

728.1
R15r
1978/79
c.3

SIXTH ANNUAL REPORT

of the

HOUSING ASSISTANCE SUPPLY EXPERIMENT

Sponsored by

The Office of Policy Development and Research
U.S. Department of Housing and Urban Development

October 1978 — September 1979

R-2544-HUD
May 1980

Rand
SANTA MONICA, CA 90406

The research reported here was performed pursuant to Contract No. H-1789 with the Office of Policy Development and Research, U.S. Department of Housing and Urban Development. Statements and conclusions in this report are those of Rand's research staff and do not necessarily reflect the views of the sponsoring agency.

ISSN 0190-8030
ISBN 0-8330-0198-1

The Rand Publications Series: The Report is the principal publication documenting and transmitting Rand's major research findings and final research results. The Rand Note reports other outputs of sponsored research for general distribution. Publications of The Rand Corporation do not necessarily reflect the opinions or policies of the sponsors of Rand research.

Published by The Rand Corporation

DEPARTMENT OF HOUSING
AND URBAN DEVELOPMENT

AUG 14 1991

LIBRARY
WASHINGTON, D.C. 20410

SIXTH ANNUAL REPORT

of the

HOUSING ASSISTANCE SUPPLY EXPERIMENT

Sponsored by

The Office of Policy Development and Research
U.S. Department of Housing and Urban Development

October 1978 — September 1979

R-2544-HUD
May 1980

Rand
SANTA MONICA, CA. 90406

PREFACE

This report was prepared for the Office of Policy Development and Research, U.S. Department of Housing and Urban Development (HUD). It describes the progress of the Housing Assistance Supply Experiment (HASE) during its sixth year of field operations, October 1978 through September 1979.

The experiment is conducted by The Rand Corporation under a contract with HUD. A fullscale housing allowance program was mounted under Rand's supervision in each of two midwestern metropolitan areas in order to learn about the effects of such a program on local housing markets. At the end of September 1979, the allowance program had been operating for 63 months in Brown County, Wisconsin, and for 57 months in St. Joseph County, Indiana.

This report continues the history of the Supply Experiment presented in prior annual reports, summarizing the progress of the allowance programs and the research activities conducted in conjunction with them. The research is based on both program records and an annual cycle of field surveys addressed to the owners and occupants of a marketwide sample of residential properties in each site. A major part of Rand's work has been supervising the allowance programs and the field surveys and assembling both program and survey data into accurate machine-readable research files. This report summarizes our progress in developing and analyzing the data, but does not, except incidentally, discuss research findings; these are presented separately in topical reports, published as they are completed.¹ The report also explains our plans for completing the experiment in September 1981.

Conducting the Supply Experiment during the past year has required close cooperation among a number of institutions and dedicated efforts by their staffs. We are grateful for their support, advice, and technical contributions. The institutions are HUD's Office of Policy Development and Research, the sponsoring agency; local governments and housing authorities in Brown and St. Joseph counties, where the experiment is being conducted; the housing allowance offices, nonprofit corporations established in those places to administer the experimental programs; and HUD's Region V office (Chicago), which administers the annual contributions contracts under which the two allowance programs operate. We regret that the individuals of these institutions who have earned our respect and gratitude are too numerous to name here.

We are also heavily indebted to the many citizens of Brown and St. Joseph counties who granted us lengthy interviews—some as often as four times—in the interests of policy research whose benefits to them were remote; and to the participants in the experimental programs who cooperated with research inquiries beyond their obligations as allowance recipients. Besides the inconveniences entailed in our inquiries, both groups have entrusted us with personal information whose confidentiality we have and will continue to guard meticulously.

We should also record our appreciation for the careful work of other organizations who have contributed directly or indirectly to our research. These include

¹ Appendix A lists 168 currently available publications of the Housing Assistance Supply Experiment, including the five preceding annual reports.

survey research organizations who conducted fieldwork for Rand during the earlier years of the experiment: Urban Opinion Surveys, a division of Mathematica, Inc., who conducted the first cycle of surveys in Brown County; the National Opinion Research Center of the University of Chicago, who conducted the remaining three cycles there; Westat, Inc., who conducted all four cycles in St. Joseph County; and Chilton Research Services, Inc., who conducted a special survey in both counties during 1979 under contract to the housing allowance offices. Others who have been helpful in various stages of the experiment are Abt Associates, Inc., contractors to HUD for the Housing Assistance Demand Experiment and the Administrative Agency Experiment; and The Urban Institute, contractors to HUD for an integrated analysis of data from all the experiments.

This report draws directly or indirectly on material prepared by Rand's staff for the Supply Experiment over a period of nearly eight years, a group now numbering several hundred current or former members. Those active in 1979 are listed in Appendix D. Ira S. Lowry, principal investigator of the Supply Experiment, planned and edited this report with the assistance of Donna Betancourt. Others helped organize the material and drafted portions of the text.

The account of program developments in Sec. II is based mostly on material supplied by the housing allowance offices and collated by Iao Katagiri of Rand. This section was reviewed by Daniel J. Alesch and Thomas W. Weeks, Rand's site managers for Brown and St. Joseph counties; by Lars Larson and Hollis Hughes, directors of the two housing allowance offices; and by Gene Rizer, formerly director of the Brown County housing allowance office and now a member of Rand's Field and Program Operations Group.

The account of research activities in Sec. III is based on material prepared by or under the supervision of the HASE group managers: Douglas Scott for the Survey Group, Donald P. Trees for the Survey Data Preparation Group, Susan C. Augusta for the Data Systems Group, Wayne Hansen for the File Development Group, C. Lance Barnett for the Analysis Group, and Charlotte Cox for the Publications Group.

The draft report was reviewed by G. Thomas Kingsley, Rand's program director for housing studies; Gene H. Fisher, head of Rand's Management Sciences Department; and Barbara R. Williams, deputy vice president for Washington Operations. In HUD's Office of Policy Development and Research, the draft was reviewed by Howard M. Hammerman, government project manager for HASE. All made helpful comments. Gwen Shepherdson prepared the draft typescript and tables. Penny Post edited the typescript, and Judy Rasmussen supervised production of the report. Graphics were prepared under the supervision of Ronald Miller.

This report was prepared pursuant to HUD Contract H-1789 as amended through 29 September 1978, and fulfills the requirements of Task 2.13.6 of that contract.

SUMMARY

The Housing Assistance Supply Experiment (HASE) is one among several elements of the Experimental Housing Allowance Program (EHAP) begun in 1972 by the Office of Policy Development and Research, U.S. Department of Housing and Urban Development (HUD). Specifically authorized by Congress, EHAP was undertaken to learn whether direct cash assistance to low-income households is a feasible and desirable way to help them secure decent housing in a suitable living environment; and if so, to help determine the best terms and conditions for such assistance and the most efficient and appropriate methods for its administration.

HASE was designed primarily to study market and community response to a fullscale housing allowance program—one that was open to nearly all low-income renters and homeowners. Under contract to HUD, The Rand Corporation organized and supervised such a program in two midwestern housing markets. The program began in Brown County, Wisconsin (whose central city is Green Bay), in 1974, and in St. Joseph County, Indiana (whose central city is South Bend), in 1975. In addition to monitoring allowance program events by means of administrative records, Rand has monitored local housing markets by means of annual interview surveys with the owners and occupants of marketwide samples of residential properties, as well as less frequent field observation of the properties and the neighborhoods.

This report summarizes events in each allowance program and describes Rand's research activities during the year ending 30 September 1979. It provides current program statistics, indicates the status of each element of the complex data base, and explains the overall research strategy. Specific research findings are reported in the technical monographs listed in Appendix A.

THE HOUSING ALLOWANCE PROGRAM

The allowance program is open to all families and most single persons in the two counties who are unable to afford the standard cost of adequate housing on the local market without spending more than a fourth of their adjusted gross incomes. Each enrolled household receives monthly cash payments equal to the "housing gap" thus calculated, provided that the dwelling it occupies meets minimum standards for space, domestic facilities, safety, and sanitation.

Both renters and homeowners may participate in the program, and participants may change tenure or place of residence (within the program's jurisdiction) without loss of benefits. Participating renters are responsible for locating suitable housing, negotiating with landlords over rent and conditions of occupancy, paying the rent, and seeing that their dwellings are maintained to program standards. Participating owners are entirely responsible for negotiating purchases and mortgage financing, meeting obligations to lenders, and maintaining their properties.

In short, the experimental allowance program provides cash assistance that enables each participant to afford decent, safe, and sanitary housing on condition that he find such housing in the private market and see that its quality is main-

tained during his occupancy. The program thus relies heavily on the participant's initiative and on normal market processes. The amount of the allowance is usually much less than, and does not vary with, actual housing expenses. Because the marginal dollar spent ordinarily comes out of his nonallowance income, the participant has a motive to seek the best bargain he can find on the local market.

The program is funded by a ten-year annual contributions contract between HUD and a local housing authority in each site. That authority in turn delegates program operations to a nonprofit corporation established by Rand, the housing allowance office (HAO). The HAO enrolls eligible applicants, evaluates their housing, and disburses payments to participants.

Enrollment and Participation

At the end of September 1979, the experimental allowance program had operated for 63 months in Brown County and 57 months in St. Joseph County. Altogether, nearly 24,800 households had been enrolled in the two sites and nearly 19,800 had received one or more allowance payments. Currently, about 11,300 households (9 percent of all households in each site) are enrolled and over 9,400 are receiving monthly payments.

Population differences between the sites are reflected in the characteristics of both eligible and enrolled households.¹ Among Brown County's 4,200 enrolled households, 72 percent are renters, 66 percent are headed by persons under 62 years of age, and 96 percent are headed by whites. Among St. Joseph County's 7,100 enrolled households, 48 percent are renters, 56 percent are nonelderly, and 75 percent are white. In both counties, 46 percent of the enrolled households consist of single persons living alone and only 6 percent consist of five or more persons.

After two years during which new enrollments were nearly offset by enrollment terminations, both programs have resumed growth. Current enrollment increased by about 8 percent in each site during 1979, and September's application backlogs imply continued growth during the winter of 1979-80. The new growth seems to reflect the joint effects of inflation and layoffs in the two counties.

Allowance Payments

Overall, the programs have provided financial assistance to 11,300 renters and 8,500 homeowners. Currently, the average payment is \$86 monthly, augmenting the average recipient's gross income by 22 percent. The annual equivalent of all payments made in September 1979 is \$9.6 million.

The schedule of standard costs for adequate housing, on which allowance entitlements are based, has been revised four times in Brown County and three times in St. Joseph County to reflect inflation caused primarily by escalating energy

¹ When the program began, Brown County had about 48,000 households (1 percent nonwhite or Latin) and St. Joseph County had about 76,000 (10 percent nonwhite or Latin). Brown County's urban population was growing rapidly and its housing market was tight; home prices were high relative to rents, so most low-income households were renters. In St. Joseph County, South Bend contained nearly all the racial minorities (19 percent of its households) and was losing over 2 percent of its population annually. Vacancy rates were high and home prices were low relative to rents, so relatively more low-income families owned homes than in Brown County; moreover, about 12 percent of all renters in the county lived in federally subsidized dwellings (public housing, rent supplements, Sec. 236), and so were ineligible for allowance payments.

prices. When the next revision in St. Joseph County's schedule goes into effect (January 1980), the average allowance payment in both sites will have increased by nearly 30 percent since September 1976, the combined effect of upward schedule revisions and partially offsetting increases in client incomes.

Housing Improvement

Nearly half of all enrollees join the program while living in dwellings that meet program standards, so their allowances mainly help them meet existing housing expenses (which usually exceed the legislative norm of one-fourth of adjusted income). But over 10,000 dwellings have been repaired or improved to meet program standards and over 5,000 households have improved their housing circumstances by moving. About 300 renters have purchased homes after enrolling in the program.

Although housing defects are common, most are quickly and inexpensively repaired by enrollees eager to qualify for payments. Cumulatively, about two-thirds of all initially defective dwellings (those occupied at enrollment plus the prospective residences evaluated at enrollees' requests) have been successfully repaired by the occupants or their landlords. Among those who repair, three out of four report cash outlays of less than \$30; the median outlay is only \$10. One reason cash expenses are low is that nearly nine-tenths of the repairs are done with unpaid labor provided by the occupant, his friends, or his landlord; the cash outlays are mostly for materials.

Annual reevaluations of recipients' dwellings show that a fifth in Brown County and a third in St. Joseph County again need repair, usually of items judged acceptable a year earlier. It thus appears that periodic rechecks of the condition of recipients' dwellings are needed to ensure that they remain free of hazards to health, safety, and decency.

Program Administration

The housing allowance offices are responsible for outreach, enrolling qualified applicants, evaluating enrollees' dwellings, and making monthly payments to those in acceptable dwellings. They also periodically recheck eligibility and dwelling quality.

At first, outreach and enrollment dominated HAO workloads. However, by the end of the third program year, services to existing clients accounted for more than half the work (currently about 60 percent). During 1979, the workload increased by about 10 percent due both to increased intake and more continuing clients. In Brown County the large workload was handled by a smaller staff, administrative costs dropping by 4 percent. In St. Joseph County, the staff was slightly increased and costs rose by 8 percent.

Rand's oversight of the Brown County HAO ended in June 1979 and the site office was closed in September. The program will continue until 1984 under the guidance of local trustees, who contemplate no significant changes in rules or administrative organization. A similar transition to local control in St. Joseph County is scheduled for March 1980.

THE RESEARCH PROGRAM

To determine the effects of housing allowances on the housing markets and communities in which the experimental allowance program operated, Rand embarked in 1973 on an ambitious program of data collection, now virtually complete. Four annual cycles of field surveys were conducted in each site, yielding detailed time-series of data on the owners, occupants, and characteristics of about 7,000 empaneled dwellings on over 4,000 residential properties in the two sites combined. The Brown County HAO has delivered administrative records covering transactions with over 9,000 enrollees during the first five years of program operations; the final installment of similar records from the St. Joseph County HAO, covering over 15,000 enrollees, will be delivered to Rand early in 1980. Two supplemental surveys were conducted in 1979 to fill evident gaps in our knowledge of program effects.

All of the annual survey data and four-fifths of the program data have been edited and organized into research files. Each file is being audited to assess the completeness and reliability of the data, and augmented by adding analytically useful derived variables. As this process is completed, the files and their supporting documentation will be delivered to HUD, which plans to make them available for public use. The complete set will comprise the most comprehensive data ever compiled for either a local housing market or a transfer program.

The original research charter of the Supply Experiment focused almost exclusively on the market and community effects of a fullscale allowance program. That charter was expanded in 1976 to include research on program administration, and again in 1978 to include studies of program eligibility and participation and the program's effects on participants. This agenda was embodied in a contract funding the final three years of the experiment, which was signed in September 1978. During 1979, HASE staff developed plans for the final round of analysis and reports and began work pursuant to those plans. The research findings are to be integrated into a comprehensive final report that will be submitted to HUD in mid-1981 and made available to the public as soon thereafter as is feasible.

In the meantime, preliminary results have been presented in briefings to HUD staff and others, in papers delivered at professional conferences, and in research notes and reports published by Rand. During 1979, HASE staff made 19 oral presentations, and published 24 research notes and 6 research reports. Nine papers were accepted for publication in professional journals or conference proceedings.

The research staff of HASE is organized according to function. Different groups are responsible for specific phases of data collection, preparation, and management; others analyze the data and prepare reports for publication. The accomplishments of each group during 1979 are summarized below.

Surveys

During 1978, the Survey Group completed its main agenda: designing and conducting interview and field observation surveys pertaining to marketwide samples of residential properties in Brown and St. Joseph counties. In 1979, two additional surveys were conducted under its guidance: a survey of the landlords of HAO clients, to obtain data on program-related repairs; and a survey of enrollees who left the program without ever qualifying for payments, to obtain data on their reasons for dropping out.

Altogether, the group (consisting at peak of 16 professionals) has supervised 32 complex surveys for HASE. Its work complete except for some remaining documentation, the group is phasing out. In September 1979, its staff consisted of only 3 part-time persons.

Survey Data Preparation

The Survey Data Preparation Group receives hardcopy survey field reports, codes open-ended responses, edits all response fields, and transcribes the reports into machine-readable records. During 1979, this group completed its work on the final cycle of field surveys in St. Joseph County, as well as on one of the two supplemental surveys mentioned above.

At its peak, the group consisted of 24 professionals and 75 part-time coders, editors, and data entry operators. It has processed 365,000 survey documents containing over 103 million response fields, coded nearly 1.5 million verbatim entries, and resolved nearly 1.1 million error reports. Its remaining tasks (hardcopy disposition, procedural documentation, residual problem resolution) will be handled by a small staff during 1980.

Data Management

Nearly all HASE data are stored and processed by machine. The Data Systems Group performs these operations for three major classes of data: survey field reports, HAO administrative records, and survey sampling records. The group has compiled and reformatted records of the 32 field surveys and the first four years of allowance program operations. Duplicates of the completed files are archived in separate storage locations to insure against accidental loss. Survey sampling records, which trace the history of each sample element through repeated annual surveys and were used to generate each year's field materials, have been finally updated and the file has been closed.

However, this group's workload increased by about 50 percent during 1979. In addition to work on the final wave of surveys, the fourth year of program records, and the survey sampling records, the group programmed 1,377 data processing requests from the File Development and Analysis Groups and supervised 40,201 computer jobs for HASE. The present staff of 13 programmers and supervisors will be needed throughout 1980.

File Development and Documentation

Early in 1979, a newly formed File Development Group was assigned the task of auditing all postbaseline survey files and the research files created from allowance program records to assess the completeness and reliability of the data and, in the case of sample surveys, to weight individual records to reflect sampling probabilities. In addition, they undertook to create some 5,300 analytically useful variables derived from raw survey responses and other sources. Finally, they are responsible for compiling or completing codebooks and audit reports for each research file.

During 1979, the group completed sample accounting on all four survey waves in each site and began a longitudinal audit of each sample element's records. About

half of the 5,300 derived variables were completed and added to the appropriate files. A new file structure was designed for HAO records and the first three years of data were compiled in the new format. Ten codebooks and four audit reports were published during the year. The current staff of 23 will work during 1980 to complete file development and documentation for all but the final year of HAO records, which will not be ready until 1981.

Analyzing Experimental Data

Early in 1979, the Analysis Group was reorganized to accommodate its revised research agenda (see above, p. viii). Teams were formed to address four topical areas: market effects, community attitudes, eligibility and participation, and effects on participants. Each team planned and began a coherent series of analyses leading to final topical reports, all to be completed by mid-1981.

During 1979, the market effects team completed its analysis of rent inflation during the first three program years, compiled four-year income and expense accounts for rental properties, constructed hedonic indexes for rental housing services, completed studies of market intermediaries, residential mobility, and housing search patterns, and began work on a study of neighborhood change.

Early in 1979, the community attitudes team completed its initial round of analysis, using the first two years of program and survey data to report on program knowledge and attitudes among clients, landlords, the general public, public officials, and the media. The rest of the year was spent assembling data for a final round of analysis to be conducted in 1980.

Our charter for research on eligibility and participation was enlarged in September 1978 to encompass formal modeling of the processes entailed in eligibility turnover, the decision to apply for assistance, and subsequent choices by enrollees that determine their program status. By September 1979, the work on eligibility and the decision to apply had progressed far enough to support an interim report. Work on postenrollment processes was under way.

Also in September 1978, the charter was broadened to allow analyses of participants' responses to the allowance program, including housing expenditure changes, housing repairs or improvements, and moving. Although it is relatively easy to measure what participants did after enrolling, distinguishing the program's influence on their actions from the influence of other factors is more difficult.² During 1979, the participant effects team undertook exploratory analysis of housing expenditures, repairs, and moving, and developed methods for causal inference. Interim reports on income-expenditure effects and repair activity were completed during the year.

During 1980, the workload of the Analysis Group will increase as the final data sets become available and the deadline for completing analyses approaches. We expect to continue at current staffing levels (15 persons) through September 1980.

² The Housing Allowance Demand Experiment was designed specifically to analyze program effects on participants and has done so by varying treatments (program rules) and comparing the variously treated groups with untreated control groups of households. The Supply Experiment, designed to study market effects, operated open enrollment programs under uniform rules in both sites, so it has neither treatment variations nor control groups as analytical resources. However, compared to the Demand Experiment, it has a much larger number of enrollees, includes owners as well as renters, has a longer period of assistance, and has much more information about the population from which enrollees were drawn.

In 1981, the senior members of each team will integrate topical and interim findings into a comprehensive final report.

Analyzing Program Administration

The Field and Program Operations Group has been mainly occupied with supervising the operations of the HAOs and interfacing between them and HUD. But in 1978 this group completed a series of studies of program administration (costs, reliability, effectiveness), and during 1979 began planning for a final round of analysis to be conducted in 1980. One report, on the reliability of the means test administered by the HAOs, was published during 1979.

Reporting the Findings

The Publications Group consists of editors, technical typists, and artists who prepare draft notes and reports for publication and supply visual aids for briefings. Altogether, this group has supervised production of over 200 documents for HASE, including 34 published during 1979. Between now and September 1981, another 100 documents are planned.

Although that agenda is formidable, the research, writing, and production on each document have been scheduled in some detail. Barring major interruptions to the flow of work, the Supply Experiment should be completed on schedule and all its findings and data should be available to the public early in 1982.

CONTENTS

PREFACE.....	iii
SUMMARY	v
FIGURES	xv
TABLES	xvii
Section	
I. INTRODUCTION AND OVERVIEW	1
Elements of the Experimental Housing Allowance Program	1
Research Objectives of the Supply Experiment.....	3
Organization of the Experiment.....	5
The Experimental Sites.....	5
The Allowance Program	6
Research Design	9
Historical Background for This Report	13
II. THE HOUSING ALLOWANCE PROGRAMS.....	15
Enrollment and Payment Authorizations	15
Characteristics of Enrollees.....	17
Benefit Standards and Payments	20
Enforcing Housing Standards	24
Program Administration.....	29
Preparations for Transition	32
III. THE RESEARCH PROGRAM.....	33
Surveys	34
Survey Data Preparation	38
Data Management	40
File Development and Documentation	41
Analyzing Experimental Data.....	47
Analyzing Program Administration	51
Reporting the Findings	51
Appendix	
A. HOUSING ASSISTANCE SUPPLY EXPERIMENT PUBLICATIONS	55
B. CHRONOLOGY OF MAJOR EVENTS.....	68
C. ORGANIZATION OF THE HOUSING ASSISTANCE SUPPLY EXPERIMENT	87
D. RAND'S STAFF FOR THE HOUSING ASSISTANCE SUPPLY EXPERIMENT	91

FIGURES

2.1.	Households enrolled and receiving payments: housing allowance programs in Brown and St. Joseph Counties, 1974-79.....	18
2.2.	Selected characteristics of enrollees by enrollment date: housing allowance programs in Brown and St. Joseph counties	19
C.1.	Rand's project organization for HASE.....	88
C.2.	Organization of the housing allowance office for Brown County...	89
C.3.	Organization of the housing allowance office for St. Joseph County	90

TABLES

2.1.	Selected Enrollment and Payment Authorization Statistics: Housing Allowance Programs in Brown and St. Joseph Counties through September 1979.....	16
2.2.	Selected Characteristics of Currently Enrolled Households: Housing Allowance Programs in Brown and St. Joseph Counties, September 1979.....	21
2.3.	Standard Cost of Adequate Housing by Size of Household: Housing Allowance Programs in Brown and St. Joseph Counties, 1974-79.....	22
2.4.	Participants' Incomes and Allowance Payments: Housing Allowance Programs in Brown and St. Joseph Counties, 1976-79..	23
2.5.	Results of Housing Evaluations for Newly Enrolled and Reinstated Households: Housing Allowance Programs in Brown and St. Joseph Counties through September 1979.....	25
2.6.	Results of Housing Evaluations for Recipient Households: Housing Allowance Programs in Brown and St. Joseph Counties through September 1979.....	27
2.7.	Housing Evaluation Failure and Repair Rates by Year Evaluation Was Conducted: Housing Allowance Programs in Brown and St. Joseph Counties through September 1979.....	28
2.8.	Administrative Workload, Costs, and Staffing: Housing Allowance Programs in Brown and St. Joseph Counties, 1977-79.....	31
3.1.	Field Results of Supplemental Survey of Landlords Whose Tenants Were Allowance Recipients: St. Joseph County, 1979.....	35
3.2.	Field Results of Supplemental Survey of Terminees: Housing Allowance Programs in Brown and St. Joseph Counties, 1979.....	37
3.3.	Survey Data Preparation Workload for St. Joseph County, Wave 4.....	39
3.4.	Summary of Survey Data Preparation Workload, 1975-79.....	40
3.5.	Statistical Summary of HASE Interview Surveys: Brown and St. Joseph Counties, Survey Waves 1-4.....	43
3.6.	Statistical Summary of Field Observation and Public Record Surveys: Brown and St. Joseph Counties, Survey Waves 1-4.....	44
3.7.	Number of Oral and Written Publications Produced by HASE: October 1971 through September 1979.....	52
B.1.	Chronology of Major Events in Site I: Housing Allowance Program.....	69
B.2.	Chronology of Major Events in Site I: Research Program.....	72
B.3.	Chronology of Major Events in Site II: Housing Allowance Program.....	78
B.4.	Chronology of Major Events in Site II: Research Program.....	81

I. INTRODUCTION AND OVERVIEW

The Housing Assistance Supply Experiment (HASE) is one among several elements of the Experimental Housing Allowance Program (EHAP) undertaken by the Office of Policy Development and Research, U.S. Department of Housing and Urban Development (HUD). The program is intended to help HUD decide whether direct cash assistance to low-income households is a feasible and desirable way to help them secure decent housing in a suitable living environment; and if so, to help determine the best terms and conditions for such assistance and the most efficient and appropriate methods for administering such a program.¹

The experiment is being conducted by The Rand Corporation under contract to HUD. It has entailed organizing and operating a fullscale housing allowance program in two midwestern communities and monitoring both program operations and the local housing markets. At the end of September 1979, the program had been operating for 63 months in Brown County, Wisconsin, and for 57 months in St. Joseph County, Indiana. Rand's monitoring responsibilities have ended in Brown County and will end in St. Joseph County early in 1980, although the allowance programs will operate until 1984. The experiment's final report is due in September 1981.

The first four annual reports recounted the progress of the experiment and summarized its interim research findings. As research findings have grown in volume and complexity, such summarization has become increasingly difficult. Consequently, the fifth and subsequent annual reports only describe program and research activities during the preceding year, leaving research findings to appear separately in a series of topical reports that will be integrated in the experiment's final report.

For those unfamiliar with the experiment, this section explains its background, its research objectives, and the main features of the experimental design. Section II describes the current status of each allowance program, highlighting changes during the past year and plans for turning program administration over to local control at the end of the monitoring period. Section III summarizes research activities during the year—data collection, processing, management, and analysis—and explains our plans for the orderly completion of the experiment in 1981.

ELEMENTS OF THE EXPERIMENTAL HOUSING ALLOWANCE PROGRAM

Most federal programs of housing assistance for low-income families channel public funds directly to a local housing authority, a private landlord or developer, or a mortgage lender, to help support specific housing units to be occupied by low-income tenants. A contractual agreement between the federal agency and the

¹ Office of Policy Development and Research, U.S. Department of Housing and Urban Development, *First Annual Report of the Experimental Housing Allowance Program*, Washington, D.C., May 1973, pp. i-ii.

supplier of housing services usually regulates both the services to be provided to the tenants and the prices the tenants may be required to pay for them.

A housing allowance program would operate differently. Public funds would be granted directly to low-income families who would then use their increased resources to buy services in the local housing market. The intent of such a program would be to enable recipient families to afford an adequate level of housing consumption without depriving themselves of a reasonable standard of living in other respects. It is thus important to anticipate how recipients would respond to the opportunity afforded them by a housing allowance. For most, the allowances would function as rent supplements, the recipients also contributing toward the cost of their housing. Depending on the form of the allowance (cash grant, rent certificate) and its terms (percent of actual rent, percent of income), and on the restrictions placed on the housing a recipient may occupy (rent level, quality level), the public contribution could be made nonfungible, partially fungible, or entirely fungible with the remainder of the recipient's resources, and he would be given more or less discretion in choosing his level of housing expenditure and the characteristics of his dwelling.

To learn how recipients respond to alternative amounts and forms of assistance, HUD sponsored a Housing Assistance Demand Experiment. Briefly, the experiment entailed selecting a sample of 1,250 low-income renter households in each of two large metropolitan areas² for enrollment in a housing allowance program. Subsamples of the enrollees received allowances on different terms, as suggested above. Another 550 renter households who did not receive allowances served as "controls" for the treated families. The housing choices and budgetary decisions of both groups were monitored for three years.

Because the number of allowance recipients was small relative to the total population—or even to the total low-income population—of the housing markets in which the Demand Experiment operated, those markets were not noticeably perturbed by the allowance program. Neither suppliers of housing services, nor market intermediaries, nor nonrecipient families were likely to be aware of, or significantly affected by, the efforts of allowance recipients as a group to obtain better housing. Although those circumstances served the specific purposes of the Demand Experiment, they also made it different from a fullscale program of housing allowances, which would enroll all low-income families who chose to participate.

The Supply Experiment is designed to test the market's response to a fullscale allowance program. Such a program was mounted in each of two metropolitan housing markets, selected for their contrasting market characteristics. In each case, housing allowances were offered for a ten-year period to most of the low-income households (both renters and owners) who would probably be eligible under a fullscale housing allowance program—some 15 to 20 percent of all households in each market.³ Program and survey data combine to reveal how many of those who

² The Demand Experiment was conducted in Pittsburgh, Pennsylvania, and Phoenix, Arizona. Preliminary findings are reported in Helen E. Bakerman, Stephen D. Kennedy, and James Wallace, *Housing Allowance Demand Experiment, Fourth Annual Report*, Abt Associates, Cambridge, Massachusetts, December 1977.

³ Naturally, the results of both the Demand and Supply experiments are likely to modify a priori judgments as to who should be eligible for housing allowances under a fullscale program. The point is simply that those eligible in the Supply Experiment constitute a substantial fraction of the metropolitan population and include most of those who, under any reasonable standard, would be eligible under a fullscale program. Because enrollment is open to all eligibles rather than only a sample of eligibles, the Supply Experiment approximates fullscale program operations.

are eligible chose to enroll. The two local housing markets were monitored to see what happens when program participants try to turn their augmented resources into higher levels of housing consumption.

The third element of HUD's experimental program is the Administrative Agency Experiment, which was designed to explore the advantages and disadvantages of alternative institutional and administrative arrangements for delivering allowances to low-income households. For that purpose, HUD contracted with eight different agencies—local housing authorities, metropolitan governments, state housing agencies, and welfare agencies—to plan and operate two-year allowance programs for renters within their jurisdictions.⁴ Within a basic framework of program definition, each agency had wide latitude in designing and administering its own program. The agencies' experiences and operating costs were monitored to guide HUD on issues of program design.

RESEARCH OBJECTIVES OF THE SUPPLY EXPERIMENT

All the EHAP experiments are intended to provide information bearing both on the best design of a housing allowance program and on the merits and demerits of such a program as a means of improving the housing conditions of low-income households. HUD's decision to mount separate Demand, Supply, and Administrative Agency experiments was motivated by considerations of efficiency. Each experiment was designed to answer specific questions and to capture specific kinds of information; the various findings are to be integrated analytically. HUD assigned the integrative role to The Urban Institute, which participated in the design of all three experiments and has access to the data they produce.

The mission assigned to the Supply Experiment was to provide reliable and credible answers to four clusters of questions about the effects of a national housing allowance program:⁵

1. *Supply responsiveness.* How will the suppliers of housing services—landlords, developers, and homeowners—react when allowance recipients attempt to increase their housing consumption? Specifically, what mix of price increases and housing improvements will result? How long will those responses take to work themselves out to a steady state? How will the responses differ by market sector?
2. *Behavior of market intermediaries and indirect suppliers.* How will mortgage lenders, insurance companies, and real estate brokers respond to an allowance program? Will their policies help or hinder the attempts of allowance recipients to obtain better housing and those of landlords to improve their properties? What happens to the availability, price, and

⁴ The jurisdictions were Salem, Oregon; Tulsa, Oklahoma; Jacksonville, Florida; San Bernardino County, California; Springfield, Massachusetts; Peoria, Illinois; Burleigh, Stutsman, Morton, and Stark counties, North Dakota; and Durham County, North Carolina. See Frederick T. Temple and others, *Third Annual Report of the Administrative Agency Experiment Evaluation*, Abt Associates, Inc., Cambridge, Mass., AAI No. 76-66, August 1976.

⁵ In 1976, studies of program administration were added to the research charter. In 1978, Rand and HUD jointly reviewed interim findings of the experiment and rewrote the charter to reflect those findings and also new policy interests. The charter revisions are discussed in Sec. III.

- quality of building services or repair and remodeling services? What seem to be the reasons for changes in institutional or industrial policies?
3. *Residential mobility and neighborhood change.* In their attempts to find better housing (or better neighborhoods), will many allowance recipients relocate within the metropolitan area? What factors influence their decisions to move or to stay? What types of neighborhoods will the movers seek and succeed in entering? Do moves by allowance recipients set in motion a chain of moves by nonrecipients—either into neighborhoods vacated by recipients or out of neighborhoods into which recipients have moved?
 4. *Effects on nonparticipants.* How will households not receiving housing allowances—particularly those whose incomes are within or just above the limit of eligibility—be affected by the program? Specifically, will the increased housing demands of allowance recipients cause an increase in housing prices for nonrecipients? Whether or not such price increases occur, will nonrecipients perceive personal hardships or benefits from the program? How will they perceive and react to allowance-stimulated neighborhood changes?

The answers to these questions are interdependent. Whether a landlord chooses to raise rents, and whether he also chooses to offer his tenants improved housing, depends on his perception of changes in market demand and of the alternatives available to his tenants. To undertake capital improvements, he usually must seek mortgage financing. The mortgage lender must judge that the future stream of revenues will be adequate for debt service, that foreclosure will not result in capital loss, and that the property is and will continue to be insurable against damage or destruction. The extent to which their landlords raise rents or improve facilities and services will affect whether allowance recipients decide to stay, or seek other quarters better suited to their augmented budgets and housing preferences. If they seek better housing elsewhere, they are likely to be competing with nonrecipients for housing that was previously beyond their means.

Furthermore, the answers to the questions are likely to change over time. Those initially enrolled in a housing allowance program are unlikely to react immediately or simultaneously to their augmented housing budgets; consequently, the demand signals to landlords and developers will be delayed and at first unclear. The landlords will also need time to respond—whether with rent increases or housing improvement—and as market signals clarify, their responses may change. The actions of landlords and developers may, in turn, modify the perceptions and policies of market intermediaries and financial institutions. All those events, in time, may perceptibly change the alternatives open to allowance recipients and the consequences of their choices for others (e.g., nonrecipients).

Finally, different groups within the relevant populations of landlords, financial institutions, allowance recipients, and nonrecipients are likely to respond differently to a given stimulus, so that an "average" response may conceal important information. The structure and initial condition of the local housing market may also influence response patterns. The incidence of rental tenure (or of ethnic minorities) may condition responses by both renters and owners (or by blacks and whites). A market initially characterized by excess demand may respond differently from one characterized by excess supply.

Thus, though the questions can be phrased simply, the answers are likely to be both complex and highly dependent on local circumstances. No feasible set of experiments can embrace all plausible variations in circumstances or trace out all consequences. Yet if a national program of housing allowances is a serious possibility, some information about its probable consequences is manifestly better than none, and limited empirical evidence can be extended analytically to predict the unobserved. Sites for the Supply Experiment were carefully selected for contrast in market structure; data from those two sites are supplemented in the integrated analysis by data from the ten sites in which the Demand and Administrative Agency experiments are being conducted.

ORGANIZATION OF THE EXPERIMENT

Under contract to HUD's Office of Policy Development and Research, The Rand Corporation worked with HUD to design both an experimental allowance program and an agenda of research for the Supply Experiment. The allowance program will operate for ten years in each experimental site. During the first five years, now drawing to a close, Rand supervised program operations and gathered data bearing on program administration, participants' behavior, and the effects of the program on the local housing market. Generally, program and research activities have been jointly planned but separately administered. Appendix C summarizes the administrative organization of the Supply Experiment for both its program and research functions. Below, we describe the substance of each.

THE EXPERIMENTAL SITES

The Supply Experiment is being conducted in two contrasting metropolitan housing markets. Site I is Brown County, Wisconsin, a Standard Metropolitan Statistical Area (SMSA) whose central city is Green Bay. Site II is St. Joseph County, Indiana, a portion of an SMSA whose central city is South Bend.* Both are self-contained housing markets in that their boundaries are drawn through thinly populated territory at some distance both from their own central cities and from other population centers.

Those places were selected from among all the nation's SMSAs by a multistage screening process reflecting basic requirements of experimental design and constraints on program funding. Design considerations led us to search for housing markets that were likely to respond differently to the experimental allowance program yet were each typical in certain respects of a substantial portion of all metropolitan housing markets. Available program funding limited the choices to markets with populations of under 250,000 persons (about 75,000 households) in 1970, the potential size and cost of the experimental allowance program depending on the number of eligible households within the program's jurisdiction.

Brown County was selected as representative of metropolitan housing markets with rapidly growing urban centers (hence with relatively tight housing markets) and without large racial minorities (hence with minimal problems of residential

* The remainder of the SMSA is Marshall County, which contains no large cities.

segregation or housing discrimination). St. Joseph County was selected as representative of another group—metropolitan housing markets that have declining urban centers which contain large, growing populations of blacks or other disadvantaged minorities. That combination characteristically leaves low-income minority households concentrated in deteriorating central-city neighborhoods that have an excess supply of older housing, while new housing is built mostly in surrounding all-white suburbs.⁷

Although no two metropolitan areas can reflect all the important combinations of housing-market features, we believe these two offer powerfully contrasting environments for the experimental housing allowance program. By observing and analyzing similarities and differences between the sites in market responses to the program, we expect to be able to judge the pertinence of the housing allowance concept to housing problems in other metropolitan markets.⁸

THE ALLOWANCE PROGRAM

The Demand Experiment tested a carefully designed range of program features, and the Administrative Agency Experiment provided broad latitude to local agencies in program design. The Supply Experiment, in contrast, has operated identical experimental allowance programs at each of its two sites; within each site, housing allowances have been available to all eligibles on essentially the same terms and conditions.

Features to be tested in the Supply Experiment were chosen as a first approximation to those of a national program with fullscale participation. By selecting sites with contrasting market characteristics, we hoped to learn how different housing markets would respond to the same general program. The key features of our experimental program are summarized below.

Program Administration

The experimental allowance program is administered in each site by a housing allowance office (HAO), a nonprofit corporation whose trustees include members of The Rand Corporation and local residents. At the end of the five-year monitoring period, the HAO will operate entirely under local control.

Funds for the program come from a ten-year annual contributions contract between HUD and a local housing authority, pursuant to Sec. 23 of the U.S. Housing Act of 1937, as amended. The local housing authority in turn delegates operating authority for the program to the HAO.

Assistance Formula

The amount of assistance offered to an eligible household is intended to enable

⁷ The population and housing characteristics of the two experimental sites are detailed in *Third Annual Report of the Housing Assistance Supply Experiment*, The Rand Corporation, R-2151-HUD, February 1977, pp. 47-75.

⁸ Although the Demand and Administrative Agency experiments did not try to produce or measure market effects, their experience in operating allowance programs in a variety of housing markets is also relevant; See Jeanne E. Goedert, *Generalizing from The Experimental Housing Allowance Program, An Assessment of Site Characteristics*, The Urban Institute, Washington, D.C., 249-6, 1978.

that household to afford well-maintained existing housing with suitable space and facilities for family life, free of hazards to health or safety. Periodic market studies conducted by Rand in each site provide estimates of the "standard cost of adequate housing" for each size of household. Allowance payments fill the gap between that amount and one-fourth of the household's adjusted gross income, with the constraint that the amount of assistance cannot exceed the actual cost of the housing services consumed by a participant.

Eligibility for Assistance

A household is eligible to participate in the allowance program if it consists of (a) one person, either elderly (62 or over), handicapped, disabled, or displaced by public action,⁹ or (b) two or more related persons of any age; provided also that current income and assets are within specified limits and that the household does not already receive equivalent assistance under another federal housing program. The income limit is set by the assistance formula itself: When adjusted gross income exceeds four times the standard cost of adequate housing for a given household size, allowance entitlement drops to zero. The net asset limit was initially \$32,500 for households headed by elderly persons and \$20,000 for others; those amounts were subsequently increased to offset general price inflation.¹⁰

Adjustments to gross income generally follow those of the federal public housing program, with deductions for work-related expenses and for dependents and elderly persons. Transfer income (e.g., public assistance and social security) is included in gross income. An unusual feature of the program is that the asset ceiling has been set relatively high to include homeowners whose current incomes are low. However, gross income is calculated to include imputed income from home equity and other real property that does not yield a cash flow, so that allowance entitlement decreases for larger holdings of such assets.

Housing Choices

Program participants may be either renters or homeowners, and they may change their tenure or place of residence (within the boundaries of the experimental site) without affecting their eligibility for assistance. Participants are encouraged to seek the best bargains they can find on the private market, negotiating terms and conditions of occupancy with the landlord or seller. They are provided with market information (if they request it) and with equal opportunity assistance (if needed); but they are not directed to particular neighborhoods or types of housing nor required to spend specific amounts, except as noted below.

The use of allowance payments by program participants is constrained in two ways. First, in order to receive monthly payments, a participating household must

⁹ Beginning 1 August 1977, the HAOs were authorized to enroll any single person under 62 who lived alone and met other program requirements. However, such persons may not constitute more than 10 percent of the number of households authorized for assistance by the annual contributions contract in each site. Eligibility was thus broadened pursuant to a provision of the Housing Authorization Act of 1976 (Public Law 94-378), which applies specifically to public housing and Sec. 8 housing assistance.

¹⁰ Beginning 1 July 1978, the net asset limit is to be adjusted annually to reflect changes in the consumer price index. As of 30 September 1979, the adjusted limit in Brown County was \$41,100 for households headed by elderly persons and \$25,300 for others. In St. Joseph County, the corresponding figures were \$43,800 and \$27,000.

occupy a housing unit that meets certain standards of adequacy, standards enforced by periodic evaluations conducted by the HAO. Second, the household must spend at least the amount of its allowance for housing services (contract rent and utilities for renters; mortgage interest, property taxes, insurance, maintenance and repairs, and utilities for homeowners).

Since the allowance entitlement for all but the poorest households is less than the estimated standard cost of adequate housing, the first provision is the most significant. A participant who finds certifiable housing at less than standard cost will not need to contribute a full 25 percent of his nonallowance income to pay for it. On the other hand, if he chooses a unit with costs that are above standard, he will not receive any additional payment but must pay the excess from nonallowance income. Thus, the allowance formula provides an incentive to seek housing bargains, while the minimum standards provision ensures that the program's housing objectives will be met by all recipients.

Assistance to Renters

A renter household enrolling in the allowance program must submit evidence of income and household size, on which the amount of its allowance entitlement is based. The household may continue to reside in the unit it occupies at the time of enrollment or it may seek another unit, as long as the unit meets program standards. Once the HAO has certified the housing unit and has received a copy of the lease agreement between the tenant and landlord, it begins issuing monthly allowance checks to the head of the household. It reviews income and household size every six months, adjusting allowance payments accordingly, and it reevaluates the housing unit annually, suspending payments if the unit falls below program standards.

The amount of contract rent and the responsibility for utility costs are matters between the landlord and tenant, as are the enforcement of lease provisions and the resolution of disputes. The HAO has no contractual relationship with the landlord. In the event that a housing unit becomes uncertifiable while it is occupied by a program participant, it is the participant's responsibility to work with the landlord to correct the defects or to find other quarters that meet program standards.

Assistance to Homeowners

Homeowners are assisted on nearly the same terms as renters.¹¹ As with renters, allowance entitlement depends on income and household size, the amount reflecting the same schedule of standard housing costs that applies to renters; however, a homeowner's income includes an annual amount equal to 5 percent of the value of his equity in his home. The home is evaluated immediately after

¹¹ Prior to October 1975, a nominal landlord-tenant relationship between the HAO and the homeowner was created by means of a lease-leaseback agreement. That agreement was designed so that homeowners could be assisted under the provision of Sec. 23 of the U.S. Housing Act of 1937, as amended prior to the beginning of the program. However, the Housing and Community Development Act of 1974 amended Sec. 23 in a way that allows direct assistance to homeowners in the experimental program. In October 1975, the lease-leaseback arrangement was accordingly terminated and homeowners now receive monthly allowance payments without that formality. The lease-leaseback agreement did not alter the locus of title to the property and could be terminated by the homeowner at any time. While it was in effect, the homeowner received monthly assistance checks subject to the same conditions that applied to renters, but he was wholly responsible for the maintenance and financing of his property.

enrollment; to qualify for payments, the enrollee must either remedy any defects noted or move to an acceptable dwelling. As with renters, income, household size, and allowance entitlement are reviewed every six months and the dwelling is reevaluated annually.

The owner-enrollee is entirely responsible for maintaining his property and for its insurance, property taxes, and outstanding mortgage obligations. The HAO has no lien on the property and no responsibility for debts contracted by the homeowner.

Assistance to Home Purchasers

Although home purchase is an option open to those enrolled in the allowance program, we did not expect it to be exercised often, because of financial constraints. Even with program assistance, eligible households will not ordinarily be able to afford new single-family homes; their ability to purchase older homes will depend on their liquid assets and on the availability of mortgage credit on terms they can afford.

The experiment tests whether lenders will consider up to ten years of allowance entitlement a sufficient income supplement and stabilizer to warrant extending mortgage credit to households for whom it is not now usually available. In addition, local or state assistance to low-income home purchasers may be used to supplement the housing allowance.

RESEARCH DESIGN

The experimental housing allowance program described above is designed to enable low-income households to afford adequate housing in the private market and to encourage housing improvements by both landlords and homeowners. The attempts of program participants to obtain better housing with their augmented resources should act as a market stimulus whose consequences—good or bad—are being measured and analyzed.

As indicated earlier, the initial research charter of the Supply Experiment focused on four interrelated clusters of questions concerning supply responsiveness, the behavior of market intermediaries, residential mobility and neighborhood change, and effects on nonparticipants. We designed a six-year agenda¹² of data collection and analysis that we believed would provide reliable answers for each experimental site. That information, supplemented by data from the Demand and Administrative Agency experiments, would also provide a basis for extending and generalizing the site-specific findings.

Our plans required both operating data from the experimental allowance program and concurrent data on events in the local housing market. Though gathered by different means, the two kinds of data are being jointly analyzed.

¹² Five years after baseline was our best a priori estimate of the time needed for market processes triggered by the allowance program to approach some new equilibrium. However, evidence gathered along the way led us to recommend that market monitoring be terminated at the end of the fourth cycle of surveys. We still plan to analyze administrative records covering the first five years of program operations. See Sec. III for details.

Monitoring the Allowance Program

We have followed the experimental housing allowance program primarily through periodic analyses of administrative records provided to Rand by the HAO at each site. Those records, which are purged of personal identification, include enrollment applications, certifications and periodic recertifications, histories of allowance payments and other administrative actions, and housing evaluations for units occupied or nominated for occupancy by program participants.

Although administrative procedures were designed, with few exceptions, to obtain only information needed for program administration, the various records provide considerable information on the characteristics of applicants and enrollees, their housing conditions and expenditures at the time of enrollment, and subsequent changes in income, household composition, housing characteristics, and housing expenditures. They also provide useful data on applicants who were declared ineligible (e.g., reasons for ineligibility) and on those who were declared eligible but finally declined to participate.

Monitoring the Housing Market

The administrative records of the allowance program provide measures of its market stimulus; data on the market response come primarily from an annual cycle of field surveys addressed to the owners and occupants of a marketwide sample of residential properties. The sample design provided for probability sampling in each of 18 strata of residential properties distinguished by location (urban vs. rural), tenure (rental vs. ownership), size (number of housing units), and cost (gross rent or estimated market value). Altogether, we empaneled approximately 2,000 properties in each site, collecting data for each property at baseline (before the beginning of the allowance program) and annually thereafter during the experimental period. Each year, the panel was augmented by a sample of properties newly converted to residential use. Within the limits of sampling reliability, the data will support generalizations about the entire population of residential properties in each site.

The annual cycle of field surveys was thorough and complex. Its main elements are the following:

Survey of Residential Buildings. Each property in the sample was examined in the field to record the physical characteristics of its residential buildings and the general characteristics of the immediate neighborhood. The survey instrument was designed to detect alterations or improvements, changes in the physical condition or use of the property, and changes in the neighborhood.¹³

Survey of Landlords. For each rental property in the sample, we sought an annual interview with the landlord. That interview, running about 90 minutes, was designed to obtain a record of his rental revenues and outlays for building maintenance and operation during the preceding year, including a detailed account of repairs and improvements and their costs. It also sought data on mortgage financing, property ownership and management, property and tenant characteristics, landlord-tenant relationships, and plans for the property. Finally, it elicited the landlord's impressions of the program and how it had affected him.

¹³ Review of baseline data from this survey led to a decision to resurvey buildings on empaneled properties in the fourth survey cycle rather than annually. However, owners and occupants of those buildings were interviewed annually.

Survey of Tenants and Homeowners. For rental properties in the sample, we also sought annual interviews with the current occupants of each property, sampling the housing units on large properties. We asked each respondent to describe the interior features and condition of the dwelling, to report its contract rent and any other housing expenses, and to evaluate the dwelling, the landlord, and the neighborhood. As background for analysis of housing-related responses, we also obtained information on household composition and family characteristics, income, education, and occupation. An important element of the first interview for each household head was a five-year residential and employment history, which included data on household, housing, and employment characteristics at the time of each move.

The interview for homeowners covered similar ground but also included detailed questions on mortgage financing and housing expenses similar to those addressed to landlords.

The annual interviews for tenants and homeowners updated information obtained at baseline and also elicited the respondents' perceptions of the allowance program and its effects on their housing and neighborhoods. Inasmuch as the sample included both program participants and nonparticipants, both views are represented.

Finally, urban renter households that were eligible to enroll in the allowance program were sampled and followed even though they moved from empaneled housing units. They were interviewed at their new addresses to obtain information more directly comparable with that gathered in the Demand Experiment.

Survey of Neighborhoods. In addition to observing the immediate environs of each property in the sample (see "Survey of Residential Buildings," above), we gathered data on larger neighborhoods within each site. We divided Brown County into 108 neighborhoods and St. Joseph County into 86. Detailed information on land use, access to public facilities, amenities, and the condition of housing and streets or other public areas in each neighborhood was gathered at baseline and updated three years later. Those data should help explain differences in the views and behavior of the landlords and tenants of sampled properties within each neighborhood.

Survey of Market Intermediaries. Independently of the surveys addressed to the panel of residential properties, we undertook periodic surveys of the activities and policies of market intermediaries in each site—specifically, mortgage lenders, real estate brokers, insurance firms, and home improvement contractors. The formality of the surveys varied, with the most systematic data being collected from mortgage lenders. The data will be used to assess how program outcomes were influenced by intermediaries' policies, and the reverse.

Resident Observer. The systematic surveys were supplemented at each site by a resident observer who reported periodically on community events, activities, and attitudes that may bear on the housing allowance program. The observers' reports helped us interpret survey findings and flagged issues that warranted additional research by Rand staff or that needed attention from the HAO.

Background Data on Housing Costs and Links to Other Surveys

To supplement the data collected in each experimental site, we drew on existing statistical systems for regional and national background data with which local data

could be compared. Specifically, we compiled an annual regional price index for factors used in the production of housing services against which changes in local prices can be compared; and we linked data on housing-market conditions and trends to those collected by the U.S. Bureau of Labor Statistics and the Bureau of the Census.

Analysis Plan

The techniques for analyzing the data described above are too complex to be detailed here. We should note, however, that the agenda of data collection, including both the design of the sample of residential properties and the contents of the survey instruments, reflects well-specified analytic requirements relating to the four clusters of research issues described earlier.¹⁴

However, our analysis plans have steadily evolved as early findings modified prior assumptions or narrowed uncertainties; as analytic techniques were invented or tested on available data; and as new opportunities for useful research were perceived by Rand or HUD. As will be detailed in Sec. III, there has been a considerable shift in emphasis from analyzing the program's effects on housing markets to analyzing its effects on participants.

Postbaseline changes in analysis plans have naturally been constrained by prebaseline decisions as to the agenda of data collection, whose scale sets an inexorable pace of action and whose virtue rests in part on the promise of comparable time-series. However, the scope and detail of the initially planned data base give it great flexibility, and we have been able to accommodate a number of unforeseen data needs by special smallscale surveys or other means.

Reporting Experimental Findings

Because of the large volume of data to be collected, processed, and analyzed, reports of experimental findings lag behind actual events by one to three years. Moreover, the experiment is mainly addressed to issues that depend for resolution either on time-series of annually collected data or accumulated program records. Consequently, data collected in the early part of the experiment serve more to challenge prior assumptions and sharpen analytic tools than to settle major policy issues related to housing allowances. However, as the experiment has proceeded, the scope and power of experimental evidence bearing on policy issues have increased.

The fourth annual report, published in May 1978, summarized findings based on the first two years of program operations and, less systematically, on the first two annual survey cycles.¹⁵ It was the first occasion on which we were able to report, albeit tentatively, on the full range of issues in our research charter, and to achieve for ourselves and our audience a balanced perspective on the probable outcomes of the experiment.

By 30 September 1979, all the survey data had been collected and nearly all of

¹⁴ See Ira S. Lowry (ed.), *General Design Report: First Draft*, The Rand Corporation, WN-8198-HUD, May 1973 (forthcoming as N-1046-HUD), Secs. V through X and Appendixes A through F.

¹⁵ *Fourth Annual Report of the Housing Assistance Supply Experiment*, The Rand Corporation, R-2302-HUD, May 1978 (hereafter cited as *Fourth Annual Report*). The findings summarized and integrated there are reported in greater detail in topical working notes. See Appendix A for citations.

the program data had been transferred by the HAOs to Rand. The massive data files were in various stages of preparation for both analysis by Rand and delivery to HUD. Rand's analysts were well-launched on a series of topical reports covering the major research issues in our charter. A comprehensive final report is scheduled for submission to HUD in mid-1981 and for publication as soon thereafter as feasible.

HISTORICAL BACKGROUND FOR THIS REPORT

The Housing Assistance Supply Experiment may be conveniently dated from October 1971, when HUD invited Rand to prepare a design study to complement work done by The Urban Institute on what later became the Demand Experiment. Our report¹⁶ was submitted in December 1971; in April 1972, HUD contracted with Rand for Phase I (the planning phase) of the Supply Experiment. The following eighteen months were spent principally on site selection, elaborating the research design, and planning the experimental housing allowance program.

Brown County, Wisconsin, was designated as the first of two experimental sites on 22 December 1972; selection of the second site, St. Joseph County, Indiana, was delayed until 8 April 1974, for reasons discussed in the first annual report.

A draft of the research design¹⁷ was submitted to HUD in May 1973; it was reviewed by HUD and by an outside committee of experts during the summer of 1973 and, with revisions, was accepted by HUD and Rand as the basis for the Supply Experiment on 17 October 1973.

A draft of the program design¹⁸ was submitted to HUD in August 1973 and was also accepted by HUD and Rand on 17 October 1973, subject to the resolution of legal difficulties relating to the use of Sec. 23 funds to assist homeowners. Those difficulties were not finally resolved until 6 February 1974.

Phase II of the Supply Experiment (the operating phase) may be conveniently dated from 5 March 1973, when Rand opened its site office in Brown County. It thus overlapped the planning phase by some months.

The first annual report¹⁹ described the two experimental sites and their housing markets, drawing on the 1970 Census of Population and Housing and on local sources of data other than our surveys. It also described in considerable detail the processes of site selection, program implementation, and survey fieldwork in each site through September 1974.

The second annual report continued the account of program implementation and survey fieldwork in the two sites through September 1975. In addition, it reported findings from our analysis of baseline survey and first-year program records in Site I. Since events in Site II lag behind those in Site I by about a year, we then had few firm analytical findings for Site II.

¹⁶ Ira S. Lowry, C. Peter Rydell, and David M. de Ferranti, *Testing the Supply Response to Housing Allowances: An Experimental Design*, The Rand Corporation, WN-7711-UI, December 1971 (forthcoming as N-1025-HUD).

¹⁷ Lowry, *General Design Report: First Draft*. Related working notes detailing various aspects of the research design are listed in Appendix A to the present report.

¹⁸ Robert Dubinsky (ed.), *The Housing Allowance Program for the Supply Experiment: First Draft*, The Rand Corporation, WN-8350-HUD, August 1973 (forthcoming as N-1051-HUD).

¹⁹ Full citations to the five annual reports mentioned in the following paragraphs are provided in Appendix A.

The third annual report described program operations and research activities through September 1976. It also analyzed the market structures and baseline market conditions in each site, explaining how intersite differences were affecting the allowance programs. Finally, it drew on HAO records for the first two years in Site I and the first year in Site II to describe the enrollees, their housing, and their experiences with the program.

The fourth annual report carried the historical account of program operations and research activities through September 1977, and summarized interim findings under three broad topics: how the program had affected its participants, how it had affected housing markets, and how its administrative design had worked in practice.

The fifth annual report followed the pattern of its predecessors in describing an additional year of program operations and research activities through September 1978. However, unlike its predecessors, it did not summarize experimental findings, which were reported separately in various monographs published during the following year.

This sixth annual report is similarly limited in scope. Section II reports on program operations in both sites through September 1979, providing summary statistics comparable to those in prior reports. However, Rand's five-year supervision of the allowance program in Brown County ended on 20 June 1979, control of the HAO then passing to local trustees. The Rand site office there was closed on 30 September 1979. Similar steps are planned in St. Joseph County during the first quarter of 1980.

Section III of this report summarizes our research activities during the year ending 30 September 1979. These include the completion of data collection except for a final installment of program records from the St. Joseph County HAO; closing down survey operations in St. Joseph County; editing and "cleaning" the field reports from the final cycle of surveys; developing research files from both HAO and survey records; analyzing the data and reporting findings to various audiences; and planning the final round of analysis and reporting.

The appendixes include a topical index to Rand's publications concerning the Supply Experiment, a chronology of program and research activities in each site, an account of the administrative structure of the experiment, and a listing of its current staff.

II. THE HOUSING ALLOWANCE PROGRAMS

At the end of September 1979, the experimental housing allowance program had operated for 63 months in Brown County and 57 months in St. Joseph County.¹ Altogether, nearly 24,800 households had been enrolled in the two sites and nearly 19,800 had received one or more allowance payments. Currently, about 11,300 households are enrolled and over 9,400 are receiving monthly payments. Enrollees constitute about 53 percent of the eligible population in Brown County, 44 percent in St. Joseph County; in both counties, they constitute about 9 percent of all households.

Overall, the program has provided financial assistance to 11,300 renters and 8,500 homeowners. Currently, the average payment is \$86 monthly, augmenting the average recipient's gross income by 22 percent. The annual equivalent of all payments made in September 1979 is \$9.6 million.

Nearly half of all enrollees join the program while living in dwellings that meet program standards, so their allowances mainly help them meet existing housing expenses (which usually greatly exceed the legislative norm of one-fourth of adjusted gross income). But over 10,000 dwellings have been repaired or improved to meet program standards, and about 5,000 households have improved their housing circumstances by moving. Over 300 renters have purchased homes after enrolling in the program.

The following pages review key program statistics for the two sites, noting trends and major developments. Although the fifth program year and Rand's monitoring responsibilities ended in Brown County in June 1979, we report comparable statistics through September 1979 for both sites.

ENROLLMENT AND PAYMENT AUTHORIZATIONS

Table 2.1 summarizes the status of all applications for assistance received by each HAO through September 1979. The cumulative number of applications equals a third of all households in Brown County and two-fifths in St. Joseph County.² "Success rates" for both applicants and enrollees have been slightly higher in Brown County, where 55 percent of all applicants are eventually enrolled and 84 percent of those enrolled eventually meet the program's housing requirements and thereby qualify for payments. In St. Joseph County, the corresponding success rates are 47 and 77 percent.

By September 1979, over half of those ever enrolled in each site were no longer in the program. Thirteen percent of all enrollees in Brown County and 19 percent in St. Joseph County had dropped out without ever receiving a payment; their enrollment dwellings failed to meet program standards, and they were unable or

¹ During the first three months of the program in St. Joseph County, applications were invited from 750 homeowners, of whom 103 enrolled. There have been only 54 months of open enrollment.

² From household survey data, we estimate that in 1978 there were 49,600 households in Brown County and 75,200 households in St. Joseph County. Because of turnover, these populations are inexact as denominators for most program statistics, but do provide rough scalars.

Table 2.1

SELECTED ENROLLMENT AND PAYMENT AUTHORIZATION STATISTICS: HOUSING ALLOWANCE PROGRAMS IN BROWN AND ST. JOSEPH COUNTIES THROUGH SEPTEMBER 1979

Item	Brown County		St. Joseph County	
	Number of Cases	Percent of Total	Number of Cases	Percent of Total
<i>Enrollment</i>				
All applicants	17,317	100	32,611	100
Screened out before interview ^a	4,716	27	9,523	29
Screened out by interview ^b	2,723	16	6,600	20
Awaiting interview or processing	338	2	1,232	4
Eligible and enrolled	9,540	55	15,256	47
<i>Payment Authorization</i>				
All enrollees	9,540	100	15,256	100
Authorized for payments	8,054	84	11,698	77
Currently receiving payments	3,689	39	5,720	38
Payments suspended	326	3	644	4
Enrollment terminated ^d	4,039	42	5,334	35
Never authorized for payments	1,486	16	3,558	23
Authorization pending ^e	234	2	703	5
Enrollment terminated ^d	1,252	13	2,855	19

SOURCE: HAO management information system reports for September 1979.

NOTE: Payments are not authorized until the housing unit chosen by an enrollee has been evaluated by the HAO and certified for occupancy; and for a rental unit, until an executed copy of an acceptable lease agreement has been filed with the HAO. Percentages may not add exactly to totals or subtotals because of rounding.

^aApplicant ineligible or declined interview.

^bApplicant ineligible, declined to complete interview, or declined enrollment.

^cCurrent housing is not certified or enrollee has violated reporting requirements or other program rules.

^dVoluntary or involuntary. Involuntary terminations usually result from change in income or family circumstances that affect eligibility.

^eAwaiting housing certification or lease agreement. See Note above.

unwilling to repair those dwellings or move to acceptable housing. The other terminations (42 percent of enrollees in Brown County, 35 percent in St. Joseph County) received at least one payment before leaving the program; most had become ineligible because their incomes increased after they enrolled.

Both HAOs are well past the startup phase of rapid enrollment in a new program, but they nonetheless receive a steady flow of applications from new residents and newly formed or newly eligible households. During the year ending in September 1979, the Brown County HAO processed 2,409 applications, enrolled 1,495 households, and reinstated 405 households whose enrollments had been previously terminated. In St. Joseph County, 5,753 households applied, 2,748 were enrolled, and 881 were reinstated.

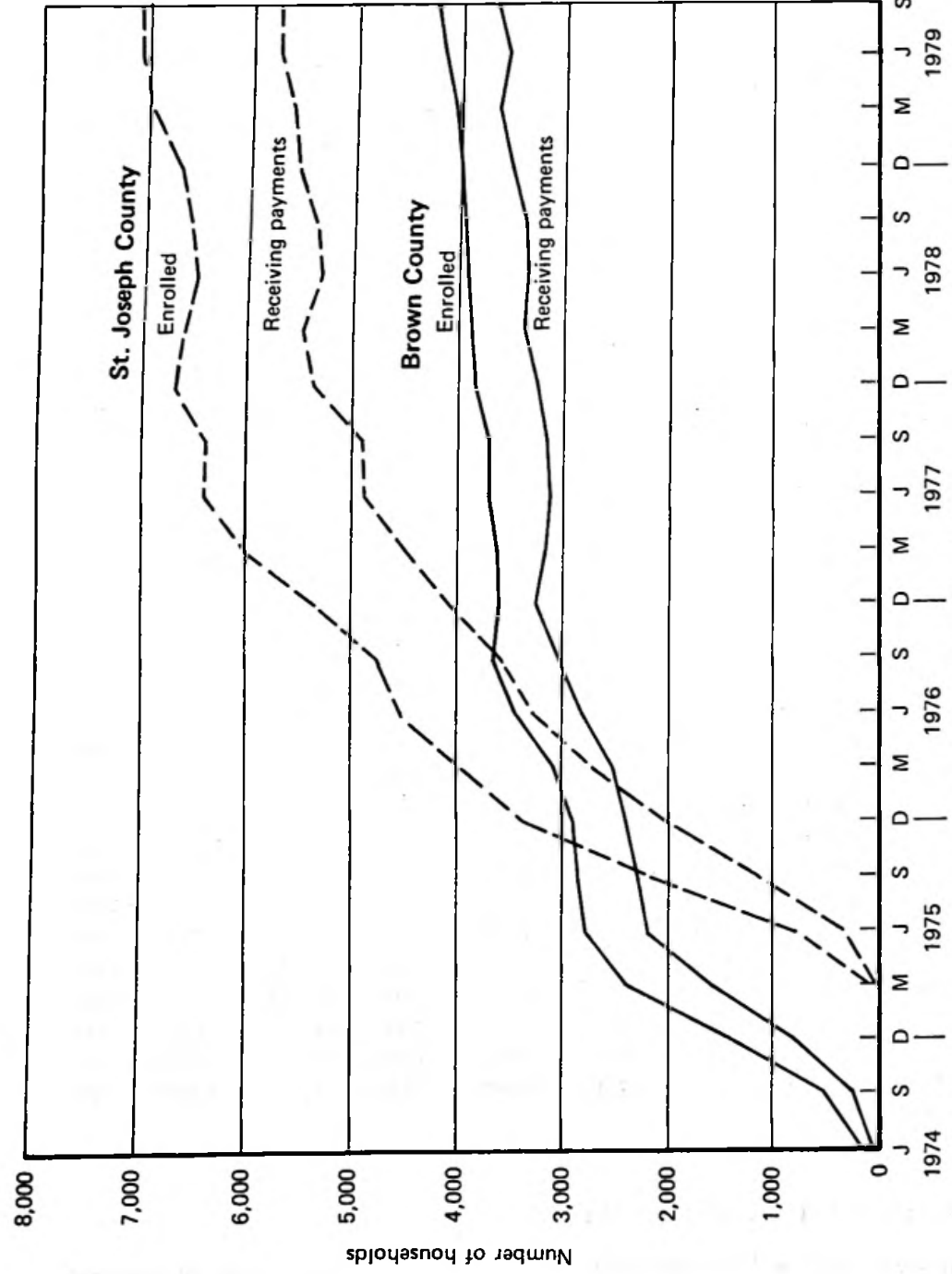
During 1978, intake (new enrollments plus reinstatements) was roughly balanced by terminations in both sites. This year (October 1978 to September 1979), current enrollment in both programs grew by more than 8 percent and the number of households currently receiving payments grew by 9 percent in Brown County and 7 percent in St. Joseph County (see Fig. 2.1). Although the management information reports from which we draw recent program statistics are inadequately detailed to explain why the growth occurred, it appears to reflect rising unemployment in the sites. Application backlogs in both sites imply additional growth through the winter of 1979-80.

Because our household surveys indicate that knowledge of the program's existence and benefits is now widespread in both sites, prospects for future growth depend mostly on net migration, household formation, and economic conditions, which are in turn interdependent. The number of households in Brown County has increased by over 5 percent since the program began, but St. Joseph County's household population has not measurably changed. Another economic recession might increase eligibility and enrollment in both sites, but layoffs are more likely to be severe in St. Joseph County because of its more vulnerable industrial base. National inflation is unevenly reflected in the items whose relationship determines eligibility—local incomes and the standard cost of adequate housing.

Although a year ago we did not anticipate the recent increases in program size, we still judge that the program in both sites is close to a longrun steady state, with enrollment fluctuating from year to year in response to short-term demographic and economic forces. Averaging over time, we think that a permanent program (operated according to the rules of the experimental program) would provide assistance to no more than 10 percent of all households in each site. Given the striking differences between the sites in both population composition and housing market condition, the small differences in eligibility, enrollment, and participation rates suggest that the results of a national program would not vary greatly from those in our sites.

CHARACTERISTICS OF ENROLLEES

Figure 2.2 shows the composition of new enrollment in each site—by housing tenure, age of household head, race, and household size—and how it has changed over the past three years. In general, differences between enrollees in the two sites reflect differences in the eligible populations. As indicated by the last bar in each



SOURCE: HAO management information reports through September 1979.

Fig. 2.1—Households enrolled and receiving payments: housing allowance programs in Brown and St. Joseph Counties, 1974-79

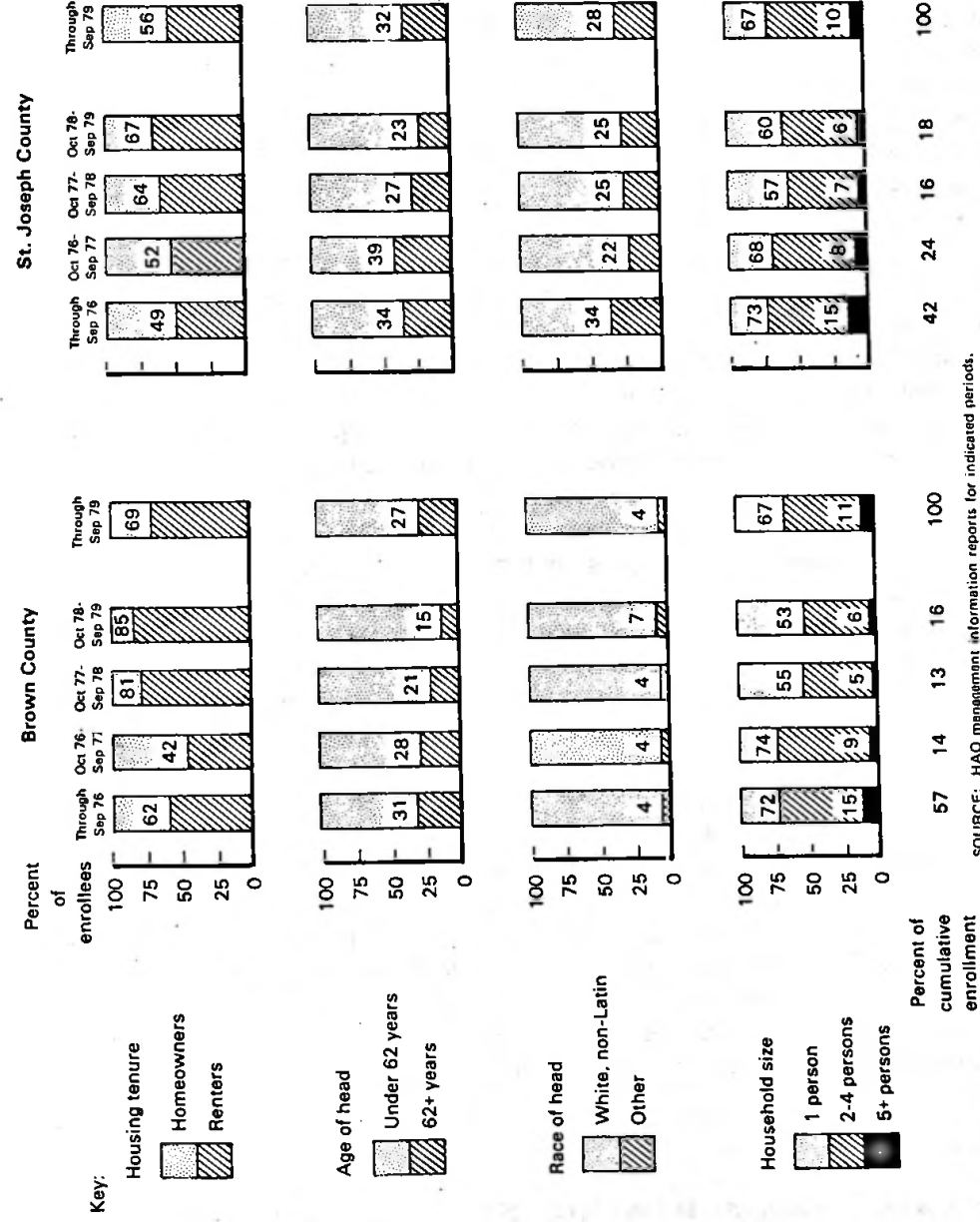


Fig. 2.2—Selected characteristics of enrollees by enrollment date: housing allowance programs in Brown and St. Joseph Counties

panel of the figure, cumulative enrollment data show a larger fraction of renters in Brown than in St. Joseph County (69 vs. 56 percent), relatively fewer elderly household heads (27 vs. 32 percent), but similar distributions by size of household. Reflecting the county's racial homogeneity, Brown County's enrollment of blacks and Latins is only 4 percent of the total; St. Joseph County's is 28 percent.

Because a large fraction of the cumulative enrollment in each site preceded September 1976 (first bar in each panel), differences in the composition of subsequent annual enrollments (three center bars), though striking, are not strongly reflected in the cumulative figures (last bar in each panel). Three shifts after 1976 are especially notable.

First, homeowner enrollment has dropped off sharply, both absolutely and as a percentage of the total. In Brown County, 58 percent of the 1977 enrollees were homeowners, but only 15 percent in 1979. In St. Joseph County, the homeowner share dropped from 51 percent in 1976 to 33 percent in 1979. Second, the proportion of new enrollees who are elderly also dropped sharply over the same period.

These two events are related by the fact that eligible homeowners are usually elderly persons. The declining proportion of elderly homeowners among new enrollees is partly explained by a program change in August 1977 that permitted the HAOs to enroll nonelderly single persons, most of whom are renters. During 1978 and 1979, a fourth (Brown County) to a third (St. Joseph County) of the new enrollments were of this type. However, even without the program change, nonelderly renters would form an increasing share of new enrollments because membership in that pool of eligibles turns over rapidly.

The other compositional change is for racial minorities in St. Joseph County. Blacks and Latins comprised a third of the pre-1976 enrollment, but only a fifth to a fourth of each subsequent year's enrollment. Minority enrollment was initially high because the program was at first limited to South Bend, where nearly all of the county's racial minorities live; the outlying areas included many eligible whites, but few blacks or Latins.³

Because turnover is high and termination rates vary with household characteristics, the composition of current enrollment differs from that of cumulative enrollment. Table 2.2 describes the households enrolled in the program at the end of September 1979. In both sites, homeowners, households headed by elderly persons, and single-person households account for larger shares of current than of cumulative enrollment. Whereas the high proportion of single persons among current clients mostly reflects the recent initial enrollment of nonelderly singles, the high proportion of homeowners and elderly household heads reflects their relatively low termination rates. Also in both sites, racial minorities account for a slightly smaller share of current than of cumulative enrollment, reflecting more turnover for them than for whites.

BENEFIT STANDARDS AND PAYMENTS

As explained in Sec. I, each enrollee's allowance entitlement is scaled to his income and to the standard cost of adequate housing (called R^*) in his community.

³ However, blacks and Latins are more likely than whites to be eligible and, if eligible, to enroll. In 1975, blacks and Latins headed 10.4 percent of all households in St. Joseph County but accounted for 28 percent of cumulative enrollment.

Table 2.2

SELECTED CHARACTERISTICS OF CURRENTLY ENROLLED HOUSEHOLDS: HOUSING ALLOWANCE PROGRAMS IN BROWN AND ST. JOSEPH COUNTIES, SEPTEMBER 1979

Client Characteristic	Brown County		St. Joseph County	
	Number of Households	Percent of Total	Number of Households	Percent of Total
<i>Housing Tenure</i>				
Homeowners	1,176	28	3,656	52
Renters	3,073	72	3,411	48
Total	4,249	100	7,067	100
<i>Age of Head</i>				
Under 62 years	2,792	66	3,956	56
62+ years	1,457	34	3,111	44
Total	4,249	100	7,067	100
<i>Race of Head</i>				
White non-Latin	4,072	96	5,329	75
Other	177	4	1,738	25
Total	4,249	100	7,067	100
<i>Household Size</i>				
1 person	1,979	46	3,281	46
2 persons	1,052	25	1,778	25
3-4 persons	968	23	1,600	23
5-6 persons	201	5	331	5
7+ persons	49	1	77	1
Total	4,249	100	7,067	100

SOURCE: HAO management information reports and special tabulations for September 1979.

NOTE: Percentage distributions may not add exactly to 100 because of rounding.

If he is able to find certifiable housing whose cost exactly equals R^* , his housing expenses will amount to his allowance payment plus 25 percent of his adjusted gross income. If he spends more than R^* for housing, the excess comes from his nonallowance income; if he spends less, a large fraction of his nonallowance income is available for other consumption.

The standard cost of adequate housing for households of different sizes was estimated for each site before program operations began. The figure includes the full costs of shelter and utilities and is the same for renters and homeowners. In Table 2.3, the first column for each county shows the initial R^* schedules, based on field surveys conducted in September 1973 in Brown County and August 1974 in St. Joseph County. Although the costs of small units were then estimated to be the same in both sites, the larger units—mostly single-family houses—were less expensive in St. Joseph County.

Subsequent inflation in fuel and utility prices led to decisions to increase the scheduled values of R^* , and thus the benefit levels. Table 2.3 shows the revised

Table 2.3

STANDARD COST OF ADEQUATE HOUSING BY SIZE OF HOUSEHOLD: HOUSING ALLOWANCE PROGRAMS IN BROWN AND ST. JOSEPH COUNTIES, 1974-79

Number of Persons	Number of Rooms ^a	Standard Monthly Cost (\$) ^b									
		Brown County					St. Joseph County				
		June 1974	April 1976	May 1977	May 1978	July 1979	Dec 1974	Sep 1976	Sep 1977	Jan 1979	
1	1-2	100	125	130	140	155	100	115	120	130	
2	1-3	125	145	155	170	180	125	140	150	160	
3-4	4	155	175	185	200	220	145	160	175	190	
5-6	5	170	195	205	235	255	160	175	185	195	
7-8	6	190	210	220	265	280	170	185	190	205	
9+	6	220	230	245	300	320	170	185	190	205	

SOURCE: FPOG Policy Clarification Memoranda Nos. 141, 158, 186, 193, 209, 218, and 221.

NOTE: Standard costs were initially estimated from preprogram field surveys of rental dwellings in each site; they were subsequently increased to reflect measured inflation, nearly all of which was in fuel and utility prices. The effective date of each schedule is shown in the table; the measurement dates were several months earlier: September 1973, January 1976, January 1977, March 1978, and January 1979 for Brown County; and August 1974, July 1976, August 1977, and October 1978 for St. Joseph County.

^aMinimum number of rooms for household of indicated size. For one and two persons, rooming units are acceptable.

^bEstimated monthly cost of shelter and utilities for a dwelling of the indicated size that meets specified quality standards.

schedules and their effective dates. The increases cumulate to about 47 percent in Brown County and 26 percent in St. Joseph County.⁴

Increasing *R** also increases the upper income limit for enrollment. If incomes were fixed, raising the limit would also increase the number of eligible households. But because incomes have in fact been rising in both sites, the number of eligible households has probably changed very little during the past year. For the same reason, benefits have not increased by as much as the indicated changes in *R**.

Table 2.4 shows average incomes and allowance payments for participants in each site during September of each year, 1976 to 1979. Gross income includes transfer payments such as Aid to Families with Dependent Children (AFDC) and unemployment compensation. Adjustments required by law generally reduce gross income by \$300 to \$3,000, the amount increasing with household size and age of head. Annual benefits are calculated by subtracting a fourth of adjusted gross

⁴These are unweighted averages of percentage increases for each size of dwelling, which range from 42 to 55 percent in Brown County and 21 to 30 percent in St. Joseph County. Note also that the larger Brown County changes span five years, whereas the St. Joseph County changes span only four years. The schedule for St. Joseph County was again under review in September 1979; a new schedule is to be effective in January 1980.

Table 2.4

PARTICIPANTS' INCOMES AND ALLOWANCE PAYMENTS: HOUSING ALLOWANCE PROGRAMS IN BROWN AND ST. JOSEPH COUNTIES, 1976-79

Item	Average Amount (\$) ^a							
	Brown County				St. Joseph County			
	1976	1977	1978	1979	1976	1977	1978	1979
<i>Homeowners</i>								
Annual gross income	4,973	5,245	5,490	5,845	4,209	4,496	4,604	4,960
After adjustment	3,885	4,197	4,453	4,738	3,277	3,587	3,679	3,939
Monthly allowance payment	67	66	74	83	67	64	62	67
Annual equivalent	804	792	888	996	804	778	744	804
<i>Renters</i>								
Annual gross income	4,348	4,570	4,646	4,789	3,152	3,396	3,467	3,547
After adjustment	3,586	3,783	3,890	4,013	2,386	2,642	2,756	2,819
Monthly allowance payment	77	78	85	97	93	94	87	97
Annual equivalent	924	936	1,020	1,164	1,116	1,128	1,044	1,164
<i>All Participants</i>								
Annual gross income	4,612	4,830	4,926	5,109	3,782	4,082	4,149	4,376
After adjustment	3,712	3,943	4,077	4,232	2,917	3,232	3,310	3,475
Monthly allowance payment	72	74	81	93	78	76	72	79
Annual equivalent	864	888	972	1,116	936	912	864	948

SOURCE: HAO management information reports for the indicated dates.

NOTE: Gross income for a homeowner includes an imputed amount equal to 5 percent of equity in the home. Adjustments are those required by law and vary with age of head, number of dependents, and number of secondary wage earners. The monthly allowance payment is based on adjusted gross income and the standard cost of adequate housing (see Table 2.3).

^aAverage for all those receiving payments during September of the indicated year.

income from the appropriate annualized value of *R**; the monthly payment is one-twelfth of that amount.

In both sites, the average gross incomes of allowance recipients have increased since 1976—by 11 percent in Brown County and by 16 percent in St. Joseph County. The increases reflect both general inflation and changes in the client mix. Partly because most of the adjustments to gross income are specified in dollars rather than as percentages of income, average adjusted gross income rose faster than gross income—by 14 percent in Brown County and 19 percent in St. Joseph County.

In Brown County, the 14-percent increase in average adjusted gross income combined with the 47-percent increase in *R** to yield a 29-percent increase in the average allowance payment between September 1976 and September 1979. In St. Joseph County, the 19-percent increase in income more nearly kept pace with the 26-percent increase in *R**; average allowance payments went up by only 3 percent. However, the substantial increase in *R** that is scheduled for January 1980 will raise the average payment to \$100, or 28 percent above the level in September 1976.

Table 2.4 also shows that client incomes differ in the two sites. In September 1979, the average adjusted gross income for participating homeowners in Brown County was 20 percent greater than for their counterparts in St. Joseph County; for participating renters, the differential was 42 percent, again favoring Brown County. But housing costs are also higher in Brown County, so those income differences do not reflect in allowance entitlements.

Because few participants have zero incomes, the average allowance payment is well below the standard cost of adequate housing. But in relation to gross income, the average payment is substantial, ranging from 17 percent for Brown County homeowners to 33 percent for St. Joseph County renters. Overall, payments average 22 percent of gross income (27 percent of adjusted gross income).

Through September 1979, the Brown County HAO had disbursed \$12.9 million in allowance payments, and the HAO in St. Joseph County had disbursed \$16.9 million. At the September rate of disbursement, the annual outlay would be \$4.1 million in Brown County and \$5.5 million in St. Joseph County, an overall average of \$1,021 per year for each of 9,409 households.

ENFORCING HOUSING STANDARDS

Shortly after a household enrolls in the program, the HAO evaluates its dwelling against program standards for living space, essential facilities, and health or safety hazards. To date, 47 percent of all enrollment dwellings in Brown County and 55 percent in St. Joseph County have failed such evaluations.

The occupant of a defective dwelling must take one of two actions to qualify for payments—either arrange for the dwelling's repair,⁵ or move to another that meets program standards. In the former case, he requests a reevaluation when repairs are completed. In the latter, he is supposed to request an evaluation of a prospective residence before he commits himself to it; but some clients move, then call for a housing evaluation.

Table 2.5 shows the outcome of housing evaluations and reevaluations in each site that are associated with an enrollee's attempts to qualify for payment. (It does not include the annual evaluations for those whose housing qualified initially, nor any evaluations related to subsequent moves.) In every category, the failure rate is higher in St. Joseph County, reflecting the generally worse condition of housing there.

Evaluation results for renters and homeowners are not distinguished in the table because they are generally similar. In both sites, just over half of all owners failed initial evaluations; but among renters, 45 percent failed in Brown County while 57 percent failed in St. Joseph County. Between a tenth and a fifth of all enrollees—typically renters—explore alternatives to their enrollment dwellings, some calling for evaluations of several potential residences before deciding to move or stay. In Brown County, failure rates on those evaluations are lower than for enrollment dwellings, but they are higher in St. Joseph County. Cumulatively, about two-thirds of all initially defective dwellings (those occupied at enrollment

⁵ A renter may either persuade his landlord to make needed repairs or undertake them himself. Both are common practices.

Table 2.5

RESULTS OF HOUSING EVALUATIONS FOR NEWLY ENROLLED AND REINSTATED HOUSEHOLDS: HOUSING ALLOWANCE PROGRAMS IN BROWN AND ST. JOSEPH COUNTIES THROUGH SEPTEMBER 1979

Result by Type of Evaluation	Brown County		St. Joseph County	
	Number of Cases	Percent of Total	Number of Cases	Percent of Total
<i>Initial Evaluation of Enrollment Residence</i>				
Acceptable	4,634	53	5,716	45
Not acceptable	4,132	47	6,973	55
Total	8,766	100	12,689	100
<i>Initial Evaluation of Other Enrollee-Nominated Dwelling</i>				
Acceptable	1,656	56	1,044	32
Not acceptable	1,281	44	2,263	68
Total	2,937	100	3,307	100
<i>Evaluation for Reinstated Household</i>				
Acceptable	633	61	660	47
Not acceptable	401	39	734	53
Total	1,034	100	1,394	100
<i>Reevaluation of Failed Dwelling</i>				
Acceptable	3,988	92	6,484	86
Not acceptable	352	8	1,094	14
Total	4,340	100	7,578	100

SOURCE: HAO management information reports for September 1979.

NOTE: If feasible, each enrollee's preenrollment dwelling is evaluated even though the enrollee may plan to move. Prospective residences are evaluated only at the enrollee's request; often, several such evaluations are conducted on behalf of the same enrollee. Households reinstated after an earlier termination of enrollment must have their dwellings evaluated as though they were new enrollees. Failed units are reevaluated (presumably after being repaired) at the enrollee's request.

plus the prospective residences evaluated at enrollees' requests) have been successfully repaired by the occupant or his landlord.

Since the program began in Brown County, nearly 4,000 initially defective dwellings (including those to which enrollees moved) have been repaired at the instance of enrollees seeking to qualify for payments, and about 1,000 enrollees have moved before qualifying for payments. In St. Joseph County, nearly 6,500 dwellings have been repaired and about 1,800 enrollees have moved before qualifying for payments.⁶

For those whose housing is initially certifiable, neither repairing nor moving is required to qualify for allowance payments. Rather, payments alleviate budgetary stresses likely to lead to nonpayment of rent or utility bills or to undermaintenance of homes. About 1,400 recipients in Brown County and 1,100 in St. Joseph County have moved *after* qualifying for payments, presumably having reconsidered their housing alternatives in the light of their increased resources.

The repairs needed to bring a dwelling up to program standards are rarely expensive, even though genuine hazards to the occupants are often remedied. Most repairs are done by the occupant himself or his landlord; out-of-pocket expenses for materials and hired labor have seldom exceeded \$100; in three-fourths of the cases, cash expenses were under \$30, and the median was about \$10.⁷

Each dwelling occupied by an allowance recipient is evaluated annually to ensure that it meets program standards. Table 2.6 reports the results of all such evaluations so far conducted—about 9,900 in Brown County and 13,100 in St. Joseph County. A fifth of the dwellings occupied by Brown County recipients and a third of those occupied by St. Joseph County recipients drifted below standard during the year preceding their annual evaluations. Most of those whose dwellings failed promptly repaired the new defects; some subsequently moved; and payments were suspended for those who did neither. It is thus clear that the program's housing objectives would not be met solely by initial evaluations. Periodic rechecks of the condition of recipients' dwellings are needed to ensure that they remain free of hazards to health, safety, and decency.

The housing standards on which both initial and annual evaluations are based have been amended from time to time as field experience has revealed weaknesses of specification or inequities in enforcement. The most important change, prompted by federal legislation, pertains to lead-based paint hazards. The HAOs have always failed dwellings in which the hazard was unmistakable, but a more stringent standard was adopted in January 1977. Now the existence of any cracking, scaling, chipping, peeling, or loose paint, whether it contains lead or not, is grounds for failure if children under seven years old are residents or frequent visitors.

The new standard significantly affected subsequent evaluation results. During the next 18 months, 4 percent of the dwellings evaluated in Brown County and 8

⁶The management information system on which this section is based does not report numbers of moves. The estimates of moves cumulative to September 1979 are extrapolated from an analysis of the first three years of program data for each site. Between two-thirds and three-fourths of the movers qualified for payments in their new homes, often after repairing them.

⁷See James L. McDowell, *Housing Allowances and Housing Improvement: Early Findings*, The Rand Corporation, N-1198-HUD, September 1979, for details. We have estimated the costs of repairing dwellings whose occupants instead move or drop out of the program; these unrepaired dwellings have higher average repair costs than the repaired dwellings, but not enough higher to seriously constrain the clients' decisions. The underlying fact is that, even in St. Joseph County, housing defects tend to be easily remediable health or safety hazards rather than fundamental structural flaws.

Table 2.6

RESULTS OF HOUSING EVALUATIONS FOR RECIPIENT HOUSEHOLDS: HOUSING ALLOWANCE PROGRAMS IN BROWN AND ST. JOSEPH COUNTIES THROUGH SEPTEMBER 1979

Result of Type of Evaluation	Brown County		St. Joseph County	
	Number of Cases	Percent of Total	Number of Cases	Percent of Total
<i>Annual Evaluation of Recipient's Dwelling^a</i>				
Acceptable	7,955	80	8,878	68
Not acceptable	1,945	20	4,270	32
Total	9,900	100	13,148	100
<i>Evaluation of Other Recipient-Nominated Dwelling</i>				
Acceptable	903	58	590	37
Not acceptable	665	42	989	63
Total	1,568	100	1,579	100
<i>Reevaluation of Failed Dwelling</i>				
Acceptable	1,610	93	3,535	86
Not acceptable	128	7	577	14
Total	1,738	100	4,112	100

SOURCE: HAO management information reports for September 1979.

NOTE: Recipients' dwellings are reevaluated annually; if defects found by these evaluations are not promptly remedied, allowance payments are suspended. When a recipient moves, the new dwelling must be evaluated and certified for occupancy to avoid payment suspension. Failed units are reevaluated (presumably after being repaired) at the recipient's request.

^aData on annual evaluations include a few in each site for enrollees who never qualified for payments but maintained their enrollments by completing semi-annual and annual eligibility recertification requirements.

percent in St. Joseph County failed only because of lead-based paint hazards. Another 8 percent (Brown County) and 22 percent (St. Joseph County) failed for lead-based paint hazards in combination with other defects. Actually, evaluators' reports indicate paint defects in about 45 percent of the dwellings evaluated in Brown County and 60 percent in St. Joseph County, but children are present in only a minority of the cases.

Most paint defects require scaling and repainting of selected exterior surfaces, over 100 square feet in a fourth of all such cases. Because paid labor is rarely used, the repair costs are modest, averaging \$20 to \$30 for single-family houses, less for apartments. In aggregate, however, correcting lead-based paint hazards now accounts for a fourth of initial repair costs.

Despite the adverse effects of the new paint standard, housing evaluation failure rates have generally declined over time, both for new enrollees and recipients (see Table 2.7). Several factors could account for that decline: a change in enrollment patterns that brought better dwellings into the program, recycling through the system of dwellings already evaluated and repaired by one enrollee but

Table 2.7
HOUSING EVALUATION FAILURE AND REPAIR RATES BY YEAR EVALUATION
WAS CONDUCTED: HOUSING ALLOWANCE PROGRAMS IN BROWN AND
ST. JOSEPH COUNTIES THROUGH SEPTEMBER 1979

Item, by Site	Rate (%) by Year Evaluation was Conducted			
	Through Sep 1976	Oct 1976- Sep 1977 ^a	Oct 1977- Sep 1978	Oct 1978- Sep 1979
<i>Newly Enrolled and Reinstated Households</i>				
Failure rate:				
Brown County	48.4	45.1	43.8	41.3
St. Joseph County	57.4	61.4	56.6	53.0
Repair rate:				
Brown County	61.3	74.4	76.4	75.5
St. Joseph County	55.8	72.9	71.1	68.3
<i>Recipient Households</i>				
Failure rate:				
Brown County	(b)	26.1	20.6	18.4
St. Joseph County	(b)	42.4	34.6	29.8
Repair rate:				
Brown County	(b)	62.5	58.6	63.0
St. Joseph County	(b)	53.9	70.6	83.0

SOURCE: HAO management information reports for indicated periods.

NOTE: For newly enrolled and reinstated households, the failure rate combines initial evaluations of both enrollment and reinstatement residences with initial evaluations of other enrollee-nominated dwellings, whether or not the latter were ever occupied by the enrollees. The repair rate is the total number of "acceptable" reevaluations divided by the numerator of the failure rate.

For recipients, the failure rate combines annual reevaluations of their dwellings with evaluations of other recipient-nominated dwellings, whether or not the latter were ever occupied by the recipients. The repair rate is the total number of "acceptable" reevaluations divided by the numerator of the failure rate.

See notes to Tables 2.5 and 2.6 for additional details.

^aFor recipient households, include evaluations conducted before October 1976.

^bSeparate data for evaluations prior to October 1976 are not available.

subsequently occupied by another, and anticipatory repairs made prior to evaluation. The HAO's housing evaluators report that as program information has spread, both new enrollees and recipients often repair obvious defects before the evaluator arrives. Probably, these anticipatory repairs account for most of the time-trend in failure rates.

For those dwellings that do fail, repair rates show no clear trend. Among new enrollees in both sites, the repair rate was distinctly lower before October 1977 than subsequently. Among recipients in St. Joseph County, but not in Brown County, the repair rate has climbed spectacularly. We are presently unable to account for those outcomes.

PROGRAM ADMINISTRATION

As explained in Sec. I, the housing allowance program in each site is administered by a state-chartered nonprofit corporation, the housing allowance office. During the program's experimental phase (the first five years), a majority of the trustees were members of The Rand Corporation, the remainder being local residents; Rand's site manager for the experiment was chairman of the board.⁸ In September 1979, all but one member of The Rand Corporation resigned from the Brown County board, leaving a majority of local trustees. A similar transfer of control is planned for St. Joseph County in April 1980.

HUD provides financial support for the program through an annual contributions contract with a local housing authority (LHA) in each site, which delegates program administration to the HAO and passes to it funds from HUD. Annual budgets prepared by the HAO are approved by its trustees and reviewed by the LHA before they are submitted to HUD.

Operating Policies

The program is staffed and operated pursuant to policies approved by both the trustees and HUD and documented in the *HAO Handbook*. The director and other senior HAO officers are appointed by the trustees and answerable to them. During the experimental period, the HASE Field and Program Operations Group (FPOG) has provided technical assistance to the HAOs and monitored their performance, attending to both operating efficiency and conformity with experimental design. Proposals for policy changes might originate with any of the parties to the program, but were formally submitted by FPOG for trustee approval, LHA review, and HUD approval. The HAO staff now performs that function in Brown County and will soon assume it in St. Joseph County.

An advisory committee of local residents, including city and county officials, citizens, and allowance program participants, reviews program developments and prospects. In St. Joseph County, the HAO staff meets periodically with the advisory committee; in Brown County, the committee is no longer active.

Though elaborate, the system for policy formulation, review, and approval has worked smoothly to accommodate local concerns while preserving the experiment's

⁸Appendix C contains organization charts for each HAO and shows its relationship to The Rand Corporation.

integrity. Policies and procedures that bear on experimental issues are virtually identical in the two sites, while local solutions to site-specific problems are regularly devised and implemented.

Program Functions

For accounting purposes, we distinguish two major program functions, client intake and client maintenance. Client intake entails outreach to encourage applications; interviewing applicants, verifying their submissions, and determining their eligibility status and allowance entitlements; evaluating enrollees' current and prospective residences and authorizing payments to those whose housing meets program standards; and counseling enrollees about program requirements, housing problems, and their rights under equal opportunity laws.

Client maintenance comprises administrative procedures relating to those who qualify for payments: disbursing monthly checks; reviewing eligibility and allowance entitlement at midyear (by mail) and annually (by reinterview), or at shorter intervals under special circumstances; evaluating recipients' dwellings annually and when they move, to ensure continued compliance with housing standards; suspending clients whose housing falls below standard or who violate program regulations; and terminating the enrollments of those no longer eligible.

Workload, Staffing, and Administrative Costs

When the program began, the HAOs naturally addressed themselves almost wholly to intake. Through 1978, intake workloads diminished and transactions with recipients increased. For 1979, both intake and maintenance workloads increased over the preceding year, the former by more than 15 percent in each site, and the latter by 7 percent. During the year ending in September 1979, the Brown County HAO enrolled or reinstated 1,900 households and provided monthly payments and related services to an average of 3,560 clients; the St. Joseph County HAO took in 3,629 households but provided monthly services to an average of 5,638 clients.

An analysis of HAO workload and costs during 1976, when the program was operating routinely in both sites, showed that the number of direct work-hours spent on intake functions per new or reinstated enrollee was slightly greater than the number spent to serve one recipient for a year: 15 percent greater in Brown County and 21 percent greater in St. Joseph County.^a That relationship enables us to assess trends in workloads and administrative productivity, even though the mix of intake and maintenance workloads changes over time.

Table 2.8 measures both intake and maintenance workloads in recipient year units (RYU), counting each new enrollment as the equivalent of 1.15 RYU in Brown County and 1.21 RYU in St. Joseph County. By this yardstick, we estimate that the 1979 workload in each site was about 10 percent greater than the 1978 workload. Productivity increased in both sites, but there were marked differences in the rate of improvement. For Brown County, total administrative costs dropped by 4 percent; for St. Joseph County, they rose by 8 percent. The different cost trends

^aNote that intake work-hours are scaled to the number of new enrollments, not the number of applicants. The larger ratio for St. Joseph County at least partly reflects its lower "success rate" for applicants: More time is spent on unsuccessful applicants there than in Brown County.

Table 2.8
ADMINISTRATIVE WORKLOAD, COSTS, AND STAFFING: HOUSING
ALLOWANCE PROGRAMS IN BROWN AND ST. JOSEPH COUNTIES,
1977-79

Item	Brown County			St. Joseph County		
	Oct 1976- Sep 1977	Oct 1977- Sep 1978	Oct 1978- Sep 1979	Oct 1976- Sep 1977	Oct 1977- Sep 1978	Oct 1978- Sep 1979
<i>Workload</i>						
<i>Intake</i>						
Households enrolled	1,344	1,263	1,495	3,704	2,482	2,748
Households reinstated	289	350	405	569	661	881
Total	1,633	1,613	1,900	4,273	3,143	3,629
<i>Maintenance</i>						
Total recipient years	3,247	3,417	3,650	4,621	5,528	5,906
<i>Workload in RYU^a</i>						
Intake	1,878	1,855	2,185	5,170	3,803	4,391
Maintenance	3,247	3,417	3,650	4,621	5,528	5,906
Total	5,125	5,272	5,835	9,791	9,331	10,297
<i>Costs and Staffing</i>						
<i>Administrative Costs</i>						
Total cost (\$000)	1,034	1,008	969	1,736	1,602	1,736
Cost per RYU (\$)	202	191	166	177	172	169
<i>HAO Staff</i>						
Person years (FTE)	56.4	45.1	41.1	84.0	74.4	77.0
Person years per 1,000 RYU	11.0	8.6	7.0	8.6	8.0	7.5

SOURCE: Analysis of HAO accounting records and management information reports for the indicated periods.

^aRYU = recipient year unit, the number of staff hours required to maintain a client as a recipient for 12 months. Each enrollment or reinstatement requires about 1.15 RYU in Brown County and 1.21 RYU in St. Joseph County, a relationship used to express intake and maintenance workloads in comparable units.

principally reflect continued shrinkage of the Brown County staff, but an expansion in the St. Joseph County staff.

Over time, the productivity gains in the Brown County HAO have been remarkable. The dollar cost per unit of work (RYU) dropped by 18 percent between 1977 and 1979, and the number of employee years per 1,000 RYU dropped by 36 percent. The St. Joseph County HAO, due to its larger scale, began as the more efficient operation, but the improvement over time has been less than in Brown County. In 1979, the two HAOs operated at about the same level of efficiency despite their differences in scale.

PREPARATIONS FOR TRANSITION

As explained in Sec. I, Rand was responsible for supervising the allowance programs during the five-year experimental period. Thereafter, the programs are to operate under local control until the expiration of the ten-year annual contributions contract. The transition to local control was scheduled for 30 June 1979 in Brown County and 31 March 1980 in St. Joseph County.

Brown County

Well before the scheduled transition date, Rand, HAO, and BCHA staff reviewed all contracts governing the relationships between HUD, the BCHA, and the HAO. The Brown County Housing Authority voted to continue its contract with the HAO for administering the program and to retain the *HAO Handbook*, including its eligibility rules and housing standards, as the program's operating guide. A number of amendments were approved by the governing bodies of the HAO and BCHA and have been submitted to HUD for review and approval. The *HAO Handbook* was revised to delete all references to Rand as well as to streamline certain operating procedures. The revised *Handbook* has been approved by the HAO and BCHA boards and is currently being reviewed by HUD. Amendments to the HAO bylaws ending Rand's role in trustee selection will be executed when HUD approves the proposed contract and *Handbook* changes. However, a majority of the trustees are now local residents and FPOG no longer monitors the HAO's activities. The Rand site office in Green Bay was closed on 30 September 1979.

St. Joseph County

Preparations for transition in St. Joseph County are well under way; indeed, much of the staff work was done jointly with Brown County's HAO, and the post-transition arrangements are expected to be similar in the two sites.

Most of the formal amendments to contracts governing the relationships between the HAO, the SBHA, and HUD have been approved by the HAO's trustees. HAO staff have met with local officials, some of whom are newly elected, to acquaint them with the program's policies and operations and to prepare them for transition. In the late spring of 1979, the South Bend Housing Authority approved a new five-year lease for the HAO's office space and affirmed its intent that the HAO will continue administering the program after transition. During the coming months, contract amendments and the revised *HAO Handbook* will be submitted to the relevant parties for approval.

III. THE RESEARCH PROGRAM

To determine the effects of housing allowances on the housing markets and communities in which the experimental allowance program operated, Rand embarked in 1973 on an ambitious program of data collection, now virtually complete. Four annual cycles of field surveys were conducted in each site, yielding detailed time-series on the owners, occupants, and characteristics of about 7,000 empaneled dwellings on over 4,000 residential properties in the two sites combined. The Brown County HAO has delivered administrative records covering transactions with over 9,000 enrollees during the first five years of program operations; the final installment of similar records from the St. Joseph County HAO, covering over 15,000 enrollees, will be delivered to Rand early in 1980. Two supplemental surveys were conducted during 1979 to fill evident gaps in our knowledge of program effects.

All of the annual survey data and three-fifths of the program data have been edited and organized into research files. Sample accounting on the survey files is nearly complete, and half of the planned "derived variables" have been created and added to the files. After auditing and documentation, both survey and HAO files will be delivered to HUD at intervals between now and September 1981. During that same period, HASE staff must complete analysis of the data and prepare the final reports on the Supply Experiment.

Both file preparation and analysis plans were substantially affected by a major revision in the Supply Experiment's research charter in 1978. The changes followed from interim findings that were summarized in the fourth annual report, published in May 1978. Those findings established beyond reasonable doubt that the market-wide effects of a fullscale allowance program were slight, even though not yet precisely measured. HUD and Rand agreed that while closure should be sought on market effects, more analytic attention should thereafter be directed to two topics hardly considered in the original charter: the dynamics of eligibility and participation, and the program's effects on participants. Those conclusions were embodied in a contract funding the final three years of the experiment, which was signed in September 1978.

Another feature of the new contract was a definite schedule and specifications for delivering to HUD copies of the principal data files prepared by Rand from survey and HAO records. The files constitute a valuable national resource for the study of housing markets and transfer programs. HUD plans to make them available for public use.

The Supply Experiment's research activities during 1979 included fielding two special surveys; transcribing, coding, and editing the final cycle of marketwide surveys in St. Joseph County; continuing the development of flexible, well-documented analytical files that permit time-series analysis and delivering some of those files to HUD; completing and publishing a number of interim reports; participating in a major conference on the Experimental Housing Allowance Program; and conducting new analyses whose findings will be reported in 1980 and 1981. The following pages describe those activities in more detail.

SURVEYS

The HASE Survey Group essentially completed its mission during 1978, when the last annual cycle of field surveys was conducted in St. Joseph County. However, during 1979 the Survey Group supervised two special surveys designed to supplement the data that were routinely collected by the HAOs from their clients. One was a survey of repair activity addressed to the landlords of allowance recipients; the other was addressed to enrollees who left the program without ever qualifying for payments, a group called "EENPs."

The Supplemental Survey of Landlords

In 1976, at the request of HASE researchers, the HAOs began collecting detailed information on repairs to the dwellings occupied by households enrolled in the allowance programs. This included both repairs made to qualify failed dwellings for occupancy by allowance recipients and repairs made voluntarily by the occupants or owners of these dwellings during the intervals between annual dwelling evaluations. Analysis of these data suggested that homeowner clients were reporting more fully on repair actions and costs than were renter clients. The reason seemed to be that renters often did not know about repairs made by their landlords, and when they knew about such repairs, often did not know their costs. To fill this gap in our data on program-related repair activity, we surveyed a sample of landlords who had allowance recipients as tenants. Because the experimental period was ending in Brown County, the survey was conducted only in St. Joseph County.

The sampling frame consisted of all dwellings occupied by enrolled households between 1 January and 30 June 1978. Because the survey data were to be matched with tenants' reports on the occasion of their next annual housing evaluation, the dwellings of clients who left the program before January 1979 were excluded, leaving a survey population of 1,809 dwellings (see Table 3.1). We needed both the client's consent and the landlord's current telephone number in order to contact each survey respondent; in the end, we were able to contact landlords for 603 client-occupied dwellings, and completed interviews covering 548 of those dwellings.

The interviews were conducted in mid-1979 by long-distance telephone from the Rand Telephone Center in Santa Monica. We sought repair data for calendar year 1978 in a format parallel to that collected by HAO housing evaluators from HAO clients: information on the type, extent, location, cash cost, source of labor, and amount of unpaid labor for each repair or improvement made to the client's dwelling or to other parts of the property used by the client. The reports of these telephone interviews were then submitted to the HASE Survey Data Preparation Group for processing, which was completed on 31 August 1979.

Supplemental Survey of Terminees

Cumulatively, about 13 percent of all enrollees in Brown County and 19 percent in St. Joseph County have dropped out of the program without ever qualifying for allowance payments. Some are terminated by the HAOs after a routine recertification report indicates that the household is no longer eligible for assistance (usually

Table 3.1

FIELD RESULTS OF SUPPLEMENTAL SURVEY OF LANDLORDS WHOSE TENANTS WERE ALLOWANCE RECIPIENTS: ST. JOSEPH COUNTY, 1979

Item	Number of Cases
<i>Derivation of Survey Sample</i>	
Sampling frame ^a	2,083
Client enrollment terminated ^b	274
Survey population	1,809
Client consent not obtained	722
Client consent obtained	1,087
Landlord telephone listing not obtained ...	118
Landlord telephone listing obtained	969
<i>Results of Interview Attempts</i>	
Survey sample	969
No interview attempted, by reason	332
Respondent burden ^c	199
Ownership change	73
Unit identification problem	11
Landlord telephone out of service	49
Interview attempted, by result	637
Respondent not contacted	34
Respondent contacted	603
Refused interview	55
Interview completed	548
Sample completion rate ^d57
Field completion rate ^e86
Field response rate ^f91

SOURCE: Tabulated by HASE staff from records of the supplemental survey of landlords whose tenants were allowance recipients, St. Joseph County, 1979.

^aAll rental units occupied by enrollees between 1 January and 30 June 1978.

^bEnrollment terminated prior to record search in January 1979. Includes two clients then still enrolled, but who had never qualified for payments.

^cLandlord already interviewed concerning four other client-occupied units, or interviewed in HASE marketwide survey.

^dCompleted interviews/survey sample.

^eCompleted interviews/interview attempts.

^fCompleted interviews/respondents contacted.

because of increased income). Others contact the HAO and request that their enrollments be terminated, offering a variety of reasons. However, the majority of terminations occur because enrollees fail to respond to recertification notices; in these cases, the HAO lacks reliable data on the client's circumstances. Some may have moved away from the area, others may have decided without HAO confirmation that they were no longer eligible, and others may have concluded that they could not remedy the housing defects that prevented them from receiving payments.

Programmatic concerns led the HAOs to seek additional information about eligible enrollees who terminated without receiving payments (EENPs). The two HAOs jointly funded a survey of such cases, the contract for which was awarded to Chilton Research Services. Rand helped design the survey sample, instrument, and field procedures, monitored the contractor's performance, and took delivery of machine-readable records prepared by the contractor; we plan to audit the data and analyze them in ways that will serve both the HAOs' programmatic interest and Rand's research interest.

The sampling frame for the EENP survey consisted of all households who enrolled in the allowance program after 31 May 1976 and whose enrollments were terminated before 1 January 1979. To obtain the survey sample, we excluded those terminees who had received payments or whose reasons for terminating were clearly established by HAO records (see Table 3.2). The remaining terminees, 358 in Brown County and 864 in St. Joseph County, were tracked to current addresses if feasible; 258 were located in Brown County and 532 in St. Joseph County. Interviews were completed with 228 and 427 respondents in the counties respectively.

The interviews were conducted either by telephone or at the respondent's home, depending on circumstances. The instrument elicited an account of the respondent's dealings with the HAO (which we can check against HAO records) and probed his reasons for acting or failing to act in ways that led to termination. Detailed questions were asked about housing repair problems that might have prevented an enrollee from qualifying for payments, and about eligibility status at the time of termination.

Remaining Survey Tasks

The HASE Survey Group has supervised 32 complex surveys in Brown and St. Joseph counties. It was responsible for designing the survey instruments, selecting fieldwork subcontractors, providing them with field materials, and monitoring their operations; for creating and supporting a computer-based tracking system for each sample element throughout the four survey cycles; for compiling codebooks for each survey (and for HAO research files) that captured not only question wording and authorized response codes but any special instructions or policy decisions that affected fieldwork or data cleaning; and for assisting other HASE groups with survey-related problems.

With all surveys now complete, the Survey Group is phasing out. At the end of September 1979, its staff had declined from a peak of 16 persons to 3, all now part-time only. Their remaining tasks are to prepare texts for the rest of the survey and HAO codebooks, document survey operations, and assist other HASE groups with problems arising from the surveys.

Table 3.2

FIELD RESULTS OF SUPPLEMENTAL SURVEY OF TERMINEES: HOUSING ALLOWANCE PROGRAMS IN BROWN AND ST. JOSEPH COUNTIES, 1979

Item	Number of Cases	
	Brown County	St. Joseph County
<i>Derivation of Survey Sample</i>		
Sampling frame ^a	407	1,434
Known reason for termination ^b	49	123
Survey population	358	1,311
Eliminated by sampling	--	447
Retained in survey sample	358	864
<i>Results of Interview Attempts</i>		
Survey sample	358	864
No interview attempted, by reason	100	332
Respondent unlocatable	76	284
Sample selection error ^c	12	23
Other error	12	25
Interview attempted, by result	258	532
Respondent located but not contacted ^d ..	20	74
Respondent contacted	238	458
Refused interview	10	31
Interview completed	228	427
Sample completion rate ^e64	.49
Field completion rate ^f88	.80
Field response rate ^g96	.93

SOURCE: Tabulated by HASE staff from records of the supplemental survey of terminees, Brown and St. Joseph counties, 1979.

^aClients who enrolled after 31 May 1976 and whose enrollments were terminated before 1 January 1979.

^bHAO records clearly indicated that the termination was due to a change in eligibility status, moving outside of the program's jurisdiction, discovery that the initial enrollment was erroneous, or fraudulent practice by the client.

^cRespondent denied ever enrolling or claimed that some payments were received before termination.

^dIncludes 5 persons in Brown County and 34 in St. Joseph County who were deceased or too ill to interview.

^eCompleted interviews/survey sample.

^fCompleted interviews/interview attempts.

^gCompleted interviews/respondents contacted.

SURVEY DATA PREPARATION

Completed questionnaires and related field reports from the HASE surveys of residential properties in each site were sent to the Survey Data Preparation Group (SDPG) in Santa Monica. There, each document was logged and manually edited, and fields with verbatim responses were coded. Machine-readable records were created from the documents, then cleansed of errors and ambiguities by iterative manual and machine editing. The clean records were then assembled into an "edited field reports file" for each category of document. Such files were forwarded to the Data Systems Group (DSG), which reorganized them into a standard research file format.

During the year covered by this report, SDPG's workload consisted mainly of field reports from the final survey cycle in St. Joseph County, conducted in 1978.¹ Table 3.3 summarizes the workload generated by those surveys, although the reporting year does not coincide exactly with the period in which the work was done. The entries also include processing for the supplemental survey of landlords described above (p. 34). No major problems were encountered, and the last file of edited field reports was transferred to DSG on 28 September 1979.

Altogether, the 1979 workload consisted of 52,000 documents² containing 12.6 million response fields. These included 214,000 that contained verbatim responses (concerning occupation, industry of employment, reasons for moving, and opinions about the allowance program) that had to be manually coded into machine-readable categories.

Editing specifications listing all permissible entries in each field and logical checks for consistency with related entries were designed for each of the different field-report forms. Each of the 12.6 million response fields was checked by machine against its editing specifications, the process yielding 62,000 error messages. Each message was resolved by an editor who checked the source document for evidence of recording, interpretation, or transcription errors and consulted editing guides for policy decisions on recurring problems. Members of the Survey and Analysis Groups periodically reviewed decisions and helped resolve problems that lacked clear precedent. If an error was resolved, the record was corrected; otherwise the questionable entry was flagged as "suspicious data." The record was then recycled through the editing program to verify that the new entry conformed to edit specifications.

When all records for each file of a given survey had passed through the editing program without generating error messages, the survey was declared "clean." The edited field report files were sent to DSG, along with a copy of the initially transcribed files, the cleaning specifications, the suspicious data files, the data dictionaries, and the machine-readable logs of all changes made during cleaning. These six files jointly document data preparation and provide an audit trail for each response

¹ The final survey cycle in Brown County was conducted in 1977; its field reports were processed by SDPG in 1978.

² The large number of documents reflects the division of survey instruments and auxiliary reporting forms into separately bound documents, not all of which were used in a given field assignment. For example, the 1978 instrument for the survey of households consisted of seven separately bound booklets, of which only four were applicable to any one respondent, and could be supplemented by any of six auxiliary forms (e.g., refusal reports, vacancy reports, validations, field editing problem sheets). The forms actually used in a given case were collected in a record folder that was itself a form, listing its own contents.

Table 3.3
SURVEY DATA PREPARATION WORKLOAD FOR ST. JOSEPH COUNTY,
WAVE 4

Workload Measure	Thousands of Items
<i>Survey Questionnaires</i>	
Documents processed	22 ^a
Response fields coded	214
Response fields checked	9,590
Error messages resolved	57
<i>Related Field Reports</i>	
Documents processed	30 ^b
Response fields checked	2,994
Error messages resolved	5
<i>Total Workload</i>	
Documents processed	52
Response fields coded	214
Response fields checked	12,584
Error messages resolved	62

SOURCE: Records of the HASE Survey Data Preparation Group.

NOTE: The table accounts for all field reports associated with the wave 4 surveys in St. Joseph County; and for certain other data collected in the site, such as tax record abstracts. Nearly all the work described here was done between 1 October 1978 and 30 September 1979.

^aIncludes 777 tax record abstracts with about 99,000 response fields, 13,356 neighborhood observation and abstraction forms with about 984,000 response fields, and 552 HAO landlord surveys with 78,000 response fields.

^bIncludes receipt and filing of approximately 7,000 edit problem forms that did not require data entry or cleaning.

field on every report generated during the survey. For the 1978 survey cycle in St. Joseph County, 174 such files were delivered to DSG.

Table 3.4 summarizes the entire data preparation workload generated by HASE surveys over a five-year period, 1975-79. Altogether, SDPG processed 365,000 documents containing over 103 million response fields, coded nearly 1.5 million verbatim entries, and resolved nearly 1.1 million error reports.

These tasks were accomplished by a group created and staffed in 1974 specifically for that purpose. The scale and complexity of the task required development of new technical procedures and new computer software, and the installation of production-oriented management techniques that were essentially foreign to a research institution. By 1977, SDPG had a smoothly operating system that routinely processed each year's workload. During peak production periods, the group was staffed with 24 full-time professional or technical workers, 55 part-time coders, editors, and clerks, and 20 data entry operators.

Table 3.4

SUMMARY OF SURVEY DATA PREPARATION WORKLOAD, 1975-79

Workload Measure	Thousands of Items, by Year Processed					Total
	1975 ^a	1976 ^b	1977 ^c	1978 ^d	1979 ^e	
<i>Survey Questionnaires</i>						
Documents processed	23	33	11	25	22	114
Response fields coded	170	262	346	487	214	1,479
Response fields checked	11,069	20,045	24,838	17,507	9,590	83,049
Error messages resolved	159	339	247	137	57	939
<i>Related Field Reports</i>						
Documents processed	22	62	82	55	30	251
Response fields checked	(f)	4,862	6,680	5,661	2,994	20,197
Error messages resolved	(f)	76	29	22	5	132
<i>Total Workload</i>						
Documents processed	45	95	93	80	52	365
Response fields coded	170	262	346	487	214	1,479
Response fields checked	11,069	24,907	31,518	23,168	12,584	103,246
Error messages resolved	159	415	276	159	62	1,071

SOURCE: Records of the HASE Survey Data Preparation Group.

NOTE: Each year's workload consists of all field reports pertaining to the preceding year's survey plus miscellaneous items processed from October of the preceding year through September of the indicated year.

^a1974 survey cycle: Brown County, wave 1.

^b1975 survey cycle: Brown County, wave 2, and St. Joseph County, wave 1.

^c1976 survey cycle: Brown County, wave 3, and St. Joseph County, wave 2.

^d1977 survey cycle: Brown County, wave 4, and St. Joseph County, wave 3.

^e1978 survey cycle: St. Joseph County, wave 4.

^fNot available.

The 1980 workload will consist of hardcopy disposition and documentation tasks leading to the termination of HASE survey data preparation activity. During this period, a small staff will be available to respond to queries and resolve data problems encountered by the File Development Group, whose work is discussed below.

DATA MANAGEMENT

Nearly all HASE data are stored and processed by machine. The Data Systems Group (DSG) performs those operations for three major classes of data: survey field reports, HAO administrative records, and survey sampling records.

DSG receives the edited field reports files for each survey from SDPG, reformats the individual records, and reorganizes the several files into a standard format. The File Development Group (FDG) then audits each file to ensure that all field assignments are accounted for and that all reports pertain to cases on the sample

list. Corrected files are archived as preliminary master files, each documented by a codebook interpreting every entry in each response field and showing response distributions for each field. DSG provides programming and processing support for FDG's further file development and data analysis. HAO administrative records are processed in the same fashion, the main difference being that they are received in machine-readable form, thus bypassing SDPG.

The third element of the DSG workload is maintaining and operating the survey record management system, which records the history and current status of every sampled property, building, and dwelling, and identifies the appropriate respondent for each interview. The files were updated every year by the Survey Group to reflect new information that would affect fieldwork: physical changes to a property, changes in its ownership or occupants, and outcomes of prior surveys. The updated records were used to select survey samples, produce field materials, and support sample accounting.

During the year covered by this report, DSG compiled and reformatted the edited field report files for wave 4 surveys in both Brown and St. Joseph counties and documented and archived preliminary master files for three surveys and final master files for the third year of HAO administrative records in both sites. HAO administrative records, cumulative through the fourth year of program operation in each site, were reorganized into research files. In its survey support role, the group completed accounting for wave 4 surveys in St. Joseph County. The survey record management system was updated 39 times during the year, primarily with new information from the field. Finally, DSG programmed 1,377 analytic requests from the File Development and Analysis Groups and executed the machine jobs needed to produce the requested data. File preparation, survey management, and data analysis together generated 40,201 machine jobs that accounted for 16 percent of the usage of Rand's IBM system 370/158, a 50-percent increase over the preceding year.

With this period's final update of the survey record management system to reflect wave 4 field results, DSG's support of survey operations ended. Now that all survey files (through wave 4 in both sites) have been reformatted and archived and all HAO administrative files (except year 5 in St. Joseph County) have been delivered to Rand, the group must prepare the remaining files for delivery to HUD as well as continue its computing support of file development and analysis. During 1980, this work will require a staff of about 13 full-time programmers and supervisors.

FILE DEVELOPMENT AND DOCUMENTATION

After each research file is compiled by DSG from the edited field reports, it is released to FDG for auditing, augmentation, and record weighting. The audit findings and weighting procedures are formally reported, the survey questions and added variables are documented in codebooks, and the augmented file is archived as a permanent master file that may be copied or abstracted by users of the data.

These functions were formerly performed by a team within the Design and Analysis Group which developed the standards and technical procedures for assessing the completeness and reliability of the survey data and weighting the individual

records so that, jointly, they would portray the population from which the survey sample was drawn. Early in 1979, that team was expanded and reconstituted as a separate File Development Group, which has a dual responsibility: preparing and documenting research files for use by HASE researchers, and delivering the documented files to HUD on a schedule established by mutual agreement. HUD plans to make the files available for public use.

FDG's workload divides naturally into two parts: tasks connected with the surveys addressed to a marketwide sample of residential properties in each site, and tasks connected with HAO administrative records. Below, we review accomplishments in both domains.

Survey Data

As noted earlier, Rand has conducted four annual cycles of field surveys addressed to a panel of residential properties in each site.³ All four cycles included an interview with each property's owner (landlord or homeowner) and with some or all of its occupants (renters or owners). The initial and terminal cycles also included field observations on the physical characteristics and condition of each property in the panel and of each neighborhood in the site.

Prior annual reports have described the outcomes of various of these surveys as determined from an initial accounting for reports received from the field. Tables 3.5 and 3.6 summarize the outcomes of all the surveys for all four waves in each site, as determined by FDG's sample accountants. Their conclusions generally verify the initial accounting, but they discovered various errors in the field procedures or field reports that alter some details. In these accounts, the number of sample elements changes from year to year, primarily because the HASE panel of residential properties was augmented annually by adding a sample of newly constructed residential properties; some sampled properties changed to nonresidential use, so were retired from the sample; others changed tenure, which shifts them from one survey schedule to another; and others merged or split, altering the number of distinct sample elements. The wave 1 surveys in each site were addressed to comparatively large samples, from which the properties, buildings, and dwellings in the permanent panel were chosen. All these factors complicated both the fieldwork and our subsequent accounting for it.

Combining the four waves in two sites, we obtained a total of 9,660 interviews with landlords, 15,197 with their tenants, and 4,915 with homeowners (see Table 3.5). The total of 29,772 completed interviews is 73 percent of all interviews attempted. Failures are about evenly distributed between cases in which fieldworkers were unable to contact the desired respondent despite repeated attempts, and cases in which a contacted respondent refused to grant an interview.⁴ Considering that these interviews usually required about 90 minutes to complete and that many

³ Rand also surveyed a panel of urban renter households in each site, following each household through membership splits and changes of residence. Records of this survey were delivered to The Urban Institute (UI) for comparison with similar records from the Housing Assistance Demand Experiment. The final deliveries were made in August 1979.

The discussion below pertains only to surveys of the HASE panel of residential properties and their neighborhoods, not the UI comparability panel.

⁴ Reasons for response failure are not shown in Table 3.5. They are presented in the *Fifth Annual Report* (R-2434-HUD, June 1979), Table 3.4, whose entries are based on field final status reports rather than FDG's sample accounts.

Table 3.5
STATISTICAL SUMMARY OF HASE INTERVIEW SURVEYS: BROWN AND
ST. JOSEPH COUNTIES, SURVEY WAVES 1-4

Survey Wave	Brown County				St. Joseph County			
	Number of:			Field Completion Rate ^d	Number of:			Field Completion Rate ^d
	Sample Elements ^a	Interview Attempts ^b	Completed Interviews ^c		Sample Elements ^a	Interview Attempts ^b	Completed Interviews ^c	
<i>Survey of Landlords^e</i>								
Wave 1	2,970	2,926	2,111	.72	3,025	2,856	1,915	.67
Wave 2	1,396	1,310	1,106	.84	1,452	1,344	915	.68
Wave 3	1,377	1,278	936	.73	1,458	1,273	935	.73
Wave 4	1,348	1,258	911	.72	1,447	1,233	831	.67
All waves	7,091	6,772	5,064	.75	7,382	6,706	4,596	.69
<i>Survey of Tenants^f</i>								
Wave 1	6,597	3,843	2,940	.77	5,580	3,217	2,195	.68
Wave 2	2,690	2,291	1,894	.83	2,862	2,341	1,513	.65
Wave 3	2,741	2,302	1,786	.78	2,839	2,267	1,546	.68
Wave 4	2,769	2,328	1,842	.79	2,745	2,194	1,481	.68
All waves	14,797	10,764	8,462	.79	14,026	10,019	6,735	.67
<i>Survey of Homeowners^g</i>								
Wave 1	1,436	1,241	897	.72	1,226	970	595	.61
Wave 2	695	690	582	.84	651	633	448	.71
Wave 3	788	778	581	.75	782	763	598	.78
Wave 4	843	829	584	.70	890	857	630	.74
All waves	3,762	3,538	2,644	.75	3,549	3,223	2,271	.70
<i>All Interview Surveys</i>								
Wave 1	11,003	8,010	5,948	.74	9,831	7,043	4,705	.67
Wave 2	4,781	4,291	3,582	.83	4,965	4,318	2,876	.67
Wave 3	4,906	4,358	3,303	.76	5,079	4,303	3,079	.72
Wave 4	4,960	4,415	3,337	.76	5,082	4,284	2,942	.69
All waves	25,650	21,074	16,170	.77	24,957	19,948	13,602	.68

SOURCE: Tabulated by HASE staff from sample accounting records for each site.

NOTE: Annual survey waves were conducted in Brown County in 1974-77; in St. Joseph County, 1975-78.

^aAll cases sampled for the indicated survey wave, including some for which interviews were not attempted because of vacancy, change in property use, or change in occupant's tenure. Also includes cases for which interview attempts were conditioned on tenure of occupant or on prior completion of another interview. In the event of tenure change, the case was added to the sample list for the appropriate survey, so there is some double-counting across surveys.

^bSample elements with whom interviews were appropriate and actually sought. Interview attempts are not double-counted across surveys.

^cA successful interview yielding a "field-complete" questionnaire.

^dComplete interviews/interview attempts.

^eOwners of rental properties, including mobile home parks.

^fOccupants of rented dwellings, including rented rooms and rented mobile homes.

^gHouseholds that own the dwellings they occupy, including cooperatives, condominiums, and mobile homes whose sites may have been rented. Resident landlords were not interviewed as homeowners.

Table 3.6

STATISTICAL SUMMARY OF FIELD OBSERVATION AND PUBLIC RECORD
SURVEYS: BROWN AND ST. JOSEPH COUNTIES, SURVEY WAVES 1-4

Survey Wave	Brown County				St. Joseph County			
	Number of:			Field Completion Rate ^a	Number of:			Field Completion Rate ^a
	Sample Elements ^a	Observation Attempts ^b	Completed Records ^c		Sample Elements ^a	Observation Attempts ^b	Completed Records ^c	
<i>Survey of Residential Buildings^e</i>								
Wave 1	4,781	4,667	4,662	1.00	4,967	2,997	2,926	.98
Wave 2	2,200	2,159	2,076	.96	272	33	26	.79
Wave 3	486	133	116	.87	368	174	164	.94
Wave 4	2,332	2,329	2,265	.97	2,614	2,600	2,467	.95
All waves	9,799	9,288	9,119	.98	8,221	5,804	5,583	.96
<i>Survey of Tax Parcel Records^f</i>								
Wave 1	4,406	1,945 ^g	1,935 ^g	.99	4,251	2,510	2,510	1.00
Wave 2	2,011	2,005	1,993	.99	1,990	1,955	1,955	1.00
Wave 3	2,105	2,035	2,022	.99	2,113	2,029	2,029 ^h	1.00
Wave 4	2,147	2,065	2,057	1.00	2,196	2,075	2,075 ^h	1.00
All waves	10,669	8,050	8,007	.99	10,550	8,569	8,569	1.00
<i>Survey of Neighborhoods--Street Segmentsⁱ</i>								
Wave 1	8,372	8,372	8,084	.97	12,173	12,173	12,152	1.00
Wave 4	9,315	9,315	9,256	.99	12,934	12,934	12,848	.99
All waves	17,687	17,687	17,340	.98	25,107	25,107	25,000	1.00
<i>Survey of Neighborhoods--Local Sources^j</i>								
Wave 1	108	108	108	1.00	86	86	86	1.00
Wave 4	108	108	108	1.00	86	86	86	1.00
All waves	216	216	216	1.00	172	172	172	1.00

SOURCE: Tabulated by HASE staff from sample accounting records for each site.

NOTE: Annual survey waves were conducted in Brown County in 1974-77; in St. Joseph County, 1975-78.

^aAll cases sampled for the indicated survey wave, including some for which observations were not attempted because of change in property use or noncompletion of an owner or occupant interview.

^bSample elements on which observations were actually sought. For the surveys of residential buildings and street segments, an observation consists of a field inspection. On the surveys of tax parcel records and neighborhood local sources, the data were abstracted from public records.

^cA successful observation, yielding a "field-complete" record.

^dComplete records/observation attempts.

^eBuildings containing sampled dwellings.

^fTax assessment records pertaining to sampled properties.

^gRecords abstracted for empaneled properties only.

^hPreliminary.

ⁱThis survey collected land use and other data for each street segment (a length of street between intersections) in the county.

^jMap measurements, utility services, and other data for each HASE-defined neighborhood in the county.

respondents were approached for interviews several years in succession, the high completion rate is a tribute to the thoroughness and tact of the fieldwork subcontractors.⁵

Table 3.6 summarizes the outcomes of the surveys that did not entail interviews. The survey of residential buildings entailed field observations on the sampled properties.⁶ The street segment surveys entailed field observations on every street segment in each county. The surveys of tax parcel records and "local sources" entailed locating public records and abstracting information from them. These surveys have higher completion rates than the interview surveys because only a field error or a missing public record could prevent us from obtaining the information we sought—although uncooperative property owners occasionally hampered our observations of residential buildings.

By fall 1979, FDG had completed its accounting for each separate survey and was well into an even more complex task, accounting longitudinally for all surveys pertaining to each empaneled property. For longitudinal analysis, the ideal property record would include interviews with the owner and all sampled occupants for each year in which the property was surveyed, plus an annual tax record abstract and both initial- and terminal-year building observation records. Because of interview failures, vacancies, and field errors, it is unlikely this ideal will often be achieved, but much longitudinal analysis can be accomplished with less complete data.

Preliminary results of this accounting indicate that at least three annual interviews were obtained from the landlords of about 1,000 rental properties in each site, and the complete four-year series is available for about 700 properties in each site. For rental dwellings in Brown County, we have about 1,700 complete three-year records and 1,000 complete four-year records; comparable figures for St. Joseph County are 1,150 and 480. For owner-occupied homes in Brown County, we have about 500 complete three-year records and over 360 complete four-year records; comparable figures for St. Joseph County are 420 and 280.

Especially for Brown County, these results are encouraging for longitudinal analysis of individual dwellings and properties. The lower longitudinal completion rates for St. Joseph County do concern us. They reflect both that county's higher vacancy rate (thus no interview was possible), and consistently lower interview completion rates (see Table 3.5) than in Brown County. However, our analysts judge that by using efficient statistical procedures they can obtain reasonably precise estimates of most longitudinal parameters of interest from both sites.

In addition to accounting for records and auditing the contents of each file, FDG has embarked on an extensive agenda of record augmentation. Based on their research plans and analytical experience with wave 1 files, HASE researchers specified over 700 derived variables—sample-selection indicators, aggregations or transformations of survey responses, items from related surveys, and sampling weights—to be added to the records of survey responses. Each was to be construct-

⁵ Urban Opinion Surveys, a division of Mathematica, Inc., conducted wave 1 fieldwork in Brown County; waves 2-4 were conducted by the National Opinion Research Center of the University of Chicago. All interview surveys in St. Joseph County were conducted by Westat, Inc.

⁶ The full survey of residential buildings in Brown County was, for various reasons, conducted in wave 2 as well as waves 1 and 4. The small samples for wave 3 in Brown County and waves 2 and 3 in St. Joseph County are associated with properties newly added to the panel or otherwise changing status in ways that required new information.

ed for all four survey waves in each site, yielding a total of 5,300 variables. Although parallels in the survey instruments for the two sites and for different waves simplified the task, the algorithm for each variable had to be specified, programmed, and adapted to each specific survey, and the variables thus constructed had to be checked for possible errors, both in the algorithm and the data. By September 1979, roughly half the work had been completed. The full set of derived variables is scheduled to be on the files by July 1980.

Nearly all preliminary master files have been archived, and about half are currently used by HASE analysts. The 28 final master files containing survey data are scheduled for delivery to HUD at intervals from January through November 1980. When delivered, each final master file will be accompanied by a comprehensive codebook describing each data field in the unit record, interpreting all possible entries in that field, and displaying unweighted response frequencies. In addition, an audit report will assess the completeness and reliability of the data contained in each file and explain the derivation of sample weights attached to each record. As of 30 September 1979, HASE had compiled and published 17 codebooks⁷ and 10 audit reports pertaining to survey data.

HAO Administrative Data

The housing allowance offices in Brown and St. Joseph counties record transactions with applicants, enrollees, and recipients in six machine-readable data files, some cumulative and others updated to reflect status changes resulting from recent transactions. These files are delivered to Rand each quarter. Under FDG's supervision, the Data Systems Group reformats and merges these administrative files in annual batches to create three principal research files for use by HASE analysts. Each such file is audited by FDG, and the HAOs help to correct any errors discovered. The data are then archived as final master files, each documented by a codebook and an audit report.

Because HASE's initial research charter included only limited responsibility for analyzing program (as distinct from market) data, the appropriate specifications for HAO files were not as clear to us as for survey files, and our early analyses were constrained by difficulties in linking data from different administrative files for a specific client so as to understand the chronology of his transactions with the HAO. The record structure was incrementally improved through the third year of HAO data, but the research charter revisions approved in September 1978 implied more complex analysis than the existing file formats would support.

During 1979, FDG therefore began redesign of the HAO files, assembling all the salient information about each client's transactions with the HAO into a single lengthy record. This record in turn is summarized by a "digital client history" that chronologically orders and dates all transactions and the resulting changes in client status, with pointers to the location of the supporting detail elsewhere in the record. Constructing the digital history for a client serves as a much more thorough audit of his records than we were able to conduct previously. The completed history

⁷ The interview surveys are each documented by a three-part codebook, one part for survey responses excepting attitudinal data, another for attitudinal data, and a third for derived variables. The parts are compiled and bound separately and at different times, so the count of codebooks is larger than the count of final master files.

provides for easy identification of analytically important subsets of clients and flexible access to supporting detail.

By the end of September 1979, the new grand master file had been compiled from the first three years of program records in each site and the complex logic needed to create a digital history was mostly programmed. During the first quarter of 1980, we expect to have all five years of HAO data on hand and will proceed to construct a five-year grand master file and digital history.

In the meantime, FDG has begun delivering HAO year 3 data to HUD in its earlier format. The first delivery for Brown County occurred in June 1979; year 3 records for St. Joseph County will follow in November. By the end of 1979, HASE will have published ten codebooks and two audit reports pertaining to HAO records.

Remaining Tasks

During 1980, the File Development Group expects to complete its work on all survey files and all but the final year of HAO records from each site. After delivering the files and their documentation to HUD, FDG will begin work on a user's guide to the HASE data base, one of the richest and probably the most complex of any now available for social science research. FDG's current staff of 23 will phase down as tasks are completed.

ANALYZING EXPERIMENTAL DATA

Early in 1979, HASE's Design and Analysis Group was divided into the File Development Group (whose work was discussed above) and the Analysis Group. The latter consists of over 20 full- or part-time analysts organized into four teams, each responsible for a general area of HASE research, as follows:

- Market effects of housing allowances
- Community attitudes toward housing allowances
- Eligibility and participation
- Program effects on participants

The first two topics were carried over from the original HASE research charter; the last two were added in September 1978 by agreement between Rand and HUD. Below, we summarize our progress with each topic during 1979.

Market Effects

During 1979, the market effects team completed its analysis of rent inflation in St. Joseph County during the first three program years, summarized and interpreted the inflation findings for both counties, and developed a theory of shortrun market adjustments that generalizes the observed outcomes. Hedonic indexes for rental housing services were specified and estimated for both Brown and St. Joseph counties. Four-year income and expense accounts were compiled for rental properties in both sites, preparatory to analysis of supply and demand influences on rents. The team completed its planned studies of market intermediaries in both counties and drafted a final report on that topic. A study of housing search and residential

mobility was completed. Analyses of neighborhood characteristics in both counties laid the basis for future studies of program-induced neighborhood change.

The central motivation for the Supply Experiment was concern that a full-scale housing allowance program might disrupt local housing markets, and specifically might cause large increases in rents or home prices. While the data were accumulating, we used records of the annual survey of tenants to measure the extent of rent inflation in each site, the findings serving both research and program administration.⁸

In 1978, the market effects team completed a three-year rent inflation analysis for Brown County, and in 1979 completed a similar study for St. Joseph County. The findings from both studies were then summarized and compared to preexperimental predictions. Because the program's price effects in the rental market were so much less than most observers anticipated, the team reexamined the underlying theory of shortrun market adjustments to demand shifts, and developed a cogent theoretical generalization of the empirical findings.⁹

Precision in measuring housing price changes requires independently measuring housing quantity changes, a difficult task because of the complexity of the housing service bundle. One tool for quantity measurement is hedonic indexing; during 1979, the market effects team specified and estimated hedonic indexes for rental housing services in both counties.¹⁰ Another tool is input accounting; landlord and tenant survey data were used during the year to compile comprehensive four-year financial accounts for each rental property in the survey panel. Factor price indexes will be used to deflate each year's operating expenses; the team has compiled such indexes through 1975 for each site and during 1980 will complete the task for the remaining survey years.

Pursuant to the original research charter, HASE analysts also have examined the roles of market intermediaries—primarily mortgage and home improvement lenders, real estate brokers and rental agents, and home repair firms—in transactions involving program participants. The planned research was completed during 1979 and a final report was being drafted for submission to HUD.¹¹

Another preexperimental concern was that program participants would move in sufficient numbers to disturb neighborhood housing markets or social structures in undesirable ways. Research conducted in 1976 and 1977 established that the number and geographical pattern of participants' moves did not foreshadow drastic neighborhood change. In 1979, the market effects team further investigated the

⁸ The HAOs used the findings from our periodic rent inflation analysis to adjust allowance entitlements.

⁹ James P. Stucker, *Rent Inflation in Brown County, Wisconsin: 1973-78*, WN-10073-HUD, August 1978 (forthcoming as N-1134-HUD); D. Scott Lindsay, *Rent Inflation in St. Joseph County, Indiana, 1974-79*, N-1468-HUD, forthcoming; C. Lance Barnett and Ira S. Lowry, *How Housing Allowances Affect Housing Prices*, R-2452-HUD, September 1979; and C. Peter Rydell, *Shortrun Response of Housing Markets to Demand Shifts*, R-2453-HUD, September 1979. All were published by The Rand Corporation. Rydell's work on market adjustments will continue under a separate grant from HUD.

¹⁰ The hedonic index for Brown County's rental housing is reported in C. Lance Barnett, *Using Hedonic Indexes to Measure Housing Quantity*, The Rand Corporation, R-2450-HUD, October 1979; the index for St. Joseph County will be reported by Charles W. Noland, *Assessing Hedonic Indexes for Housing*, The Rand Corporation, N-1305-HUD, forthcoming.

¹¹ Some of the findings were reported in Michael G. Shanley and Charles M. Hotchkiss, *How Low-Income Renters Buy Homes*, The Rand Corporation, N-1208-HUD, August 1979.

methods used by low-income families to search for housing, how successful they were, and whether they were often thwarted by discrimination.¹²

Finally, the team worked to develop an appropriate data base for the analysis of program-induced neighborhood change. Early in the experiment, 1970 census data were used to divide both Brown and St. Joseph counties into small residentially homogeneous neighborhoods; subsequently, the addresses of survey respondents and HAO clients were coded to these neighborhoods. For analytical purposes, larger territorial units have now been created for both counties and their appropriateness tested.¹³ Concurrently, program enrollees who moved during the first three program years have been identified, and the relevant information about them and their origins and destinations have been assembled for analysis.

Community Attitudes

Data on community attitudes toward the allowance program have been gathered by interviewing households and landlords whose dwellings or properties are in the permanent panel of residential properties; by monitoring public meetings and observing community events in each site; and by analyzing the content of telephone calls received by each HAO. The first cycle of analysis, based primarily on data from the first two survey waves, was completed early in 1979.¹⁴ The community attitudes team spent the rest of the year planning a second round of analyses and preparing the data collected from the wave 4 surveys.

Eligibility and Participation

Analysis of participation in transfer programs is usually hampered by limited data both on participants and on the populations from which they are drawn. The Supply Experiment is blessed with unusually complete records on participants and annual household surveys that identify those who are eligible. However, the availability of so much data also complicates analysis in that it shows us that neither the eligible population nor program participants are fixed over time.¹⁵

Late in 1978, the eligibility and participation team planned a three-year study of program dynamics that emphasizes formal models of eligibility turnover, the

¹² See the *Fourth Annual Report of the Housing Assistance Supply Experiment*, The Rand Corporation, R-2302-HUD, May 1978, pp. 118-133; Mark David Menchik, *Residential Mobility of Housing Allowance Recipients*, The Rand Corporation, N-1144-HUD, October 1979; and Kevin F. McCarthy, *Housing Search and Mobility*, The Rand Corporation, R-2451-HUD, September 1979. Menchik's work on duration of residence will continue under a grant from the National Institute of Child Health and Human Development. McCarthy's work on housing search and discrimination will be continued under a grant from HUD.

¹³ The work for St. Joseph County is documented in John E. Bala, *Neighborhoods in St. Joseph County, Indiana*, The Rand Corporation, N-1205-HUD, September 1979. A similar report for Brown County will be published in 1980.

¹⁴ Phyllis L. Ellickson and David E. Kanouse, *Public Perceptions of Housing Allowances: The First Two Years*, The Rand Corporation, R-2259-HUD, September 1979. See also Phyllis L. Ellickson, *Public Knowledge and Evaluation of Housing Allowances: St. Joseph County, Indiana, 1975*, The Rand Corporation, R-2190-HUD, February 1978; and David E. Kanouse, *Landlord Knowledge and Evaluation of Housing Allowances: St. Joseph County, Indiana, 1975*, The Rand Corporation, R-2475-HUD, forthcoming.

¹⁵ See C. P. Rydell, J. E. Mulford, and L. W. Kozimor, *Dynamics of Participation in a Housing Allowance Program*, The Rand Corporation, WN-10200-HUD, June 1978 (forthcoming as N-1137-HUD); and Bruce W. Lamar and Ira S. Lowry, *Client Responses to Housing Allowances: The First Two Years*, WN-9814-HUD, February 1979 (forthcoming as N-1124-HUD).

decision to apply and, for enrollees, the process of achieving reciprocity status. By September 1979, the work on eligibility and the decision to apply had progressed far enough to support an interim report.¹⁶ Work on postenrollment processes was under way.

Effects on Participants

In September 1978, the Supply Experiment's charter was broadened to include analysis of participants' responses to the allowance program.¹⁷ During 1979, the participant effects team studied three types of response: expenditure change, housing repairs and improvements, and moving.

Housing allowances increase the incomes of recipients; it is important to know how such an income change, in abstraction from other aspects of the program, influences housing consumption. Household survey data were used to estimate the income elasticities of housing expenditures in Brown and St. Joseph counties for both renters and homeowners, using both current and "permanent" incomes.¹⁸ The next steps are to determine how the baseline (preprogram) consumption patterns of future enrollees differed from those of their eligible peers; then to predict the housing consumption of those who subsequently enrolled, assuming no program and, alternatively, an unrestricted cash allowance. HAO records will then inform us as to actual consumption patterns for those who enrolled and qualified for payments.

A similar analytical approach will be used to assess repair activity by program participants. In this case, the team has begun by measuring the participants' responses to the HAOs' housing requirements as well as their voluntary repairs.¹⁹ Survey data will be used to estimate what part of the observed repairs is program-induced.

Any large adjustment in housing consumption is usually made by changing the place of residence. The participant effects team has compared the pre- and post-move housing consumption of allowance recipients as to expenditures, space, quality, and neighborhood characteristics, distinguishing between recipients who moved voluntarily (i.e., from HAO-approved dwellings) and those who moved from substandard dwellings in order to qualify for payments. Again, survey data on preprogram moves and associated consumption changes are expected to clarify program effects.

¹⁶ Phyllis L. Ellickson, *Who Applies for Housing Allowances: Evidence from The Housing Assistance Supply Experiment*, The Rand Corporation, forthcoming.

¹⁷ The HUD-sponsored Housing Allowance Demand Experiment conducted by Abt Associates was designed to study participant responses to variations in allowance amounts and housing consumption requirements. Eligible renter households were sampled and assigned to various treatment groups or to a control group to facilitate the isolation of program effects on behavior. The original objectives of the Supply Experiment forestalled either the use of program variations or a control group, but the HASE data nonetheless have certain advantages over HADE data that we propose to exploit: records for many more enrollees (25,000 vs. 2,500), records for owners as well as renters, a longer period of assistance for enrollees (10-year vs. 3-year maximum), and detailed annual surveys of the populations from which enrollees were drawn.

¹⁸ John Mulford, *Income Elasticity of Housing Demand*, The Rand Corporation, R-2449-HUD, July 1979.

¹⁹ James L. McDowell, *Housing Allowances and Housing Improvement: Early Findings*, The Rand Corporation, N-1198-HUD, September 1979. See also Lawrence Helbers, *Estimated Effects of Increased Income on Homeowner Repair Expenditures*, The Rand Corporation, N-1192-HUD, forthcoming.

Further in the future, the team plans to integrate these topical studies, showing how the allowance offer made to each enrollee and the evaluation report on his housing affected his decision to repair, move, or drop out of the program.

Remaining Tasks

The workload of the Analysis Group will increase during 1980 as the final installments of experimental data become available for analysis and the end of the experiment approaches. Except for the study of market intermediaries, now complete, important analytical tasks remain for each team, and as elements of the research are completed, the findings and the methods used to obtain them must be documented. We expect to continue at about current staffing levels (15 full-time equivalent analysts and supervisors) through September 1980. During the final year of the experiment, the senior members of each team will integrate topical and interim findings into a comprehensive final report.

ANALYZING PROGRAM ADMINISTRATION

Under its contract with HUD, Rand was responsible for designing the organization and procedures for the HAOs, and had continuing responsibility for guiding and monitoring their performance. In 1976, HUD and Rand agreed on a new research task—the analysis of HAO procedures from an administrative perspective. Conducted jointly by FPOG and the HAO staffs, the resulting studies address issues of administrative effectiveness and cost.

The initial studies were completed in early 1978. They analyzed the determinants of administrative cost in both sites and measured the reliability or effectiveness of specific administrative functions. Findings from those studies were summarized in Sec. VI of the fourth annual report.²⁰

Remaining FPOG research focuses on the cost and reliability of alternative income certification methods; the effects of experience and scale on administrative costs; and the potential role of agency services in helping enrollees meet program housing requirements. Although data for that research were collected beginning in mid-1978, FPOG devoted most of its resources over the next year to transition planning (see above, p. 32). Research activity picked up again in summer 1979. By the end of September, most of the data required for income certification studies were in hand, the allocation of HAO costs for January 1977 to June 1979 was nearly complete, and the special survey of enrollees who never qualify for payments (discussed on pp. 34-36) had been completed. Interim reports on these topics are scheduled for the spring and summer of 1980, followed by a final report on HASE allowance program administration at the end of the year.

REPORTING THE FINDINGS

The last task in the long series described above is reporting the findings. So far, reporting has taken five forms, to reach different audiences: briefings and lectures,

²⁰ See also Paul E. Tebbets, *Controlling Errors in Allowance Program Administration*, The Rand Corporation, N-1145-HUD, August 1979.

illustrated pamphlets, papers for professional journals or conferences, research notes, and research reports. Table 3.7 summarizes the output since the beginning of the experiment.

Briefings and lectures have been delivered to federal officials, Rand and HAO trustees, audiences in the experimental sites, and academic and professional groups. The illustrated pamphlets—four-page reports of survey findings—were distributed to survey respondents to show how we used the data they provided. Papers for professional conferences are byproducts of technical monographs prepared for HUD. They invite criticism from scholars unconnected with the experiment and publicize findings in ways likely to stimulate further research.

The major conference in which HASE staff participated during 1979 was a HUD-sponsored symposium on the housing choices of low-income families (8-9

Table 3.7

NUMBER OF ORAL AND WRITTEN PUBLICATIONS PRODUCED BY HASE:
OCTOBER 1971 THROUGH SEPTEMBER 1979

Type of Publication	Year ending 30 September						Total
	1972-74	1975	1976	1977	1978	1979	
Lecture or briefing:							
For federal officials ^a	10	3	4	15	7	4	43
Other ^b	5	1	6	7	15	15	49
Illustrated pamphlet ^c	--	2	4	3	1	--	10
Professional paper ^d	1	1	3	2	5	4	16
Research note ^e	38	15	12	19	25	24	133
Research report ^f	--	1	1	1	2	6	11

SOURCE: HASE administrative records.

NOTE: Entries include only material prepared and delivered by employees of The Rand Corporation. In addition, employees of the housing allowance offices in each site have made many speeches to local audiences, published numerous brochures containing program information, and prepared both monthly and annual reports on program operations.

^aPrimarily officers and staff of the U.S. Department of Housing and Urban Development. Other federal agencies have either been represented at such briefings or were briefed separately, including the General Accounting Office, the Office of Science and Technology, and the Office of Management and Budget. Also includes peer review panels organized by Rand and testimony invited by congressional committees.

^bSeminars for academic audiences and professional associations and briefings to trustees of The Rand Corporation and the housing allowance offices.

^cPopular summaries of survey findings.

^dUsually prepared for publication in professional journals or conference proceedings.

^ePublished by The Rand Corporation to transmit preliminary findings or technical documentation to the client; after April 1979, also available to the general public.

^fPublished by The Rand Corporation for distribution to the general public.

March, in Washington, D.C.), attended by over 200 scholars, public officials, and housing specialists. Rand staff presented five of the twelve conference papers.²¹

Papers were also presented at the annual Mid-Continent Meeting of the Regional Science Association, the annual meeting of the Western Finance Association, and a conference on housing delivery systems at Ohio State University.²²

We communicate our research to HUD principally in the form of technical monographs formerly called "working notes" but shortened to "notes" in April 1979.²³ We have submitted over 160 of these, but some were incorporated into larger documents or superseded in other ways; Appendix A lists 140 current titles in this series. Though all document research plans, problems, methods, or findings, many are of limited interest to the public at large or even to the research community, dealing as they do with technical details that are important mainly to users of the data.

Through 1977, HASE annual reports served the important function of informing the public about the experiment. Each of the first four annual reports combined a history of the Supply Experiment's most recent year with a summary of salient research findings, which in the experiment's early years were mainly descriptive. The fourth annual report's 150-page summary and evaluation of prior research findings suggested the limits of that reporting device, given the growing volume and complexity of our analytical studies. Since then, annual reports have been designed only to serve the historical function. Research findings are presented in separate monographs, either as research notes or reports. During 1979, three such notes and five such reports were published in addition to 21 notes containing technical documentation.

HASE authors are assisted in the production of their reports by the Publications Group, consisting of editors, technical typists, and artists. Altogether, this group has supervised production of over 200 HASE documents, including 34 in 1979. Between October 1979 and September 1981, we plan to produce 54 more codebooks (vs. 30 published to date) and 22 audit reports (vs. 11 to date), each documenting a portion of the HASE data base, and a user's guide to all HASE data. Research findings will be published in 15 to 20 research notes, 8 topical reports, and a comprehensive summary report.

This formidable schedule of reporting will certainly be difficult to meet, but more has been accomplished than the numbers in the preceding paragraphs suggest. For example, nearly all the 54 codebook texts have been compiled and are only awaiting the insertion of response distributions and introductions. Formats for audit reports have been standardized and many of their statistical tables have been produced. Most of the research notes and reports have been planned in some detail and their prospective authors are launched on the final round of analysis needed

²¹ John Mulford, *Income Elasticity of Housing Demand*, C. Lance Barnett, *Using Hedonic Indexes to Measure Housing Quality*, Kevin F. McCarthy, *Housing Search and Mobility*, C. Lance Barnett and Ira S. Lowry, *How Housing Allowances Affect Housing Prices*, and C. Peter Rydell, *Shortrun Responses of Housing Markets to Demand Shifts*. HUD plans to publish a volume of conference papers during 1980; those by Rand staff are also available as Rand reports, all cited elsewhere in this section.

²² Michael G. Shanley and Charles Hotchkiss, *How Low-Income Renters Buy Homes*, Charles W. Noland, *Assessing Hedonic Indexes for Housing*, and Ira S. Lowry, *Housing Allowances: Lessons from the Supply Experiment*. The first two papers are available as Rand notes, cited elsewhere in this section. The third will be published by the conference sponsors in 1980.

²³ Working notes (WNs) issued before April 1979 are currently being reissued as research notes (Ns) available to the public as well as to HUD.

to complete them. Barring major interruptions to the flow of work, the Supply Experiment should be completed on schedule and all its findings and data should be available to the public early in 1982.

Appendix A

HOUSING ASSISTANCE SUPPLY EXPERIMENT PUBLICATIONS

A research project that entails gathering and processing primary data requires a great deal of technical documentation, the external audience for which is limited to those who wish to probe deeply into research methods or to access and manipulate the primary data. In the Supply Experiment, such technical information is preserved in research notes (WN and N series), copies of which are permanently on file at Rand, HUD, the National Technical Information Service (NTIS), and HUD User.¹ Although these documents are available to the public, Rand has not sought wide distribution.

Preliminary or narrowly topical research findings have also generally been published as research notes or professional papers (P series). Some are subsequently revised or expanded for publication as research reports (R series) that are readily available to the public from Rand or from nearly 350 libraries that subscribe to Rand publications.

In April 1979, Rand revised its publication system to make research "notes" as well as "reports" more readily available to the public and to eliminate the P series as a vehicle for reporting on contract research. We are systematically reissuing most of the WNs listed below as publications in the new N series. One reason for doing so is that HUD plans soon to arrange public access to the primary data files of HASE (and the other components of the Experimental Housing Allowance Program), so we expect the audience for technical documentation to increase. Documents in the P series will not be reissued, inasmuch as most have been published in professional journals or conference proceedings. In the future, such professional papers will be initially published by Rand as either notes or reports.

This appendix lists 11 reports, 140 notes (WN or N series) and 17 professional papers that are currently available, many of which are cited in the text of this report. They are indexed here by subject, so some of the titles appear more than once. Within each subject, publications are listed in order of publication number, which is roughly chronological within each series. Titles appearing in earlier lists but not shown here have been superseded and withdrawn. WNs reissued as Ns are listed only in the latter series.

¹ The address of NTIS is Springfield, Virginia 22151. The address of HUD User is P.O. Box 280, Germantown, Maryland 20767.

BIBLIOGRAPHY

RESEARCH DESIGN

General Design

- WN-7711-UI. *Testing the Supply Response to Housing Allowances: An Experimental Design*. Ira S. Lowry, C. Peter Rydell, David M. de Ferranti. December 1971.
- WN-7866-HUD. *Preliminary Design for the Housing Assistance Supply Experiment*. Ira S. Lowry. June 1972.
- WN-7888-HUD. *Phase II Price Controls and the Housing Assistance Supply Experiment*. Donald B. Lewis. July 1972.
- WN-7895-HUD. *Failure Mode Analysis for the Housing Allowance Program*. Robert A. Levine. July 1972.
- WN-7982-HUD. *Supplemental Design Papers for the Housing Assistance Supply Experiment*. Housing Assistance Supply Experiment Staff. July 1972.
- WN-8198-HUD. *General Design Report: First Draft*. Ira S. Lowry, Editor. May 1973.
- WN-8364-HUD. *General Design Report: Supplement*. Ira S. Lowry, Editor. August 1973.
- WN-8396-HUD. *Proceedings of the General Design Review of the Housing Assistance Supply Experiment*. Housing Assistance Supply Experiment Staff. October 1973.
- WN-8577-HUD. *Market Intermediaries and Indirect Suppliers: Reconnaissance and Research Design for Site I*. William G. Grigsby, Michael Shanley, Sammis B. White. February 1974.
- WN-9026-HUD. *Market Intermediaries and Indirect Suppliers: Reconnaissance and Research Design for Site II*. William G. Grigsby, Michael Shanley, Sammis B. White. May 1975.
- WN-9051-HUD. *Monitoring the Experiment: An Update of Sec. IV of the General Design Report*. Ira S. Lowry. April 1975.
- WN-9098-HUD. *Introduction and Overview: An Update of Secs. I and II of the General Design Report*. Ira S. Lowry. May 1975.
- WN-9541-HUD. *Are Further Survey Cycles Needed in Site I?* Ira S. Lowry. July 1976.
- WN-10223-HUD. *Completing the Supply Experiment*. Housing Assistance Supply Experiment Staff. June 1978.
- P-4645. *Housing Assistance for Low-Income Urban Families: A Fresh Approach*. Ira S. Lowry. May 1971.
- P-5302. *The Housing Assistance Supply Experiment: Tensions in Design and Implementation*. Ira S. Lowry. September 1974.

Site Selection

- WN-7833-HUD. *Site Selection for the Housing Assistance Supply Experiment: Stage I*. Housing Assistance Supply Experiment Staff. May 1972.
- WN-7907-HUD. *Site Selection for the Housing Assistance Supply Experiment: SMSAs Proposed for Site Visits (A Briefing)*. Housing Assistance Supply Experiment Staff. August 1972.
- WN-8034-HUD. *Collected Site Selection Documents: Housing Assistance Supply Experiment*. Robert Dubinsky. January 1973.

Survey Sample Design

- WN-8029-HUD. *Sample Design for the Housing Assistance Supply Experiment*. Timothy M. Corcoran, Eugene C. Poggio, Tiina Repnau. November 1972.
- WN-8174-HUD. *The Effects of Nonresponse on Record Completion in a Panel of Residential Properties*. Timothy M. Corcoran. April 1973.
- WN-8218-HUD. *The Role of Household Survey Data in the Supply Experiment*. Adele P. Massell, Editor. March 1973.
- WN-8640-HUD. *Survey Sample Design for Site I*. Timothy M. Corcoran. March 1974.

Survey Instrument Design

- WN-7883-HUD. *Preliminary Description of Survey Instruments*. Housing Assistance Supply Experiment Staff. June 1972.

Audit and Analysis Plans

- WN-8612-HUD. *Baseline Audit Plan*. Leonard G. Chesler, David M. de Ferranti, William L. Dunn, Joseph A. Grundfest, Richard E. Stanton. February 1974.
- WN-8687-HUD. *Accounting and Auditing Procedures for Rental Property Financial Data*. Therman P. Britt, Jr. August 1974.
- WN-10223-HUD. *Completing the Supply Experiment*. Housing Assistance Supply Experiment Staff. June 1978.
- WN-10328-HUD. *Eligibility and Participation Research Plan for the Housing Assistance Supply Experiment*. John E. Mulford, Grace M. Carter, Phyllis L. Ellickson. October 1978.

Statistical Methods

- WN-8268-HUD. *Compensating for Landlord Nonresponse in the Housing Assistance Supply Experiment*. Adele P. Massell. June 1973.
- WN-8686-HUD. *Using Hedonic Indexes To Measure Supply Response to Housing Allowances*. C. Lance Barnett. August 1976.
- WN-9211-HUD. *A Plan for Analyzing Nonresponse Bias: Survey of Landlords, Baseline, Site I*. C. Peter Rydell, Richard E. Stanton. August 1975.
- WN-10095-HUD. *Using Weights to Estimate Population Parameters from Survey Records*. Daniel A. Relles. April 1978.

PROGRAM DESIGN**General Design**

- WN-7866-HUD. *Preliminary Design for the Housing Assistance Supply Experiment*. Ira S. Lowry. June 1972.
- WN-8025-HUD. *Funding Housing Allowances for Homeowners under Sec. 235*. Mack Ott. November 1972.
- WN-8028-HUD. *Housing Allowances and Household Behavior*. Ira S. Lowry, Mack Ott, Charles W. Noland. January 1973.
- WN-8350-HUD. *The Housing Allowance Program for the Supply Experiment: First Draft*. Robert Dubinsky, Editor. August 1973.
- WN-8489-HUD. *Funding Homeowner Assistance in the Supply Experiment: Problems and Prospects*. Ira S. Lowry. November 1973.
- WN-8999-HUD. *The Section 8 Housing Assistance Program: Notes on Eligibility and Benefits*. Barbara Woodfill. February 1975.
- WN-9070-HUD. *The Experimental Housing Allowance Program: An Update of Sec. III of the General Design Report*. Ira S. Lowry. April 1975.

Program Standards

- WN-8105-HUD. *Estimating the Standard Cost of Adequate Housing*. Donald B. Lewis, Ira S. Lowry. February 1973.
- WN-8574-HUD. *Program Standards for Site I*. Ira S. Lowry, Barbara Woodfill, Tiina Repnau. January 1974.
- WN-8715-HUD. *Equity and Housing Objectives in Homeowner Assistance*. Ira S. Lowry. June 1974.
- WN-8974-HUD. *Program Standards for Site II*. Ira S. Lowry, Barbara Woodfill, Marsha A. Dade. February 1975.
- WN-9430-HUD. *Inflation in the Standard Cost of Adequate Housing: Site I, 1973-1976*. Ira S. Lowry. March 1976.
- WN-9734-HUD. *Rent Inflation in St. Joseph County, Indiana: 1974-77*. James P. Stucker. September 1977.
- WN-10073-HUD. *Rent Inflation in Brown County, Wisconsin: 1973-78*. James P. Stucker. August 1978.

Program Estimates

- WN-7901-HUD. *Preliminary Estimates of Enrollment Rates and Allowance Costs*. Barbara Woodfill. July 1972.
- WN-7974-HUD. *Estimates of Eligibility and Allowance Entitlement under Alternative Housing Allowance Programs*. Barbara Woodfill, Tiina Repnau. September 1972.
- WN-8167-HUD. *Additional Estimates of Enrollment and Allowance Payments under a National Housing Allowance Program*. Tiina Repnau, Barbara Woodfill. March 1973.
- WN-8439-HUD. *Estimates of Eligibility, Enrollment, and Allowance Payments in Green Bay and Saginaw: 1974 and 1979*. Barbara Woodfill, Tiina Repnau, Ira S. Lowry. September 1973.

- WN-8547-HUD. *Program Size and Cost for Site I: New Data from the Screener Survey*. Ira S. Lowry, Barbara Woodfill, Tiina Repnau. December 1973.

Program Administration

- WN-8209-HUD. *The Housing Allowance Office: Functions and Procedures*. Alan Greenwald, Donald B. Lewis. March 1973.
- WN-9390-HUD. *Review of the Relationship between the Housing Assistance Supply Experiment and Other Types of Assisted Housing Programs*. Robert Dubinsky, William G. Grigsby, Karen G. Watson. February 1976.

FIELD SURVEYS**Sample Selection**

- WN-8101-HUD. *Preliminary Description of Sample-Selection Procedure*. Eugene C. Poggio. January 1973.
- WN-8201-HUD. *Sample-Selection Procedures for Site I*. Eugene C. Poggio. March 1973.
- WN-8588-HUD. *Sample Selection Procedure for St. Joseph County, Indiana*. Sandra H. Berry, Daniel A. Relles, Eugene Seals. January 1974.
- WN-8623-HUD. *Sampling Nonresidential Properties: Site I*. Timothy M. Corcoran. March 1974.
- WN-8645-HUD. *Selecting the Baseline Sample of Residential Properties: Site I*. Eugene C. Poggio. March 1977.
- WN-8682-HUD. *Characteristics of the Residential Baseline Survey Samples for Site I*. Tiina Repnau. May 1974.
- WN-9027-HUD. *Selecting the Baseline Sample of Residential Properties: Site II*. Daniel A. Relles. October 1975.
- WN-9575-HUD. *Selecting the Permanent Panel of Residential Properties, Site I*. Timothy M. Corcoran. April 1978.
- WN-9577-HUD. *Selecting the Permanent Panel for Residential Properties: Site II*. Timothy M. Corcoran. April 1977.

Survey Instruments

- WN-8688-HUD. *The Screening Survey Instrument and Supplementary Forms: Site I*. HASE Survey Group. July 1974.

Field Procedures

- WN-8689-HUD. *Interviewer Training Manual for the Site I Screening Survey*. HASE Survey Group. October 1974.

Codebooks

- N-1189-HUD. *Codebook for the Survey of Landlords, Site I, Wave 2*. Patricia M. Boren. June 1979.

- N-1190-HUD. *Codebook for the Household Survey, Site I, Wave 2.* Patricia M. Boren. July 1979.
- N-1191-HUD. *Codebook for the Survey of Residential Buildings, Site I, Wave 2.* Patricia M. Boren. August 1979.
- WN-8809-HUD. *Codebook for the Survey of Tenants and Homeowners, Site I, Baseline.* HASE Survey Group. December 1975.
- WN-8810-HUD. *Codebook for the Baseline Survey of Residential Buildings in Site I.* Ann W. Wang, Charles W. Noland. February 1975.
- WN-8811-HUD. *Codebook for the Survey of Neighborhoods, Site I, Baseline.* HASE Survey Group. June 1977.
- WN-8976-HUD. *Codebook for the Baseline Landlord Survey in Site I.* Ann W. Wang, Doris Crocker, Stephanie Schank. March 1975.
- WN-9444-HUD. *Codebook for the Survey of Landlords, Site II, Baseline.* HASE Survey Group. July 1976.
- WN-9651-HUD. *Codebook for the Survey of Tenants and Homeowners, Site II, Baseline.* HASE Survey Group. April 1977.
- WN-9801-HUD. *Codebook for the Attitude Module of the Landlord Survey, Site II, Baseline.* Phyllis L. Ellickson, David E. Kanouse, HASE Survey Group. April 1978.
- WN-9802-HUD. *Codebook for the Attitude Module of the Survey of Tenants and Homeowners, Site II, Baseline.* Phyllis L. Ellickson, HASE Survey Group. November 1977.
- WN-9895-HUD. *Codebook for the Survey of Residential Buildings, Site II, Baseline.* HASE Survey Group. September 1977.
- WN-9949-HUD. *Codebook for the Survey of Neighborhoods, Site II, Baseline.* HASE Survey Group. December 1977.
- WN-10293-HUD. *Codebook for the Survey of Tenants and Homeowners, Site II, Wave 2.* Patricia M. Boren. October 1978.
- WN-10294-HUD. *Codebook for the Survey of Landlords, Site II, Wave 2.* Patricia M. Boren. December 1978.
- WN-10422-HUD. *Codebook for the Attitude Module of the Landlord Survey, Site II, Wave 2.* Patricia M. Boren. February 1979.
- WN-10432-HUD. *Codebook for the Attitude Module of the Survey of Tenants and Homeowners, Site II, Wave 2.* Patricia M. Boren. March 1979.

Audit Reports

- N-1173-HUD. *Audit of the Community Attitude Module of the Survey of Households, Site II, Wave 2.* Marsha E. Baran. July 1979.
- WN-8684-HUD. *Screening Survey Audit Report for Site I.* David M. de Ferranti, Ira S. Lowry, Larry A. Day, Joseph A. Grundfest, Jennifer A. Hawes, Carolyn Ivie, Richard E. Stanton, Ann W. Wang. November 1974.
- WN-8973-HUD. *Audit Report for the Baseline Survey of Residential Buildings in Site I.* Larry A. Day. January 1976.
- WN-8977-HUD. *Audit of the Baseline Landlord Survey in Site I.* Richard E. Stanton, Therman P. Britt, Jr. June 1977.
- WN-9229-HUD. *Audit of the Baseline Household Survey in Site I.* Lawrence Helbers. February 1979.

- WN-9576-HUD. *Audit of the Baseline Survey of Tenants and Homeowners in Site II.* John E. Mulford. August 1978.
- WN-9709-HUD. *Audit of the Baseline Neighborhood Survey in Site II.* John E. Bala. September 1977.
- WN-9732-HUD. *Audit of the Baseline Neighborhood Survey in Site I.* C. Lance Barnett. April 1977.
- WN-9738-HUD. *Audit of the Baseline Survey of Residential Buildings in Site II.* Larry A. Day, Charles W. Noland. December 1977.
- WN-9739-HUD. *Audit of the Baseline Landlord Survey in Site II.* Richard E. Stanton, Therman P. Britt, Jr. February 1979.

Data Management

- WN-7885-HUD. *Data Management System: Part I, Fieldwork Data and Data Transfer Specifications.* Gerald Levitt. July 1972.
- WN-7953-HUD. *Data Management System: Part II, The Management of Data for Analysis.* Gerald Levitt. August 1972.
- WN-8054-HUD. *Data Management System for the Housing Assistance Supply Experiment.* Colleen M. Dodd, Misako C. Fujisaki, Gerald Levitt. November 1972.
- WN-8611-HUD. *Baseline Data Systems Design, Implementation, and Operation Report.* Gerald Levitt, Editor. March 1974.
- WN-9292-HUD. *HASE Data Systems: The HASE Audit and Analysis Support Package (HAASP).* Eric F. Harslem, Michel M. Rogson. November 1975.
- WN-10029-HUD. *HAMISH Update System: Input Form Specifications.* Zahava B. Doering, Susan Welt. January 1978.
- WN-10039-HUD. *Sample Maintenance Office Procedures Manual.* Susan Welt. January 1979.
- WN-10057-HUD. *HAMISH Survey Support System: Technical Description.* Zahava B. Doering, Susan Welt. May 1978.
- P-5494-1. *Documentation in Social Science Experiments.* Michel M. Rogson. January 1976.

HOUSING ALLOWANCE OFFICE ADMINISTRATIVE RECORDS

Codebooks

- N-1146-HUD. *Codebook for the HAO Client Characteristics File: Site I, Year 3.* Ann W. Wang, Leslie Geller. May 1979.
- N-1147-HUD. *Codebook for the HAO Housing Characteristics File: Site I, Year 3.* Ann W. Wang, Leslie Geller. May 1979.
- N-1148-HUD. *Codebook for the HAO Recertification Characteristics File: Site I, Year 3.* Ann W. Wang, Leslie Geller. June 1979.
- WN-9433-HUD. *Codebook for the HAO Client Characteristics File: Site I, First Year.* Marsha A. Dade, Ann W. Wang. May 1976.
- WN-9504-HUD. *Codebook for the HAO Housing Characteristics File: Site I, First Year.* Iao M. Katagiri, Ann W. Wang. July 1976.

WN-9621-HUD. *Codebook for the HAO Client Characteristics File: Site II, First Year.* Iao M. Katagiri, Ann W. Wang. February 1977.

WN-9622-HUD. *Codebook for the HAO Housing Characteristics File: Site II, First Year.* Iao M. Katagiri, Ann W. Wang. March 1977.

Audits

N-1149-HUD. *Audit of the HAO Analysis Files, Site I, Year 3.* Ann W. Wang. May 1979.

Data Management

WN-8054-HUD. *Data Management System for the Housing Assistance Supply Experiment.* Colleen M. Dodd, Misako C. Fujisaki, Gerald Levitt. November 1972.

WN-9292-HUD. *HASE Data Systems: The HASE Audit and Analysis Support Package (HAASP).* Eric F. Harslem, Michel M. Rogson. November 1975.

PROGRAM ANALYSIS

Eligibility and Participation

WN-9714-HUD. *Public Housing and Housing Allowances in South Bend, 1975-76.* Lawrence W. Kozimor, Ira S. Lowry. February 1977.

WN-9814-HUD. *Client Responses to Housing Requirements: The First Two Years.* Bruce W. Lamar, Ira S. Lowry. February 1979.

WN-9816-HUD. *Eligibility and Enrollment in the Housing Allowance Program: Brown and St. Joseph Counties through Year 2.* Lawrence W. Kozimor. August 1978.

WN-10200-HUD. *Dynamics of Participation in a Housing Allowance Program.* C. Peter Rydell, John E. Mulford, Lawrence W. Kozimor. June 1978.

P-6187. *Participation Rates in Government Transfer Programs: Application to Housing Allowances.* C. Peter Rydell, John E. Mulford, Lawrence W. Kozimor. January 1979.

Housing Conditions

N-1198-HUD. *Housing Allowances and Housing Improvement: Early Findings.* James L. McDowell. September 1979.

P-6076. *Housing Repair and Improvement in Response to a Housing Allowance Program.* James L. McDowell. May 1978.

Incomes and Housing Expenditures

N-1198-HUD. *Housing Allowances and Housing Improvement: Early Findings.* James L. McDowell. September 1979.

Participants' Attitudes

R-2190-HUD. *Public Knowledge and Evaluation of Housing Allowances: St. Joseph County, Indiana, 1975.* Phyllis L. Ellickson. February 1978.

P-5960. *How the Public Views Housing Allowances.* Phyllis L. Ellickson, David E. Kanouse. August 1978.

Program Administration

N-1145-HUD. *Controlling Errors in Allowance Program Administration.* Paul E. Tebbets. August 1979.

MARKET ANALYSIS

Market Structure and Conditions

WN-8980-HUD. *Rental Housing in Site I: Market Structure and Conditions at Baseline.* C. Peter Rydell, Joseph Friedman. April 1975.

WN-10074-HUD. *Vacancy Duration and Housing Market Condition.* C. Peter Rydell. January 1978.

P-6008. *Effects of Market Conditions on Prices and Profits of Rental Housing.* C. Peter Rydell. September 1977.

P-6184. *Expected and Actual Effects of Housing Allowances on Housing Prices.* C. Lance Barnett. January 1979.

Housing Demand

R-2449-HUD. *Income Elasticity of Housing Demand.* John E. Mulford. July 1979.

R-2450-HUD. *Using Hedonic Indexes to Measure Housing Quality.* C. Lance Barnett. September 1979.

R-2452-HUD. *How Housing Allowances Affect Housing Prices.* C. Lance Barnett, Ira S. Lowry. September 1979.

R-2453-HUD. *Shortrun Response of Housing Markets to Demand Shifts.* C. Peter Rydell. September 1979.

WN-9029-HUD. *Housing Choices and Residential Mobility in Site I at Baseline.* Kevin F. McCarthy. August 1976.

WN-9079-HUD. *Measuring Homeowner Needs for Housing Assistance.* Lawrence Helbers. February 1978.

WN-9737-HUD. *Housing Choices and Residential Mobility in Site II at Baseline.* Kevin F. McCarthy. September 1977.

P-5565. *The Household Life Cycle and Housing Choices.* Kevin F. McCarthy. January 1976.

Housing Supply

WN-8978-HUD. *Rental Housing in Site I: Characteristics of the Capital Stock at Baseline.* C. Peter Rydell. August 1975.

Rental Housing

- WN-8978-HUD. *Rental Housing in Site I: Characteristics of the Capital Stock at Baseline*. C. Peter Rydell. August 1975.
- WN-8980-HUD. *Rental Housing in Site I: Market Structure and Conditions at Baseline*. C. Peter Rydell, Joseph Friedman. April 1975.
- P-6008. *Effects of Market Conditions on Prices and Profits of Rental Housing*. C. Peter Rydell. September 1977.

Homeowner Housing

- N-1208-HUD. *How Low-Income Renters Buy Homes*. Michael G. Shanley, Charles M. Hotchkiss. August 1979.
- WN-9079-HUD. *Measuring Homeowner Needs for Housing Assistance*. Lawrence Helbers. February 1978.

Supply Response to Allowances

- R-2452-HUD. *How Housing Allowances Affect Housing Prices*. C. Lance Barnett, Ira S. Lowry. September 1979.
- R-2453-HUD. *Shortrun Response of Housing Markets to Demand Shifts*. C. Peter Rydell. September 1979.
- P-5564. *Measuring the Supply Response to Housing Allowances*. C. Peter Rydell. January 1976.
- P-6076. *Housing Repair and Improvement in Response to a Housing Allowance Program*. James L. McDowell. May 1978.
- P-6184. *Expected and Actual Effects of Housing Allowances on Housing Prices*. C. Lance Barnett. January 1979.

Residential Mobility

- R-2451-HUD. *Housing Search and Mobility*. Kevin F. McCarthy. September 1979.
- WN-9029-HUD. *Housing Choices and Residential Mobility in Site I at Baseline*. Kevin F. McCarthy. August 1976.
- WN-9737-HUD. *Housing Choices and Residential Mobility in Site II at Baseline*. Kevin F. McCarthy. September 1977.
- P-5565. *The Household Life Cycle and Housing Choices*. Kevin F. McCarthy. January 1976.

Market Intermediaries

- N-1208-HUD. *How Low-Income Renters Buy Homes*. Michael G. Shanley, Charles M. Hotchkiss. August 1979.
- WN-8577-HUD. *Market Intermediaries and Indirect Suppliers: Reconnaissance and Research Design for Site I*. William G. Grigsby, Michael Shanley, Sammis B. White. February 1974.
- WN-9020-HUD. *Market Intermediaries and Indirect Suppliers: First Year Report for Site II*. Sammis B. White. August 1977.

- WN-9026-HUD. *Market Intermediaries and Indirect Suppliers: Reconnaissance and Research Design for Site II*. William G. Grigsby, Michael Shanley, Sammis B. White. May 1975.
- WN-9400-HUD. *Market Intermediaries and Indirect Suppliers: First Year Report for Site I*. Sammis B. White. September 1976.

Community Attitudes

- R-2190-HUD. *Public Knowledge and Evaluation of Housing Allowances: St. Joseph County, Indiana, 1975*. Phyllis L. Ellickson. February 1978.
- R-2259-HUD. *Public Perceptions of Housing Allowances: The First Two Years*. Phyllis L. Ellickson, David E. Kanouse. September 1979.
- P-5960. *How the Public Views Housing Allowances*. Phyllis L. Ellickson, David E. Kanouse. August 1978.

Housing Cost and Price Indexes

- R-2450-HUD. *Using Hedonic Indexes to Measure Housing Quality*. C. Lance Barnett. September 1979.
- WN-9022-HUD. *Indexing the Cost of Producing Housing Services: Site I, 1973*. Charles W. Noland. January 1977.
- WN-9430-HUD. *Inflation in the Standard Cost of Adequate Housing: Site I, 1973-1976*. Ira S. Lowry. March 1976.
- WN-9734-HUD. *Rent Inflation in St. Joseph County, Indiana: 1974-77*. James P. Stucker. September 1977.
- WN-9735-HUD. *Indexing the Cost of Producing Housing Services: Site I, 1973-74*. Charles W. Noland. April 1977.
- WN-9736-HUD. *Indexing the Cost of Producing Housing Services: Site II, 1974*. Charles W. Noland. May 1977.
- WN-9979-HUD. *Indexing the Cost of Producing Housing Services in Site I, 1973-75*. Charles W. Noland. June 1978.
- WN-9980-HUD. *Indexing the Cost of Producing Housing Services in Site II, 1974-75*. Charles W. Noland. May 1978.
- WN-10073-HUD. *Rent Inflation in Brown County, Wisconsin: 1973-78*. James P. Stucker. August 1978.

Neighborhood Studies

- N-1205-HUD. *Neighborhoods in St. Joseph County, Indiana*. John E. Bala. September 1979.
- WN-8468-HUD. *Neighborhoods in Brown County*. Bryan C. Ellickson. November 1973.
- WN-8819-HUD. *Index to the Site I Maps*. Doris Dong. August 1974.
- WN-9901-HUD. *Index to the Site II Maps*. Housing Assistance Supply Experiment Staff. December 1977.
- P-6225. *Hungarian-Americans in St. Joseph County, Indiana: Implications of Ethnicity for Social Policy*. Wim Wiewel. March 1979.

SITE MONITOR REPORTS

- WN-9015-HUD. *Brown County Press Coverage of the Housing Assistance Supply Experiment and the Allowance Program: December 1972-December 1974.* Earl S. Carter, Compiler. March 1975.
- WN-9016-HUD. *South Bend Press Coverage of the Housing Assistance Supply Experiment and the Allowance Program: January 1974-December 1974.* Earl S. Carter, Compiler. March 1975.
- WN-9307-HUD. *Press Coverage of the Experimental Housing Allowance Program in Site I: January-June 1975.* Kirk L. Gray, Compiler. November 1975.
- WN-9723-HUD. *Monitoring the Housing Allowance Program in St. Joseph County, Indiana: July-September 1974.* Michael Shanley. December 1977.
- WN-9724-HUD. *Monitoring the Housing Allowance Program in St. Joseph County, Indiana: September 1974-March 1975.* Nancy O'Neil, Michael Shanley. December 1977.
- WN-9725-HUD. *Monitoring the Housing Allowance Program in St. Joseph County, Indiana: April-August 1975.* Nancy O'Neil, Michael Shanley. December 1977.
- WN-9726-HUD. *Monitoring the Housing Allowance Program in St. Joseph County, Indiana: September-December 1975.* Nancy O'Neil, Michael Shanley. December 1977.
- WN-9727-HUD. *Monitoring the Housing Allowance Program in St. Joseph County, Indiana: January-June 1976.* Nancy O'Neil, Michael Shanley. December 1977.
- WN-9728-HUD. *Monitoring the Housing Allowance Program in St. Joseph County, Indiana: July-September 1976.* Nancy O'Neil, Wim Wiewel. December 1977.
- WN-10086-HUD. *Monitoring the Housing Allowance Program in St. Joseph County, Indiana: October-December 1976.* Nancy O'Neil, Wim Wiewel. January 1979.
- WN-10139-HUD. *Monitoring the Housing Allowance Program in St. Joseph County, Indiana: January-March 1977.* Wim Wiewel, Nancy O'Neil. February 1979.
- P-5887. *Coming of Age in Policy-Relevant Research.* Kirk L. Gray. June 1977.
- P-5959. *Housing Allowances and the Dutch Rent Subsidy Program.* Wim Wiewel. January 1979.

GENERAL REPORTS

- R-1659-HUD. *First Annual Report of the Housing Assistance Supply Experiment.* October 1974.
- R-1959-HUD. *Second Annual Report of the Housing Assistance Supply Experiment.* May 1976.
- R-2151-HUD. *Third Annual Report of the Housing Assistance Supply Experiment.* February 1977.
- R-2302-HUD. *Fourth Annual Report of the Housing Assistance Supply Experiment.* May 1978.
- R-2434-HUD. *Fifth Annual Report of the Housing Assistance Supply Experiment.* June 1979.
- N-1215-HUD. *A Topical Guide to HASE Research.* Ira S. Lowry. June 1979.
- P-5567. *The Housing Assistance Supply Experiment: An Overview.* Ira S. Lowry. January 1976.

- P-5976. *An Overview of the Housing Assistance Supply Experiment.* Ira S. Lowry. September 1977.
- P-6075. *Early Findings from the Housing Assistance Supply Experiment.* Ira S. Lowry. January 1978.

Appendix B
CHRONOLOGY OF MAJOR EVENTS

- B-1. Housing Allowance Program, Site I
- B-2. Research Program, Site I
- B-3. Housing Allowance Program, Site II
- B-4. Research Program, Site II

Table B-1
CHRONOLOGY OF MAJOR EVENTS IN SITE I:
HOUSING ALLOWANCE PROGRAM

Date	Event
1972	
18 December	<ul style="list-style-type: none"> • Rand appoints site manager for Brown County. • HUD tentatively designates Brown County as an experimental site, based on progress in negotiating memoranda of understanding with the major units of local government.
22 December	
1973	
21 February	<ul style="list-style-type: none"> • Brown County board of supervisors approves a memorandum of understanding with HUD and establishes the Brown County Housing Authority (BCHA) as an agency empowered to enter into an annual contributions contract (ACC) with HUD under Sec. 23.
5 March	<ul style="list-style-type: none"> • Rand opens a site office in Green Bay. • First meeting of the BCHA. • BCHA approves a memorandum of understanding with HUD concerning the purposes and organization of the experimental housing allowance program.
15 May	
4 June	
19 October	<ul style="list-style-type: none"> • Housing allowance office (HAO) of Brown County is incorporated as a nonprofit organization under the laws of the State of Wisconsin. Incorporators appoint director and deputy director of the HAO.
14 December	<ul style="list-style-type: none"> • HAO board of trustees adopts bylaws, elects officers, and ratifies appointments of HAO director and deputy director.
24 December	<ul style="list-style-type: none"> • HAO acquires temporary quarters in Green Bay.
1974	
4 January	<ul style="list-style-type: none"> • Rand submits drafts of final sections of HAO handbook to HUD.
18 February	<ul style="list-style-type: none"> • BCHA formally submits application for annual contributions contract to HUD, accompanied by resolutions of approval from 20 units of local government in Brown County.
11 March	<ul style="list-style-type: none"> • BCHA approves allowance program standards promulgated by HUD.

- 14 March • HUD and BCHA execute annual contributions contract. BCHA and HAO execute agreement delegating program operations to the HAO.
- 29 March • HAO tests enrollment and housing certification procedures with small number of invited applicants.
- 6 May • HUD conducts HAO operational readiness review.
- 21 May • HUD approves HAO operating budget.
- 29 May • HUD and BCHA deliver first installment of ACC funds to HAO.
- 12 June • HUD approves participation manual and form of participation agreements for renters and homeowners.
- 13 June • Advisory committee of local officials and citizens formed. First meeting held.
- 17 June • HAO completes first formal enrollment (signed participation agreement).
- 19 June • HAO invites applications for enrollment from the general public and makes first payment to allowance recipient.
- 10 October • HAO moves into permanent quarters in Green Bay.
- 14 October • HAO begins active outreach, including newspaper and radio advertising.
- 26 November • Number of households enrolled reaches 1,000.

1975

- 24 January • Number of households receiving payments reaches 1,000.
- 4 April • HAO begins first semiannual recertification cycle.
- 19 June • HAO begins second year of open enrollment, first annual recertification cycle, and first annual housing reevaluation cycle.
- 14 July • HAO opens field office on west side of Green Bay.
- 9 August • HAO begins television advertising.
- 25 August • Cumulative allowance payments reach \$1 million.
- 7 October • BCHA approves removal of lease-leaseback requirement from homeowners' participation agreements.
- 24 October • HAO opens temporary office in Pulaski.
- 30 October • HAO opens temporary office in De Pere.
- 26 November • Number of households whose enrollments have been terminated reaches 1,000.

1976

- 9 January • HAO opens temporary branch offices in Wrightstown and Denmark.
- 1 April • HUD-approved increase in benefit levels reflected in April allowance payments.

- 26 April • HUD authorizes residents of subsidized housing for allowance payments if other subsidy is foregone.
- 19 June • HAO begins third year of open enrollment.
- 1 August • HAO publishes *Report to Brown County*.

1977

- 1 January • HAO adopts more restrictive lead-based paint standards.
- 1 January • HAO broadens definition of assets counted toward eligibility asset limit.
- 1 May • HUD-approved increase in benefit levels reflected in May allowance payments.
- 19 June • HAO begins fourth year of open enrollment.
- 15 August • HAO closes field office on west side of Green Bay.
- 1 October • HAO opens enrollment to most single persons under 62.

1978

- 1 May • HUD-approved increase in benefit levels reflected in May allowance payments.
- 19 June • HAO begins fifth year of open enrollment.
- 1 July • HUD-approved increase in asset limits for participants becomes effective.
- 14 August • BCHA resolves to continue delegating program administration to the HAO during the post-experimental period, and to continue existing program rules and procedures.

1979

- 10 April • BCHA submits amendments to its annual contributions contract and delegation agreement covering postexperimental program operation.
- 1 May • HUD-approved increase in asset limits for participants becomes effective.
- 10 May • HAO and HUD Area Office (Milwaukee) discuss postexperimental monitoring arrangements and reporting requirements.
- 18 June • Rand and HAO submit modifications to the *HAO Handbook* governing postexperimental program operations.
- 29 June • Rand, HAO, BCHA, and HUD review proposed contract amendments.
- 30 June • End of five years of open enrollment and the experimental phase of the housing allowance program.
- 30 September • Rand closes its Green Bay site office.

Table B-2
CHRONOLOGY OF MAJOR EVENTS IN SITE I:
RESEARCH PROGRAM

Date	Event
1973	
1 February	• Mathematica opens site office in Green Bay.
13 March	• Rand completes plan for survey sample selection.
23 April	• Mathematica commences tax office search for parcel data required for sample selection.
6 August	• Rand releases screening survey sample list of residential properties to Mathematica.
26 August- 13 October	• Mathematica conducts screening survey of occupants of 10,500 housing units.
19 October	• Rand completes coding, keypunching, and cleaning of 8,646 completed screening survey questionnaires and compiles master file for baseline sample selection.
16 October- 21 December	• Mathematica conducts baseline survey of 6,750 residential buildings.
11 November- 18 December	• Rand releases baseline sample list to Mathematica in installments.
10 December- 31 March 1974	• Mathematica conducts baseline survey of landlords of 3,115 rental properties.
12 December- 30 April 1974	• Mathematica conducts baseline survey of 6,319 tenants, 1,412 homeowners, 264 lodgers, and 147 occupants of mobile homes.
27 December- 11 January 1974	• Mathematica conducts baseline windshield survey of 8,660 street segments in 108 neighborhoods.
1974	
31 January	• Rand releases baseline sample list of nonresidential properties to Mathematica.
3 March- 8 April	• Mathematica conducts baseline survey of owners of 378 nonresidential properties.
15 March	• Rand releases baseline sample list of seasonal properties to Mathematica.
3 April- 19 April	• Mathematica conducts baseline survey of owners of 250 seasonal properties.
15 June	• Mathematica completes baseline survey cleanup; closes site office.

1 July	• Mathematica delivers field record management materials to Rand.
20 August	• Rand completes accountability review on all major surveys.
16 September	• Rand completes coding, keypunching, and cleaning of 6,751 field observation forms from the survey of residential buildings.
20 September	• Rand releases sample list for wave 2 fieldlisting of selected residential properties.
24 September- 9 October	• NORC conducts wave 2 fieldlisting of 275 residential properties.
4 October	• Rand completes coding, keypunching, and cleaning of 2,116 questionnaires from the baseline survey of landlords.
17 October	• Rand releases field materials for wave 2 landlord quest.
18 October	• Rand completes coding, keypunching, and cleaning of 8,064 field observation forms from the baseline survey of neighborhoods.
18 October- 13 December	• NORC conducts wave 2 landlord quest for 1,620 residential properties.
18 December	• Rand selects permanent panel of 1,945 residential properties, 2,074 residential buildings, and 3,288 housing units from among those with complete baseline records.
1975	
11 January	• Rand releases sample list for wave 2 survey of tenants and homeowners.
15 January	• Rand completes coding, keypunching, and cleaning of 108 local sources data forms from the baseline survey of neighborhoods.
15 January	• Rand archives preliminary master file of field observation records for the baseline survey of neighborhoods.
16 January	• Rand completes coding, keypunching, and cleaning of 3,976 questionnaires from the baseline surveys of tenants, homeowners, lodgers, and occupants of mobile homes.
20 January- 30 September	• NORC conducts wave 2 survey of 2,973 tenants and 685 homeowners.
3 February	• Rand archives preliminary master file for the baseline survey of landlords.
13 February	• Rand archives preliminary master file for the baseline survey of residential buildings.
22 February	• Rand archives preliminary master file for the baseline surveys of tenants and homeowners.

- 3 March • Rand archives preliminary master file for the local sources records of the survey of neighborhoods.
- 1 April • Rand releases sample list for wave 2 survey of landlords.
- 21 April-30 September • NORC conducts wave 2 survey of landlords of 1,316 rental properties.
- 16 June • Rand releases preliminary sample list for wave 2 panel augmentation (new construction sample).
- 23 June-30 June • NORC conducts wave 2 fieldlisting of 136 newly constructed residential properties.
- 15 July • HAO delivers administrative records for first year of program operations to Rand.
- 30 July • Rand releases sample list for wave 2 survey of residential buildings.
- 8 August-30 October • NORC conducts wave 2 survey of 2,714 residential buildings.
- 26 August-1 November • NORC conducts wave 2 surveys of landlords, tenants, homeowners, and residential buildings for 65 properties in the new construction sample.
- 5 September • Rand archives preliminary master file for the baseline surveys of lodgers and occupants of mobile homes.
- 22 September • Rand archives preliminary master file of client characteristics from HAO records for first year of program operations.
- 22 September • Rand releases sample list for wave 3 fieldlisting of selected residential properties.
- 24 September • NORC begins wave 3 fieldlisting for 414 residential properties.
- 8 October • Rand releases field materials for wave 3 landlord quest.
- 13 October-14 November • NORC conducts wave 3 landlord quest for 1,960 properties.
- 5 December • Rand completes respondent accounting for wave 2 survey of tenants and homeowners.
- 18 December • Rand releases main sample list and field materials for wave 3 survey of tenants and homeowners.

1976

- 13 January • Rand archives HAO client characteristics file for year 1.
- 19 January-30 July • NORC conducts wave 3 survey of 3,838 tenants and 838 homeowners.
- 20 February • Rand completes respondent accounting for wave 2 survey of landlords.
- 26 February • Rand submits wave 3 landlord instrument to HUD and OMB for clearance.

- 27 February • Rand archives HAO housing characteristics file for year 1.
- 2 March • Rand releases supplementary sample list and field materials for wave 3 survey of tenants and homeowners, including 490 households added to Urban Institute comparability panel.
- 21 March • Rand releases sample list for wave 3 survey of landlords.
- 26 March • Rand archives final master file for baseline screening survey.
- 29 March • Rand completes data entry and cleaning of 2,010 baseline tax records for sampled properties.
- 7 April • Rand completes data entry and cleaning of 2,010 wave 2 tax records for sampled properties.
- 26 April-20 August • NORC conducts wave 3 survey of landlords of 1,334 rental properties.
- 7 May • Rand completes data entry and cleaning of 1,117 questionnaires from wave 2 survey of landlords.
- 13 May • Rand completes data entry and cleaning of 2,868 questionnaires from wave 2 survey of tenants and homeowners.
- 24 May • Rand completes coding, data entry, and cleaning of 2,444 field observation forms and 1,218 refielded questionnaires from wave 2 survey of residential buildings.
- 9 July • HAO delivers administrative records for second year of program operations to Rand.
- 22 July • Rand releases sample list for wave 3 survey of residential buildings (comparability panel only).
- 23 July • Rand archives final master file for the baseline survey of residential buildings.
- 26 July-27 August • NORC conducts wave 3 survey of 446 residential buildings (comparability panel only).
- 19 August • Rand submits wave 4 tenant/homeowner instrument to HUD and OMB for clearance.
- 30 August • Rand completes sample accounting for wave 2.
- 28 September • Rand releases sample lists for wave 4 landlord quest and fieldlisting of selected properties.
- 5 October • Rand releases sample list for wave 4 panel augmentation (new construction sample).
- 5 October-22 October • NORC conducts wave 4 fieldlisting of 235 properties.
- 6 October-29 October • NORC conducts landlord quest for 575 properties.
- 22 October • Rand archives HAO client characteristics file for year 2.

-
- 6 December • Rand archives HAO housing characteristics file for year 2.
 - 7 December • Rand completes respondent accounting for wave 4 survey of tenants and homeowners.
 - 14 December • Rand releases sample list for wave 4 survey of tenants and homeowners.

1977

- 5 January-8 July • NORC conducts wave 4 survey of 3,290 tenants and 843 homeowners.
 - 20 March • Rand releases sample list for wave 4 survey of landlords.
 - 30 March - 12 August • NORC conducts wave 4 survey of landlords of 1,297 rental properties.
 - 8 July • Rand completes community attitude coding of 1,117 questionnaires from wave 2 survey of landlords.
 - 18 July • HAO delivers administrative records for third year of program operations to Rand.
 - 22 July • Rand releases field materials for wave 4 survey of neighborhoods.
 - 26 July • Rand completes coding, data entry, and cleaning of 2,508 wave 3 tax record abstracts.
 - 27 July • Rand releases sample list for wave 4 survey of residential buildings.
 - 1 August - 23 September • NORC conducts wave 4 survey of neighborhoods (9,311 street segments).
 - 16 August - 21 October • NORC conducts wave 4 survey of 2,577 residential buildings.
 - 30 August • Rand completes coding, data entry, and cleaning of 2,997 completed questionnaires from wave 3 survey of tenants and homeowners.
 - 30 August • Rand completes coding, data entry, and cleaning of 415 field reports from wave 3 survey of residential buildings.
 - 6 September • Rand completes cleaning of 5,763 reports of calls to HAO.
 - 20 September • Rand completes community attitude coding of 2,868 questionnaires from wave 2 survey of tenants and homeowners.
 - 14 October • Rand completes coding, data entry, and cleaning of 1,090 completed questionnaires from wave 3 survey of landlords.
 - 29 November • Rand completes respondent accounting for wave 4 survey of tenants and homeowners.
-

1978

-
- 8 February • Rand completes coding, data entry, and cleaning of 11,036 field observation forms from wave 4 survey of neighborhoods.
 - 28 February • Rand completes accounting for wave 4 survey of landlords.
 - 25 July • HAO delivers administrative records for fourth year of program operations to Rand.
 - 4 August • Rand completes coding, data entry, and cleaning of 917 completed questionnaires from wave 4 survey of landlords.
 - 21 August • Rand completes coding, data entry, and cleaning of 108 local sources data forms from wave 4 survey of neighborhoods.
 - 22 August • Rand completes cleaning of 7,509 reports of calls to HAO.
 - 11 September • Rand completes coding, data entry, and cleaning of 2,732 questionnaires from wave 4 survey of tenants and homeowners.
 - 2 October • Rand completes coding, data entry, and cleaning of 782 field reports from the wave 4 survey of residential buildings.
 - 4 October • Rand archives preliminary master file for the wave 2 survey of residential buildings.
 - 19 October • Rand archives preliminary master for the wave 2 survey of tenants and homeowners.
 - 20 October • Rand completes data entry and cleaning of 2,129 wave 4 tax parcel records.
 - 1 November • Rand archives preliminary master file for the wave 2 survey of landlords.
 - 15 November • Rand begins designing supplemental survey of terminees.

1979

-
- 4 May • OMB clears instrument for survey of terminees.
 - 15 May • Rand releases sample list for survey of terminees.
 - 30 May • Rand archives and delivers to HUD the final master file of HAO records (client characteristics, recertification characteristics) for the third year of program operations.
 - 4 June-24 September • Chilton Research Services conducts survey of terminees.
 - 23 July • Rand archive final master file for the baseline survey of residential buildings.
-

Table B-3

**CHRONOLOGY OF MAJOR EVENTS IN SITE II:
HOUSING ALLOWANCE PROGRAM**

Date	Event
1974	
28 January	• South Bend common council approves a memorandum of understanding with HUD concerning the purposes and organization of the housing allowance program.
8 April	• HUD designates St. Joseph County as an experimental site despite failure to secure participation of Mishawaka and the remainder of the county.
13 May	• Rand appoints site manager for St. Joseph County.
15 July	• Rand opens site office in South Bend.
25 July	• Housing allowance office (HAO) is incorporated as a nonprofit organization under the laws of the State of Indiana.
8 August	• First meeting of HAO board of trustees. Board adopts bylaws and elects officers.
14 August	• South Bend Housing Authority (SBHA) formally submits application for annual contributions contract (ACC) to HUD, accompanied by a resolution of approval from the South Bend common council.
5 September	• HAO board of trustees appoints HAO director and deputy director.
6 September	• HUD and SBHA execute annual contributions contract. SBHA and HAO execute agreement delegating program operations to the HAO.
16 September	• HAO acquires temporary quarters in South Bend.
27 September	• HUD approves operating budget for the HAO.
27 September	• First meeting of HAO advisory committee of public officials and citizens.
3 October	• HUD and SBHA deliver first installment of ACC funds to the HAO.
15 October	• Rand submits draft of HAO handbook to HUD.
29 November	• HAO completes hiring for supervisory staff.
5 December	• HUD conducts operational readiness review.
12 December	• HAO begins invitational enrollment of homeowners.
16 December	• HAO handbook approved by chairman of the board of trustees.
27 December	• HAO completes first formal enrollment and payment authorization.
31 December	• HAO moves into permanent quarters in South Bend.

1975

2 April	• HAO invites enrollment from general public.
26 June	• St. Joseph County and SBHA agree to extend program jurisdiction to unincorporated territory within five miles of South Bend.
25 July	• Number of enrolled households reaches 1,000.
10 August	• HAO begin active outreach, including newspaper, radio, and television advertising.
11 August	• St. Joseph County Council endorses allowance program.
14 August	• Roseland joins allowance program.
22 September	• Number of households receiving payments reaches 1,000.
24 September	• SBHA approves removal of lease-leaseback requirement from homeowners' participation agreements.
1 October	• HAO begins first semiannual recertification cycle.
6-8 October	• GAO reviews HAO operations.
4 November	• New Carlisle joins allowance program.
1 December	• HAO begins first annual recertification cycle.
3 December	• North Liberty joins allowance program.

1976

1 March	• Cumulative allowance payments reach \$1 million.
15 March	• Mishawaka joins allowance program.
24-25 March	• SBHA and HUD approve amended annual contributions contract and SBHA/HAO agreement.
2 April	• HAO begins second year of open enrollment, first annual recertification cycle, and first annual housing reevaluation cycle.
5 April	• HAO opens branch office in Mishawaka.
15 April	• Walkerton joins allowance program.
19 April	• HUD conducts equal opportunity compliance review of HAO operations.
3 May	• Osceola joins allowance program.
11 May	• HAO begins direct mail advertising.
7 June	• Lakeville joins allowance program.
11 June	• Number of households whose enrollments have been terminated reaches 1,000.
14 June	• Mishawaka Housing Authority (MHA) agrees to extend program to unincorporated territory within five miles of Mishawaka.
22 June	• St. Joseph County Council reactivates County Housing Authority (CHA).
13 July	• St. Joseph County Council and CHA agree to extend program to all unincorporated territory in county.
2 August	• HAO begins billboard advertising.

1 September	<ul style="list-style-type: none"> • HUD-approved increase in benefit levels reflected in September allowance payments.
1 November	<ul style="list-style-type: none"> • Indian Village joins allowance program, whose jurisdiction now includes all of St. Joseph County.
1977	
2 April	<ul style="list-style-type: none"> • HAO begins third year of open enrollment.
15 July	<ul style="list-style-type: none"> • HAO publishes <i>Report to St. Joseph County</i>.
1 August	<ul style="list-style-type: none"> • HAO opens enrollment to most single persons under 62.
1 September	<ul style="list-style-type: none"> • HUD-approved increase in benefit levels reflected in September allowance payments.
1978	
2 April	<ul style="list-style-type: none"> • HAO begins fourth year of open enrollment.
1 July	<ul style="list-style-type: none"> • HUD-approved increase in asset limits for participants becomes effective.
1 December	<ul style="list-style-type: none"> • HUD-approved increase in benefit levels reflected in December allowance payments.
1979	
2 April	<ul style="list-style-type: none"> • HAO begins fifth year of open enrollment.
27 June	<ul style="list-style-type: none"> • SBHA resolves to continue delegating program administration to the HAO during the postexperimental period.
6-7 August	<ul style="list-style-type: none"> • Rand and HAO discuss plans for program's post-experimental phase with mayors of South Bend and Mishawaka.
1 September	<ul style="list-style-type: none"> • HUD-approved increase in asset limits for participants becomes effective.

Table B-4
CHRONOLOGY OF MAJOR EVENTS IN SITE II:
RESEARCH PROGRAM

Date	Event
1974	
30 January	<ul style="list-style-type: none"> • Rand completes preliminary design for sample selection (WN-8588-HUD) and obtains list of tax parcels in St. Joseph County.
1 May-3 July	<ul style="list-style-type: none"> • Rand conducts tax record search for data on 40,894 properties.
16 May	<ul style="list-style-type: none"> • Westat opens site office in South Bend.
24 June-9 August	<ul style="list-style-type: none"> • Rand releases screening survey sample list of housing units to Westat in installments.
10 July-6 September	<ul style="list-style-type: none"> • Westat conducts screening survey of occupants of 9,976 housing units.
23 July-23 September	<ul style="list-style-type: none"> • Rand codes, keypunches, and cleans 6,066 completed screening survey questionnaires.
18 September-28 November	<ul style="list-style-type: none"> • Westat conducts baseline survey of 12,136 street segments in 86 neighborhoods.
11 November	<ul style="list-style-type: none"> • Rand releases sample list for baseline survey of landlords.
18 November	<ul style="list-style-type: none"> • Rand releases sample list for baseline survey of tenants and homeowners.
25 November-20 June	<ul style="list-style-type: none"> • Westat conducts baseline surveys of landlords of 3,528 rental properties, 5,803 tenants, and 1,415 homeowners.
2 December	<ul style="list-style-type: none"> • Rand archives preliminary master file of screening survey records.
1975	
21 April	<ul style="list-style-type: none"> • Rand releases sample list for baseline survey of residential buildings.
25 April-2 July	<ul style="list-style-type: none"> • Westat conducts baseline survey of 5,074 residential buildings.
25 June	<ul style="list-style-type: none"> • Rand releases sample list for baseline verification survey of nonresidential properties.
6 August-22 August	<ul style="list-style-type: none"> • Westat conducts baseline verification survey of 543 nonresidential properties.
31 August	<ul style="list-style-type: none"> • Rand completes coding, keypunching, and cleaning of 1,922 questionnaires from the baseline survey of landlords.
8 September-8 October	<ul style="list-style-type: none"> • Westat conducts tax record search for data on 4,943 residential properties.

-
- 22 September • Rand releases sample list for wave 2 fieldlisting of selected residential properties.
 - 24 September • Westat begins wave 2 fieldlisting for 600 residential properties.
 - 1 September-15 December • Rand conducts fieldwork for baseline survey of neighborhoods (local sources module).
 - 14 October • Rand releases field materials for wave 2 landlord quest.
 - 15 October-13 November • Westat conducts wave 2 landlord quest for 2,581 residential properties.
 - 23 October • Rand completes data entry and cleaning of 2,927 questionnaires from baseline surveys of tenants and homeowners.
 - 3 November • Rand completes coding, data entry, and cleaning of 12,137 field observation forms from baseline survey of neighborhoods.
 - 21 November • Rand completes baseline sample accounting.
 - 5 December • Rand completes respondent accounting for baseline survey of tenants and homeowners.
 - 18 December • Rand releases main sample list and field materials for wave 2 survey of tenants and homeowners.

1976

- 9 January • HAO delivers administrative records for first year of program operations to Rand.
 - 24 January-30 July • Westat conducts wave 2 survey of 4,308 tenants and 723 homeowners.
 - 30 January • Rand completes coding, data entry, and cleaning of 3,092 field observation forms from baseline survey of residential buildings.
 - 3 February • Rand completes data entry and cleaning of 4,611 baseline tax records for sampled properties.
 - 9 February • Rand archives preliminary master file for baseline survey of landlords.
 - 20 February • Rand completes respondent accounting for baseline survey of landlords.
 - 26 February • Rand submits instrument for wave 2 survey of landlords to HUB and OMB for clearance.
 - 2 March • Rand releases supplementary sample list and field materials for wave 2 survey of tenants and homeowners.
 - 18 March • Rand completes coding, data entry, and cleaning of local sources module of baseline survey of neighborhoods.
 - 29 March • Rand releases sample list and field materials for wave 2 survey of landlords.
-

-
- 22 April • Rand archives preliminary master file for baseline survey of tenants and homeowners.
 - 1 May-31 August • Westat conducts wave 2 survey of landlords of 1,417 rental properties.
 - 11 June • Rand completes postcoding of baseline survey of tenants and homeowners (community attitudes module).
 - 18 July • Rand archives HAO client characteristics file for year 1.
 - 23 July • Rand releases sample list and field materials for wave 2 survey of residential buildings (comparability panel only).
 - 19 August • Rand submits instrument for wave 3 survey of tenants and homeowners to HUD and OMB for clearance.
 - 31 August • Rand completes postcoding of baseline survey of landlords (community attitudes module).
 - 28 September • Rand releases sample list and field materials for wave 3 landlord quest and fieldlisting of selected properties.
 - 30 September • Rand archives HAO housing characteristics file for year 1.
 - 1 October-13 October • Westat conducts wave 3 fieldlisting of 101 properties.
 - 1 October-13 October • Westat conducts landlord quest for 723 properties.
 - 15 December • Rand releases sample list for waves 2 and 3 panel augmentation (new construction sample).
 - 17 December-14 January • Westat conducts waves 2 and 3 fieldlisting of 153 newly constructed residential properties.
 - 20 December • Rand releases sample list for wave 3 survey of tenants and homeowners.

1977

- 5 January • Rand archives preliminary master file for baseline survey of neighborhoods (local sources module).
 - 10 January-3 July • Westat conducts wave 3 survey of 4,220 tenants and 861 homeowners.
 - 19 January • Rand archives preliminary master file for baseline survey of residential buildings.
 - 20 January • Rand completes coding, data entry, and cleaning of 2,658 completed questionnaires from wave 2 survey of households.
 - 2 February • Rand completes coding, data entry, and cleaning of 929 completed questionnaires from wave 2 survey of landlords.
-

- 23 March • Rand releases sample list for wave 3 survey of landlords.
- 6 April • Rand archives HAO client characteristics file for year 2.
- 13 April • Rand archives preliminary master file for baseline survey of neighborhoods (street observation module).
- 22 April • Rand completes data entry and cleaning of 11,587 reports of calls to HAO.
- 25 April-
24 August • Westat conducts wave 3 survey of 1,350 landlords.
- 13 June • Rand archives HAO housing characteristics file for year 2.
- 15 July • Rand archives preliminary master file for wave 2 survey of tenants and homeowners.
- 15 July • Rand archives preliminary master file for wave 2 survey of landlords.
- 7 August • Rand releases sample list and field materials for wave 3 survey of residential buildings (comparability panel and new construction only).
- 30 August • Rand completes coding, data entry, and cleaning of 476 field reports from wave 2 survey of residential buildings.
- 26 September-
14 November • Westat conducts wave 3 survey of 630 residential buildings.
- 8 November • Rand completes data entry and cleaning of 5,114 reports of calls to HAO.
- 28 November • Rand completes respondent accounting for wave 3 survey of tenants and homeowners.
- 16 December • Rand releases field materials for wave 4 survey of tenants and homeowners.

1978

- 6 January • Rand archives preliminary master file for wave 2 survey of tenants and homeowners (community attitudes module).
- 6 January • Rand releases sample list and field materials for wave 4 survey of tenants and homeowners.
- 31 January • HAO delivers administrative records for third year of program operations to Rand.
- 3 February-
31 August • Westat conducts wave 4 survey of 3,738 tenants and 892 homeowners.
- 28 February • Rand completes accounting for wave 3 survey of landlords.
- 26 March • Rand releases field materials for wave 4 survey of landlords.

- 24 April-
11 September • Westat conducts wave 4 survey of landlords of 1,402 rental properties.
 - 28 April • Rand completes data entry and cleaning of 1,196 reports of calls to HAO.
 - 12 June • Rand completes coding, data entry, and cleaning of 936 completed questionnaires from wave 3 survey of landlords.
 - 6 July • Rand releases field materials for wave 4 survey of neighborhoods.
 - 18 July • Rand completes coding, data entry, and cleaning of 2,985 questionnaires from wave 3 survey of tenants and homeowners.
 - 25 July-
30 September
31 July • Westat conducts wave 4 survey of neighborhoods (12,828 street segments).
 - 14 August • Rand releases sample list and field materials for wave 4 survey of residential buildings.
 - 14 August • Rand archives preliminary master file for wave 2 survey of landlords (community attitudes module).
 - 28 August-
20 November • Westat conducts wave 4 survey of 3,132 residential buildings.
 - 1 November • Rand begins designing supplemental survey of landlords.
 - 15 November • Rand begins designing supplemental survey of terminees.
- 1979
- 10 January • Rand completes respondent accounting for wave 4 survey of tenants and homeowners.
 - 29 January • HAO delivers administrative records for fourth year of program operations to Rand.
 - 26 March • Rand completes coding, data entry, and cleaning of 2,685 completed questionnaires from the wave 4 survey of tenants and homeowners.
 - 17 April • Rand completes coding, data entry, and cleaning of 833 questionnaires from the wave 4 survey of landlords.
 - 14 May-
12 July • Rand conducts supplemental survey of landlords.
 - 15 May • Rand releases sample list for survey of terminees.
 - 24 May • Rand completes coding, data entry, and cleaning of 86 local sources data forms from the wave 4 survey of neighborhoods.
 - 25 May • Rand completes coding, data entry, and cleaning of 3,488 field reports from the wave 4 survey of residential buildings.

4 June- 24 September	• Chilton Research Services conducts survey of terminatees.
15 June	• Rand completes coding, data entry, and cleaning of 13,270 field observation forms from the wave 4 survey of neighborhoods.
26 June	• Rand completes respondent accounting for the wave 4 survey of landlords.
31 August	• Rand completes coding, data entry, and cleaning of 552 questionnaires from the supplemental survey of landlords.
28 September	• Rand completes data entry and cleaning of 777 wave 4 tax parcel records.

Appendix C

ORGANIZATION OF THE HOUSING ASSISTANCE SUPPLY EXPERIMENT

C-1. Rand's Project Organization for HASE

C-2. Organization of the Housing Allowance Office for Brown County

C-3. Organization of the Housing Allowance Office for St. Joseph County

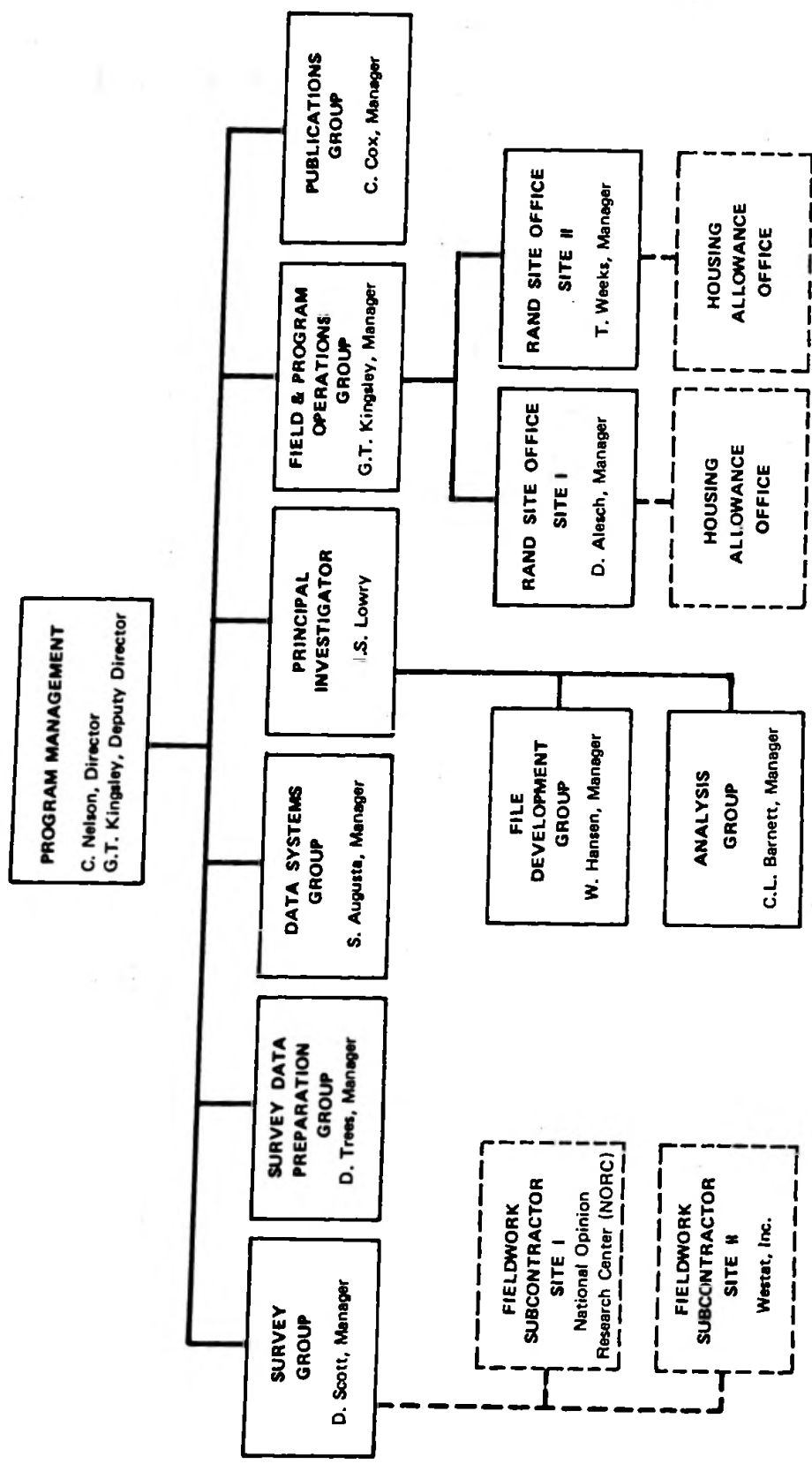
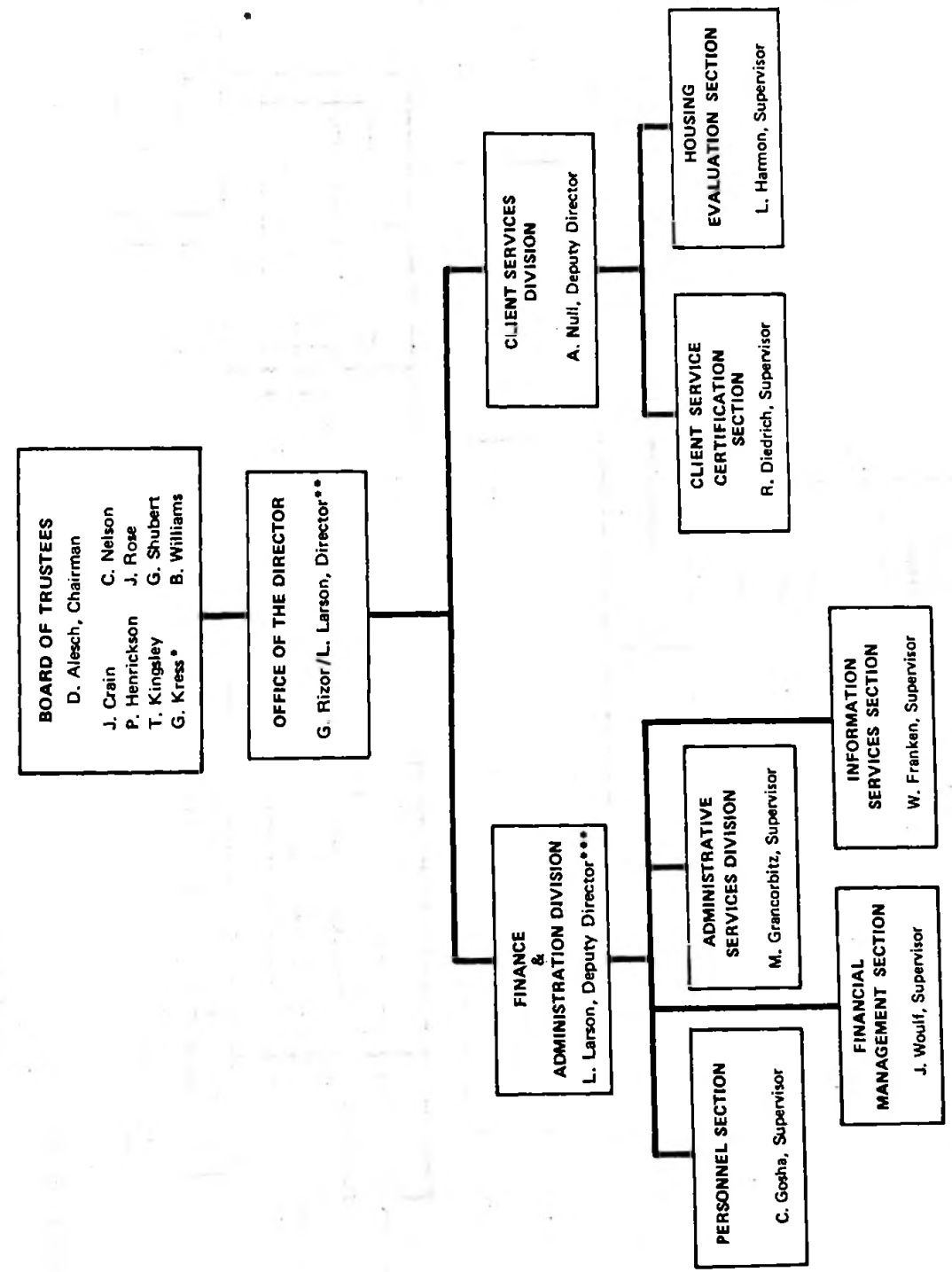
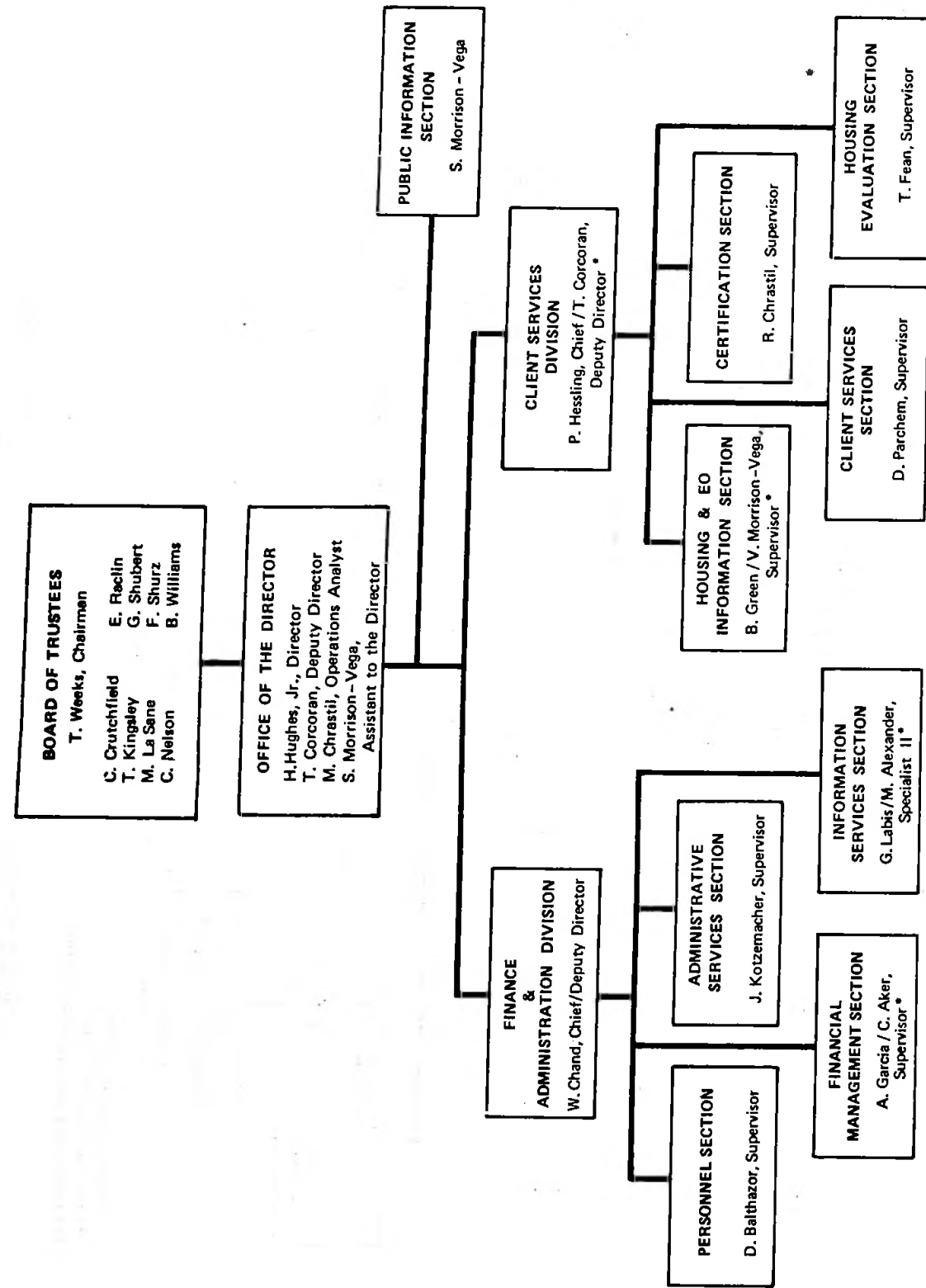


Fig. C.1—Rand's project organization for HASE



* Resigned December 1978
 ** In order of incumbency
 *** Position discontinued in April 1978

Fig. C.2—Organization of the housing allowance office for Brown County



* In order of incumbency

Fig. C.3—Organization of the housing allowance office for St. Joseph County

Appendix D

RAND'S STAFF FOR THE HOUSING ASSISTANCE SUPPLY EXPERIMENT
October 1978 - September 1979

The Housing Assistance Supply Experiment began its formal existence in April 1972 with a staff of ten professionals engaged in planning the experiment and screening potential sites. By September 1974, when the experiment was under way in two sites and a large volume of field survey data was being processed, the staff had grown to the equivalent of about 110 fulltime employees. They were located in Rand's offices in Washington, D.C.; Santa Monica, California; Green Bay, Wisconsin; and South Bend, Indiana. During 1979, the number ranged from 100 down to 80 at the end of September. As the Survey and Survey Data Preparation Groups complete their missions and phase out entirely, further reductions are expected.

Slightly more than half the staff are professionally rated employees or consultants, most of them working fulltime on the project. The remainder provide the administrative, clerical, data preparation, and secretarial services without which such a project could not function.

In the following pages, we list the professional staff of the project during the year covered by the report¹ and indicate at least the main responsibilities or contributions of each member. Because responsibilities and job titles change continuously in response to shifts in workload and the professional growth of staff members, it is difficult to give as clear a picture as we would like of the contributions of each person.

To simplify the lists, several conventions have been observed. First, only professionally rated employees and consultants are included. While the nonprofessional support staff has been indispensable, turnover, changes of assignment, and division of effort between this project and others make a listing of such individuals well-nigh incomprehensible. Second, where names are grouped by function, they are listed alphabetically and the persons listed thus were not necessarily all working concurrently at the indicated tasks. Third, some individuals are listed in more than one place, reflecting concurrent or successive assignments. Fourth, the incumbents of a few key positions are listed in order of incumbency.

Many more persons than are listed have contributed in significant ways to the Supply Experiment. However, those listed have borne the daily brunt of problem resolution and schedule pressures, for which they deserve special recognition. On that basis, we have included the names of our fieldwork subcontractors and their key personnel.

The housing allowance offices in our two experimental sites are corporate entities separate from The Rand Corporation. Their principal officers as of September 1979 are named in Appendix C.

See prior annual reports for staffing during earlier phases of the experiment.

STAFF FOR PHASE II
OCTOBER 1978—SEPTEMBER 1979

PROGRAM MANAGEMENT

Program Director
Charles E. Nelson

Deputy Director
G. Thomas Kingsley

Program Control Officer
Priscilla M. Schlegel

FIELD AND PROGRAM OPERATIONS GROUP

Manager
G. Thomas Kingsley

Staff
Deborah R. Both
Iao Katagiri
Sheila Kirby
W. Eugene Rizor
Priscilla M. Schlegel
Larry Schlereth

Site I Staff

Site Manager
Daniel J. Alesch

Site Monitor
Paul F. Ernst (HAO)

Site II Staff

Site Manager
Thomas W. Weeks

Site Monitors
Nancy O'Neil
Wim Wiewel (HAO)

RESEARCH GROUPS

Principal Investigator
Ira S. Lowry

Administrative Assistant
Donna M. Betancourt

Analysis Group

Manager
C. Lance Barnett

Market Effects
Wayne D. Perry*
John E. Bala
Charles M. Hotchkiss
D. Scott Lindsay
J. Kevin Neels
Charles W. Noland
C. Peter Rydell
Michael G. Shanley

Participant Effects
John E. Mulford*
Lawrence Helbers
Kevin F. McCarthy
James L. McDowell
George D. Weiner
Orhan M. Yildiz

Eligibility and
Participation
Grace M. Carter*
Steve L. Balch
Sinclair B. Coleman
Phyllis L. Ellickson

Community Attitudes

Tora K. Bikson*
Barbara A. Gutek
Jacqueline D. Goodchilds
Carl P. Hensler
Roger H. Johnston

Statistical Methods

Daniel A. Relles

File Development Group

Manager
E. Wayne Hansen

Survey Accounting
Carole A. Beauchemin
John W. Dawson
Sandra S. Figge
Carol E. Hillestad
Beverly F. Lowe
Mary E. Morris

File Preparation
Sally Trude*
Roberta M. Allen
Patricia M. Boren
Evelyn C. Casper
Sandra S. Figge
Beverly F. Lowe
Molly A. McMullen
Kenneth C. Wong

Attitude Data
Marsha Baran*
Roger H. Johnston
Marlene L. Laskey
Christina J. Witsberger

Documentation
Christine D'Arc

Administrative Data
Ann W. Wang*
Clairessa H. Cantrell
Leslie E. Geller
Charles A. Hubay, Jr.

*Team leader.

SURVEY GROUP**Manager**

Douglas Scott

Deputy Manager

Diane Schoeff

Administrative Support*Katherine Hummel
Kay A. McKenzie**Survey Design and Operations****Survey of Residential
Buildings**

Carolyn Rahe

**Supplemental Survey
of Landlords**Sandra Turner
Diane Schoeff**Sample Maintenance****Technical Supervisor**
Susan Welt Luxenberg**Production Unit**
Diane Reingold**Site II, Wave 4 Surveys**
Westat, Inc.**Project Leader**
Oscar L. Powers**Site Director**
Ann Brunston**Neighborhood Local
Sources Survey**Carolyn Rahe
Diane Schoeff**Supplemental Survey
of Terminees**Carolyn Rahe
Diane Schoeff**Operations Supervisor**

Sandra Turner

Codebooks

Deborah Wesley

**Supplemental Survey
of Terminees****Chilton Research Services****Project Leader**
James Fink**Project Coordinator**
Judy Greener**SURVEY DATA PROCESSING GROUP****Manager**

Donald P. Trees

Deputy Manager

Doris Allison

**Data Coding, Editing,
and Control****Supervisor**

Elizabeth Davidson

**Coding and Editing
Staff***Ellyn Bloomfield
Linda Buhl
Gary Crawford
Cheryl Ingram
Stephanie Knapik**Data Control
Staff**Barbara Bailey
Garnette Bailey
Alicia Kawamoto
Cordell Pierson
Al Shoden**Computer Services****Supervisor**

Pam McMahon

**Computer Services
Staff**Patricia Gallimore
Loretta Gray
Karen Hackett
Matthew Howitt
Nancy Lee
Frank Maltez
Kathleen Ninnis
Cordell Pierson
JoAnne Stevenson

*Plus 30 part-time consultants.

*In order of incumbency.

DATA SYSTEMS GROUP**Manager**

Susan C. Augusta

Administrative Assistant

Jan L. Butler

Audit and Analysis

Dorothy Baumann	Wade Harrell
M. A. "Jean" Bedell	Paul Honig
Timothy Carlson	Matthew R. Howitt
Antonio F. Corona	Lynn Johnson*
Carol Edwards	Ernest E. Kuncel
Kim Edwards	Pilar N. Montes
Sandra Edwards	Helen Wagner
Michael H. Emery	Louise Weiler
Jeffrey B. Garfinkle	Victoria T. Wikle
	Robert Young*

Data Administration

M. A. "Jean" Bedell
 Shirley J. Lee
 Cordell L. Pierson

Postbaseline System

Dorothy Baumann
 Lynn Johnson

Survey Management Information

Carol Edwards

*Leader.

PUBLICATIONS GROUP**Managing Editor**

Charlotte Cox

Consulting Editor

Judy Rasmussen

728.1 R15r 1978/79 c.3

Annual report of the Housing
Assistance supply Experiment



DUE DATE

Printed
in USA

DEPARTMENT OF HOUSING
AND URBAN DEVELOPMENT

AUG 14 1991

LIBRARY
WASHINGTON, D.C. 20410