Level of Teachers	4	f. National Education Association	1/2 Day	
11. Preschool/Daycare	a. No. of Applicants	3	a.-c. Survey of Facilities: impact area	2 Hours	
	b. No. of Facilities	1		1 Hour	
	c. Pupil/Teacher Ratio	2		1/2 Hour	
12. Library Use (see Public Service 14)	a. Mean Daily Attendance	3	a., c. Survey of Library: impact area	2 Hours	
	b. Books Checked Out/Day/Cap. (circulation)	2	b. State Library Advisory Commission	1 Hour	
	c. Mean No. of Information Calls/Day	2	State Library Statistics: county, city	1/2 Hour	
13. Recreation Use (see Public Services 11-13)	a. Mean Attendance at Parks/Day	2	a.-c. Park and Recreation Dept.: county, city	2 Hours	
	b. Mean Attendance at Park Programs/Day	4	d. Survey of Local Movie Theatres: impact area	3 Hours	
	c. Swimming Pool Use/Day/Capita	2		1 Hour	
	d. Mean Cinema Admissions/Cap./ Wk	2		2 Days	
14. Employment (see Economy 1,2)	Gross Labor Turnover Rate/Yr.	2	State Dept. of Economic Security: county, city	2 Hours	
15. Poverty (see Public Services 9)	a. % of All Families Below The Official Poverty Line	1	a.-b. 1. Dept. of Social Rehabilitation Service: client history data File	3 Hours	
	b. No. of People/1000 Receiving Soc. Security, SSSI, Pensions, Child Support	2	2. Summary of Public Assistance: county, state 3. Survey: impact area 4. Community Action Agency: local area covered	2 Hours	

SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter Social Well- being

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	TIME TO COLLECT	COST
16. Quality of Housing (see Social Structure 5, 6)	a. % of Housing Units-Dilapidated, Standard, Deteriorated	1	a.-e. 1. Planning Dept.: county, city 2. Survey: impact area a., c. 1. Community Action Agency: local area covered 2. Local Housing Authority: city or other area 3. Neighborhood Association: neighborhood 4. Regional Planning Commission: region, county, city	2 Days Total	
	b. % of Housing Units Without Plumbing	4			
	c. % Housing Owned, Rented	2			
	d. No. of Habitable Rooms/ Household.	2			
	e. No. of Habitable Rooms/ Cap.				
17. Housing Values (see Demography 12)	Mean and Median Housing Value	2	1. Real Estate Board: city 2. Survey: impact area 3. Local Housing Authority: city or other area	1/2 Day	
18. Property Improvements	a. Mean Sq. Ft. Floorspace Added	3			
	b. No. of Demolitions/Cap.	1	a.-d. 1. Building Inspector: county, township, city (clerks, zoning administrator) 2. Township Trustee: township	1 Day Total	
	c. No. of Building Permits By Type/Cap.	1			
	d. Mean Amount of $ Spent on Improvements	3			
19. Reported Fires (see Public Services 6)	a. No. of Fires/1000/Sq. Mi.	1	a.-b. Survey of Fire Protection Unit: impact area; maps allow specific area identification	1 Day Total	
	b. Amount of Damage/1000/ Sq. Mi.	2			
20. Transportation Quality (see Public Services 6)	a. Vehicle Mi. Travelled/ Cap.	2	a. 1. Transportation Authority: area 2. Planning Dept.: county, city	1 Hour	
	b. No. of Moving Violations/ Cap.	2	b.,d. 1 Sheriffs Dept.: county; maps allow specific area identification	1 Day	
	c. No. of Parking Violations/Cap.	2	b.-d. Police Dept.: city	1 Day	
	d. No. of Accidents by Type/ 1000	1	b., d. Police Dept.: city b., d. 2. Highway Patrol: county	1 Hour	

SOCIAL IMPACT DESIGN VARIABLES

Project_____

Date _____

Parameter Social Well - being

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	TIME TO COLLECT	COST
21. Utilities (see Public Services 16, 17, 18, 19, 20)	a. Ratio of Water Consumption (in gal.) to Water Supply or Amount Purified.	1	a., b. 1. Water Company: city 2. Rural Water District: county and specific district	1/2 Hour	
	b. No. of Shutoffs/Yr./ Existing Customers 1. Electric 2. Gas 3. Water 4. Telephone	2	b. 1. Gas Company: area covered 2. Electric Company: impact area included in area 3. Telephone Company: impact area included in area	4 Hours	

SOCIAL IMPACT DESIGN VARIABLES

Project _____

Date _____

Parameter Economy

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	TIME TO COLLECT	COST
1. Job Opportunities	a. In General and Project Specific: % Unskilled Jobs, Semi-Skilled, Clerical/Sales Managerial, Professional Jobs That Are Vacant	2	a. 1. State Dept. of Employment Security: county 2. Local Newspaper Wantads: local area 3. Contracts Officer for Project	3 Days	
2. Job Distribution	a. In General and Project Specific, % of all Available Jobs That Are: unskilled semiskilled, skilled, clerical/sales, managerial, professional	2	a. 1. State Dept. of Employment Security: county 2. Local Newspaper Wantads: local area	3 Days	
3. Employment Level (see Social Well-being 8)	a. % of Labor Force Employed b. % of Women in Labor Force c. % of Persons Over 65	1 1 1	a.-c. 1. Survey: impact area 2. Planning Dept.: county, city 3. State Dept. of Employment Security: county 4. State Dept. of Economic Development: county, city, region	1 Hour 1 Hour 1 Hour	
4. Gross Community Product	a. Gross Community Income/ Yr. b. Value Added by Manufacturing c. Value Added by Agricultural Products	3 3 3	a.-b. 1. Chamber of Commerce: city 2. Clerk's Office: county, city c. Extension Service: county		
5. Gross Community Product Growth	% Rate/Yr. of Community Income for 10 Years	4	1. Clerk's Office: county, city 2. Treasurer's Office: county, city	5 Hours	
6. Property Tax Base	a. Total Value of Assessed Real Property b. Total Value of Assessed Personel Property (given value) % assessed	4 4	a.-b. 1. Tax Assessor: county, city 2. State Dept. of Revenue: annual economic report; state, county	1 Hour/ Section	

SOCIAL IMPACT DESIGN VARIABLES

Project_____
Date _____
Parameter Economy

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	TIME TO COLLECT	COST
7. Financial Inflow From the Federal Government	a. Amount of Federal Revenue Sharing/Yr. b. Amount of Direct Federal Aid to Impact Area /Yr. c. Amount of Federal Monies Received/Yr.	3 2 2	a.-c. 1. Clerk's Office: county, city 2. Treasurer's Office: county, city	1 Hour Total	
8. Price Level	Consumer Price Index for the Community	4	Available in Regional Base Only	1/2 Hour	
9. Public Revenues	a. Total Revenues Collected by All Government Units In past Yr./Cap. b. Sales Tax/Capita	3 2	a.-b. 1. Clerk's Office: county, city 2. Township Trustee: township 3. Treasurer's Office: county, city	1/2 Hour	
10. Household Consumption (see Social Structure 2)	Income Spent/Capita	1	1. Survey of Buying Power: county, city 2. Survey: impact area	1 Hour	
11. Retail Trade	a. No. of Businesses/1000 b. $ of Retail Trade/Capita c. No. of New Business/ Capita in Past Yr.	1 1 2	a. 1. Regional Planning Commission: region, county, city 2. City Directory: city 3. Chamber of Commerce: city a., b. Survey of Area Businesses: impact area a., c. Planning Dept.: county, city c. State Dept. of Economic Dev.: county, city, region	1 Day 1 Day 2 Days	
12. Distance From Work	Ave. Time Travelled/Capita	3	1. Survey: impact area 2. Regional Planning Commission: region, county, city	5 Days	

SOCIAL IMPACT DESIGN VARIABLES

Project _____
Date _____
Parameter Economy

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	TIME TO COLLECT	COST
13. Site Activity (see Demography 3)	a. Acres/Zoning Category b. % Of Acres With Zoning Change in Past Year	1 2	a., b. 1. Planning Dept.: county, city 2. Zoning Administrators: county, city township 3. Township Trustee: township 4. State Planning and Research: LUDA: county, city	6 Hours 1 Hour	
14. Land Values	Dollars/Acre/Capita	1	1. Tax Assessors: county, city 2. State Dept. of Revenue: county, city 3. League of Municipalities: city	2 Days	
15. Subdivision Activity	a. No. of Tracts Developed b. No. of Tracts Sold c. No. of Sites Platted/Yr.	2 2 1	a-c. 1. Planning Dept.: county, city 2. Zoning Administrator: county, city, township	2 Hours 3 Hours 2 Hours	
16. Financial Activity	a. $ Amt. Bank Deposits b. $ Amt. Time Deposits c. $ Amt. Loans Current	2 2 2	a.- c. 1. Survey of Banks: Impact Area 2. State Dept. of Economic Dev.: county, city	1 Hour 1 Hour 1 Hour	

SOCIAL IMPACT DESIGN VARIABLES

Project_____

Date _____

Parameter Social Structure

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	TIME TO COLLECT	COST
1. Educational Attainment (see Social Well-being 10, Public Services1)	a. Mean and Median Educational Attainment of People over 25	1	a.-c. State Board of Education: Annual Statistical Report: county, city, state	1 Hour	
	b. % of H.S. Graduates	1		1 Hour	
	c. Mean Daily Attendance	2		1 Hour	
2. Socioeconomic Status (see Economy 10)	a. Mean Occupational Status of the Work Force	3	a.-b. 1 Survey: impact area	1/2 Hour	
			2. Survey of Buying Power	1/2 Hour	
	b. Median and Mean Gross Family Income	2			
3. Kin Ties	Av. No. Visits/Mo.	2	Survey: impact area	1/2 Hour	
4. Ethnic Identification (see Demography 9)	No. Languages Spoken in the Community	2	Survey: impact area	1/2 Hour	
5. Housing Availability	No. of Unoccupied Dwelling Units/Cap.	3	1. Local Housing Authority: city or other area covered 2. Survey: impact area 3. Planning Dept: county, city 4. Neighborhood Association: neighborhood	1 Day	
6. Housing Space (see Social Well-being 16-18)	a. Mean D.U. Size. (Sq. Ft.)/Cap.	3	a., b. 1. Planning Dept.: county, city 2. Survey: impact area	1 Hour	
	b. % of D.U. That Are: single family, mobile home, apartments, duplex	1	3. Local Housing Authority: city, or other area covered 4. Neighborhood Association: neighborhood	1 Hour	
7. Residential Stability (see Demography 3)	a. Mean Length of Occupancy of All D.U.	1	a.-b. 1. Survey: impact area 2. Planning Dept.: county, city	2 Hours 1 Hours	
	b. % of D.U. Owner-Occup.	1			
8. Mass Media	a. Combined Circulation/Cap. of All Newspapers	2	a. Newspaper Survey: all local newspapers	4 Hour	

SOCIAL IMPACT DESIGN VARIABLES

Project_____

Date _____

Parameter Social Structure

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	TIME TO COLLECT	COST
8. Mass Media (cont.)	b. No. of TV Channels in Area	2	b.-c. 1. Survey: impact area	1/4 Hour	
	c. No. of Radio Stations	2	2. State Dept. of Economic Dev.: county, city, region	1/4 Hour	
9. Civic Associations (bus., prof., service, educ., ethnic, rec., culture)	a. No. of Associations/Cap.	2	a. 1. Chamber of Commerce: city	2 Days	
	b. Total Memberships/Cap. of All Associations	3	2. Telephone Book: local area	1 Additional Day	
	c. Yrs. of Residency of Office Holders	4	3. Volunteer or Referral Clearing Houses	Total	
	d. % of people belonging to any organization.		4. Neighborhood Association: neighborhood		
			a.-d. Survey of Organizations		
10. Political Participation (see Community Response)	a. % of Eligible Persons Who are Registered	1	a.-d. 1. Clerk's Office: by precinct and Ward (often synonymous with township)	1 Hour	
	b. % Registered Who Voted Last General Election	2	2. Analyses of Elections-Results from Clerks Office	2 Hours	
	c. Turnover Rate in Local Election the Previous Year	2		1 Hour	
	d. No. of Bond Issue/Yr.	2			
11. Local Government Size	a. Total No. of Government Employees/Cap.	2	a.-c. 1. Survey of Government Agencies: impact area	1 Day	
	b. % For Each Category	2	2. Regional Planning Commission: region, county, city	1 Hour	
	c. Total Program Budget of All Units/Cap.	3		1 Hour	

SOCIAL IMPACT DESIGN VARIABLES

Project_____

Date _____

Parameter Community Response

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	TIME TO COLLECT	COST
1. Public Issues	a. No. of Public Issues (related to community as a whole) That Receive Media Attention/Yr.	3	a. Newspaper: local area b. State District Court: county c. Federal District Court: several states; requires editing through all lawsuits	2 Days 1 Day 1/2 Day	
	b. No. of Public Interest Lawsuits Filed/1000/Yr.	2			
	c. No. of Appeals to Gov. Decision/1000	3			
2. Organizational Activities	a. No. of Organizations Making Public Statements on Issues/1000/Yr.	1	a.-c. Survey of Organizations: impact area	3 Days	
	b. Amt. of Financial Contributions by Organizations to Programs or Other Activities in Community/Cap./Yr.	2		1 Day	
	c. No. of Programs or Other Activities Initiated by Organizations/1000/Yr.	4		2 Days	
3. Political Activities (see Social Structure 10)	a. No. of Petitions and Initiatives Filed/1000/Yr.	2	a. Clerk's Office: county, city b. Newspaper: local area	1 Day	
	b. No. of Political Movements/1000/Yr.	4	c. 1. Sheriff's Office: county 2. Police Dept.: city	1/2 Hour	
	c. No. of Political Protests and Demonstrations/Yr.	3	3. Neighborhood Association: neighborhood	1 Hour	
	d. Voting Results on Bond Issues	2	4. Regional Planning Commis.: region, county, city d. Clerk's Office: city, county	1 Hour	
4. Government Programs (see Social Structure 11)	a. No. of New Government Program/1000/Yr.	4	a. Survey of Government Offices: impact area	2 Hours	
	b. No. of Existing Government Programs Exp./1000/Yr.	4	b.,c. 1. Clerk's Office: county, city 2. Regional Planning Commission: region, county, city	2 Hours	
	c. Amt. of Increased Exp/Cap./Yr. (for new or exp. pro.)	3		1 Hour	

SOCIAL IMPACT DESIGN VARIABLES

Project _____

Date _____

Parameter Community Response

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	TIME TO COLLECT	COST
5. Community Planning	a. Existence of Planning Program or Dept.	1	a.-c. 1. Planning Dept.: county, city 2. Zoning Administrator or Trustee: county, city, or township	1/2 Hour	
	b. No. of Employees In Local Planning Dept./1000	2		1/2 Hour	
	c. Total Budget of Local Planning Dept./Cap./Yr.	2		1 Hour	

CHARACTERISTICS OF THE SOURCES

Mode of Access

The first column of the Social Impact Design Variables form lists the sources in alphabetical order. For each source, the mode of access is given. The mode of access may be any of a range of possibilities from printed documents or reports to material stored on microfiche. Generally, the choices will be one of the following: printed documents (such as Bills of Sale), reports, machine readable input, tapes or actual output, interviews with officials, survey samples, statistical reports, michrofiche, microfilm, books, maps, or a combination of the above.

Ease of Access and Variable Number(s)

The next column refers to the availability of the data. In some cases, the precise data needed will be available from the source; in others, the data will be quite easy to compute from the information available. For instance, if the information is recorded in map form, the researcher may need only to identify the impact area on the map and then count the occurrences of some phenomenon.

Some sources have very accurate data which has not been aggregated into useful units. In these cases, it is best for the purposes of consistency to accumulate as much raw data as possible in order to compute the standardized measures. However, problems of accessibility and the time and costs involved in aggregating raw data are often excessive. For instance, the variable "housing values" is one that could very accurately show the economic impact of projects. The best indicators for housing values are either mean housing values or median housing values. If those values aren't available, they can be aggregated by going through each bill of sale during a given period and recording the value of each sale. However the aggregation presents a serious problem regarding accessibility. The Bill of Sale is confidential and special permission must be received to aggregate the data for research purposes. There is also a problem in the time it takes to aggregate the data, especially if there are several other indicators which must be aggregated to obtain the highest degree of accuracy. Another way to get housing values is to get a figure for the total assessed value of real estate and divide it by the number of houses and multiply it times the appropriate constant (assessed value is always a percentage of real value). But the accuracy is reduced considerably and it may be difficult to get a precise number of houses in the area without going through the tax rolls and thereby consuming valuable time. In summary, the researcher must constantly balance the need for accuracy against time and costs. The efficiency of using already computed values which may not be the same as the designated indicator must be weighed against the need for consistent and standardized values. These are decisions which must depend on the amount of funding, priorities, and

size of impact area. Many of the problems are reduced when the impact area is a specific unit of government, such as a county, for which most aggregated data are available.

For each source, we have also noted which variables to look for. One of the surest ways to consume valuable researcher time is to make repeated trips of phone calls to the same source because all the required data was not gathered the first time. The variable numbers serve as a check list of information to get from each source.

Public Access

The third column concerns the level of public access. The data may be guaranteed for public access or it may be accessible through an interview and verbal approval from some official, or with written approval via a letter. The information may require identification of the researcher and research project with a guarantee that the information will remain completely confidential. The most extreme difficulty would be the need for approval of some legislative body which requires preparation of a justification for use of the data.

Reporting Frequency

Reporting frequency is a comment on how current the information is. If a source's reporting occurs less than once a year it will probably be somewhat out of date. Other sources collect information annually, monthly, or as the data occur. This will be noted. Thus, reporting frequency is an indirect indicator of the accuracy of the data for SIA purposes.

Accuracy

The accuracy of the data will be somewhat dependent on frequency of reporting. But the methods used to collect the data are noted if the accuracy is less than perfect. The quality of the data is not always obvious simply by stating the source, and so accuracy will be qualified if neccessary. Particulat attention is called to sources which use aggregated methods without identifying their methods.

Generalizability

The column headed by generalizability refers to how universal one can expect the data to be. If data are available only for certain levels of government, i.e., states, counties, townships, cities or legal units or if data are only available in certain areas of the country, these restrictions on generalizability are noted. For instance, every airport in the U.S. is required by the FAA to have a manual listing feet of runway. On the other hand, Farm Directories are only available in certain states. Generalizability may not depend on unit of government *per se*, but on the size and sophistication of the area. The existence of a Planning Department is an example. Our generalizability is somethat limited to the midwest. If further information is known it is included.

Comments

The last column will be open for comments discussing any relevant issue not included in the previous column. In addition, it is a good place for the user of the handbook to record local contacts and their telephone numbers. These forms create a mode for completing a social profile of an area. Not only do they give a list of variables but they suggest which variables might be expected to change the most. The results of data collecting over time will demonstrate how plausible our predictions of impact are. The result of completing a social profile as the Design Variables form suggests allows policy decisions to be made based on material that is factual. When there are very few data available, the researcher will be limited to the less reliable subjective data sources.

CHARACTERISTICS OF THE SOURCES

MODE OF ACCESS	EASE OF ACCESS & VARIABLE NUMBER(S)	PUBLIC ACCESS GUARANTEED	FREQUENCY OF REPORTING	ACCURACY	GENERALIZABILITY	COMMENTS
Airport Authority Interview	PS10 Data is usually posted or very accessible.	Yes	Information must be current; reg. by FAA.	Information must be accurate.	Any airport will have a manual giving ft. of runway. For every public airport in U.S.	If there is no authority, the airport itself will have the information.
Ambulance Service Interview with personnel and use of maps for location identification purposes, sometimes reports.	PS4 If map is available, calls may be counted. If not, relies on memory of personnel or quality of reports or fee charge cards or records.	Yes, if reports are made; contact through the ambulance personnel.	In some cases annual or monthly reports, however these are not reduced beyond county level.	Maps are most accurate. Personnel and vehicle data are accurate.	Generally in most every county in Kansas; kind & quality of records varies widely.	Most are public, but 25-30% are private.
Arts Commission - see state offices.						
Attorney - see city and county offices.						
Board of Education Superintendent of schools, some state reports (see state); interviews with administration in impact area is best mode, especially with irregular impact area.	D10, PS1, SW10 data most likely must be aggregated unless some management information system has been in effect. Also while school districts generally fall within county boundaries, they are not always the same as county or city limits and data for the precise area may be difficult to isolate.	Yes, through the interview.	Generally, annually.	Accurate	Most school districts have some type of records. The more sophisticated the county is the better the amount of information already aggregated.	The main problem with Board of Education information is that school districts will overlap with other districts and if the data is available it will not fit the impact area precisely.

MODE OF ACCESS	EASE OF ACCESS & VARIABLE NUMBER(S)	PUBLIC ACCESS GUARANTEED	FREQUENCY OF REPORTING	ACCURACY	GENERALIZABILITY	COMMENTS
Board of Healing Arts Interview with director, possibly tape. Building Inspector - see city and county offices.	PS3 May have to extract recent county information.	Yes	Annual	Yes	Some states may not have the precise dept.	
Businesses - retail. restaurant, movie theaters, banks; interview for detailed information, survey for information from all establishments.	PS13, SW13, E11, E16 May entail going through records or aggregating the data before any computation occurs.	Not necessarily; it is necessary to establish some rapport.	Erratic, not predictable; probably at least annually for taxes.	Impossible to determine.	Information will vary by business dependent on size and sophistication of business and community.	
Bus Company Intra-urban Interview with officials.	PS10 Fairly easy to get this information. If miles are not calculated, it should be fairly easy to do so from maps.	Setting up an appointment and getting verbal permission is probably sufficient; but if it is a public co., should be guaranteed.	Current data is probably available.	Accurate	Any place that has bus service will have this information.	
Chamber of Commerce Interviews with official, publicity releases rather then written reports; usually some type of information sheet with basic city data	D4, PS2, PS10, PS11, PS13, PS14, PS15, E4, E11, SS8 Will probably be no data to aggregate. Most facts will be in a consolidated form.	Not only guaranteed, but welcome.	Generally annual update of most information.	Accurate	Most all cities and towns have some type of organization (>2000); amount of info. varies acc. to sophistication.	A good place to orient oneself with the community and to discover other sources of info. that the C of C doesn't have.

MODE OF ACCESS	EASE OF ACCESS & VARIABLE NUMBER(S)	PUBLIC ACCESS GUARANTEED	FREQUENCY OF REPORTING	ACCURACY	GENERALIZABILITY	COMMENTS
City Directory R.L. Polk; directory format; first two pages have all types of facts about the city; located in town library or Chamber of Commerce; on magnetic tape in Detroit Mich.	D4, PS2, PS10, PS11, PS14, PS15, E11, SS9, CR2 Data may be collected although not in precise indicator format.	Public access guaranteed for a fee.	Annually or on request by the city.	Self-reporting.	Always the same information for all of the 1293 books for 50 states	Cost of a city directory depends on size; around $5.00-$100.
Civic Organizations i.e. Rotary Club, Kiwanis, Lions, Sertoma; J.C.'s, interviews with officers; some budgetary info. on paper.	SS9, CR2 Some precise data available on membership; end the interview by asking about local issues (CR2).	Access via interview and some creation of rapport.	Current	No reason to doubt accuracy.	Civic organizations vary in size number, and sophistication.	
CITY OR COUNTY OFFICES						
Attorney Interview; possibly reports.	PS8, SW2, Data may have to be aggregated from case files.	Yes	Updated list of attorneys.	Accurate	All counties have attorneys, some part-time, larger ones full-time.	County officers may be combined in smaller counties. Presence of forms and reports from which to copy data will depend on the sophistication of the county itself.

MODE OF ACCESS	EASE OF ACCESS & VARIABLE NUMBER(S)	PUBLIC ACCESS GUARANTEED	FREQUENCY OF REPORTING	ACCURACY	GENERALIZABILITY	COMMENTS
Building Inspector Reports, or application forms.	SW18 Data is probably not aggregated; some may be in number of building permits.	Yes	Current	Accurate	Most counties and cities require some building permits, but responsibility may be within a different office.	See also Engineering, Public Works, Planning Dept.
Clerk Election info. available even in small counties by computer printout; the remaining in printed documents or reports; receipt book for liquor license.	PS5, PS6, PS7, PS9, PS10, PS12, PS13, E4, E5, E7, E9, SS10, CR3, CR4 Some information must be aggregated.	Yes	Each election annual budget.	Absolute	Every county and city has an office to handle financial matters.	
District Court Sometimes there will be a written report; otherwise records of what is filed.	SW9, CR1 Aggregation might be required, especially if county is not tightly organized.	Yes	Annually for reports to date on record.	Absolute	County courts may have different names but every state has them.	

MODE OF ACCESS	EASE OF ACCESS & VARIABLE NUMBER(S)	PUBLIC ACCESS GUARANTEED	FREQUENCY OF REPORTING	ACCURACY	GENERALIZABILITY	COMMENTS
Engineer Interview, some records of roads by map.	PS10, PS15 May require adding up road mileage by type.	Yes	Current	Yes	Some counties may have only public works or county surveyor.	This office may have some data that a planning dept. would have if there is no planning dept.
Extension Agent Reports, interviews.	E4 Data may have to be compared to other econ. data but info. on crops, amount etc. are available.	Yes	During crop season weekly.	Dependent on reporting system.	Not certain how universal county extension system is with other states.	
Health Department Some records, written reports; computer output if very large county.	PS5, SW6 Should already be aggregated.	Should be available through an interview.	May be as frequently as monthly; at least annually.	Accuracy may depend on the office.	There is generally a public health dept. in most communities.	
Parks & Recreation Publications, reports.	PS11, SW12 Data may already be aggregated.	Yes	Varies; probably annually.	No reason to doubt accuracy.	Many areas do not have park and rec. depts.; may come under Public Works	
Planning Department Computer output, publications, documents.	D1, D4, D5, D7, D8, D9, D10, PS15, SS6, SW20, E3, E13, SS5, SS6, SS7, CR5 Data, if not already aggregated will probably not be available.	Yes	Varies	As accurate as the methodology in research	Many communities do not have a planning dept.; larger counties and cities do, but smaller ones may work out of Regional Planning Comm.	Much data Planning Dept. have are usually census data if they haven't done their own research; see also Public Works, Engineer, Regional Planning Commission.

MODE OF ACCESS	EASE OF ACCESS & VARIABLE NUMBER(S)	PUBLIC ACCESS GUARANTEED	FREQUENCY OF REPORTING	ACCURACY	GENERALIZABILITY	COMMENTS
Public Works Reports, possibly documents and records; maps.	PS10, PS15, PS16 May require some aggregation.	Yes	Annually for budget purposes.	Accurate	Some communities may have an engineer or county surveyor instead.	
Recorder of Deeds Books indexed according to legal definition of the land; also microfilm in very large counties.	D3 One must aggregate the number of warranty or quit claim deeds.	Absolutely	Daily recording.	Absolute	Everywhere is the same although the abbreviations may be different; secret land trusts may present some problems in Ill., Virginia, Florida, N.D., Indiana, Ariz.	One asks for grantor and grantee index which is recorded according to geographic area.
Tax Assessor Books showing values; computer output; files.	E6 Available in aggregated form for township and cities but available for smaller legally defined areas-however aggregation is very tedious.	Absolutely	Some figures may be in older money figures; personal property is annual.	Not always current dollars; must be multiplied by a certain value to insure accuracy.	This is the same in most counties, although the multiplication value might change.	Land values are confidential (i.e. through Bill of Sale) but researcher may gain permission through special petition.

MODE OF ACCESS	EASE OF ACCESS & VARIABLE NUMBER(S)	PUBLIC ACCESS GUARANTEED	FREQUENCY OF REPORTING	ACCURACY	GENERALIZABILITY	COMMENTS
Treasurer Budget published in an annual report.	E5, E7, E9 Data available at county level; cannot be disaggregated.	Absolutely	Annually	Absolutely	Across all counties; some counties may have info. at townships and city level; budget may be broken down in different ways.	County Treas. may be combined with another job: see also County Clerk for Budget.
Zoning Administrator Maps, reports, applications.	E15, CR5 Information may have to be counted.	Absolutely	Current	Accurate	This function may be filled by other offices or by trustees in small less-populated counties.	
End of City, County Offices.						
Clerk - see city or county office,						
Community Action Agency - reports, files.	D7, D9, PS9, SW8, SW15, SW16. Data should be aggregated already for federal report.	Yes	Varies	Varies	Much info. used by CAA will vary from agency to agency	Information might be modified Census--check for source of research.
District Court - see city or county offices.						
Dept. of Economic Development - see state offices.						

MODE OF ACCESS	EASE OF ACCESS & VARIABLE NUMBER(S)	PUBLIC ACCESS GUARANTEED	FREQUENCY OF REPORTING	ACCURACY	GENERALIZABILITY	COMMENTS
Dept. of Education - see state offices.						
Electric Co. interview, file, computer output.	PS18, SW21 Some data may have to be computed, might be already in indicator form.	Some offices have public relations offices - others require boundary lines.	Current	Absolute	Different companies will have different data as well as different levels of accessibility.	
Dept. of Employment Security - see state offices.						
Engineer - see city or county offices.						
Extension Agent - see city or county offices.						
Federal Aviation Administration on file, in books.	PS10 Data readily available in indicator form.	Yes	Biannual update.	Absolute	All airport information is available from FAA.	
Federal Bureau of Investigation: Uniform Crime Reporting System tape, reports.	PS7, SW1, SW2 Data readily available, some may not be in precise indicator form.	Yes	Annually	Depends on self-reporting of local law enforcement agencies.	For the entire United States.	

MODE OF ACCESS	EASE OF ACCESS & VARIABLE NUMBER(S)	PUBLIC ACCESS GUARANTEED	FREQUENCY OF REPORTING	ACCURACY	GENERALIZABILITY	COMMENTS
Federal District Court documents.	SW8, CR1 Data will probably have to be aggregated by going through cases.	Yes	As occurs.	Accurate	To all fed. dist. courts - some may have different filing system.	
Fire Dept. interviews, maps, or list of fire runs.	PS6, SW19 The lack of maps with fires depicted means the data must be aggregated from lists.	Yes	Current maps may only be of current year and for past years, lists must be examined.	The accuracy of location may be suspect, especially for rural areas.	Usually all fire departments keep some type of fire run data; some rural areas may not have their own fire department.	
Gas Company Interviews, maps, list of customers.	PS16, SW21 Data may not be recorded as indicators demand, and may require quite a lot of aggregation effort. Also data may not fit impact area which is exacerbated by a lack of map.	Some companies are private and may require additional effort.	Current for customers and shutoffs.	Accurate	Rural areas may have a mixture of gasoline and propane tanks, making estimates of use difficult.	Use of survey for these indicators is advised.
Dept. of Health & Environment - see state offices. Health Department - see city or county offices.						

MODE OF ACCESS	EASE OF ACCESS & VARIABLE NUMBER(S)	PUBLIC ACCESS GUARANTEED	FREQUENCY OF REPORTING	ACCURACY	GENERALIZABILITY	COMMENTS
Health Planning Commission or Health Services Agency interview, reports, some statistical reports, computer output. Highway Patrol - see state offices.	PS2, PS3, SW7 If data is available, it will probably already be aggregated. The problem may be that the data doesn't fit the design of the indicator.	Yes	Varies by activeness of agency.	Accuracy varies.	Some areas may have an agency but there may be a lack of research effort on its part; depends on the sophistication of the area.	
Hospitals interview, reports.	PS2, SW7 Hospital expenditures are difficult to access as well as occupancy rates and mean hospital stay; can be aggregated if access is achievement.	No, some hospitals are willing to cooperate, others not.	Reports should be no older than a year.	Accurate if aggregated by research; may be exaggerated otherwise.	Hospitals must have the data in order to estimate budgetary expenditures.	
Hospital Association Reports such as the American Hospital Association "1976 American Hospital Guide to the Health Care Field," interview.	PS2, SW7 Data would already be aggregated.	Access via written explanation.	Annually	Data appears accurate.	This is applicable on the county and city level.	
Housing Authority interview, reports on need made to federal govern.	SW16, SW17, SS5, SS6 Data should already be aggregated; may not fit precisely with designated indicators.	Yes	If under current funding, annual, if not depends on last applica. for funding.	Varies with quality of research.	Housing authorities not located in every community; sophistication and sources of data vary greatly.	Data may come from housing census data and not recent local surveys.

MODE OF ACCESS	EASE OF ACCESS & VARIABLE NUMBER(S)	PUBLIC ACCESS GUARANTEED	FREQUENCY OF REPORTING	ACCURACY	GENERALIZABILITY	COMMENTS
League of Municipality reports.	E14 Data aggregated but may not be synonymous with designated indicators.	Yes, possibly a fee.	Varies according to report.	Accurate	Limited to areas of certain size, e.g., cities over 2500.	
Legal Aid Society interview, report.	PS8 Data should be easily accessible.	Yes	Annual	Accurate	Many areas have no legal aid agency.	
Library Advisory Committee - see state offices.						
Library Service interview, records, computer output.	PS14, SW12 Number of books is easily accessible but some difficulty is anticipated in aggregating other data if not computerized.	Yes	Varies across libraries, minimum: annually	Whatever data is aggregated is accurate.	Libraries vary in what data is recorded according to size & sophistication.	
Newspaper Files, actual issues, microfilm, interview.	SW3, E1, E2, SS8, CR1, CR3 Any information must be aggregated except that pertaining to newspaper circulation that may be difficult to limit to any impact area. Mailing address may help if impact area can be identified that way.	Access isn't guaranteed but there is little problem in looking at back issues.	Varies, some papers are daily; some weekly.	Dependent on quality of reporting staff	Almost every area is covered by some newspaper: limitation might be if the community does not have its own: most do.	Some smaller newspapers don't discuss news pertaining to community response and lack full want-ads.

MODE OF ACCESS	EASE OF ACCESS & VARIABLE NUMBER(S)	PUBLIC ACCESS GUARANTEED	FREQUENCY OF REPORTING	ACCURACY	GENERALIZABILITY	COMMENTS
Neighborhood Association interview, some reports.	SW16, SS6, SS9, CR3 May have some data already aggregated.	Access via interview.	Varies with association.	Difficult to determine, depends on source.	Association mainly in urban areas; different purposes of groups makes generalalizability difficult.	
Parents Without Partners interview, membership lists.	SW9 Data may have to be aggregated from files unless organization has aggregated it.	Files may be considered confidential.	Varies with organization.	Depends on self-reporting.	Most organizations will vary in size, info. collected & sophistication.	
Parks & Recreation - city or county offices.						
Dept. of Planning and Research - see state offices.						
Physicians interview.	P53, SW6 Data will probably have to be aggregated.	May be very difficult to gain any universal access.	Should be current.	Accurate.	Doctors may not want to spend time to cooperate, not seeing anything useful in research.	
Planning Dept. - see city or county offices.						
Dept. of Planning & Research - see state offices.						

MODE OF ACCESS	EASE OF ACCESS & VARIABLE NUMBER(S)	PUBLIC ACCESS GUARANTEED	FREQUENCY OF REPORTING	ACCURACY	GENERALIZABILITY	COMMENTS
Police Dept. or Sheriff interview, maps, files, reports, computer output.	PS7, SW1, SW3, SW20, SS5, CR3 Some data may have to be aggregated from files; maps facilitate collection.	Yes	Current; may be more difficult to get historic data.	Accuracy okay.	Police units may vary in sophistication & information collected; some difficulty with geographic identification anticipated.	
Post Office interview, maps.	PS10, PS18 Verification of impact area, roads, and residences through interview with mail carrier.	Must have written permission of District Manager.	Current	Accurate	May be difficult to get cooperation in certain areas, but most help is needed in rural areas.	
Professional Associations AMA medical, ABA legal, social work, dental, NEAA education, directories, lists, reports, interviews.	PS3, PS8, PS9, PS3, SW10 Data should already be aggregated; may have application from which data could be aggregated but difficult to get access to.	Not necessarily; interview, identification of researcher project.	Varies with organization; minimum annually.	Does not include all professionals; this should be considered.	Organization may have branch on the county or city level.	State Medical Society Membership Director, State Dental Board Directory.
Public Water - see city or county offices.						
Real Estate Board Interview, records of sales.	SW17 Data probably has to be aggregated.	Interview and verbal approval.	Varies with groups.	Dependent on sales of membership.	Not a national group; areas may or may not have a different title.	

MODE OF ACCESS	EASE OF ACCESS & VARIABLE NUMBER(S)	PUBLIC ACCESS GUARANTEED	FREQUENCY OF REPORTING	ACCURACY	GENERALIZABILITY	COMMENTS
Recorder of deeds - see city or county offices.						
Regional Planning Commission interviews, reports, maps, computer output.	D1, D3, D5, D7, D9, PS4, PS10, PS11, PS15, SW7, SW16, E11, E12, SS11, CR3, CR4 Data should already be aggregated or if not in the same form as indicator, able to be aggregated from their sources.	Yes	Depends on report.	Accurate	Most areas are covered by some type of regional planning commission (although some commissions tend to focus on some areas more than others). Sophistication and amount of information collected vary greatly.	
Restaurant Association interview, list of members.	PS13 Data might have to be sorted out for impact area.	Interview and identification of researcher.	Depends on the organization.	Depends on self-reporting of restaurants.	Not certain if all states or areas have such an association.	
Dept. of Revenue - see state offices.						
Rural Farm Directories Directory Service-farm "phone books."	PS10 Contact services for phone books by county.	For a fee $10 each + postage.	Annually, some less often; out of date.	Depends on survey; inaccuracy is not a problem but directories not comp. accurate.	17 States: Col, Ore, Iowa, Ind, Ks, Minn, Mo, Neb, N.D, Okla, S.D, Ark, Tex, Wisc, Wyoming.	Directory service, Algona Iowa; Central Pub. Co., Iola, Ks.

MODE OF ACCESS	EASE OF ACCESS & VARIABLE NUMBER(S)	PUBLIC ACCESS GUARANTEED	FREQUENCY OF REPORTING	ACCURACY	GENERALIZABILITY	COMMENTS
Rural Water District files, interviews.	PS16, SW21 Data must be aggregated.	Yes	Current	Accurate	Areas not covered by water companies often organize and develop some source of water for themselves.	Under the auspices of the Farmers Home Adminis.
Sales Management Survey of Buying Power published by Sales and Marketing Management magazine.	E10, SS2 Pick up a copy - data is aggregated but may not fit indicators precisely.	$25	Annually - magazine pub. 2 times a month.	Accurate	Information available for most major areas although most likely to be county if area is predominatly rural.	Metropolitan areas, counties, cities.
Dept. of Social Rehabilitation Sources - see state offices.						
Department of Economic Development reports, pamphlets on each community.	D1, PS2, PS10, E3, E11, E16 Data already aggregated; may not be in same form as indicator.	Yes	Annually at minimum.	Some self-reporting from communities.	Most states have a department or commission which is helpful in industries placement and provides technical assis. to communities.	Some data may be from census sources.
Department of Education reports, books.	PS1, SW10, SS1 Data already aggregated; may not be in the same form as indicators.	Yes	Annually	Yes	The type of information collected may vary across states.	"Average Classroom Teacher and Principle Salaries," "Public School Report," "Annual Statistical Report."

MODE OF ACCESS	EASE OF ACCESS & VARIABLE NUMBER(S)	PUBLIC ACCESS GUARANTEED	FREQUENCY OF REPORTING	ACCURACY	GENERALIZABILITY	COMMENTS
Department of Employment Security reports, computer output.	SW8, SW14, E1, E2, E3 Data already aggregated but form may have to be changed.	Yes	Varies by report; some monthly.	Yes	Information and form may vary across states.	
Department of Health and Environment files and computer tape.	PS2, PS3, D2, D11, D13 D15, SW5, SW9 Some data not in aggregated form and files must be used.	Yes	Annually	Yes	Information is similar across states.	State Annual Summary of Vital Statistics.
Highway Patrol reports and files.	SW20 Some data may have to be aggregated.	Yes	Current	Yes	Categorization varies across states.	
Library Advisory Committee reports.	PS14, SW12 Data already aggregated.	Yes	Annual	Yes	The universality of library committees unknown.	
Department of Parks and Recreation reports, files.	PS11 Some data might have to be aggregated.	Yes	Varies	Yes	The department may be combined with others in some states or not existant in others.	
Department of Planning and Research computer tapes, reports, maps.	D5 Some data may have to be aggregated; generally have collected data although it may not be in comparable form.	Yes	At minimum annually.	Yes	LUDA can be available to all states at state option.	"Future" Studies; LUDA, "Land Use Data Analysis," in a photographic technique for assessing land use via areal photos.

MODE OF ACCESS	EASE OF ACCESS & VARIABLE NUMBER(S)	PUBLIC ACCESS GUARANTEED	FREQUENCY OF REPORTING	ACCURACY	GENERALIZABILITY	COMMENTS
Department of Revenue report.	E6, E14 Data aggregated.	Yes	Annual	Yes	Other states have similar info. but may not be compiled.	Annual Economic Report.
Dept. of Social Rehabilitation Services reports.	SW4, SW5, SW15 Data aggregated.	Yes	Monthly	Yes	Other states have similar data - categories should be the same for federal purposes.	Client History Date File. Summary of Public Assistance.
Department of Transportation maps, reports. End of State Listings	PS10 Maps have much land use information; data must be aggregated from them.	Yes	Maps may be older than a year.	Yes	Not sure if other states have similar maps, but should have information.	
Survey interview with residents.	D1, D5, D7, D8, D9, D10, D11, D12, SW6, SW8, SW9, SW15, SW16, SW17, E3, E10, E12, SS2, SS3, SS4, SS5, SS6, SS7, SS8 Data must be key-punched and computerized.	Residents may refuse to be interviewed.	Decided by researcher according to project.	Yes - but dependent on self-reporting.	Can be done anytime and any place.	
Telephone Comp. phonebook, interview.	DS20, SW21, PS3, PS8, SS8 Data must be aggregated.	Sometimes difficult to get phonebook; try libraries.	Annually	Yes - leaves out people who don't have phones.	Very generalizable except that not everyone has phones.	

MODE OF ACCESS	EASE OF ACCESS & VARIABLE NUMBER(S)	PUBLIC ACCESS GUARANTEED	FREQUENCY OF REPORTING	ACCURACY	GENERALIZABILITY	COMMENTS
Tourist Bureau interview.	PS13 More informational than data producing.	Not guaranteed but for the public.	Updated weekly or frequently.	Yes	Not all areas have tourist bureaus.	
Township Trustee interview, files.	SW18, F9, CR5 Data will have to be aggregated.	Yes	Annual or as events occur.	Yes	Some areas don't have this type of government.	
Transportation Authority files, interviews.	PS10, SW20 Data may have to be aggregated.	Not guaranteed but accessible through verbal approach.	Should be current.	Yes	Not all areas have an authority.	
United Fund files, reports.	PS1 Files may have to be searched for relevant information.	Accessible through verbal approach.	Annual	Appears to be accurate.	For any area that has united fund (or other name), data should be available.	
Volunteer or Referral Clearing House lists, files, reports.	PS9, SW4, SS8 Data may have to be aggregated.	Not guaranteed, but should be accessible through verbal approach.	Information should have been collected within last year.	Appears to be accurate.	Not all areas have such a clearinghouse.	

MODE OF ACCESS	EASE OF ACCESS & VARIABLE NUMBER(S)	PUBLIC ACCESS GUARANTEED	FREQUENCY OF REPORTING	ACCURACY	GENERALIZABILITY	COMMENTS
Water Company files. Zoning Administrator- see city or county offices.	PS16, SW21 Data may have to be aggregated.	If not publicly owned, no; but accessibility usually not a problem.	Current	Yes	Information may be collected in different ways.	An area may have more than one company.

Other Sources

The National Directory of State Agencies 1976 - 1977, Information Resources Press, Washington, DC, 1976.

This book will provide the state agencies by state and function as well as the phone numbers, addresses, and names of persons to contact.

R. L. Polk and Company, User's Guide to the Profiles of Change: An Urban Information Package, Urban Statistical Division, 431 Howard Street, Detroit, Michigan, 48231

This will provide a guide for the Profiles of Change information package, a computer-processed by produce of the door to door city directory canvasses which R. L. Polk makes in several communities each year. It includes up-to-date inventory counts and the components of year-to-year change.

AN EXAMPLE OF BASELINE PROFILING--HILLSDALE DAM

Introduction

Methodology

Case Study

Comments of the Case Study

Conclusion

INTRODUCTION

The baseline profile for Hillsdale Dam was prepared as part of a larger ongoing project funded by the Kansas Water Resource Research Institute entitled, "Measuring the Social Impacts of Water Resources Projects." The study will measure social variables at two points in time for the Hillsdale Dam area, the Mud Creek rechannelization impact area, and for a control area, Willow Springs. The purpose of the project is to develop the methodology for objectively measuring social impacts as they occur, toward the future goal of developing a methodology for predicting social impacts. Since the study is methodological in nature, there have of course been numerous modifications in our original design. For instance, there have been additions to the list of variables since the baseline data were gathered. Also, we are revising our lists of sources for indicators as new sources are called to our attention. Thus, the profile of the Hillsdale Dam impact area reflects our best thinking to date.

METHODOLOGY

The following steps are necessary to complete a baseline social profile for the purposes of Social Impact Assessment:

1. Examine project characteristics to hypothesize some possible impacts.
2. Identify project impact area, given these impacts.
3. Re-prioritize the variable list according to expected impacts.
4. Choose a suitable time frame for the data.
5. Outline the research for the indicators according to priorities, costs, and anticipated ease of accessing the information. If the impact area conforms to a convenient level of government such as a county, or if the area if fairly sophisticated, having a planning agency, the information will be easy to gather.

Background. Many population impacts were anticipated for the Hillsdale Dam Project. The relocation of residents and the location of the area just outside the major Standard Metropolitan Statistical Area (SMSA) of Kansas City, Missouri - Kansas both implied that the population might change in size and composition. While initially the size might decrease due to relocation, its proximity to the metropolitan area implies growth and a young population that might be commuting to jobs in the SMSA.

Impacts were expected in public services and social well-being, criminal activities, roads, utilities, public recreation, and amenities such as restaurants. Secondary impacts associated with population growth were also anticipated; medical care, fire protection and education might be strained. Housing values and property values were also expected to increase somewhat over the course of the project.

Initially, no specific economic impact was anticipated for the area, but as the project progresses, impacts are expected in the use of retail establishments, recreation, residential and agricultural use. Therefore, baseline data was necessary in these areas. The amount of federal money entering the area would undoubtedly increase and have future economic effects.

There has been substantial community response to the project over the past few years, as is demonstrated by the fact that the Hillsdale Project was one of the first projects to have an Environmental Impact Statement written (in 1970). The project went through an extended legal challenge ending with the District Court of Appeals go-ahead in 1977. The Carter administration listed Hillsdale as a project to be discontinued, but Congress has funded it in spite of the administration's position.

During the last several years, there were numerous public hearings held, and a group called, "Save Our Invaluable Land, Inc.," (SOIL) was organized. This group led the organized opposition to the dam.

Boundaries. The project impact area was defined as bounded by Ocheltree Road in the north, Kansas 7/Highway 169 on the east, United States Highway 68 on the south, United States Highway 33 on the west, and Interstate Highway 35 on the northwest. There were no real natural or social boundaries other than major roads. These boundaries included six sections in Franklin County on the west, and approximately 12 sections in Johnson County on the north. However, the majority of the impact area was in Miami County, Richland and Maryville townships.

Design. The variables were prioritized according to the expected impacts cited above. Within each of the parameters, the indicators were labelled "1" if it was thought they would show the most significant impacts either now or in the future. Other variables were given lower priority numbers, such that 4 indicates the lowest priority. The table beginning on p. 64 shows both the original priorities and the changes we made for Hillsdale.

For this project, Calendar 1976 was chosen as a suitable time reference. Every effort was made to use the most recent data available for an entire year. The baseline survey data were gathered between February and May, 1977.

The likely sources for the information were listed. Several practical factors had to be taken into account. Funding was somewhat limited, the impact area was irregular and covered three counties, the area was basically rural and lacked a planning agency. Given these limitations a survey for primary information was judged the best method for formulating the necessary baseline data.

Sampling. Using the Rural Farm Directory (in conjunction with the State Department of Planning and Development), the number of rural residences in the impact area was determined. To determine the number of residences in Hillsdale Town and Spring Hill, the researchers conducted windshield surveys of those towns. A sample of the population was decided upon, because of limited funding, time, and resources. The following table shows the number of households and resulting sample:

	Households	Sample	Interviews Completed
Hillsdale Rural Area	501	125	103
Hillsdale Town	76	25	20
Spring Hill	526	75	64
	1103	225	187

The sample was chosen by using a table of random numbers.

Data Collection. The largest county visited to obtain the majority of the secondary data. We bagan with the county offices in the county courthouse. The turnover of property was considered high pri-

ority data although it took almost an entire day to aggregate. The second visit covered the Fire Department, Ambulance Service, Police Department, Library, Chamber of Commerce, Public Health Department, the Newspaper, District Court, the Tax Assessor, the County Clerk, the County Attorney, the Board of Education and the County Engineer. An entire day was spent at each of the other counties, gathering similar information. In addition, approximately 50 phone calls were made contacting township trustees, utilities, and people missed on the visits.

The cost of these visits was computed as follows:

Secondary Data (41 Variables):

3 visits to Paola (county seat of Miami County)	@ 120 miles	@ $.13/Mile	$ 46.80
1 visit to Ottawa (Franklin County seat)	60 miles	$.13/Mile	7.80
1 visit to Olathe (Johnson County seat)	85 miles	$.13/Mile	11.05
1 visit to Topeka	60 miles	$.13/Mile	7.80
Phone Calls		approximately	30.00
			$103.45

Primary Data (33 Variables):

Approximately 66 visits	@ 80 miles	@ $.13/Mile	$686.40

Average cost estimates for individual items collected at the county seats and in the survey were computed by dividing the total cost of trips by the number of items for which data were obtained.

A determined effort was made to get data for the precise impact area. When this could not be achieved, the township boundaries of Richland and Maryville township in Miami County were used. If these were inadequate, data for the county was collected and a per capita denominator of 20,562 was used--the population of Miami County in 1975 instead of the estimated population of 3739 for the impact area.

The Time shown on the charts for secondary data was the actual amount of time it took to get certain data, not including travel time. The Costs were computed from the total costs of travel divided by the number of variables and a fixed cost assigned to each relevant data item. Phone costs were assessed by total costs divided by the number of variables and fixed costs were assigned. Computing time and costs for survey variables (primary data) was more difficult. Total time and costs were divided by the number of variables, so a fixed time of 9 hours and cost of $20.80 was assigned to each variable. This cost and time per item could be reduced by including some items in the survey which had been omitted: hospitalization information, disability and work absence data, and separating male and female income,

for instance. Still, so much information was produced by the Survey that although it was expensive, the data would not have been accessible in any other way.

CASE STUDY: HILLSDALE DAM PROJECT

Project Characteristics

Location: The project is located in Miami and Johnson Counties in East Central Kansas, north of highway 68, west of Highway 7/Highway 169. It is approximately 12 miles above the mouth of Big Bull Creek, 15 miles southwest of Kansas City metropolitan area, and in Congressional districts 3 and 5.

Type of Area: Rural; two towns, about 1500 and 250 lie on the periphery; one community consisting of a filling station, church, and abandoned school house lies within this area.

Description of Project: A rolled earthfill dam, 75 feet high and 11,600 feet long, with outlet works and uncontrolled limited surface spillway.

Purpose of Project: Water supply, Flood Control, Water Quality:
81,000 acre-feet for temporary impoundment of floodwater
53,000 acre-feet for municipal and industrial water supply
15,000 acre-feet for water quality releases
11,000 acre-feet for the 100-year sediment reserve.

Size of Affected Area: Lake itself has a surface area of 4,580 acres; 6 miles long having 51 miles of shoreline.

Size of Project: 7410 acres.

Total Estimated First Costs:	Construction	Lands and Relocation	Total
Federal sunk through FY77	$ 8,490,000	$ 8,596,000	$17,086,000
Cost to Complete	27,940,000	10,674,000	38,614,000
Total	36,430,000	19,270,000	55,700,000
Local Match:			
Sunk through FY1977	0	0	0
Cost to Complete	0	0	0
Total Federal and Local Match	$36,430,000	$19,270,000	$55,700,000

Annual Operating Costs:	
Local	0
Federal	$ 263,500
Total	$ 263,500

Benefit/Cost Ratio:	.84 to 1	Based on total primary benefits and costs (discount rate 5 3/8%)
	$565,300	Net economic benefits (average annual)

Estimated Number of Relocations:
240 persons (64 single-family dwellings)

Acres Acquired: 13,470 acres outright
140 acres in easements

SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter Demography

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT **	COST
1. Population Size of Community	No. of inhabitants by Age, Sex, Race	1	Survey: impact area.	Table 1	9.1 Hours	$20.80
2. Amount of Growth	a. Births/yr. for 10 years b. Deaths/yr. for 10 years c. Migration/yr. for 10 yrs. d. Rate of growth for 10 yrs	2 3 3 2 3	a. Not available in units of impact area/low priority. b. Not avail. in units of impact area/low priority. c. Not avail. in units of impact area. d. Not collected/low priority.	NA NA NA NA	- - -	- - -
3. Turnover of Property (see Social Well-being 16, Economy B)	Number of persons selling per capita per year	1	County Recorder of Deeds: Franklin County; Miami Co.; Johnson Co. for impact area by plats.	Table 2	2 Days, 3 Trips.	$36.79
4. Urbanization of Community	Percent of pop. in cities of 20,000 or more	4	Not applicable.	NA	-	-
5. Population Density	Number of persons per sq. mile	2 3	Survey: impact area.	33.09	9.1	$20.80
6. Population Concentration	Percent of total population the largest urban area	3	Since urban is defined as 2,500, not applicable.	NA	-	-

Demography

Table 1: Variable D1: Population Size

Source: Survey-Based Estimates

Total Number of Inhabitants = 3739

Race	N	%
White	3679	98.39
Black	41	1.10
Indian	19	.51
	3739	100.0

Sex	N	%
Male	1933	51.70
Female	1806	48.30

Age	N	%
Under 5	265	7.09
5-17	995	26.61
18-25	524	14.01
26-35	498	13.32
36-45	546	14.61
46-55	366	9.79
56-65	265	7.09
Over 65	280	7.48

DEMOGRAPHY

Table 2: Variable D3: Turnover of Property

Source: Recorder of Deeds

1960-69	19.02/Yr.
1970	20.59
1971	25.94
1972	36.64
1973	50.28
1974	54.29
1975	41.45
1976	65.79

SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter Demography

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
7. Age Dependency	a. % of the Population Over 65	1	Survey: impact area.	7.49 %	9.1 Hours	$20.80
	b. % of the Population under 18	1	Survey: impact area.	33.70%	9.1	20.80
8. Sex Ratio	Ratio of Males to Females	2	Survey: impact area.	1.07	9.1	20.80
9. Ethnic Population (see Social Struc,4)	a. % of Population, Non-white.	2	Survey: impact area.	1.60	9.1	20.80
	b. % Foreign Born	3	Data not collected/low priority.	NA	-	-
10. Family Size in the Community	a. $\bar{X}$ No. of Persons/Household	1	Survey: impact area.	3.39	9.1	20.80
	b. $\bar{X}$ No. of Dependent Children/Household	1	Survey: impact area.	1.12	9.1	20.80
	c. Ratio of Schoolage to Total Population	1	Survey: impact area.	.08	9.1	20.80
11. Marital Status (see Social Well-being 9)	% Of People Married, Divorced, Separated, Widowed, Single.	2	Survey: impact area.	85.03% 1.61, .53 9.09 3.74	9.1	20.80
12. Household Composition	% Households: single parent, unrelated individuals, nuclear fam., individual-single	1	Survey: impact area.	21.4% 1.61% 81.81% 7.49%	9.1	20.80
13. Births	Births/1000 Women By Sex, Age, Race	4	Not collected/low priority.	NA	-	-
14. Morbidity	Communicable Disease Rate	4	Not collected/low priority.	NA	-	-

SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter Demography

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
15. Deaths	Deaths/1000 Pop. By Sex, Age, Race	3 4	Not collected/low priority.	NA	-	-
16. Migration	Immigrants/1000 Pop. By Sex, Age, Race	3 4	Not collected/low priority.	NA	-	-

SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter Public Services

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
1. Public Education (see Social well-being 10)	a. Mean Class Size	1	a. Board of Educa.: school district #368, Paola for Hillsdale Elem. School.	19.20		
	b. Mean Student-Teacher ratio	2				
	c. Unused Classrooms/Cap.	1 2	b. Board of Educa.: school dist. #368 for Hillsdale Elem. School.	16.00		
	d. Total Educational Expenditure/Student/Yr.	2	c. Variable added after data collection.			
	e. $/Cap. By Source of Income	4	d. Miami County Clerk's Office: Miami County data.	7,770		
	f. $/Cap. By Expenditure Type	4	e. Not collected/low pri.	NA	-	-
	g. Total Sq. Ft. of Classroom Space/Student	2	f. Not collected/low pri.	NA	-	-
	h. Reg. Sq. Ft. Classroom Space/Student	2	g. Variable added after data collection.	NA	-	-
	i. Schools by Type	1	h. Var. add. after data col.	NA	-	-
			i. Hillsdale Elementary.	NA	-	-
2. Medical Care (see Social Well-being 5, 6, 7,)	a. Hospital Bed/Cap.	1	a. American Hosp. Assoc. "1976 Guide to Health Care Field": for Miami County.	19.45	1/4 Hour	0
	b. No. of Hospitals/Sq. Mi.	2 1				
	c. No. of Mental Health Clinics/Cap.	2	b. Public health dept. for county.	.97	1/4 Hour	0
	d. Total Hospital Expenditures/Cap./Yrs.	3	c. Data not collected/low priority.	.49	1 Hour	1.79
				NA	-	-
3. Medical Personnel	a. No. of Physicians/Cap.	1	a. Kansas Medical Society Membership Directory, for Miami County.	.39	1/2 Hour	0
	b. No. of Dentists/Cap.	2				
	c. No. of Psychiatrists/Cap.	3 2	b. Ks. Dental Board, Dir. of Registered Dentists for Miami County.	.29	1/2 Hour	0
	d. No of Nurses/Cap.	3 4				
	e. No. of Paramed/Cap.	4	c.-e. Data not col/low pr.	NA	-	-
	f. No. of Private Practices/Cap.	2 3	f. Phone book: Miami Co.	.29	1 Hour	1.79
	g. No. of Patients/Practice	2 3	g. Data not col/low pr.	NA	-	-

SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter Public Services

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
4. Ambulance Service	a. No. of Calls/Cap.	1	a. Interview with Ambulance	4.3	3 Hours	$1.79
	b. No. of Personnel/Cap.	1	Units: impact area JoCO,			
	c. No. of Vehicles/Cap.	1	FR.Co., Mi. Co.			
			b. Miami Co. only amb. Ser.	24		
			c. Miami Co. amb. Ser.:	24		
			Miami County data.			
5. Public Health (see Social Well-being 6)	a. No. of Public Health Workers/Cap.	3	a. Miami Co. Pub. Health	.09	1 Hour	1.79
		4	Dept.-for entire county.			
	b. No. of Sani. Worker/Cap.	2	b. Mi. Co. Cl.:no sani. wks.	0	1/4 Hour	.45
	c. Local Gov. Exp./Cap./Yr.		c. Co. Cl. Office: Mi. Co.			
			data.	3.21	1/4 Hour	1.79
6. Fire Protection (see Social Well-being, 19)	a. No. of Fire Workers/Cap.	1	a. Interview w/Fire Dist.	5.34	1 Hour	1.79
	b. Total Local Gov. Expen-ditures/Cap.	2	#1: Richland, Maryville townships.			
	c. Fire Protection Class-ifications of community	2	b. Co. Clerk's Office: Miami County data.	$1.98	1/4 Hour	1.79
	d. No. of Trucks and Equipment/Cap.	1	c. Interview w/Fire Dist. #1: Richland & Mary. twns.	2nd Class	1/2 Hour	1.15
	e. Labor Hours/Fire	2	d. Interview w/Fire Dist.	.53	1/2 Hour	1.15
	f. No. of Existing Engine Companies	2	#1: Richland & Mary. twns.			
			e. Not Available.	-	-	-
			f. Int. Fire Dist. #1:twns.	2.00	1/2 Hour	1.15
7. Police Protection (see Social Well-being 1, 2)	a. No. of Police/Cap.	1	a. Sheriff's Dept.: Mi. Co.	.19	1 Hour	1.79
	b. Mean No. of Police/Cap. for Similar Areas	2	b. Var. added after data collection.	NA	-	-
	c. Total Local Gov. Expen-ditures/Cap.	2	c. Co. Clerk's office: Miami Co. data.	$5.94	1/4 Hour	1.79
8. Legal Services	a. No. of Attorneys/Cap.	3	a. Co. Attor.: Mi. Co. data.	.29	1/2 Hour	1.79
	b. Total Budget of Legal Services Centers/Cap.	3	b. Referral from Co. Attor. office/no budget.	0	1/2 Hour	1.79
	c. No. of Persons Staffing Centers	3	c. Not Applicable.	0	-	-

SOCIAL IMPACT DESIGN VARIABLES

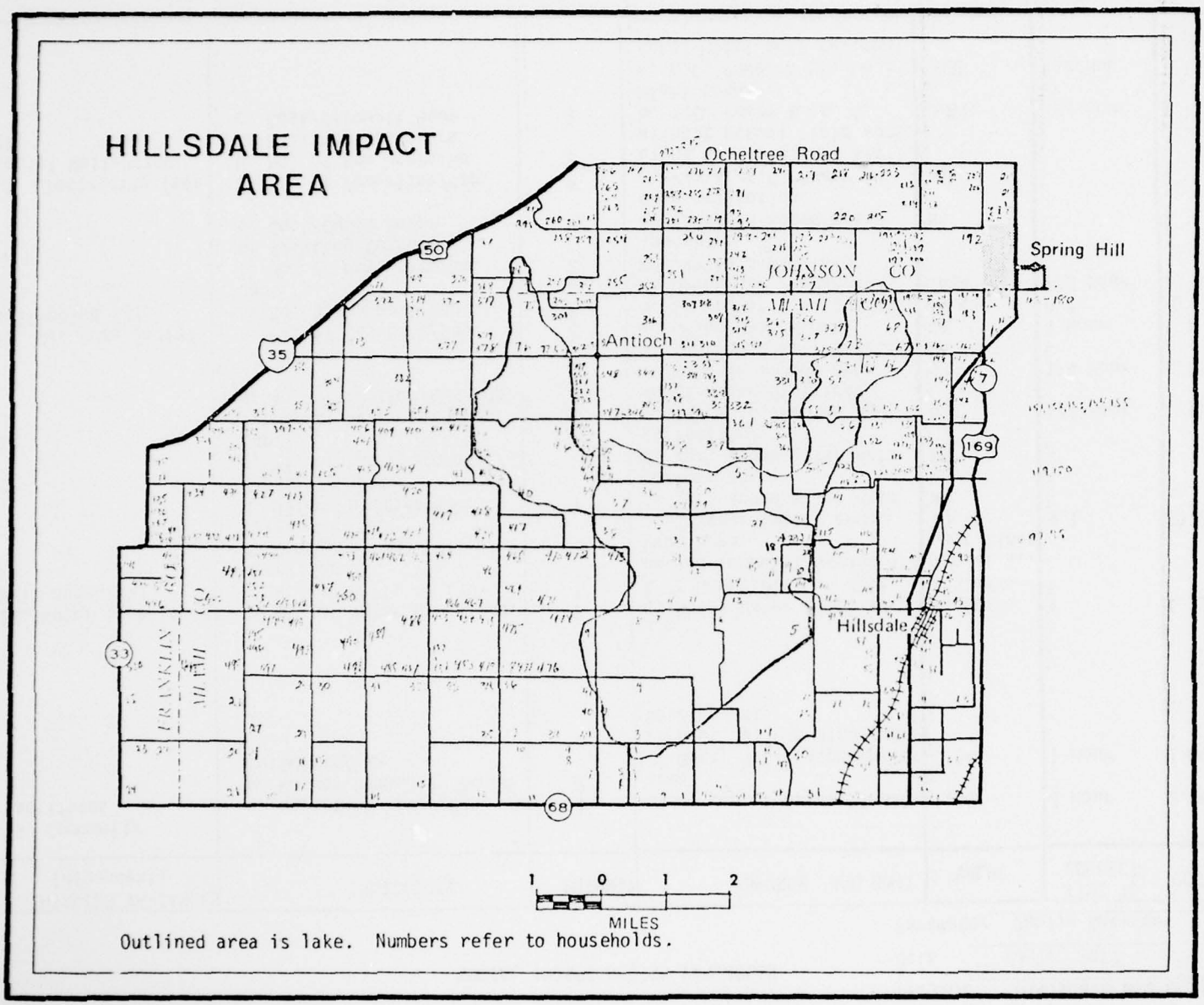
Project Hillsdale Dam Project
Date July 1977
Parameter Public Services

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
9. Social Services	a. No. of Professionals/Cap.	4	a. Data not collected/low priority, diff. to isolate.	-	-	-
	b. No. of Agencies/Cap.	2	b. Phonebook: Hillsdale-Senior Cit. Meals on Wheels	1.00	1/4 Hour	1.79
	c. No. of Volunteer Service Agencies/Cap.	2	c. Phonebook: none.	0	1/4 Hour	-
	d. Total Budget From local Gov./Cap./Yr.	3	d. Clerks Office: but var. added late.	NA	-	-
	e. Budget From United Fund/Cap.	2	e. Not avail. in units of impact area.	NA	-	-
	f. $ Amt. Spent on Disaster (related to projects)/Cap.	2	f. Not applicable.	NA	-	-
10. Public Transportation (see social wellbeing 20)	a. Total Expenditure/Cap./Yr.	2	a. Not applicable, no bus service.	0	1/4 Hour	1.79
	b. No. of Mi. of Bus Routes/Cap.	1(urban areas)	b. Not applicable, no bus service.	0	-	-
	c. No. of Buses/Cap.	1	c. Not applicable, no bus service.	0	-	-
	d. Total Expenditure on Street Maintenance/Cap./Yr.	2	d. 1. Co. Clerk's Office: Miami County data.		1/4 Hour	1.79
	e. Maps of Routes & Roads	1	2. Kansas Dept. of Transportation.	43.36		
			e. Attached Highway Dept.: impact area (redrafted).	Attached	2 Hours	4.00
	f. Mi. of Road by Type/Cap.	3 1	f. Map: Kansas Dept. of Transportation: impact area, interstate, state county, country.	7.00 38.00 8.00 174.00	1 Hour	-
	g. No. of Taxi Licenses/Cap.	3	f. Not applicable.	0	1/4 Hour	1.79
	h. Ft. of Airport Runway/Cap.	2	g. Not applicable.	0	1/2 Hour	1.79
	i. No. of Trains Stopping/Cap.	2	h. Not applicable	0	1/2 Hour	1.79

SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter Public Services

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
11. Outdoor Public Recreation Facilities (see Social Well-being 13)	a. Swimming Pool/Cap.	2	a.-e. Interview with Township Trustee: Richland and Maryville townships.	0	5 Min.	1.15
	b. Picnic Tables/Cap.	2		0	5 Min.	1.15
	c. Mi. of Hiking/Cap.	2		0	5 Min.	1.15
	d. Mi. of Biking/Cap.	2		0	5 Min.	1.15
	e. Acres of Public Park/ Cap.	1		0	5 Min.	1.15
12. Public Recreation Expenditures	a. Total Local Gov. Expenditures/Cap./Yr.	2	a.-b. Interview with Township Trustee: Richland and Maryville townships.	0	5 Min.	1.15
	b. Total Local Gov. Expenditures For Recreational Programs/Cap./Yr.	2		0	5 Min.	1.15
13. Private Recreation	a. No. of Sporting Events/ Cap./Wk.	2	a. Interview with Township Trustee: Richland and Maryville townships.	0	5 Min.	1.15
	b. No. of Drinking Establishments/Cap.	2 1	b. County Clerks Office: impact area.	.80	1	1.79
	c. No. of Restaurants/Cap.		c. Survey of area.	1.19	1	1.79
14. Cultural Facilities (see Social Well-being 12)	a. No. of Books in The Public Library/Cap.	2	a. No library in impact area; Miami Co. Lib.: Miami Co. data.	NA .63	- 1 Hour	- 1.74
	b. Total Budget of All Major Museums/Cap./Yr.	3	b. No Museums in Impact area.	NA	-	-
	c. No. of Publicly Sponsored Cultural Courses/ Cap.	2	c. No cultural courses in impact area.	NA	-	-



Outlined area is lake. Numbers refer to households.

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SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter Public Services

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
15. Community Facilities	a. No. of Churches/Cap.	1	a.-b. Map of Areas: impact area.	1.06	1 Hour	2.00
	b. No. of Community Owned Buildings/Cap.	1	1. Dept. of Transportation. 2. Dept. of Planning and Development.	1.34	1 Hour	2.00
16. Water (see Social Well-being 21)	a. Mi. of Water Lines/Cap.	2	a. Rural Water Dist. #6 & 7: boundaries of dist. extend somewhat beyond impact area.	74.89 78% of impact ar. uses lines	1	1.15
	b. No. of Wells or cisterns/Cap.	1	b. Survey: impact area.	10.16	9.1	20.80
	c. Cost Per 1000 Gal. of Water	2	c. Var. added after data collection.	NA	-	-
	d. Water Purification Capacity/Capita	2	d. Var. added after data collection.	NA	-	-
	e. Mi. of Storn Drainage/ Cap.	2	e. Township Trustee and Rural Water District.	0	1/4 Hour	1.15
	f. Mi. of Sewer Line/Cap.	2	f. None in impact area.	0	1/4 Hour	1.15
	g. No. of Septic Tanks/Cap.	2	g. Var. add. aft. data.col	NA	-	-
17. Gas (see Social Well-being 21)	a. Mi. of Gas Line/Cap.	2	a. Union Gas Company.	NA	1 Hour	1.15
	b. No. of Propane Tanks/ Cap.	1	b. Survey of impact area.	18.45	9.1	20.80
	c. No. of New users/No. of Existing Customers	2	c. Union Gas Company: Maryville & Richland townships.	.024	1/2 Hour	1.15
	d. Cost Cubic Meter	2	d. Variable added after data collection.	NA	-	-
18. Electricity (see Social Well-being 21)	a. Mi. of Powerline/Cap.	2	a. Paola: K.C. Power & Light Co. info. not avail. without actual field work.	NA	-	-
	b. No. of New users/No. of Existing Customers	2	b. K.C. Power & Lt. Co.: Miami County.	3.6%	1/2 Hour	1.15
	c. Cost/Kilowatt Hour	2	c. K.C. Power & Lt. Co.: rural Miami only resident.	.035	1/2 Hour	1.15

SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter Public Services

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
19. Mail Service	Volume of Mail Handled/ Capita/Day.	3	Post Office, Paola, KS: inf. requires permission of dist. and not yet received.	NA	-	-
20. Telephone Conn. (see Social Well-being 21)	No. of Telephone Connections (New)/No. of Existing Cust.	2	Mo.-Ks.-Dial Co.: Hillsdale exchange.		1 Hour	1.15
			business	.10		
			business extension	.71		
			resident	.03		
			resident extension	.167		
			pay phone	1.0		

SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter Social Well-being

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
1. Crime and Delinquency (see Public Services 7)	a. No. of Violent Crimes/1000/Yr.	1	a. Miami Cty. Sheriff's Office: impact area, death.	.53	1 Hour	1.79
	b. No. of Property Crimes/1000/Yr.	1	b. 1. Miami Cty. Sheriff burglary	3.74	1 Hour	1.79
	c. No. of Delinquency Violations/1000/Yr.	1 2	theft	2.14	1 Hour	1.79
	d. % Of All Cases Cleared by Making Arrest	3	2. Survey: impact area.	See Table	1 Hour	20.80
			c. Miami Cty Sheriff: not available.	3. NA	-	-
2. Justice System (see Public Services 7)	a. Mean and Median Months to Criminal Trial	2 4	d. Miami County Sheriff's Office: impact area.	8.33%		
	b. Mean and Median Months to Court Trial	2 4	a. Data not collected/low priority.	NA	-	-
			b. Data not collected/low priority.	NA	-	-
3. Public Violence	a. No. of Riots or Similar Events/Yr.	2 4	a. Miami County Sheriff's Office: impact area.	0	5 Min.	1.79
	b. No. of Resulting Deaths and Injuries/Cap./Yr.	2 4	b. Miami County Sheriff's Office: impact area.	0	5 Min.	1.79
4. Alcohol and Drug Abuse	a. No. of People Treated for A and DA by Hospitals/Cap./Yr.	3	a. Data not collected/low priority.	NA	-	-
	b. No. of Contacts with A and DA Programs/Cap./Yr.	3 4	b. Data not collected/low priority.	NA	-	-
5. Physical and Mental Health (see Public Services 2)	a. Hospitalization Rate for Illness/Cap./Yr.	2	a. Data not collected/low priority.	NA	-	-
	b. Hospitalization Rate for Mental Illness/Cap./Yr.	2	b. Data not collected/low priority.	NA	-	-
	c. No. of Disability Days Per Cap./Yr.	2	c. Data not collected/low priority.	NA	-	-
	d. Suicide Rate/Yr.	3	d. Data not collected/low priority.	NA	-	-
	e. Work Absence/Worker/Yr.	2	Nt. Avail. in impact area.			

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Table 3: Variable SW1, Crime and Delinquency

Source: Survey

Vandalism	20.50/1000 capita
Break-ins	7.89/1000 capita
Assaults	4.73/1000 capita

SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter Social Well-being

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
6. Quality of Med. Care (see Public Services, 2, 5)	a. No. of Patients Seen/Wk.	2	a. Data not collected/ not in units of impact area.	NA	-	-
	b. Mean Time Between Actual Appt. Time and Consultation	3	b. Survey: impact area.	34.47 Min.	9.1 Hours	20.80
	c. Mean Time Between Calling and Getting An Appointment	3	c. Survey: impact area.	1.86 Days	9.1	20.80
	d. Public Health Visits/ Cap./Yr.	2	d. Data not collected/ not in units of impact area.	NA	-	-
7. Quality of Hospital Care (see Public Services 2)	a. No. of Doctors Staffing Emergency/Cap.	2	a. Data not collected/ not in units of impact area.	NA	-	-
	b. Mean Hospital Stay/Person	2	b. data not collected/ not in units of impact area.	NA	-	-
	c. Ave. Occupancy/Day or % Occupied	2	c. Data not collected/ not in units of impact area.	NA	-	-
8. Racial and Sexual Discrimination (see Economy 3)	a. Ratio of Black to White Unemployment	1 2	a. Survey: impact area. The number of blacks and the number of unemployed= 2.	-	9.1 Hrs.	20.80
	b. Ratio of Female to Male Unemployment	1	b. Survey: impact area unemployed = 2.0.	-	9.1 Hrs.	20.80
	c. Ratio of Black to White Income	1 2	c. Survey: impact area blacks = 2.	-	9.1 Hrs.	20.80
	d. Ratio of Female to Male Income	1	d. Survey: impact area. not agg. by sex.	NA	9.1 Hrs.	20.80
	e. No. of Civil Rights Suits Filed	3 4	e. Data not col./low pr.	NA	-	-
9. Family Disruption (see Demography 11)	a. No. of Divorces Filed/ Cap./Yr.	2	a. Cl. of Dist. Court for Miami County: county.	7.00	1 Hr.	1.79
	b. % of One Adult Families	1	b. Survey: impact area.	2.14%	9.1 Hr.	20.80
10. Education (see Public Services 1)	a. Rate of School Dropouts/ yr.	1 2	a. Data not collected/ not in units of impact ar.	NA	-	-
	b. Mean Score of Students on National Achievement Tests	3 4	b.-f. Data not collected/ low priority.	NA	-	-

SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter Social Well-being

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
10. Education (see Public Services 1) (Cont.)	c. Ratio of Mean Score to National Mean	3 4				
	d. Students/Special Education Class	4				
	e. Accreditation Rating	4				
	f. Mean Education Level of Teachers	4				
11. Preschool/Daycare	a. No. of Applicants	3	Phonebook: no facilities	NA	-	-
	b. No. of Facilities	1	in impact area.	0	1/4	-
	c. Pupil/Teacher Ratio	2		NA	-	-
12. Library Use (see Public Service 14)	a. Mean Daily Attendance	3	a.-b. Brd. of Educ.:only	NA	-	-
	b. Books Checked Out/Day/ Cap. (circulation)	2	one lib. in impact area	NA	-	-
	c. Mean No. of Information Calls/Day	2	closed through summer (for ele. students only, in school) c. Lib. in Mi. County does not have an information system or data on atten.	NA	-	-
13. Recreation Use (see Public Services 11-13)	a. Mean Attendance at Parks/ Day	2				
	b. Mean Attendance at Park Programs/Day	4	a.-b. Not applica., no parks.	NA	-	-
	c. Swimming Pool Use/Day/ Capita	2	c.-d.	NA	-	-
	d. Mean Cinema Admissions/ Cap./ Wk	2	Not applicable, no pools., no theaters.			
14. Employment (see Economy)	Gross Labor Turnover Rate/ Yr.	2 4	Data not collected/low pr.	NA	-	-
15. Poverty (see Public Services 9)	a. % of All Families Below The Official Poverty Line	1	a. Survey: impact area.	4.52%	9.1 Hr.	20.80
			b. Survey: impact area.		9.1 Hr.	20.80
	b. No. of People/1000 Receiving Soc. Security, SSSI, Pensions, Child Support	2	Soc. Sec.	48.90		
			Pension	20.50		
			other	29.97		

SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter Social Well- being

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
16. Quality of Housing (see Social Structure 5, 6)	a. % of Housing Units- Dilapidated, Standard, Deteriorated	1	a. Survey: impact area.	a.1.60	9.1 Hrs.	20.80
			b. Data not col./low pr.	a. 98.40%		
			c. Survey: impact area.	a. 0		
	b. % of Housing Units Without Plumbing	4	d. Survey: impact area. per household per capita.	b. NA c. 85.56%,	-	-
	c. % Housing Owned, Rented	2	e. Survey: impact area.	14.44%	9.1 Hrs.	20.80
	d. No. of Habitable Rooms/ Household.	2		d. 6.20	9.1 Hrs.	20.80
	e. No. of Habitable Rooms/ Cap.			e. 1.83	9.1 Hrs.	20.80
17. Housing Values (see Demography 12)	Mean and Median Housing Value	2	Data not available in units of impact area.	NA	-	-
18. Property Improvements	a. Mean Sq. Ft. Floorspace Added	3/4	a. Data not col/low pr.	NA	-	-
			b. Data not avail. in	NA	-	-
	b. No. of Demolitions/Cap.	1/2	units of impact area.			
	c. No. of Building Permits By Type/Cap.	1	c. Township sec.: Maryville twp.	See Table 4.	2 Hrs.	1.15
	d. Mean Amount of $ Spent on Improvements	3	d. Survey: impact area.	$1048 = $\bar{x}$; $201 = Median	9.1 Hrs.	20.80
19. Reported Fires (see Public Services 6)	a. No. of Fires/1000/Sq. Mi.	1	a. Fire Dist #1: Maryville and Richland twp.	38.95	2 Hrs.	$1.15
	b. Amount of Damage/1000 Sq. Mi.	2	2. Survey: impact area.	42.59	9.1	20.80
			b. Fire Dist. #1: info unavailable.	-	-	-
20. Transportation Quality (see Public Services 6)	a. Vehicle Mi. Travelled/ Cap.	2	a.-c. Data not avail. in units of impact area.	NA	-	-
	b. No. of Moving Violations/ Cap.	2/4	d. Sheriff's Dept. of Fr. Co. Jo. Co. & Mi. Co:			
	c. No. of Parking Violations/Cap.	2/4	impact area. Non-injury,	5.35	1 Hr.	1.79
	d. No. of Accidents by Type/ 1000 to date 1977.	1	injury	1.07		
			fatality	.27		

Table 4: Variable SW18, Building Permits

Source: Township Secretary

Homes	18.32
Additions	5.23
New Buildings (garages, etc.)	7.85
Mobile Homes	1.96

SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter Social Well - being

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
21. Utilities (see Public Services 16, 17, 18, 19, 20)	a. Ratio of Water Consumption (in gal.) to Water Supply or Amount Purified.	2	a. Var. added after data collected.	NA	-	-
	b. No. of Shutoffs/Yr./ Existing Customers 1. Electric 2. Gas 3. Water 4. Telephone	2	b. Variable added after data collected.	NA	-	-

SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter Economy

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
1. Job Opportunities	a. In General and Project Specific: % Unskilled Jobs, Semi-Skilled, Clerical/Sales Managerial, Professional Jobs That Are Vacant	2	Data not available in units of impact area.	NA	-	-
2. Job Distribution	a. In General and Project Specific, % of all Available Jobs That Are: unskilled semiskilled, skilled, clerical/sales, managerial, professional	2	Data not available in units of impact area.	NA	-	-
3. Employment Level (see Social Well-being 8)	a. % of Labor Force Employed	1	a.-c. Survey: impact area.	64.16%	9.1	20.80
	b. % of Women in Labor Force	1		11.27	9.1	20.80
	c. % of Persons Over 65	1		.86	9.1	20.80
4. Gross Community Product	a. Gross Community Income/ Yr.	3	a.-c. Data not collected/ low priority and not available in impact areas.	NA	-	-
	b. Value Added by Manu-facturing	3				
	c. Value Added by Agricul-tural Products	3				
5. Gross Community Product Growth	% Rate/Yr. of Community Income for 10 Years	4	Data not collected/low priority.	NA	-	-
6. Property Tax Base	a. Total Value of Assessed Real Property	4	a. County Assessor's Office: Mi.Co., Jo. Co., Richland, Maryville, Hillsdale, Spring Hill.	$24,217,621	1/2 Hour	1.79
	b. Total Value of Assessed Personel Property	4				
	(given value) / % assessed		b. County Assessor's Office: Spring Hill only.	$1,958,917	1/2 Hour	1.79

SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter Economy

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
7. Financial Inflow From the Federal Government	a. Amount of Federal Revenue Sharing/Yr./Cap.	3	a. County Clerk's Office: Miami county data.	$3.57	1 Hour	1.79
	b. Amount of Direct Federal Aid to Impact Area /Yr.	2	b. Not applicable.	NA	-	-
	c. Amount of Federal Monies Received/Yr.	2	c. Data not available.	NA	-	-
8. Price Level	Consumer Price Index for the Community	4	Data not collected/low priority.	NA	-	-
9. Public Revenues	a. Total Revenues Collected by All Government Units In past Yr./Cap.	3	Miami County Clerk's Office: Miami county data.	$29.22	1/2 Hour	1.79
	b. Sales Tax/Capita	2				
10. Household Consumption (see Social Structure 2)	Income Spent/Capita	1	Data not available in units of impact area.	NA	-	-
11. Retail Trade	a. No. of Businesses/1000	1	a. Phone Book and Wind-Shield Survey: impact area including Springhill.	9.09	3 Hours	-
	b. $ of Retail Trade/Capita	1				
	c. No. of New Business/ Capita in Past Yr.	2	b. Data not collected/ survey required & time & costs considered.	NA	-	-
12. Distance From Work	Ave. Time Travelled/Capita	3	Data not collected/low priority.	NA	-	-

SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter Economy

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
13. Site Activity (see Demography 3)	a. Acres/Zoning Category b. % Of Acres With Zoning Change in Past Year	1 2	a. Township Trustee: Maryville & Richland twp.		1 Hour	1.15
			Not applicable.	0	-	-
14. Land Values	Dollars/Acre/Capita	1/ 2	Data not collected due to time and costs.	NA	-	-
15. Subdivision Activity	a. No. of Tracts Developed b. No. of Tracts Sold c. No. of Sites Platted/Yr.	2 2 1/ 2	a. Recorder of Deeds: impact area. (Morning Star)	1	1 Hour	1.79
			b.-c. Data not col.: Var. added late.	NA	-	-
16. Financial Activity	a. $ Amt. Bank Deposits b. $ Amt. Time Deposits c. $ Amt. Loans Current	2 2 2	a.-c. Data not available in units of impact area.	NA	-	-

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SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter Social Structure

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
1. Educational Attainment (see Social Well-being 10, Public Services1)	a. Mean and Median Educational Attainment of People over 25	1	a. Survey: impact area.	11.41%	9.1	$20.80
			b. Survey: Impact area.	80.28	9.1	20.80
	b. % of H.S. Graduates	1	c. Data not available in units of impact area.	NA	-	-
	c. Mean Daily Attendance	2				
2. Socioeconomic Status (see Economy 10)	a. Mean Occupational Status of the Work Force	3	NA	NA	9.1	20.80
	b. Median and Mean Gross Family Income	2	Survey: impact area.	15,562=$\bar{x}$ 14,000=med.	9.1	20.80
3. Kin Ties	Av. No. Visits/Mo.	2	Survey: impact area.	11.06	9.1	20.80
4. Ethnic Identification (see Demography 9)	No. Languages Spoken in the Community	2	Survey: impact area: Eng. Spanish, Germ., Other.	90.91%,.53 3.21, 5.35	9.1	20.80
5. Housing Availability	% of Unoccupied Dwelling Units	3	Survey: impact area, quality control sheet.	6.61	9.1	20.80
6. Housing Space (see Social Well-being 16-18)	a. Mean D.U. Size. (Sq. Ft.)/Cap.	3	a. Data not collected/low priority.	NA	-	-
	b. % of D.U. That Are: single family, mobile home, apartments, duplex	1	b. Survey: impact area.	92.51 5.35 1.17 1.17	9.1	20.80
7. Residential Stability (see Demography 3)	a. Mean Length of Occupancy of All D.U.	1	a. Survey: impact area.	11.67=$\bar{x}$ 6.3=med.	9.1 Hours	20.80
	b. % of D.U. Owner-Occup.	1	b. Survey: impact area.	85.56	9.1 Hours	20.80
8. Mass Media	a. Combined Circulation/Cap. of All Newspapers	2	a. Newspapers: Rep., Western Spirit New Era.	5.70	3 Hours	1.15

SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter Social Structure

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
8. Mass Media (cont.)	b. No. of TV Channels in Area	2	b. Township trustee.	5.0	5 Min.	-
	c. No. of Radio Stations	2	c. Newspaper: impact area.	14.0	1 Hour	
			AM., FM.	16.0		
9. Civic Associations (bus., prof., service, educ., ethnic, rec., culture)	a. No. of Associations/Cap.	2	a. Data not collected.	.27	5 Min	-
	b. Total Memberships/Cap. of All Associations	3	b. Fed. Dist. Court, Ks, Topeka: court proceeding.	16.05	3 Hours	1.79
	c. Yrs. of Residency of Office Holders	4	c. Data not col./low pr.	NA	-	-
			d. Survey: impact area.	42.78	9.1	20.80
10. Political Participation (see Community Response)	a. % of Eligible Persons Who are Registered	1 2	a. NA	-	-	-
	b. % Registered Who Voted Last General Election	2 1	b. County Clerk's Office: Maryville & Richland twp.			
	c. Turnover Rate in Local Election the Previous Year	3 4	c.-d. Data not col./low priority.	NA	-	-
	d. No. of Bond Issue/Yr.	3 4				
11. Local Government Size	a. Total No. of Government Employees/Cap.	2	a.-c. Data not collected/ lower priority.	NA	-	-
	b. % For Each Category	2				
	c. Total Program Budget of All Units/Cap.	3				

SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter *Community Response*

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
1. Public Issues	a. No. of Public Issues (related to community as a whole) That Receive Media Attention/Yr.	3	a. Newspaper: Hillsdale public meeting in Paola in Spring 1977.	1.0	15 Min	
			b. Data not col./low pr.	NA	-	-
	b. No. of Public Interest Lawsuits Filed/1000/Yr.	2 4	c. Fed Dist Court, Ks., Topeka Div. (to Denver 10th circuit court of appeals).	.27	1 Hour	1.79
	c. No. of Appeals to Gov. Decision/1000	3				
2. Organizational Activities	a. No. of Organizations Making Public Statements on Issues/1000/Yr.	1	a.-b. Data not col./time and costs consideration.	NA	-	-
			c. Data not col./low pr.	NA	-	-
	b. Amt. of Financial Contributions by Organizations to Programs or Other Activities in Community/Cap./Yr.	2				
	c. No. of Programs or Other Activities Initiated by Organizations/1000/Yr.	4				
3. Political Activities (see Social Structure 10)	a. No. of Petitions and Initiatives Filed/1000/Yr.	2 1	a.-d. Save Our Invaluable Land, Inc. Data not col./ low priority.	.27	5 Min.	-
	b. No. of Political Movements/1000/Yr.	4		NA	-	-
	c. No. of Political Protests and Demonstrations/Yr.	3		NA	-	-
	d. Voting Results on Bond Issues	2		NA	-	-
4. Government Programs (see Social Structure 11)	a. No. of New Government Program/1000/Yr.	4	a.-c. Data not col./low priority.	NA	-	-
	b. No. of Existing Government Programs Exp./1000/Yr.	4		NA	-	-
	c. Amt. of Increased Exp/ Cap./Yr. (for new or exp. pro.)	3		NA	-	-

SOCIAL IMPACT DESIGN VARIABLES

Project Hillsdale Dam Project
Date July, 1977
Parameter Community Response

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
5. Community Planning	a. Existence of Planning Program or Dept.	1	a. County Clerks Miami City, Franklin County, Johnson County.	0	1 Hour	1.79
	b. No. of Employees In Local Planning Dept./1000	2	b. Not applicable.	NA	-	-
	c. Total Budget of Local Planning Dept./Cap./Yr.	2	c. Not applicable.	NA	-	-

COMMENTS ON THE CASE STUDY

The completion of the social profile on the Hillsdale Dam Project has provided a perspective on its future impacts unavailable from the environmental impact statement (EIS). Most of the information presented in the EIS is of a technical nature (see Project Characteristics) describing the acre-feet for flood control, water supply, water quality; the nature of the geographic area: location, size, type; the financial investment past and future: costs, local match, operating costs and benefit/cost ratio.

The six social parameters broaden this view, provide baseline data, and describe the social and economic characteristics of the surrounding community to be affected.

Demography. In the first parameter, Demography, the composition of the community is evident; the Hillsdale area is comprised of almost 4,000 people, predominantly white with slightly more males than females. Over a third of the population is under 18. Although growth rate information was not available, it is evident from Table 2 that the amount of turnover of property doubled between 1971 and 1973 and rose another 25% since then. The reduction of turnover in 1975 may coincide with the period when buying and selling land for speculation ceased, and people anticipated an imminent return on their investment from the Army Corps of Engineers.

There are 17.4 persons/square mile which is low compared to Miami County's figure of 34.7 persons/square mile in 1976.* The lack of towns or cities of any size in the project area does not make urbanization or population concentration an issue, although the encroachment of the Kansas City metropolitan area might be significant. The extend of this influence should be indicated if population size and density changes in the next few years. The population over 65 is lower than in the overall state of Kansas (Hillsdale, 7.5%; Kansas, 12%). One possible explanation might be that many of the older people may have turned over their property in the early stages of project planning in anticipation of losing either their land or privacy.

Family composition indicates predominance (82%) of the nuclear family. Further, 85% of the adults are married. There are 3.39 persons per household in the area, including 1.12 dependent children; the household mode is a man, woman, and child; the extra persons per household are usually grandparents or other adults.

Public Services. Much of the information in this parameter is presented for the entire county due to the unavailability of data for the project area. For instance, all expenditure data came from the

*Kansas Statistical Abstract 1976, Institute for Social and Environment Studies, The University of Kansas, Lawrence, Kansas 66045.

county clerk's office and was not reducible to the impact area boundaries. Therefore, the data does not accurately fit the impact area and must be treated with caution.

The data for mean class size is for the elementary school in the area. One can assure thet if there are construction workers affiliated with the Hillsdale Dam Project who bring their families in, the elementary school with its mean class size of 19.2 and student teacher ratio of 16.0 should be able to handle it. However the information regarding high school age pupils was not collected. The school lies outside the impact area, it is fairly large, and it would be better able than the elementary school to assimulate new students since it already covers a broad area.

The data available for medical care and medical personnel existed only on the county level; no hospitals exist in the impact area. Examination of the phone bood for medical personnel showed no doctors or dentists living in the impact area.

Because the ambulance units had maps, the impact area could be identified and the number of calls established. The low number of ambulance calls indicates there probably will be little overload of this service. However, later data may change this prediction. The use of ambulance services could increase due to construction, boating or traffic accidents.

Similarly the Fire Department's volunteer force appears adequate for the impact area and it appears that it could withstand additional loads if necessary. The number of Sheriff Patrols is a little misleading, since the Sheriff's area covers the entire county but excludes community with their own police protection. The per capita standard does not reflect this however.

The phone book showed no attorneys living and practicing within the impact area. There was only one social service agency, which reflects the rural or low density aspect of the area. The miles of road by type were an essential baseline data item for showing changes over the duration of the project.

At this time there are no public recreation facilities in the impact area. There are a few drinking establishments and restaurants. The latter will be an important indicator to watch if more people frequent the area, as will the number of churches and the number of community owned buildings.

Utility data was not easy to accumulate for the impact area since boundary lines do not match for the utilities and the impact area. The indicator "miles of water lines" is available, as is new gas and electric users compared to existing users. The best information came from the survey itself which counted the number of people using gasoline or propane, water lines or wells and cisterns.

Social Well Being. The third parameter showed that there was a fair amount of crime and delinquency even though Hillsdale is primarily a rural area. The mean and median months to criminal trial was not available, but two indicators found to be available were the number of civil and criminal cases filed per year. This may be an indicator of crime which is more easily available than others, although only on a county or city base.

There was no rioting or similar event in the impact area and hence no resulting deaths or injuries. This may seem to be an extreme indicator but in many areas there is a reaction against a project such as there was in Hillsdale itself and if any persons were seriously hurt in such a response, this would have to be considered an impact of the project.

Data was not collected for several variables due to the low priority and the anticipated difficulty (especially when considering the priority of the variable) in obtaining the data. The survey did elicit information on time between appointment and consultation for medical services (about a half hour) and time between calling and getting an appointment, (2 and a half days). If the number of people increases drastically. As it is now, there is sufficient care so that the anticipated growth should not overload the facilities.

Few divorces (seven/1000 population) were filed for Miami County; for the impact area there were only 2.1% one-adult families. There were no obvious preschool or day care facilities but families may use facilities nearer to where they work. The lack of public recreation at the time produces no data for these variables.

From the survey, we find that 4.5% of all families were below the povery level ant that 15.7 per 1000 capita were receiving Social Security. In general housing was standard (98.4%) and 85.6% of the housing was owned with a mortgage. There were 6.2% rooms per household which is about 1.83 rooms per person. The number of building permits and mean amount of money spent on home improvements demonstrates that the area is growing with people investing time and money and seemingly planning on remaining in the area.

Fires per 1000 persons were 39 according to a spokesman for Fire District #1. A somewhat higher rate of 43 was reported from the survey of the impact area itself; this is surprisingly close. Accidents were easily accessible from the county offices since they are marked on maps (66 per 1000).

Economy. The fourth parameter of economy was difficult to get data for due to the irregulatities of the impact area. If there had been more time and money, the data for the county could have been accumulated for job opportunities and job distribution. But it would not have represented the impact area well. Sixty-four percent of the labor force are employed. Similarly, the value of assessed property is not available for the specific impact area. It might have been possible to get the precise value using

the legal definition as was done with turnover of property. This would probably have taken three days (Three counties are involved). More time would have permitted getting the dollar amoung of retail trade. The number of businesses, in this case 17.3 per 1000 capita, is a good baseline figure (although the dollar value would have provided a good base value for the possible increased growth of the present businesses). The area is zoned a combined agricultural-residential so this will not be good baseline data except to show the growth of zoning diversification.

Social Structure. The fifth parameter, social structure, shows that the median educational attainment of respondents and their spouses is 11.4 years just below a high school graduate. Over 80 percent of the residents in the impact area are high school graduates. Mean and median income for the impact area were easily available from the survey; this data along with previous Social Well Being data show that the impact area is not a blighted area.

People seem to interact fairly often with their relations - almost three times per week. We also found they visited and telephoned neighbors in the impact area frequently. Over 90 percent of the people speak English and no other language, indicating no specific ethnic groups; 3.2% of the people grew up speaking German however. This indicator is likely to discriminate even less in the future as more diffusion occurs.

Only 2.2% of the houses were vacant, 92.5% were single family, 5.3% were mobile homes. In December, 1974, Miami County decided not to allow any more mobile homes because they felt too many people would buy land in order to live in the county and not be able to afford to build a home. They dind't want the area to have too many. However, exceptions are made for families who want their parents to have a separate dwelling unit but still live nearby.

Most people have lived in the area over six years. There is a great deal of discrepancy between the mean number of years people have lived in the area, 11.67, and the median, 6.3. This indicates that there are a great many people who have lived there for over 20-25 years; but at least 50% have moved within the last 6 years.

There are three newspapers covering the area; the number of television and radio stations is high due to the proximity of the Kansas City Metropolitan area.

The County Clerk was able to show that almost 80% of the people voted who were registered. This was not for the exact impact area but for the two townships which are somewhat larger than the impact area.

Thus, the areas social structure has some interesting characteristics. Many of the organizational groups are centered outside the impace area per se. The residents are a mixture of old and new residents who are relatively well educated. They participate actively in

the political process at the formal level, and interact frequently with their neighbors at the informal level.

Community Response. The sixth parameter of Community Response should be modified to include law suits filed since the beginning of the project, since the past year may not incorporate all law suits filed.

There is no planning program, commission, or department in the impact area, township, or county, which also explains some of the missing data even for the county.

CONCLUSIONS

The Hillsdale case study has several important benefits. It provides the baseline data necessary for a longitudinal analysis of the social impacts resulting from the dam project. It identifies the sources of information and provides contacts for accurate and efficient upcating of data as the project progresses. It identifies both the strengths and weaknesses of available data, which in turn suggests the viable methods that can be used and the constraints on forcasting impacts. The needs for primary data gathering on future social impact assessments can be estimated from the example of information available in this case. The case study takes into account the likely priority, cost and availability of data. This may eventually result in data files which are more usable in social impact assessment and evaluation.

Accurate examinations of data indicating the impacts of significant projects are long overdue. The social costs and benefits of such projects have been the subject of assertion and speculation by both proponents and opponents in the past. Only when the necessary methods and data sources for making dispassionate and empirical assessments are created will SIA's become scientifically and socially valid.

APPENDIX: Worksheets for Social Profiling

SOCIAL IMPACT DESIGN VARIABLES

Project _____

Date _____

Parameter Demography

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT **	COST
1. Population Size of Community	No. of inhabitants by Age, Sex, Race	1				
2. Amount of Growth	a. Births/yr. for 10 years b. Deaths/yr. for 10 years c. Migration/yr. for 10 yrs d. Rate of growth for 10 yrs	2				
3. Turnover of Property (see Social Well-being 16, Economy B)	Number of persons selling per capita per year	1				
4. Urbanization of Community	Percent of pop. in cities of 20,000 or more	4				
5. Population Density	Number of persons per sq. mile	2				
6. Population Concentration	Percent of total population the largest urban area	3				

SOCIAL IMPACT DESIGN VARIABLES

Project _____
Date _____
Parameter Demography

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
7. Age Dependency	a. % of the Population Over 65	1				
	b. % of the Population under 18	1				
8. Sex Ratio	Ratio of Males to Females	3				
9. Ethnic Population (see Social Struc,4)	a. % of Population, Nationwide	3				
	b. % Foreign Born	3				
10. Family Size in the Community	a. $\bar{X}$ No. of Persons/Household	1				
	b. $\bar{X}$ No. of Dependent Children/Household	2				
	c. Ratio of Schoolage to Total Population	2				
11. Marital Status (see Social Well-being 9)	% Of People Married, Divorced, Separated, Widowed	3				
12. Household Composition	% Households: single parent, unrelated individuals, nuclear fam., individual-single	1				
13. Births	Births/1000 Women By Sex, Age, Race	3				
14. Morbidity	Communicable Disease Rate	4				

SOCIAL IMPACT DESIGN VARIABLES

Project _____

Date _____

Parameter Demography

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
15. Deaths	Deaths/1000 Pop. By Sex, Age, Race	3				
16. Migration	Immigrants/1000 Pop. By Sex, Age, Race	3				

SOCIAL IMPACT DESIGN VARIABLES

Project _____
Date _____
Parameter Public Services

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
1. Public Education (see Social Well-being 10)	a. Mean Class Size	1				
	b. Mean Student-Teacher ratio	2				
	c. Unused Classrooms/Cap.	1				
	d. Total Educational Expenditure/Student/Yr.	2				
	e. $/Cap. By Source of Income	4				
	f. $/Cap. By Expenditure Type	4				
	g. Total Sq. Ft. of Classroom Space/Student	2				
	h. Reg. Sq. Ft. Classroom Space/Student	2				
	i. Schools by Type	1				
2. Medical Care (see Social Well-being 5, 6, 7,)	a. Hospital Bed/Cap.	1				
	b. No. of Hospitals/Sq. Mi.	2				
	c. No. of Mental Health Clinics/Cap.	2				
	d. Total Hospital Expenditures/Cap./Yrs.	3				
3. Medical Personnel	a. No. of Physicians/Cap.	1				
	b. No. of Dentists/Cap.	2				
	c. No. of Psychiatrists/Cap.	3				
	d. No of Nurses/Cap.	3				
	e. No. of Paramed/Cap.	4				
	f. No. of Private Practices/Cap.	2				
	g. No. of Patients/Practic	2				

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SOCIAL IMPACT DESIGN VARIABLES

Project_____

Date _____

Parameter Public Services

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
4. Ambulance Service	a. No. of Calls/Cap.	2				
	b. No. of Personnel/Cap.	2				
	c. No. of Vehicles/Cap.	2				
5. Public Health (see Social Well-being 6)	a. No. of Public Health Workers/Cap.	3				
	b. No. of Sani. Worker/Cap.	4				
	c. Local Gov. Exp./Cap./Yr.	2				
6. Fire Protection (see Social Well-being, 19)	a. No. of Fire Workers/Cap.	1				
	b. Total Local Gov. Expenditures/Cap.	2				
	c. Fire Protection Classifications of community	2				
	d. No. of Trucks and Equipment/Cap.	1				
	e. Labor Hours/Fire	2				
	f. No. of Existing Engine Companies	2				
7. Police Protection (see Social Well-being 1, 2)	a. No. of Police/Cap.	1				
	b. Mean No. of Police/Cap. for Similar Areas	2				
	c. Total Local Gov. Expenditures/Cap.	2				
8. Legal Services	a. No. of Attorneys/Cap.	3				
	b. Total Budget of Legal Services Centers/Cap.	3				
	c. No. of Persons Staffing Centers	3				

SOCIAL IMPACT DESIGN VARIABLES

Project _____

Date _____

Parameter Public Services

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
9. Social Services	a. No. of Professionals/Cap.	4				
	b. No. of Agencies/Cap.	2				
	c. No. of Volunteer Service Agencies/Cap.	2				
	d. Total Budget From local Gov./Cap./Yr.	3				
	e. Budget From United Fund/Cap.	2				
	f. $ Amt. Spent on Disaster (related to projects)/Cap.	2				
10. Public Transportation (see Social Wellbeing 20)	a. Total Expenditure/Cap./Yr.	2				
	b. No. of Mi. of Bus Routes/Cap.	1(urban areas)				
	c. No. of Buses/Cap.	1				
	d. Total Expenditure on Street Maintenance/Cap./Yr.	2				
	e. Maps of Routes & Roads	1				
	f. Mi. of Road by Type/Cap.	3				
	g. No. of Taxi Licenses/Cap.	3				
	h. Ft. of Airport Runway/Cap.	2				
	i. No. of Trains Stopping/Cap.	2				

SOCIAL IMPACT DESIGN VARIABLES

Project _____

Date _____

Parameter Public Services

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORITY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
11. Outdoor Public Receration Facilities (see Social Well-being 13)	a. Swimming Pool/Cap.	2				
	b. Picnic Tables/Cap.	2				
	c. Mi. of Hiking/Cap.	2				
	d. Mi. of Biking/Cap.	2				
	e. Acres of Public Park/ Cap.	1				
12. Public Recreation Expenditures	a. Total Local Gov. Expenditures/Cap./Yr.	2				
	b. Total Local Gov. Expenditures For Recreational Programs/Cap./Yr.	2				
13. Private Recreation	a. No. of Sporting Events/ Cap./Wk.	2				
	b. No. of Drinking Establishments/Cap.	2				
	c. No. of Restaurants/Cap.	2				
14. Cultural Facilities (see Social Wellbeing 12)	a. No. of Books In The Public Library/Cap.	2				
	b. Total Budget of All Major Museums/Cap./Yr.	3				
	c. No. of Publicly Sponsored Cultural Courses/ Cap.	2				

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SOCIAL IMPACT DESIGN VARIABLES

Project _____

Date _____

Parameter Public Services

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
15. Community Facilities	a. No. of Churches/Cap.	1				
	b. No. of Community Owned Buildings/Cap.	2				
16. Water (see Social Wellbeing 21)	a. Mi. of Water Lines/Cap.	2				
	b. No. of Wells or cisterns/Cap.	1				
	c. Cost Per 1000 Gal. of Water	2				
	d. Water Purification Capacity/Capita	1				
	e. Mi. of Storn Drainage/ Cap.	2				
	f. Mi. of Sewer Line/Cap.	2				
	g. No. of Septic Tanks/Cap.	2				
17. Gas (see Social Wellbeing 21)	a. Mi. of Gas Line/Cap.	2				
	b. No. of Prepare Tanks/ Cap.	2				
	c. No. of New users/No. of Existing Customers	2				
	d. Cost Cubic Meter	2				
18. Electricity (see Social Wellbeing 21)	a. Mi. of Powerline/Cap.	2				
	b. No. of New users/No. of Existing Customers	2				
	c. Cost/Kilowatt Hour	2				
19. Mail Service	Volume of Mail Handled/ Capita /Day	3				

SOCIAL IMPACT DESIGN VARIABLES

Project _____

Date _____

Parameter Public Services

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
20. Telephone Service (see Social Wellbeing 21)	No. of Telephone Connections (New/No. of Existing Customers	2				

SOCIAL IMPACT DESIGN VARIABLES

Project _____

Date _____

Parameter Social Well-being

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
1. Crime and Delinquency (see Public Services 7)	a. No. of Violent Crimes/Cap./Yr.	1				
	b. No. of Property Crimes/Cap./Yr.	1				
	c. No. of Delinquency Violations/Cap./Yr.	2				
	d. % Of All Cases Cleared by Making Arrest	3				
2. Justice System (see Public Services 7)	a. Mean and Median Months to Criminal Trial	4				
	b. Mean and Median Months to Court Trial	4				
3. Public Violence	a. No. of Riots or Similar Events/Yr.	2				
	b. No. of Resulting Deaths and Injuries/Cap./Yr.	2				
4. Alcohol and Drug Abuse	a. No. of People Treated for A and DA by Hospitals/Cap./Yr.	2				
	b. No. of Contacts with A and DA Programs/Cap./Yr.	3				
5. Physical and Mental Health (see Public Services 2)	a. Hospitalization Rate for Illness/Cap./Yr.	2				
	b. Hospitalization Rate for Mental Illness/Cap./Yr.	2				
	c. No. of Disability Days Per Cap./Yr.	2				
	d. Suicide Rate/Yr.	3				
	e. Work Absence/Worker/Yr.	2				

SOCIAL IMPACT DESIGN VARIABLES

Project _____
Date _____
Parameter Social Well-being

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
6. Quality of Med. Care (see Public Services, 2, 5)	a. No. of Patients Seen/Wk.	2				
	b. Mean Time Between Actual Appt. Time and Consultation	3				
	c. Mean Time Between Calling and Getting An Appointment	3				
	d. Public Health Visits/ Cap./Yr.	2				
7. Quality of Hospital Care (see Public Services 2)	a. No. of Doctors Staffing Emergency/Cap.	2				
	b. Mean Hospital Stay/Person	1				
	c. Ave. Occupancy/Day or % Occupied	1				
8. Racial and Sexual Discrimination (see Economy 3)	a. Ratio of Black to White Unemployment	1				
	b. Ratio of Female to Male Unemployment	1				
	c. Ratio of Black to White Income	1				
	d. Ratio of Female to Male Income	1				
	e. No. of Civil Rights Suits Filed	2				
9. Family Disruption (see Demography 11)	a. No. of Divorces Filed/ Cap./Yr.	27				
	b. % of One Adult Families	1				
10. Education (see Public Services 1)	a. Rate of School Dropouts/ yr.	1				
	b. Mean Score of Students on National Achievement Tests	3				

SOCIAL IMPACT DESIGN VARIABLES

Project_____
Date_____
Parameter Social Well-being

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
10. Education (see Public Services 1) (Cont.)	c. Ratio of Mean Score to National Mean	3				
	d. Students/Special Education Class	4				
	e. Accreditation Rating	4				
	f. Mean Education Level of Teachers	4				
11. Preschool/Daycare	a. No. of Applicants	3				
	b. No. of Facilities	1				
	c. Pupil/Teacher Ratio	2				
12. Library Use (see Public Service 14)	a. Mean Daily Attendance	3				
	b. Books Checked Out/Day/Cap. (circulation)	2				
	c. Mean No. of Information Calls/Day	2				
13. Recreation Use (see Public Services 11-13)	a. Mean Attendance at Parks/Day	2				
	b. Mean Attendance at Park Programs/Day	4				
	c. Swimming Pool Use/Day/Capita	2				
	d. Mean Cinema Admissions/Cap./ Wk	2				
14. Employment (see Economy	Gross Labor Turnover Rate/Yr.	2				
15. Poverty (see Public Services 9)	a. % of All Families Below The Official Poverty Line	1				
	b. No. of People/Capita Receiving Soc. Security, SSSI, Pensions, Child Support	2				

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SOCIAL IMPACT DESIGN VARIABLES

Project _____

Date _____

Parameter Social Well- being

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
16. Quality of Housing (see Social Structure 5, 6)	a. % of Housing Units- Dilapidated, Standard, Deteriorated	1				
	b. % of Housing Units Without Plumbing	4				
	c. % Housing Owned, Rented	2				
	d. No. of Habitable Rooms/ Cap.	2				
17. Housing Values (see Demography 12)	Mean and Median Housing Value	2				
18. Property Improvements	a. Mean Sq. Ft. Floorspace Added	3				
	b. No. of Demolitions/Cap.	1				
	c. No. of Building Permits By Type/Cap.	1				
	d. Mean Amount of $ Spent on Improvements	3				
19. Reported Fires (see Public Services 6)	a. No. of Fires/Cap./Sq. Mi.	1				
	b. Amount of Damage/Cap./ Sq. Mi.	2				
20. Transportation Quality (see Public Services 6)	a. Vehicle Mi. Travelled/ Cap.	2				
	b. No. of Moving Violations/ Cap.	2				
	c. No. of Parking Violations/Cap.	2				
	d. No. of Accidents by Type/ Cap.	1				

SOCIAL IMPACT DESIGN VARIABLES

Project _____

Date _____

Parameter Social Well - being

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
21. Utilities (see Public services 16, 17, 18, 19, 20)	a. Ratio of Water Consumption (in gal.) to Water Supply or Amount Purified.	1				
	b. No. of Shutoffs/Yr./ Existing Customers 1. Electric 2. Gas 3. Water 4. Telephone	2				

SOCIAL IMPACT DESIGN VARIABLES

Project
Date
Parameter Economy

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
1. Job Opportunities	a. In General and Project Specific: % Unskilled Jobs, Semi-Skilled, Clerical/Sales Managerial, Professional Jobs That Are Vacant	2				
2. Job Distribution	a. In General and Project Specific, % of all Available Jobs That Are: unskilled semiskilled, skilled, clerical/sales, managerial, professional	2				
3. Employment Level (see Social Well-being 8)	a. % of Labor Force Employed	1				
	b. % of Women in Labor Force	1				
	c. % of Persons Over 65	1				
4. Gross Community Product	a. Gross Community Income/ Yr.	3				
	b. Value Added by Manu-facturing	3				
	c. Value Added by Agricul-tural Products	3				
5. Gross Community Product Growth	% Rate/Yr. of Community Income for 10 Years	4				
6. Property Tax Base	a. Total Value of Assessed Real Property	4				
	b. Total Value of Assessed Personel Property (given value) % assessed	4				

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SOCIAL IMPACT DESIGN VARIABLES

Project _____
Date _____
Parameter Economy

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
7. Financial Inflow From the Federal Government	a. Amount of Federal Revenue Sharing/Yr.	3				
	b. Amount of Direct Federal Aid to Impact Area /Yr.	2				
	c. Amount of Federal Monies Received/Yr.	2				
8. Price Level	Consumer Price Index for the Community	4				
9. Public Revenues	a. Total Revenues Collected by All Government Units In past Yr./Cap.	3				
	b. Sales Tax/Capita	2				
10. Household Consumption (see Social Structure 2)	Income Spent/Capita	1				
11. Retail Trade	a. No. of Businesses/Capita	1				
	b. $ of Retail Trade/Capita	1				
	c. No. of New Business/ Capita in Past Yr.	2				
12. Distance From Work	Ave. Time Travelled/Capita	3				

SOCIAL IMPACT DESIGN VARIABLES

Project _____
Date _____
Parameter Economy

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
13. Site Activity (see Demography 3)	a. Acres/Zoning Category	1				
	b. % Of Acres With Zoning Change in Past Year	2				
14. Land Values	Dollars/Acre/Capita	1				
15. Subdivision Activity	a. No. of Tracts Developed	2				
	b. No. of Tracts Sold	2				
	c. No. of Sites Platted/Yr.	1				
16. Financial Activity	a. $ Amt. Bank Deposits	2				
	b. $ Amt. Time Deposits	2				
	c. $ Amt. Loans Current	2				

SOCIAL IMPACT DESIGN VARIABLES

Project _____

Date _____

Parameter Social Structure

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
1. Educational Attainment (see Social Well-being 10, Public Services1)	a. Mean and Median Educational Attainment of People over 25	1				
	b. % of H.S. Graduates	1				
	c. Mean Daily Attendance	2				
2. Socioeconomic Status (see Economy 10)	a. Mean Occupational Status of the Work Force	3				
	b. Median and Mean Gross Family Income	2				
3. Kin Ties	Av. No. Visits/Mo.	2				
4. Ethnic Identification (see Demography 9)	No. Languages Spoken in the Community	2				
5. Housing Availability	No. of Unoccupied Dwelling Units/Cap.	3				
6. Housing Space (see Social Wellbeing 16-18)	a. Mean D.U. Size. (Sq. Ft.) Cap.	3				
	b. % of D.U. That Are: single family, mobile home, apartments, duplex	1				
7. Residential Stability (see Demography 3)	a. Mean Length of Occupancy of All D.U.	1				
	b. % of D.U. Owner-Occup.	1				
8. Mass Media	a. Combined Circulation/Cap. of All Newspapers	2				

SOCIAL IMPACT DESIGN VARIABLES

Project _____

Date _____

Parameter Social Structure

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
8. Mass Media (cont.)	b. No. of TV Channels in Area	2				
	c. No. of Radio Stations	2				
9. Civic Associations (bus., prof., service, educ., ethnic, rec., culture)	a. No. of Associations/Cap.	2				
	b. Total Memberships/Cap. of All Associations	3				
	c. Yrs. of Residency of Office Holders	4				
10. Political Participation (see Community Response)	a. % of Eligible Persons Who are Registered	1				
	b. % Registered Who Voted Last General Election	2				
	c. Turnover Rate in Local Election the Previous Year	2				
	d. No. of Bond Issue/Yr.	2				
11. Local Government Size	a. Total No. of Government Employees/Cap.	2				
	b. % For Each Category	2				
	c. Total Program Budget of All Units/Cap.	3				

SOCIAL IMPACT DESIGN VARIABLES

Project _____
Date _____
Parameter Community Response

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
1. Public Issues	a. No. of Public Issues (related to community as a whole) That Receive Media Attention/Yr.	3				
	b. No. of Public Interest Lawsuits Filed/Cap./Yr.	2				
	c. No. of Appeals to Gov. Decision/Cap.	3				
2. Organizational Activities	a. No. of Organizations Making Public Statements on Issues/Cap./Yr.	1				
	b. Amt. of Financial Contributions by Organizations to Programs or Other Activities in Community/Cap./Yr.	2				
	c. No. of Programs or Other Activities Initiated by Organizations/Cap./Yr.	4				
3. Political Activities (see Social Structure 10)	a. No. of Petitions and Initiatives Filed/Cap./Yr.	2				
	b. No. of Political Movements/Cap./Yr.	4				
	c. No. of Political Protests and Demonstrations/Yr.	3				
	d. Voting Results on Bond Issues	2				
4. Government Programs (see Social Structure 11)	a. No. of New Government Program/Cap./Yr.	4				
	b. No. of Existing Government Programs Exp./Cap./Yr.	4				
	c. Amt. of Increased Exp/Cap./Yr. (for new or exp. pro.)	3				

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SOCIAL IMPACT DESIGN VARIABLES

Project _____

Date _____

Parameter Community Response

IMPACTED VARIABLES (dependent)	INDICATORS	PRIORTY	SOURCE AND UNIT	VALUE	TIME TO COLLECT	COST
5. Community Planning	a. Existence of Planning Program or Dept.	1				
	b. No. of Employees In Local Planning Dept./Cap.	2				
	c. Total Budget of Local Planning Dept./Cap./Yr.	2				

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