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FIFTH ANNUAL REPORT

DEPARTMENT OF HOUSING
AND URBAN DEVELOPMENT

JAN 9 1979

of the

HOUSING ASSISTANCE SUPPLY EXPERIMENT

Sponsored by

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

October 1977 — September 1978

R-2434-HUD

June 1979

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 0-8330-0110-8

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

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AND URBAN DEVELOPMENT

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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 fifth year of field operations, October 1977 through September 1978.

The experiment is conducted by The Rand Corporation under a contract with HUD. A fullscale housing allowance program has been 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 1978, the allowance program had been operating for 51 months in Brown County, Wisconsin, and 45 months in St. Joseph County, Indiana.

This report continues the history of the Supply Experiment presented in prior annual reports,¹ 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 is hence supervising 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; those are presented separately in topical reports, published as they are completed.² The report also explains the events leading to the first major revision of the HASE research charter and 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. It is appropriate here to acknowledge their support, advice, and technical contributions. The institutions are HUD's Office of Policy Development and Research, the sponsoring agency; the Urban Institute, which has general responsibility for integrating findings from HUD's different housing allowance experiments; Westat, Inc., which conducted this year's field surveys under subcontract to Rand; local governments and housing authorities in Brown County and St. Joseph County, where the experiment is being conducted; the housing allowance offices 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 those institutions who have earned our respect and gratitude are too numerous to name here.

This report draws directly or indirectly on material prepared by Rand's staff for the Supply Experiment over a period of nearly six years. A research project of this type requires a great deal of technical documentation, the external audience

¹ *First Annual Report of the Housing Assistance Supply Experiment*, R-1659-HUD, October 1974; *Second Annual Report of the Housing Assistance Supply Experiment*, R-1959-HUD, May 1976; *Third Annual Report of the Housing Assistance Supply Experiment*, R-2151-HUD, February 1977; *Fourth Annual Report of the Housing Assistance Supply Experiment*, R-2302-HUD, May 1978. All were published by The Rand Corporation.

² Previous annual reports include summaries of research findings.

for which is limited to those who wish to probe deeply into research methods. For the Supply Experiment, that documentation exists in the form of working notes, copies of which are permanently on file at Rand, HUD, and the National Technical Information Service. During 1979, most of those notes will be revised and published by Rand for general distribution.³ To assist the reader who needs such additional documentation, we have cited the relevant working notes in the text of this report and in Appendix A.

Ira S. Lowry, manager of the HASE Design and Analysis Group, planned and edited this report. Others helped organize the material and drafted portions of the text.

The account of program developments in Sec. II is based on a draft prepared by G. Thomas Kingsley, manager of the Field and Program Operations Group and deputy director of the experiment. It draws on operating statistics compiled by the housing allowance offices of Brown and St. Joseph counties and collated by Sally Rich 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 Gene Rizer and Hollis Hughes, directors of the two housing allowance offices; and by Timothy M. Corcoran, deputy director of the South Bend office.

The account of research activities in Sec. III is based on materials 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 Augusta for the Data Systems Group, Ira S. Lowry for the Design and Analysis Group, and G. Thomas Kingsley for the Field and Program Operations Group. They also reviewed the final text.

The entire professional staff of HASE, all of whom contributed indirectly, is listed in Appendix D. A special acknowledgment is due Donna Betancourt, who audited the text and tables for accuracy and consistency with source materials.

The draft report was reviewed by Charles E. Nelson, Rand's program director for housing studies; Gene H. Fisher, head of Rand's Management Sciences Department; Deborah Hensler, associate head of Rand's Social Science Department; and David Novick, a Rand consultant. 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.

Ned Harcum and Gwen Shepherdson prepared the draft typescript and tables. Charlotte Cox edited the typescript and 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 2.13.5 of that contract.

³ In April 1979, Rand revised its publications system to make research "notes" as well as "reports" available to the public. Most of the notes (WN series) listed in Appendix A will be reissued during 1979 in the new N series; some will be revised or expanded and published as reports (R series). In the interim, almost all the HASE working notes are available from the National Technical Information Service, Springfield, Virginia 22151.

SUMMARY

The Housing Assistance Supply Experiment (HASE) is one among several elements of the Experimental Housing Allowance Program 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 has 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 the 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 observations of the properties and their neighborhoods.

This report describes events in each allowance program and concurrent research activities during the year ending 30 September 1978. Unlike previous annual reports, it does not summarize the year's research findings, although it provides current program statistics and discusses the status of the research.

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 of decency, 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 their 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 at 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.

Enrollment and Participation

As of 30 September 1978, the allowance program had been operating 51 months in Brown County and 45 months in St. Joseph County. Altogether, over 20,500 households had been enrolled in the two sites and nearly 16,300 had received one or more allowance payments. Currently, about 10,400 households are enrolled and over 8,700 are receiving monthly payments. In each site, current enrollees constitute 40 to 50 percent of all eligible households (about two-thirds of the eligible renters, one-third of the eligible homeowners) and about 8 percent of all households.

The experimental sites differ considerably both as to the number of eligible households and the characteristics of those who are eligible.¹ The differences are reflected in enrollment patterns. In September 1978, 3,901 households were enrolled in Brown County and 6,539 in St. Joseph County. Among Brown County's enrollees, 69 percent were renters, 37 percent were headed by elderly persons, and only 3 percent were members of racial minorities. In St. Joseph County's program, 46 percent were renters, 46 percent were elderly, and 25 percent were from minority groups. In both sites, at least two-thirds of the enrolled households consisted of one or two persons.

New enrollments during 1978 were approximately offset by enrollment terminations that usually reflected the loss of eligibility. The program seems close to the maximum size it will attain over its ten-year life. If so, its steady-state participation rate of about 50 percent of those eligible is close to participation rates in other federal transfer programs serving comparable populations.

Allowance Payments

Overall, the program has provided financial assistance to 8,850 renters and 7,400 homeowners. Currently, the average payment is about \$77 monthly and amounts to 20 percent of a recipient's nonallowance gross income. The annual equivalent of all payments made in September 1978 is \$7.8 million.

The schedule of standard costs for adequate housing, on which allowance entitlement is based, has been revised three times in Brown County and twice in St.

¹ When the program began, Brown county had about 48,000 households and St. Joseph County about 76,000. Brown County was experiencing rapid urban growth and a tight housing market, but had few nonwhite or Latin residents. St. Joseph County's central city was losing population and had a surplus of housing; but its minority population was large and growing and the county's housing market was highly segregated. Blacks and Latins composed 19 percent of South Bend's population, but only one percent of the county's suburban population.

Joseph County to reflect inflation—due primarily to escalating energy prices. The average allowance payment in Brown County has kept pace with housing costs, rising by about 37 percent between September 1975 and September 1978. Over the same period in St. Joseph County, average payments changed very little because average client incomes increased at about the same rate as housing costs.

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 gross income). But nearly 8,500 dwellings have been repaired or improved to meet program standards, and about 4,400 households have improved their housing circumstances by moving. About 260 renters have purchased homes after enrolling in the program.

Although housing defects are common, most are quickly and inexpensively remedied by enrollees eager to qualify for payments. Cumulatively, about two-thirds of all failed dwellings have been repaired by their owners or occupants. Among those who repair, three out of four report cash outlays—usually for materials only—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 by unpaid labor—provided by the occupant, his friends, or the landlord.

Annual reevaluations of recipients' dwellings show that over a fifth in Brown County and over 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. Now, services to continuing clients account for the majority of the work. Since October 1976, the total workload has not changed much, but administrative costs have decreased, reflecting efficiency gains.

Rand's oversight of the HAO will end on 30 June 1979 in Brown County and 31 March 1980 in St. Joseph County. Preparations for the HAO's transition to local control are well under way in Brown County. The Brown County Housing Authority has agreed to continue its delegation of program operations to the nonprofit HAO. No major changes in program rules are contemplated. The enrollment of new applicants will continue after transition, but may close before the experimental program ends (March 1984).

THE RESEARCH PROGRAM

To learn about the market stimulus provided by the allowance program, Rand is analyzing the client records maintained by each HAO. To learn about effects on the local housing market and the community, Rand has conducted an annual cycle of field surveys addressed to a marketwide sample of residential properties, once before the program began and for three years thereafter. To learn about program administration, Rand is working with HAO staffs to analyze procedures, their effectiveness, and their costs.

Although the HAO record system was designed primarily for administrative efficiency, it was also planned so that Rand could construct a complete and reliable history of all transactions with each client from the time he applied until he left the program. Those records include periodically updated information on the client's household characteristics, financial circumstances, and housing expenses; detailed reports on the physical characteristics of each dwelling he occupied while in the program and any repairs and improvements he made to those dwellings; and a complete record of changes in program status, allowance entitlements, and payments received.

The field surveys include annual interviews with the owners and occupants of sampled properties, as well as less frequent field observations of the properties and neighborhoods where they are located. From the landlords of rental properties, the interviewers seek (among other items) a detailed account of each property's financing, income, expenses, repairs, and improvements for the preceding year. Renters and homeowners are queried at length about their housing, its cost, and how they feel about it and the neighborhood. They are also asked about previous changes of residence and the job and family circumstances associated with such changes. Landlords, renters, and homeowners are all asked for their views of the experimental allowance program and its local effects. (Those interviewed include both program participants and nonparticipants, the latter predominating.)

Gathering data on the program and the market in which it operates enables Rand to relate the program to market and community responses. The program data are rich enough to support detailed studies of client behavior in response to program incentives, and the survey data cast valuable light on housing market structure and processes, even independently of the influence of the allowance program. Administrative records of the allowance program are designed to facilitate functional cost and output accounting, the audit of client submissions and HAO records, and the review of the case-by-case consistency of administrative decisions.

The HASE research activities during 1978 included completion of the last cycle of field surveys; continued preparation of survey and HAO data for analysis; publication of a major report on the results of the first two years of program operations; and in the light of early findings, replanning the remainder of the experiment. Those activities are briefly reviewed below.

Completing the Field Surveys

The fourth and final cycle (or *wave*) of field surveys was conducted in Brown County in 1977 and in St. Joseph County in 1978, in each case during the third year

of program operations.² The St. Joseph County fieldwork, done by Westat, Inc., included nearly 4,500 interview assignments and field observations on 3,200 residential buildings and 12,800 street segments. Interview completion rates in each site were only slightly below those for corresponding surveys conducted in the preceding year.

During the coming year, Westat will close its South Bend office and deliver the pertinent administrative records to Rand. The HASE Survey Group will submit final updates to sampling records, prepare text for the remaining survey codebooks, and document survey operations. Those events signal the completion of an ambitious survey agenda that began in 1973 and has yielded more than 30,000 interviews with landlords, tenants, and homeowners and over 50,000 field observation reports.

Revisions during 1978 to the HASE research charter (see below) prompted plans for two new surveys to be conducted in 1979. One is a telephone survey addressed to 1,800 landlords of program participants in St. Joseph County; it will be conducted from Santa Monica by Rand staff. The two HAOs have engaged Chilton Research Services to interview some 1,300 enrollees who left the allowance program before they qualified for payments, to learn about why they dropped out. Rand will compile and analyze the data from both surveys.

Preparing and Managing the Data

Rand receives completed questionnaires and other field reports from its survey subcontractors, transcribes them into machine-readable records, edits the records to correct errors and ambiguities, then organizes the edited records into research files with standard formats. Auditors account for missing records and missing or erroneous data within records, augment each usable record with variables derived from survey responses and other sources, and weight records so they jointly represent the populations sampled. Finally, HASE produces codebooks describing every variable on every record and archives the records for each survey as a permanent master file with full documentation. Those activities entail the combined efforts of the HASE Survey, Survey Data Preparation, Data Systems, and Design and Analysis groups.

During 1978, the Survey Data Preparation Group worked mostly on field reports from the 1977 survey cycle, transcribing some 80,000 documents into machine-readable records, coding 487,000 verbatim responses from interviews, checking 23 million data fields for errors, and resolving 159,000 computer-generated error messages. In 1979, the group's workload will include only the records of the wave 4 survey in St. Joseph County and a variety of file disposition and documentation tasks leading to the completion of HASE survey data preparation activity.

Nearly all HASE data are stored and processed by machine. The Data Systems Group performs those operations for three major classes of data: survey field reports, HAO administrative records, and survey sampling records. During 1978, the group compiled and reformatted the edited field report files for the wave 3 surveys.

² Initially, it was thought that as many as six annual survey cycles might be needed to trace the allowance program's effects on the local housing market and community. However, the absence of market disturbances during the first two years of program operations led Rand to recommend, and HUD to approve, curtailment of the survey agenda. See "New Research Directions," below.

HAO administrative records, cumulative through the third year of program operations in each site, were reorganized into research files following a new format designed the year before. In its survey support role, the group produced field materials for wave 4 in St. Joseph County and updated sampling records with new information from the field. Finally, the group programmed 772 analytic requests from the Design and Analysis Group and executed the machine jobs needed to produce the requested data.

Except for a final update of sampling records to reflect wave 4 field results, the group's support of survey operations is complete. During the next two years, it must format the remaining survey files (wave 4 in both sites) and the final two years of HAO data (through year 5 in each site) and prepare all files for archiving and delivery to HUD. Requests for analytic programming are also expected to increase as the final round of analysis begins.

After each survey research file is compiled, the Design and Analysis Group audits its contents, augments the records with derived variables, and assigns sampling weights to individual records. The files are then ready both for analysis and archiving as permanent master files, along with codebooks describing their contents. Auditing, augmenting, and weighting the four baseline surveys (of landlords, households, residential buildings, and neighborhoods) required considerable attention to methodology. During 1978, that experience was reviewed, routines established for preparing postbaseline files for analysis and archiving, and staffing increased for those activities.

By the end of the reporting year, sample accounting for all wave 2 surveys was complete, agreement had been reached on the list of derived variables to be added to each file, and construction of those variables was well under way. HASE expects to have all survey files ready for analysis by mid-1979 and to deliver them to HUD, complete with documentation, during 1980.

Work also proceeded on the HAO files covering the first three years of program operations. While analyzing the files prepared earlier from data for the first two years, researchers discovered that the record structures were poorly adapted to emerging analytic plans; so they redesigned the records before compiling the third year's data. By September 1978, the work on year 3 files for Brown County was nearing completion; work on the corresponding files for St. Joseph County was well under way.

New Research Directions

During the year ending in September 1978, HASE researchers focused on two major projects: a systematic summary of interim findings (with supporting topical studies), and plans for a three-year research agenda leading to the completion of the experiment in 1981.

The summary of interim findings, based on the first two years of program operations, was published in HASE's fourth annual report. It described the early effects of the allowance program on participants and on local housing markets, and analyzed the cost and effectiveness of the program's administrative procedures. Topical studies underlying that assessment of the program were completed and prepared for publication, either before or after their summarization in the fourth annual report.

The central finding from the studies was that, contrary to general expectations, the allowance program had not noticeably perturbed local housing markets and seemed unlikely to do so in the future. Because the measurement of market effects was the core of the HASE research charter, it was appropriate to reconsider the research agenda for the remainder of the experiment. During the summer of 1978, HUD and Rand considered how best to use the time and resources remaining. Their joint conclusions were embodied in a contract, signed in September 1978, covering the remainder of the experiment.

One important decision was to terminate field surveys at the end of the fourth annual cycle, the final wave of surveys in each site coinciding with the allowance program's third year of operations. However, Rand's supervision of the allowance program and its analysis of program records will continue through five full years of program operations.

The data collection plan meshed with a revised research agenda. Although HASE will seek closure on the questions about market and community effects that dominated the original experimental charter, most of the remaining resources will be devoted to analysis of two broad topics: the dynamics of eligibility and participation, and the program's effects on its participants.

Administrative research, conducted by the Field and Program Operations Group, will focus on the cost and reliability of alternative income certification methods; the effect of experience and scale on administrative costs; and a special study of enrollees who never qualify for payments.

During the coming year, HASE expects to vigorously pursue the new research agenda, analyzing up to four years of survey data in studies of market effects and eligibility and three years of program data in studies of participation and effects on participants. However, HASE researchers expect to complete only a few topical studies during 1979, aiming instead for 1980. During 1981, they will integrate the various topical studies with the last installments of data into a comprehensive final report.

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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 1978, the program had been operating for 51 months in Brown County, Wisconsin, and for 45 months in St. Joseph County, Indiana. Rand's monitoring responsibilities will terminate in June 1979 in Brown County and March 1980 in St. Joseph County, although the allowance programs will operate until 1984. The experiment's final report is due in September 1981.

Previous annual reports have both recounted the progress of the experiment and summarized its interim research findings. As research findings have grown in volume and complexity, such summarization has been increasingly difficult. Consequently, this fifth annual report only describes program and research activities during the past year, leaving research findings to be reported 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. The current status of EHAP is reported in *Experimental Housing Allowance Program: A 1979 Report of Findings*, The Division of Housing Research, Office of Policy Development and Research, HUD, April 1979.

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.

To learn how recipients respond to alternative amounts and forms of assistance, HUD sponsored a Housing Assistance Demand Experiment. Briefly, that experiment entailed selecting a sample of 1,250 low-income families in each of two large metropolitan areas for enrollment in a housing allowance program. Subsamples of the enrollees received allowances on different terms, as suggested above. Another 550 families 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.²

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 has been mounted in each of two metropolitan housing markets, selected for their contrasting market characteristics. In each case, housing allowances have been offered for a ten-year period to most of the low-income families 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 are eligible choose to enroll. The two local housing markets are being monitored to see what happens

² The Demand Experiment was conducted in Pittsburgh, Pennsylvania, and Phoenix, Arizona. Preliminary findings are reported in Helen E. Bakeman, 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 prior 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.

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. 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.⁴

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 families. 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 has 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 fullscale 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 quality of building services or repair and remodeling services? What seem to be the reasons for changes in institutional or industrial policies?

⁴ The jurisdictions are 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.

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 both those findings and new policy interests. The charter revisions are discussed in Sec. III.

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 perceptions 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 would 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, so that 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 improvements—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 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 broader 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; and data from those two sites will be 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, Rand will monitor and supervise its operations; over approximately the same period, Rand will also gather and analyze data concerning the effects of the allowance program on the local housing market. Generally, program and research activities are 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.⁶ 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

⁶ 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 is testing a carefully designed range of program features, and the Administrative Agency Experiment provides broad latitude to local agencies in program design. The Supply Experiment, in contrast, operates identical experimental allowance programs at each of its two sites; and within each site, housing allowances are 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 hope to learn how different housing markets will 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, it is expected that 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, 249-6, Washington, D.C., 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 is \$32,500 for households headed by elderly persons and \$20,000 for others.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, so as 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 occupy a housing unit that meets certain standards of adequacy, a requirement

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 1978, the adjusted limit in Brown County was \$37,700 for households headed by elderly persons and \$23,200 for others. In St. Joseph County, the corresponding figures were \$36,700 and \$22,600.

enforced by periodic evaluations conducted by the HAO. Second, the participant must spend at least the amount of his 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 cover his housing costs. On the other hand, if he chooses a unit with costs that are above standard, he will not receive any additional payment but must bear the excess cost 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 quality of 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 else 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 5.0 percent of the value of his equity in his home. The home is inspected immediately after

¹¹ Before 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 provisions 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 dwelling quality 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 would not ordinarily be able to afford new single-family homes; their ability to purchase older homes would depend on their liquid assets and on the availability of mortgage credit on terms they could 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. Supplemented by data from the Demand and Administrative Agency experiments, those data would also provide a basis for extending and generalizing the site-specific findings.

Our plans require 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 will be analyzed jointly.

¹² Five years after baseline was our best prior estimate of the time needed for market processes set in motion by the introduction of 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 in each site. 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 follow 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 have been 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

Although administrative records of the allowance program provide measures of its market stimulus, data on 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 provides for probability sampling in each of eighteen 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 have 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 is augmented by a sample of properties that have been 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 is thorough and complex. Its main elements are the following:

Survey of Residential Buildings. Each property in the sample is examined in the field to record the physical characteristics of its residential buildings and the general characteristics of the immediate neighborhood. The survey instrument is 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 seek an annual interview with the landlord. That interview, running about 90 minutes, is 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 seeks data on mortgage financing, property ownership and management, property and tenant characteristics, land-

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.

lord-tenant relationships, and plans for the property. Finally, it elicits the landlord's impressions of the program and how it affects him.

Survey of Tenants and Homeowners. For rental properties in the sample, we also seek annual interviews with the current occupants of each property, sampling the housing units on large properties. Each household head is asked to describe the interior features and condition of his housing unit and to report his contract rent and other housing expenses. He is also asked how he feels about his housing and his neighborhood. As background for analysis of housing-related responses, we also obtain information on household composition and family characteristics, income, education, and occupation. An important element of the first interview for each household head is a five-year residential and employment history, which includes data on household, housing, and employment characteristics at the time of each move.

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

The annual interviews for tenants and homeowners update information obtained at baseline and also elicit the respondent's perceptions of the allowance program and its effects on his housing and neighborhood. Inasmuch as the sample includes both program participants and nonparticipants, both views are represented.

Finally, a subsample of urban renter households that are eligible to enroll in the allowance program is followed if they move from empaneled housing units. They are 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 gather 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 have undertaken 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 varies, with the most systematic data being collected from mortgage lenders.

Resident Observer. The systematic surveys are supplemented at each site by a resident observer, who gathers informal information about community events, activities, and attitudes that may bear on the housing allowance program. The observer's reports help us interpret survey findings and flag issues that warrant additional research by Rand staff or that need attention from the HAO.

Background Data on Housing Costs and Links to Other Surveys

To supplement the data collected in each experimental site, we draw on existing

statistical systems for regional and national background data with which local data may be compared. Specifically, we compile 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 plan to compare our data on housing-market trends with those collected by the U.S. Bureau of the Census in its Annual Housing Survey.

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 gives it great flexibility, and we have been able to accommodate a number of unforeseen data needs by small, special 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.

¹⁴ See Ira S. Lowry (ed.), *General Design Report: First Draft*, The Rand Corporation, WN-8198-HUD, May 1973, 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. The findings summarized and integrated there are reported in greater detail in topical working notes published either in 1978 or soon thereafter. See Appendix A for citations.

By 30 September 1978, all the survey data had been collected and all but the final year or so of program data had been transferred to Rand by the HAOs. Data received earlier were in various stages of preparation and analysis. The coming year is planned as a period of intensive empirical work, leading to the publication in 1980 and 1981 of 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 report²⁰ 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

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.

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.

¹⁹ *First Annual Report of the Housing Assistance Supply Experiment*, The Rand Corporation, R-1659-HUD, October 1974.

²⁰ *Second Annual Report of the Housing Assistance Supply Experiment*, The Rand Corporation, R-1959-HUD, May 1976.

records in Site I. Since events in Site II lag those in Site I by about a year, we then had few firm analytical findings for Site II.

The third annual report²¹ 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.

This fifth annual report follows the pattern of its predecessors in describing an additional year of program operations (Sec. II) and research activities (Sec. III), through September 1978.²² However, unlike its predecessors, this report does not summarize experimental findings; for the reasons explained earlier, they will henceforth be reported separately.

²¹ *Third Annual Report of the Housing Assistance Supply Experiment.*

²² A chronology of major events in each site is provided in Appendix B.

II. THE HOUSING ALLOWANCE PROGRAMS

At the end of September 1978, the experimental housing allowance program had operated for 51 months in Brown County and 45 months in St. Joseph County.¹ Altogether, over 20,500 households had been enrolled in the two sites and nearly 16,300 had received one or more allowance payments. Currently, about 10,400 households are enrolled and over 8,700 are receiving monthly payments. In each site, current enrollees constitute 40 to 50 percent of all eligible households and about 8 percent of all households.

Overall, the program has provided financial assistance to 8,850 renters and 7,400 homeowners. Currently, the average payment is \$77 monthly and amounts to 20 percent of a recipient's nonallowance gross income. The annual equivalent of all payments made in September 1978 is \$7.8 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 nearly 8,500 dwellings have been repaired or improved to meet program standards and about 4,400 households have improved their housing circumstances by moving. About 260 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.

ENROLLMENT AND PAYMENT AUTHORIZATIONS

Table 2.1 summarizes the status of all applications for assistance received by each HAO through 29 September 1978. The cumulative number of applications equals about a third of all the households residing in each site when the program began.² "Success rates" for both applicants and enrollees have been slightly higher in Brown County, where 54 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 76 percent.

By September 1978, about half of those ever enrolled in each site were no longer in the program. Over 1,100 households in Brown County and 2,300 in St. Joseph County had dropped out without ever receiving a payment; their preenrollment dwellings failed to meet program standards, and they were unable or unwilling to repair those dwellings or move to acceptable housing. Among the 3,000 terminees in Brown County and 3,700 in St. Joseph County who received payments before

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 42 months of open enrollment.

² Brown County had about 48,000 households; St. Joseph County, about 76,000. Because of population turnover, the baseline population is an inexact denominator for most program statistics, but does provide a rough scalar.

Table 2.1

SELECTED ENROLLMENT AND PAYMENT AUTHORIZATION STATISTICS:
HOUSING ALLOWANCE PROGRAMS IN BROWN AND ST. JOSEPH
COUNTIES THROUGH SEPTEMBER 1978

Item	Brown County		St. Joseph County	
	Number of Cases	Percent of Total	Number of Cases	Percent of Total
<i>Enrollment</i>				
All applicants	14,908	100	26,858	100
Screened out before interview ^a	4,031	27	7,554	28
Screened out by interview ^b	2,444	16	5,410	20
Awaiting interview or processing	388	3	1,386	5
Eligible and enrolled	8,045	54	12,508	47
<i>Payment Authorization</i>				
All enrollees	8,045	100	12,508	100
Authorized for payments	6,724	84	9,541	76
Currently receiving payments	3,378	42	5,325	43
Payments suspended	331	4	574	4
Enrollment terminated ^d	3,015	38	3,642	29
Never authorized for payments	1,321	16	2,967	24
Authorization pending ^e	192	2	640	5
Enrollment terminated ^d	1,129	14	2,327	19

SOURCE: HAO management information reports for September 1978.

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.

^a Applicant ineligible or declined interview.

^b Applicant ineligible, declined to complete interview, or declined enrollment.

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

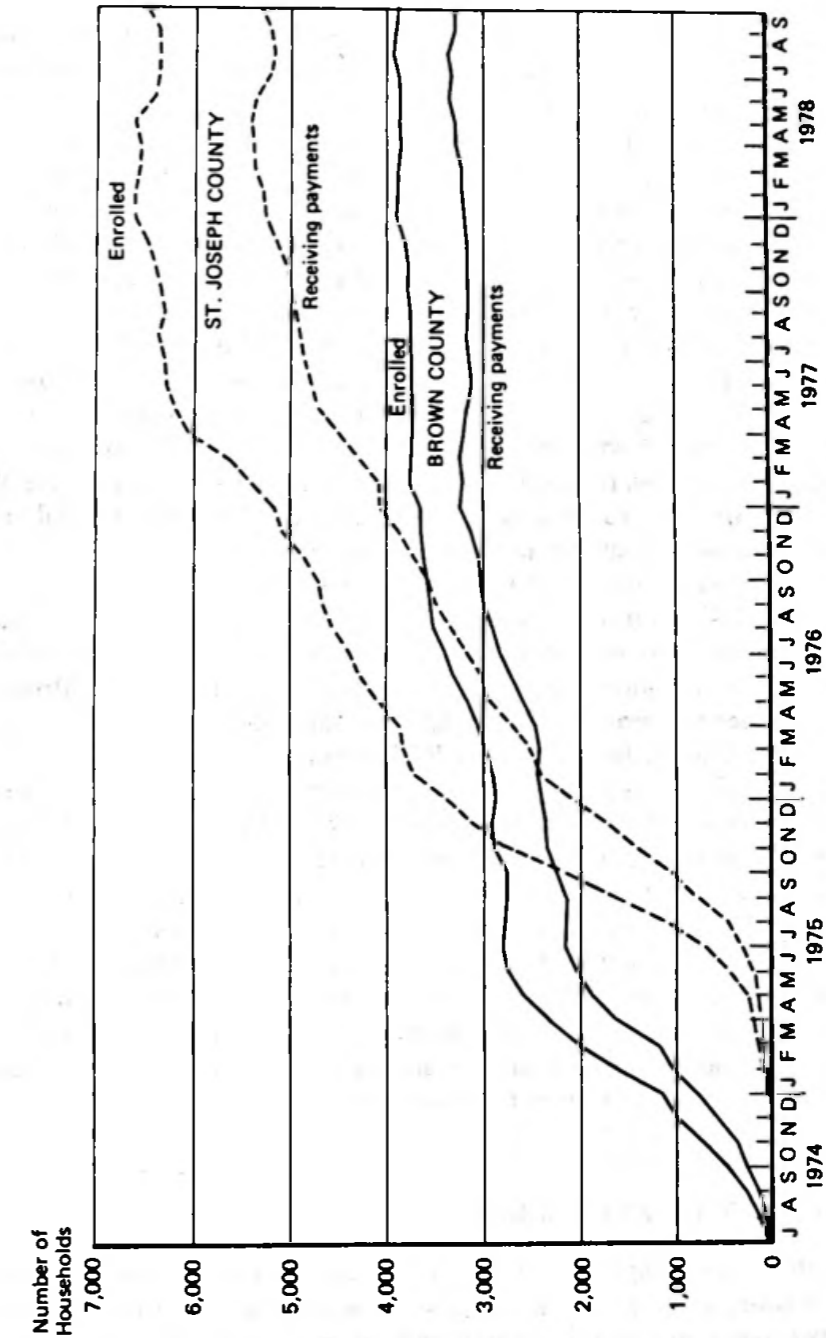
^d Voluntary or involuntary. Involuntary terminations usually result from change in income or family circumstances that affect eligibility.

^e Awaiting housing certification or lease agreement. See Note above.

leaving the program, most became 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 1978, the Brown County HAO processed 2,163 applications, enrolled 1,263 households, and reinstated 350 households whose enrollment had been previously terminated. In St. Joseph County, 4,915 households applied; 2,842 were enrolled, and 661 were reinstated.

In both sites, intake (new enrollments plus reinstatements) is now roughly balanced by attrition. During the past year, the number of households currently enrolled (month-end data) has fluctuated between 3,647 and 3,925 in Brown County, and between 6,429 and 6,651 in St. Joseph County (see Fig. 2.1). The number of



SOURCE: HAO management information reports through September 1978.

Fig. 2.1--Households enrolled and receiving payments: housing allowance programs in Brown and St. Joseph counties, 1974-78

households currently authorized for payments is about 87 percent of the number currently enrolled in Brown County and 81 percent of the St. Joseph County figure.

Monthly fluctuations in program size are partly due to random variations in applications or terminations, but also reflect administrative constraints. For example, enrollment declined in St. Joseph County during the summer of 1978 at least partly because staff turnover hampered application processing.

Changes in program rules also affect enrollment. In August 1977, HUD authorized the HAOs to enroll previously ineligible single persons under 62 years of age. Through September 1978, a total of 418 such individuals had been enrolled in Brown County and 698 in St. Joseph County, accounting respectively for 30 and 24 percent of all new enrollments during the year. Without a newly eligible population to draw upon, program size would probably have decreased slightly during the year. Likewise, annual revisions to the income and asset limits (to compensate for inflation) restore eligibility to a few households terminated earlier and bestow eligibility on some previously ineligible households.

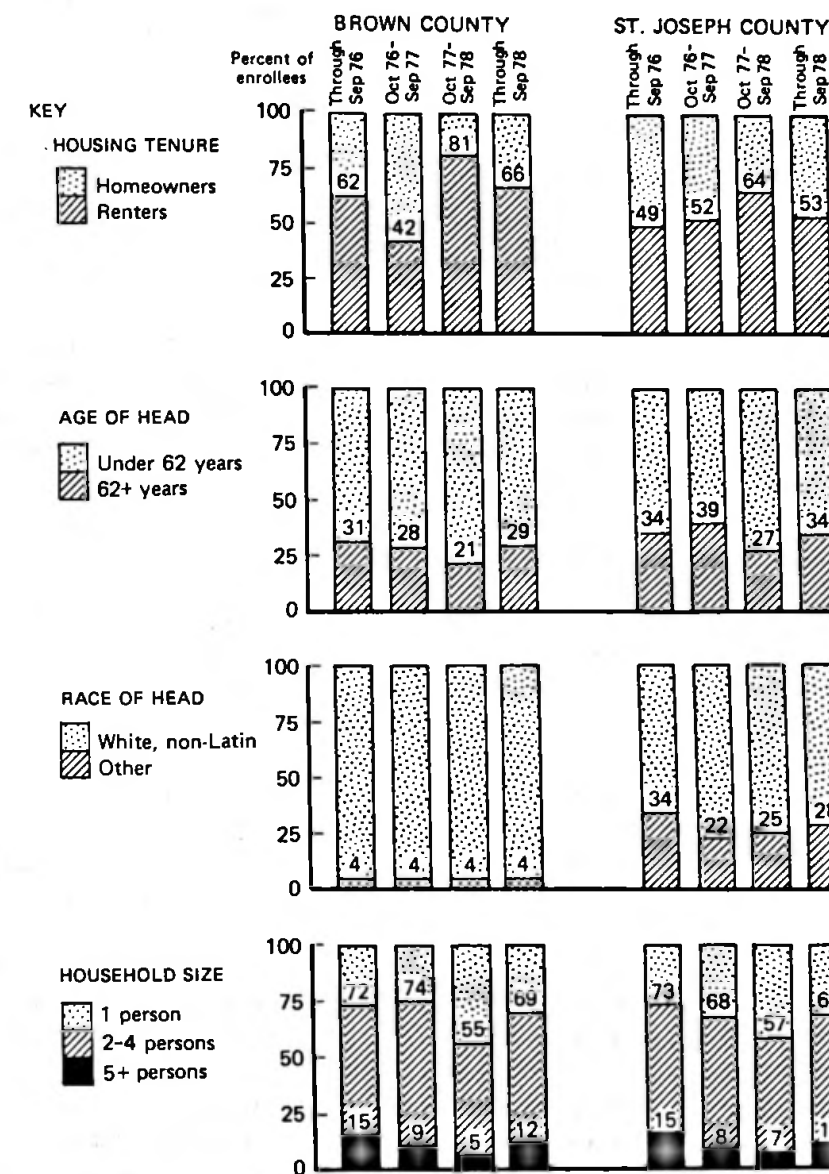
Since our household surveys indicate that knowledge of the program's existence and benefits is now widespread in both sites, prospects for further growth depend mostly on rule changes (such as those noted above), household formation, and economic conditions. Brown County's population is growing, but St. Joseph County's is not; in both places, the rate of household formation exceeds the rate of population growth. Another economic recession might increase eligibility and enrollment as the unemployed sought assistance; a boom would have the opposite effect. National inflation is unevenly reflected in the items whose relationship determines eligibility—local incomes and the standard cost of adequate housing.

Assuming a stable local economy, moderate price inflation, and no more categorical changes in eligibility standards, we doubt that the program in Brown County will grow much beyond its current size (3,901 enrollees, of whom 3,378 are receiving payments). The St. Joseph County HAO is at an earlier stage and had a sizable backlog of applications at the end of September 1978, so its future is less certain. We judge that enrollment there could reach 7,000 by the end of 1979, up from the current figure of 6,539 enrollees (of whom 5,325 are receiving payments).

We think it is now safe to conclude that a permanent housing allowance program (operating according to the rules of the experimental program) would provide assistance at any given time to no more than 10 percent of all households living in our experimental sites. 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 two years. In general, differences between enrollees in the two sites reflect differences in the eligible populations. As indicated by the last bar in each panel of the figure, cumulative enrollment data show a larger fraction of renters in Brown than in St. Joseph County (66 vs. 53 percent), relatively more nonelderly



SOURCE: HAO management information reports for indicated periods.

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

household heads (71 vs. 66 percent), and about the same distribution by size of household. Reflecting the county's racial homogeneity, Brown County's minority enrollment is only 4 percent of the total, vs. 28 percent in St. Joseph County.

Because a large fraction of the cumulative enrollment came early in each site, recent enrollments (the two center bars in each panel) have not much affected the cumulative composition (compare the first and last bars of each panel), even though they deviate sharply from early enrollments in several respects. Two shifts after 1976 are notable.

First, a program change in August 1977 permitted the HAOs to enroll nonelderly single persons. That change is reflected in the rising fraction of such households, most of them renters. In the year ending in September 1978, 81 percent of the new enrollees in Brown County and 64 percent in St. Joseph County were renters (vs. 62 and 49 percent two years earlier). Seventy-nine and 73 percent were nonelderly (vs. 69 and 66 percent two years earlier); 45 and 42 percent were single (vs. 28 and 27 percent earlier). In 1979, we expect a return to something like the 1976 pattern, so that the cumulative effects will be slight.

Second, racial minorities in St. Joseph County account for a smaller fraction of recent than of early enrollees (25 percent during 1978 vs. 34 percent through September 1976). Minority enrollment was initially high because the program was at first limited to South Bend, where most of the county's minority population lives. The program's jurisdiction was later enlarged to the entire county; the outlying areas included many eligible whites but very few Latins or nonwhites.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 1978. In both sites, households headed by elderly or single persons compose substantially 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 proportions of elderly persons reflect their relatively low termination rates. Also in both sites, minority groups constitute a slightly smaller share of current than of cumulative enrollment, reflecting more turnover for them than for whites.

The most surprising comparisons are based on housing tenure. In Brown County, renters cumulatively constitute 66 percent of all enrollees, vs. 69 percent currently. The pattern reverses in St. Joseph County, where the corresponding figures are 53 and 46 percent. Although renter enrollments increased sharply in both sites during 1978 (see Fig. 2.2, above), that increase was apparently offset by cumulative terminations in St. Joseph County.

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. If he is able to find certifiable housing whose cost exactly equals R^* , his housing

³ However, nonwhites are more likely than whites to be eligible and, if eligible, to enroll. Nonwhites (including Latins) account for 7.5 percent of all households in St. Joseph County but 28 percent of cumulative enrollment.

Table 2.2
SELECTED CHARACTERISTICS OF CURRENTLY ENROLLED HOUSEHOLDS: HOUSING ALLOWANCE PROGRAMS IN BROWN AND ST. JOSEPH COUNTIES, SEPTEMBER 1978

Client Characteristic	Brown County		St. Joseph County	
	Number of Households	Percent of Total	Number of Households	Percent of Total
<i>Housing Tenure</i>				
Homeowners	1,215	31	3,534	54
Renters	2,686	69	3,005	46
Total	3,901	100	6,539	100
<i>Age of Head</i>				
Under 62 years	2,472	63	3,524	54
62+ years	1,429	37	3,015	46
Total	3,901	100	6,539	100
<i>Race of Head</i>				
White non-Latin	3,774	97	4,901	75
Other	127	3	1,638	25
Total	3,901	100	6,539	100
<i>Household Size</i>				
1 person	1,674	43	2,961	45
2 persons	1,001	26	1,719	26
3-4 persons	946	24	1,392	21
5-6 persons	217	6	381	6
7+ persons	63	2	86	1
Total	3,901	100	6,539	100

SOURCE: HAO management information reports and special tabulations for September 1978.

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

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 larger 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 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 schedules and their effective dates. The increases cumulate to about 36 percent in Brown County and 17 percent in St. Joseph County.⁴

⁴ These are unweighted averages of percentage increases for each size of dwelling, which range from 29 to 40 percent in Brown County and 12 to 20 percent in St. Joseph County. The schedule for St. Joseph County was again under review in September 1978; the new schedule is to be effective in January 1979.

Table 2.3

STANDARD COST OF ADEQUATE HOUSING BY SIZE OF HOUSEHOLD:
HOUSING ALLOWANCE PROGRAMS IN BROWN AND
ST. JOSEPH COUNTIES, 1974-78

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

SOURCE: HAO policy clarification memorandums 141, 158, 186, 193, and 209.

NOTE: Standard costs were initially estimated from pre-program field surveys of rental dwellings in each site; they were subsequently increased to reflect measured inflation (mostly changes 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, and March 1978 for Brown County; and August 1974, July 1976, and August 1977 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.

Increasing R^* also increases the upper income limit for enrollment. If incomes were fixed, higher income limits would also increase the number of eligible households. But since 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 1976, 1977, and 1978. 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 income from the appropriate annualized value of R^* ; the monthly payment is one-twelfth of that amount.

In both sites, the average gross income of participants increased by 2 percent during the year ending September 1978—less than in the preceding year, when incomes increased by 5 percent in Brown County and 8 percent in St. Joseph County. With a smaller increase in incomes and a substantial R^* adjustment in May

Table 2.4

PARTICIPANTS' INCOMES AND ALLOWANCE PAYMENTS: HOUSING
ALLOWANCE PROGRAMS IN BROWN AND ST. JOSEPH
COUNTIES, SEPTEMBER 1976, 1977, AND 1978

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

SOURCE: HAO management information reports for indicated dates.

NOTE: Gross income for a homeowner includes an imputed income equal to 5.0 percent of his equity in his 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.

1978, the increase in the average allowance payment in Brown County for the year ending September 1978 (10 percent) was much higher than over the preceding year (3 percent). We expect the next R^* adjustment (scheduled for January 1979) to increase allowance payments in St. Joseph County as well, but only modestly. Without an intervening R^* adjustment, the average payment there actually declined slightly from September 1977 to September 1978.

Table 2.4 also shows a distinct difference in the incomes of participants in the two sites, especially for renters. In September 1978 the average income for Brown County's participating renters was 34 percent above the average for their counterparts in St. Joseph County. For participating homeowners, the differential was 19 percent, again in favor of Brown County. But housing costs are higher in Brown County, so the income differences do not reflect in allowance entitlements. Following the R^* adjustment for St. Joseph County, we expect its average allowance payments to rise above those of Brown County.

Because few participants have zero income, 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 16 percent for Brown County

homeowners to 30 percent for St. Joseph County renters. Overall, payments average 21 percent of gross income (25 percent of adjusted gross income).

Through September 1978, the Brown County HAO had disbursed \$9.3 million in allowance payments, and the HAO in St. Joseph County, \$11.3 million. At the September rate of disbursement, the annual outlay would be \$3.3 million in Brown County and \$4.6 million in St. Joseph County, an overall average of \$918 per year for each of 8,703 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, about half of all preenrollment dwellings in Brown County and more than that in St. Joseph County have been deficient.

The occupant of a defective dwelling must take one of two actions to qualify for payments—either arrange for the dwelling's repair⁵ 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 the 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, or 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; among renters, 47 percent failed in Brown County and 60 percent in St. Joseph County. Between a tenth and a fifth of all enrollees—typically renters—explore alternatives to their preenrollment 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 preenrollment dwellings, but they are higher in St. Joseph County.

Cumulatively, about two-thirds of all initially defective dwellings (preenrollment and prospective residences for new enrollees) have been successfully repaired by the occupant or his landlord and have passed the reevaluation. The repair rate on failed dwellings has risen sharply in both sites; through September 1978, 77 percent of all failed dwellings had been successfully repaired, as opposed to 58 percent of those that failed during the year ending September 1976.⁶ On the other hand, reevaluation failures have also risen, indicating that recent enrollees have more trouble understanding what is expected of them than did early ones.⁷

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

⁶ The percentages are inexact because a dwelling failed in one period may be successfully repaired later, but about 80 percent of all repairs are completed within two months of the initial failure.

⁷ About half of all unsuccessful repairs after January 1977 were associated with lead-based paint hazards, reflecting the complexity of a new standard adopted pursuant to federal legislation. One

Table 2.5

RESULTS OF HOUSING EVALUATIONS FOR NEWLY ENROLLED AND REINSTATED HOUSEHOLDS: HOUSING ALLOWANCE PROGRAMS IN BROWN AND ST. JOSEPH COUNTIES THROUGH SEPTEMBER 1978

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 Preenrollment Residence</i>				
Acceptable	3,827	52	4,648	44
Not acceptable	3,599	48	5,942	56
Total	7,426	100	10,590	100
<i>Initial Evaluation of Other Enrollee-Nominated Dwelling</i>				
Acceptable	1,210	57	787	31
Not acceptable	916	43	1,783	69
Total	2,126	100	2,570	100
<i>Evaluation for Reinstated Household</i>				
Acceptable	407	61	374	47
Not acceptable	257	39	429	53
Total	664	100	803	100
<i>Reevaluation of Failed Dwelling</i>				
Acceptable	3,201	93	5,244	87
Not acceptable	241	7	774	13
Total	3,442	100	6,018	100

SOURCE: HAO management information reports for September 1978.

NOTE: If feasible, each enrollee's preenrollment residence 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.

Since the program has been operating in Brown County, 3,200 initially defective dwellings have been repaired at the instance of enrollees seeking to qualify for payments and about 800 enrollees have moved to certifiable housing. In St. Joseph County, 5,200 dwellings have thus far been repaired and about 1,300 enrollees have moved.⁸

For those whose housing is initially certifiable, neither repairing nor moving is required to qualify for allowance payments. Rather, payments alleviate the budgetary stresses likely to lead to nonpayment of rent or utility bills or to under-maintenance of homes. About 1,200 recipients in Brown County and 1,100 in St.

complexity is that a dwelling failed for exterior lead-based paint hazards during the winter need not be repainted until spring; but in the meantime it is reported by the management information system as unacceptable even though other defects have been acceptably repaired.

⁸ The management information system on which this section is based does not directly report numbers of moves. The estimates here are extrapolated from an analysis of the first three years of program data for each site.

Joseph County have moved *after* qualifying for payments, presumably having reconsidered their housing alternatives in light of their increased resources.

The repairs needed to bring a dwelling up to program standards are rarely expensive, even though serious defects 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 \$10.⁹

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 7,300 in Brown County and 8,800 in St. Joseph

Table 2.6

RESULTS OF HOUSING EVALUATIONS FOR RECIPIENT HOUSEHOLDS:
HOUSING ALLOWANCE PROGRAMS IN BROWN AND ST. JOSEPH
COUNTIES THROUGH SEPTEMBER 1978

Result by 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	5,747	79	5,690	65
Not acceptable	1,524	21	3,109	35
Total	7,271	100	8,799	100
<i>Evaluation of Other Recipient- Nominated Dwelling</i>				
Acceptable	778	58	384	35
Not acceptable	559	42	706	65
Total	1,337	100	1,090	100
<i>Reevaluation of Failed Dwelling</i>				
Acceptable	1,278	93	2,337	86
Not acceptable	99	7	388	14
Total	1,377	100	2,725	100

SOURCE: HAO management information reports for September 1978.

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

^aData on annual evaluations include a few in each site for enrollees who never qualified for payments but maintained their enrollments by semiannual eligibility recertifications and annual housing evaluations.

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

* See *Fourth Annual Report of the Housing Assistance Supply Experiment*, pp. 66-74, for details.

suspended for those who did neither.¹⁰ 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 evaluation results. From January through September 1977, 21 percent of all dwellings evaluated in Brown County and 24 percent in St. Joseph County failed the lead-based paint standard.¹¹ The incidence of such failures subsequently decreased in both counties (to 12 and 18 percent, respectively, for the year ending in September 1978)—possibly because public knowledge of the new paint standard discouraged those with defective dwellings from enrolling or continuing in the program, or possibly because evaluators' experience with the new standard led to a more discriminating interpretation of it.

Table 2.7 indicates how the new paint standard generally affected failure rates. In nearly every evaluation category, failure rates rose when the new standard went into effect, but dropped again after September 1977. Oddly, failure rates on initial and annual evaluations of dwellings occupied by enrollees or recipients fell below their pre-1977 values. On the other hand, failed reevaluations became more common as paint repairs gained prominence.¹²

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. A majority of the trustees of each HAO are members of The Rand Corporation, the remainder being local residents. Rand's site manager for the experiment is chairman of the board.¹³

HUD provides financial support for the program through an annual contribution contract with a local housing authority (LHA) in each site, which delegates

¹⁰ The management information system does not distinguish corrective actions following annual reevaluations from repairs to dwellings to which current recipients plan to move. Thus, the last section of the table ("Reevaluation of Failed Dwelling") indicates only that in Brown County, 1,377 reevaluations were requested for the combined total of 1,524 failed annual and 559 failed remove evaluations; and similarly for St. Joseph County.

¹¹ 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. See also note 7, above.

¹² The time series shown in Table 2.7 for different types of evaluations are similar enough to warrant the judgment that the new lead-based paint standard, applied simultaneously in the two sites, is responsible for the perturbation; but they diverge in ways that defy explanation by inspection. When the machine-readable evaluation records are available for direct analysis, the anomalies may be resolved.

¹³ Appendix C contains organization charts for each HAO and shows its relationship to The Rand Corporation.

Table 2.7
**RESULTS OF HOUSING EVALUATIONS CONDUCTED BEFORE AND AFTER
 ADOPTION OF STRINGENT LEAD-BASED PAINT STANDARD:
 HOUSING ALLOWANCE PROGRAMS IN BROWN
 AND ST. JOSEPH COUNTIES**

Type of Evaluation	Failed Dwellings as Percent of Total Evaluated					
	Brown County			St. Joseph County		
	Pre-1977	Jan-Sep 1977	Oct 1977-Sep 1978	Pre-1977	Jan-Sep 1977	Oct 1977-Sep 1978
<i>Evaluations for Newly Enrolled and Reinstated Households</i>						
Initial evaluation of pre-enrollment residence	49	49	45	56	59	51
Initial evaluation of other enrollee-nominated unit	41	49	43	65	77	72
Evaluation for reinstated household	29	40	42	36	60	55
Reevaluation of failed unit	4	9	13	8	12	22
<i>Evaluations for Recipient Households</i>						
Annual evaluation of recipient's dwelling	21	25	19	38	40	32
Evaluation of other recipient-nominated unit	41	49	38	62	73	61
Reevaluation of failed unit	3	11	10	9	15	16

SOURCE: HAO management information reports for December 1976, September 1977, and September 1978.

NOTE: The lead-based paint standard was adopted 1 January 1977.

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. The HASE Field and Program Operations Group (FPOG) provides technical assistance to the HAOs and monitors their performance, attending both to operating efficiency and conformity with experimental design. Proposals for policy changes may originate with any of the parties to the program, but are formally submitted by FPOG for trustee approval, LHA review, and HUD approval.

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 regularly 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 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 statuses 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 entitlements 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 enrollment of those no longer eligible.

Workload, Staffing, and Administrative Costs

When the program began, the HAOs naturally addressed themselves almost wholly to intake. Over time, intake workloads have diminished and transactions with recipients have increased. During the year ending in September 1978, the Brown County HAO enrolled or reinstated 1,613 households but provided monthly payments and related services to an average of 3,323 clients; the St. Joseph County HAO took in 3,143 households but provided monthly services to an average of 5,292 clients.

An analysis of HAO workloads 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.¹⁴ 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. For the last two program years, the total workload increased by 3 percent in Brown County and decreased by 5 percent in St. Joseph County. However, total administrative expenditures and staffing decreased in both sites, both overall and per RYU. As measured in dollars, produc-

¹⁴ Note 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 WORKLOADS, COSTS, AND STAFFING:
HOUSING ALLOWANCE PROGRAMS IN BROWN AND
ST. JOSEPH COUNTIES, 1977 AND 1978

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

SOURCE: Analysis by HASE staff 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 1.14 RYU in Brown County and 1.21 RYU in St. Joseph County, a relationship used to express intake and maintenance workloads in comparable units.

tivity increased by 5 percent in Brown County and 3 percent in St. Joseph County; as measured in person-years, the gain was a remarkable 22 percent in Brown County and 7 percent in St. Joseph County. In both years, the St. Joseph County HAO had a slight edge in productivity over the Brown County HAO—probably because of its larger scale of operations.

PREPARATIONS FOR TRANSITION

As explained in Sec. I, Rand is responsible for supervising the allowance programs during the experimental period, approximately the first five years of program operations. Thereafter, the program will operate under local control until the expiration of the ten-year annual contributions contract. The transition to local

control is scheduled for 30 June 1979 in Brown County and 31 March 1980 in St. Joseph County.

Preparations for transition in Brown County are well under way. The most significant step was a Brown County Housing Authority (BCHA) review of post-transition (Phase II) options as to program rules and administrative structures and the adoption of a transition plan reflecting the following conclusions:

A review of the operations of the Housing Allowance Program to date indicates that it has helped to meet the housing needs of many low- and moderate-income households in Brown County. Its benefits have been provided at a reasonable cost to the taxpayer. The HAO has administered the program efficiently with sound controls to assure the proper use of public funds. Options for possible changes to the program have been examined. None that would change the program in any substantial way would appear to offer a practical means of improving its effectiveness. All such options would require an increase in costs and create considerable risk to program continuity. For these reasons, the central theme in transition policy is that the housing allowance program shall continue to operate in Phase II essentially in the same manner as it has operated in Phase I.¹⁵

Specifically, the BCHA proposes to continue its contract with the HAO for administering the program and to retain the present *HAO Handbook*, including its eligibility rules and housing standards, as an operating guide. Enrollment of new applicants will continue after transition but may close before funding terminates in March 1984. The BCHA has asked HUD to help plan a way to ease clients' adjustment to the termination of their benefits when the program ends.

In addition, Rand and HAO staffs have jointly reviewed the HAO administrative system for features that will become obsolete once the experimental period is over. No major changes in organization seem warranted, but certain data collected from clients or concerning administrative activities themselves will no longer be needed when Rand's monitoring responsibilities end.

Over the coming months, changes to the contracts governing relationships between HUD, the BCHA, and the HAO and related changes to the *HAO Handbook* will be drafted and presented to the relevant parties for approval. In June 1979, the *Handbook* will be amended to delete references to Rand, and the HAO bylaws will be amended to end Rand's role in trustee selection. In preparation for the transition to local control, the board has already been expanded to include more trustees from Brown County, so that they can become well versed in program policies and operations before transition.

¹⁵ BCHA resolution 31-78, adopted 14 August 1978.

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 which is now drawing to a close. Four annual cycles of field surveys have been conducted in each site; in January 1979, the HAOs will have transferred administrative records covering four years of program operations in each site to Rand. Although another year of program data will be obtained from each HAO, the Supply Experiment's remaining challenge is to organize data already collected into well-documented research files and analyze them pursuant to a revised research charter.

The revision of the research charter grew out of the interim findings that were summarized in the fourth annual report, published in May 1978. Those findings, briefed to HUD at intervals over the preceding year, established beyond reasonable doubt that the marketwide 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 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 1978 included the orderly completion of the last cycle of field surveys, preparation of survey and HAO data for analysis, management of an expanding data base, completion and publication of a number of interim reports, and planning for the remainder of the experiment. The following pages describe those activities in more detail.

COMPLETING THE FIELD SURVEYS

The experimental design approved by HUD in 1973 contemplated as many as six annual cycles of field surveys to measure market response to the housing allowance program. However, data for the first two years of program operations indicated so little market perturbation that Rand proposed terminating the survey agenda after the fourth annual cycle in each site.¹ Fieldwork for the fourth cycle was completed in Brown County during 1977 and in St. Joseph County during 1978.

The annual survey cycles were addressed to a "permanent" panel of residential properties selected from a larger set surveyed at baseline. As shown in Table 3.1,

¹ See Ira S. Lowry, *Are Further Survey Cycles Needed in Site I?* The Rand Corporation, WN-9541-HUD, July 1976. HUD approved our recommendation for Brown County on 19 September 1977. The recommendation for St. Joseph County was contained in Rand's *Proposal for Further Funding of the Housing Assistance Supply Experiment*, submitted to HUD in July 1978.

Table 3.1

COMPOSITION OF PERMANENT PANELS OF RESIDENTIAL PROPERTIES CHOSEN FOR FIELD SURVEYS IN BROWN AND ST. JOSEPH COUNTIES

Sampling Stratum		Brown County			St. Joseph County		
		Number of Properties	Number of Housing Units		Number of Properties	Number of Housing Units	
			Total on Property	Empaneled		Total on Property	Empaneled
Number	Description						
	<i>Urban Rental</i>						
	Single-family:						
1	Low rent	117	117	117	111	111	111
4	Medium rent	242	242	242	294	294	294
7	High rent	93	93	93	177	177	177
	2-4 units:						
2	Low rent	186	444	444	210	520	520
5	Medium rent	241	536	535	225	522	522
8	High rent	76	155	155	65	139	139
	5+ units:						
3	Low rent	32	290	128	63	1,763	332
6	Medium rent	100	1,130	408	35	1,859	218
9	High rent	32	635	135	28	2,742	238
	<i>Rural Rental</i>						
10	Low or medium rent	139	243	236	136	233	189
11	High rent	36	68	68	61	66	66
	<i>Urban Owner</i>						
12	Low value	159	160	160	151	630 ^a	173 ^a
13	Medium value	201	201	201	184	592 ^a	211 ^a
14	High value	103	103	103	82	82	82
	<i>Rural Owner</i>						
15	Low or medium value	100	100	100	90	91	91
16	High value	50	50	50	60	60	60
	<i>Other Residential</i>						
17	Rooming house	18	150	72	2	13	8
18	Mobile home property ^b	20	746	41	13	1,291	122
All strata		1,945	5,463	3,288	1,987	11,185	3,553

SOURCE: Tabulation by HASE staff of sample selection records for both sites.

NOTE: For surveys of landlords and homeowners, the property is the unit of observation, except in the case of condominiums or cooperatives. For surveys of tenants, the housing unit is the unit of observation; on large properties only a sample of housing units was empaneled. For surveys of residential buildings, buildings are the units of observation and are sampled on large properties. In Brown County, empaneled properties had 2,823 buildings, of which 2,074 were empaneled. In St. Joseph County, empaneled properties had 4,216 buildings, of which 2,457 were empaneled.

Rent categories are based on the distribution of rents for all rental units in each site, and value categories are based on the distribution of market values for owner-occupied homes. The rent distributions are divided approximately into thirds; the value distributions are divided into fourths, the "high value" category encompassing the upper two quartiles.

^aIncludes owner-occupied units on multiunit properties, such as cooperatives or condominiums.

^bProperties on which 75 percent or more of all dwellings are mobile homes. Most are mobile home parks that rent spaces to vehicle owners.

the wave 2 panel in Brown County comprised 1,945 of the 4,413 properties surveyed at baseline; in St. Joseph County, we empaneled 1,987 out of 4,333. Each year, the panels were enlarged by about 40 properties newly converted to residential use, so that each panel's representation of the county's housing stock was kept current.² A total of 2,140 residential properties were surveyed in Brown County's wave 4 and 2,294 in St. Joseph County's.

In addition to the two HASE panels, we surveyed a panel of urban renter households in each site, selected according to Urban Institute (UI) specifications and called the *UI comparability panel*. Whereas the HASE interviews are directed to the current owners and occupants of empaneled properties, the UI interviews are directed to the empaneled households, which are followed as they move within the experimental sites. Some households in the UI panel live on properties in the HASE panel, so their interview records serve two purposes.

Although the survey schedules were similar for each site, they were timed differently. Baseline surveys were conducted in 1974 in Brown County and 1975 in St. Joseph County, in each case just before the allowance program began. Consequently, the survey agenda was completed first in Brown County. During 1978, fieldwork was conducted only in St. Joseph County.

The surveys of landlords, tenants, and homeowners were conducted annually. We originally planned annual surveys of residential buildings, street segments, and neighborhoods as well; but we later concluded that changes would be too slow to warrant annual data collection and so restricted those surveys to baseline and wave 4.³

Preparing for Field Surveys

Each year's survey fieldwork requires lengthy preparation: revising and printing survey instruments and field manuals, updating lists of persons to be interviewed and properties and streets to be observed, and compiling field information sheets and directories for the survey subcontractor. Preparation for wave 4 in St. Joseph County began in April 1977 and continued until September 1978, when fieldwork for the last survey began.

Beginning in April 1977, the experiment's Survey Group (SG) and Design and Analysis Group (DAG) reviewed the household (tenant and homeowner) survey instrument. Because only minor changes were made, neither pretesting nor federal clearance was required.⁴ The survey subcontractor, Westat, Inc., subsequently modified field manuals to reflect the instrument changes.

The landlord survey instrument was reviewed in November 1977. It was revised and shortened, and the new version was approved by OMB on 24 January

² In St. Joseph County, field problems prevented panel augmentation during wave 2, so the new-construction samples for 1975 and 1976 were first surveyed during wave 3. New-construction samples range from 60 to 70 properties annually in each site, of which 40 are empaneled. About 50 properties with subsidized housing were added to the Brown County panel after being surveyed in wave 3, and three rooming houses were added to the St. Joseph County panel after being surveyed in wave 2.

³ The survey of residential buildings was repeated in Brown County's wave 2 before that decision was reached. In each annual cycle in both sites, we surveyed residential buildings newly added to the HASE permanent panel or newly occupied by households in the UI comparability panel.

⁴ Approval by the federal Office of Management and Budget (OMB) is required for instruments used in federally sponsored surveys. The OMB reviews both the information sought and the respondent burden; approval for the household survey instrument was obtained on 29 October 1976, after its last major revision.

1978. The instrument for the survey of residential buildings had been extensively revised during 1977 for use in Brown County, and its adaptation to St. Joseph County entailed only minor changes in 1978.

On another track, we updated the St. Joseph County sampling records maintained in our computer-based record management system (HAMISH⁵). New information about permanent panel properties was obtained from field reports of the prior wave of surveys and from field checks Westat conducted during the fall of 1977. By early December, sampling records for the wave 4 survey of households had been updated and loaded into HAMISH. The Data Systems Group (DSG) then generated the field materials (questionnaire labels, respondent information sheets, directories, locator cards) used to assign fieldwork and find respondents and properties. DSG produced landlord survey materials at the end of February 1978.

Preparation for the residential building surveys had to wait until the landlord and household surveys were completed, so that changes reported in those surveys, such as altered property types or new addresses (for comparability panel households), could be incorporated. Field materials were ready in August.

The countywide street observation survey required updating the baseline street segment maps. New or obsolete streets were identified from more current maps, the changes were verified in the field, and the segment maps were corrected accordingly.

Fieldwork

For the second year in a row, fieldwork in St. Joseph County was delayed by heavy snowfall, causing the entire survey schedule to slip by about a month. Fieldwork began in February 1978 and continued to mid-November. The surveys were sequential, the cleanup of one overlapping the beginning of the next. At least 90 percent of the field reports for each survey were completed within four consecutive months.⁶

Each survey was preceded by a public explanation of its purpose and expressions of support from prominent citizens and newspapers. The landlords to be surveyed were invited to a luncheon at which Rand staff reported findings from earlier surveys, and interviewers distributed a brochure with similar information.

Westat hired interviewers and observers locally; up to 40 hours of training were required to qualify an interviewer for fieldwork. Fieldworkers were assigned cases in batches. At least eight attempts were made over several months to contact a respondent before closing a case. Interview refusals were documented and reviewed for possible "conversion." A research unit tracked down hard-to-find respondents.

Westat undertook nearly 4,500 interview assignments, in addition to field observations of 3,200 residential buildings and 12,800 street segments. As interviewers returned completed questionnaires, refusal forms, and other reports, the contractor's field office reviewed them for errors and omissions. In each survey, a sample of field reports was chosen for validation, which consisted either of a brief telephone reinterview with the original respondent or an independent field observation. The

⁵ HASE Management of Information for the Survey of Housing.

⁶ A chronology is given in Appendix B.

questionnaires were then assembled with their related field reports and shipped to Rand's Santa Monica offices.

The neighborhood survey was conducted from December 1977 through October 1978. Rand staff in South Bend abstracted such data as the location of public facilities and miles of roadways from maps and public records, while Westat conducted field observations of individual street segments and their adjoining land use.

Excepting the initial delay due to bad weather, the wave 4 fieldwork in St. Joseph County went smoothly. Experience from previous survey cycles enabled Rand to produce well-designed survey instruments and Westat to administer them efficiently, carefully documenting anomalies.

As the survey cycle neared completion, Westat began closing down its St. Joseph County site office and preparing its records for transfer to Rand. It is appropriate here to acknowledge Westat's exceptional performance during four survey cycles. Their efforts have contributed greatly to the success of the HASE research program.

Field Results

Table 3.2 shows the results of the HASE interview surveys conducted in St. Joseph County during 1978. The survey of residential buildings is not included because virtually all field assignments can be completed without the cooperation of the property owner or occupant, the absence of which accounts for most interview failures.⁷ For much the same reason, we exclude the street segment survey. Except for some omissions owing to map errors, all street segments were observed.

Out of 5,097 interviews scheduled for the HASE panel, field-complete questionnaires were returned in 3,065 cases—an overall sample completion rate of 60 percent. However, some cases were retired because circumstances such as vacancies or changes in property status made interviews inappropriate. Based on the 4,434 cases for which interviews were desired, the field completion rate was 69 percent. Finally, excluding cases in which no respondent was ever contacted, the field response rate was 79 percent.

There are no uniform standards for reporting survey response rates; the measures given above are of our own devising. But as well as we can judge from published studies and discussions with other survey professionals, Westat's field results in St. Joseph County are about average for urban interview surveys. Considering that respondents had been interviewed as many as three times before the 1978 survey, and that the typical interview required 90 minutes of a respondent's time, we think the results are impressive.⁸

Table 3.3 shows field results for households that were scheduled for UI panel interviews. Some lived in dwellings that are part of the HASE panel, so their interviews served two purposes. The remaining interviews required special efforts, inasmuch as those who had moved since the last survey were traced (if possible) to a new local address. If household members had separated, each new household thus formed was also traced.

⁷ Even when refused access to a property, an observer could obtain much of the desired data from an offsite vantage point, a procedure followed in one percent of the cases. Only in 2 percent of all cases was data collection impossible.

⁸ The results are further analyzed in Table 3.4.

Table 3.2
FIELD RESULTS OF HASE INTERVIEW SURVEYS:
ST. JOSEPH COUNTY, WAVE 4

Survey	Interview Attempts, by Final Status				Not Attempted, by Reason			Summary Statistics		
	Field Complete	Refusal	No Contact	Total	Vacant	Retired ^a	Total Sample	Sample Completion Rate ^b	Field Completion Rate ^c	Field Response Rate ^d
Survey of landlords	879	200	154	1,233	(e)	169	169	63	71	82
Survey of tenants	1,560	417	386	2,363	246	194	440	56	66	79
Survey of homeowners	626	182	30	838	37	17	54	70	75	76
All surveys	3,065	799	570	4,434	283	380	663	60	69	79

SOURCE: Tabulation by HASE staff of field final status reports for each survey as of 30 September 1978.

NOTE: HASE interviews are directed to the current owners and occupants of empaneled properties or housing units.

^a Properties or housing units for which the scheduled survey was inappropriate because of a change in property use or the tenure of its occupants. In the event of a tenure change, the case was added to the sample for the appropriate survey.

^b Field completions/total sample.

^c Field completion/total interview attempts.

^d Field completions/total contacts.

^e Not applicable to the survey of landlords.

Table 3.3
FIELD RESULTS OF UI INTERVIEW SURVEY:
ST. JOSEPH COUNTY, WAVE 4

Item	Number of Cases	Percentage Distribution
<i>Sample Account</i>		
Located at prefield residence	640	68
Located elsewhere in county	122	13
Total located and interviewable	762	81
Not located in county ^a	148	16
Located but not interviewable ^b	14	2
Unresolved record or field errors	11	1
Total deleted from interview schedule	173	19
Total sample list ^c	935	100
<i>Interview Status Account</i>		
Field complete	669	88
Refusal	49	6
Contact failure	44	6
Total located and interviewable	762	100
<i>Relation to HASE Panel</i>		
Occupants of dwellings in HASE panel	122	16
Occupants of other dwellings	640	84
Total located and interviewable	762	100

SOURCE: Tabulation by HASE staff of field final status reports for the survey of tenants as of 30 September 1978.

^aIncludes scheduled respondents who could not be located, had moved out of the county, or were deceased.

^bIncludes scheduled respondents who were no longer heads of households, who were living in custodial institutions, or who were scheduled for interviews as landlords.

^cIncludes changes made during fieldwork to account for household splits and mergers.

Out of a total of 935 interviews scheduled for the UI panel in 1978, field-complete questionnaires were returned in 669 cases, for an overall sample completion rate of 72 percent. However, some interviews were impossible because the designated respondents had relocated outside the county, been institutionalized, or died. Based on the 762 cases for which interviews were possible, the field completion rate was 88 percent. Excluding cases in which the designated respondent was never contacted gives a field response rate of 93 percent. The corresponding figures for 1977 were 70, 89, and 92 percent.

Trends in Field Completions

A major uncertainty in the HASE research design was how much cooperation we would obtain from respondents to our ambitious series of surveys. The length of the typical interview, the detailed questions on property and household finances, and the long question sequences all were cause for concern about the willingness of people to respond to as many as six annual interviews. Survey professionals throughout the nation were noting a general decrease in response rates that added to our particular concerns.

Considering all those factors, we estimated response rates for different classes of respondents and for initial and annual reinterviews. We also estimated respondent turnover in the panel of residential properties due to ownership or occupancy changes.⁹ Then we designed a baseline sample for each site that we thought would yield 1,000 property records with complete information for six annual survey cycles.¹⁰ Budgetary constraints later reduced those targets to 900 six-year complete property records.¹¹

Table 3.4 summarizes field experience through the four (rather than six) survey cycles that were actually undertaken. During baseline, both contact failures and refusals were frequent, the latter especially in St. Joseph County. In Brown County, contact failures had been virtually eliminated by wave 2 because of better information about scheduled respondents and longer field periods. Although wave 2 in St. Joseph County had the same advantages over baseline, contact failure persisted as a significant problem, especially for the tenant survey.

The wave 2 surveys in Brown County were directed only to the owners and occupants of properties for which complete baseline records had been obtained, thus weeding out many of those who had refused baseline interviews. We were therefore not surprised to see the wave 2 refusal rates drop. Despite some compromises on baseline record completions in St. Joseph County, we expected the same result; but as the table shows, the rate dropped only for homeowners.

In wave 3 and thereafter we returned to empaneled properties and dwelling units regardless of the outcome of the previous interview attempts. Again, experience in the two sites has differed. Both refusal and contact failure rates rose sharply from wave 2 to wave 3 for all three classes of respondents in Brown County. In wave 4, tenant contact failures and homeowner refusals rose further. In St. Joseph County, only the rates for landlords changed much between waves 2 and 3, their refusal rate dropping and their contact failure rate rising.¹² In wave 4, the landlord contact failure rate rose again, but the other rates did not change appreciably.

As nearly as we can judge, the different field results in the two sites reflect differences in the respondent populations rather than in the skill or exertions of the survey subcontractors.¹³ By wave 4, however, the intersite differences in field completion rates were small except in the case of the tenant surveys. The persistently lower completion rate for St. Joseph County tenants probably reflects the greater frequency there of households with only one adult member, a circumstance that lessens the chances of finding a respondent at home.¹⁴

It is evident from Table 3.4 that we have enough field-complete records of each

⁹ See Timothy M. Corcoran, *The Effects of Nonresponse on Record Completion in a Panel of Residential Properties*, The Rand Corporation, WN-8174-HUD, April 1973.

¹⁰ A six-year complete record is defined for a rental property as consisting of a field-complete landlord interview, at least one field-complete tenant interview, and a residential building report for each year; and for a homeowner property, as a field-complete homeowner interview and residential building report for each year. When empaneled dwellings on a property are vacant, vacancy reports are acceptable substitutes for complete tenant or homeowner interviews.

¹¹ See *First Annual Report of the Housing Assistance Supply Experiment*, pp. 59-60.

¹² Especially for a reinterview, the difference between a refusal and a contact failure is not always clear. Some of those who do not wish to be interviewed are evasive rather than bluntly negative.

¹³ The baseline survey in Brown County was conducted by Urban Opinion Surveys, a division of Mathematica, Inc. Subsequent surveys there were conducted by the National Opinion Research Corporation of the University of Chicago. Westat, Inc., conducted all the surveys in St. Joseph County.

¹⁴ Interviews are addressed to the self-nominated head of a household. For households headed by married couples, both are invited to participate but one is acceptable.

Table 3.4

DISTRIBUTION OF INTERVIEW ATTEMPTS BY FINAL STATUS FOR EACH COMPLETED SURVEY: BROWN AND ST. JOSEPH COUNTIES, WAVES 1-4

Survey	Percentage of Interview Attempts, ^a by Final Status							
	Brown County				St. Joseph County			
	Field Complete	Refusal	No Contact	Total	Field Complete	Refusal	No Contact	Total
<i>Baseline</i>								
Survey of landlords	72	19	9	100	65	25	9	100
Survey of tenants	77	10	13	100	68	18	14	100
Survey of homeowners	72	18	10	100	63	29	8	100
<i>Wave 2</i>								
Survey of landlords	87	12	1	100	72	24	4	100
Survey of tenants	89	11	1	100	68	18	14	100
Survey of homeowners	88	12	(b)	100	76	19	4	100
<i>Wave 3</i>								
Survey of landlords	75	21	4	100	77	15	8	100
Survey of tenants	78	17	5	100	67	17	16	100
Survey of homeowners	76	22	2	100	77	20	3	100
<i>Wave 4</i>								
Survey of landlords	73	23	4	100	71	16	13	100
Survey of tenants	76	16	8	100	66	18	16	100
Survey of homeowners	71	28	1	100	75	22	3	100

SOURCE: Tabulation by HASE staff of field final status reports for each survey.

NOTE: This table accounts only for interviews undertaken for the HASE panel of residential properties. Percentages may not add exactly to 100 because of rounding.

^aExcludes cases retired from fieldwork because property characteristics or current occupancy status made scheduled interviews inappropriate.

^bLess than 0.5 percent.

type in each year for thorough cross-sectional analyses. For example, wave 4 in St. Joseph County produced 879 field-complete landlord interviews, 1,560 tenant interviews, and 626 homeowner interviews. The comparable figures for Brown County are 932, 1,877, and 587. However, we have yet to assess the longitudinal completeness of our records for individual properties and dwellings. If nonresponse is highly correlated from year to year, we will have abundant four-year complete records; if not, we will need to exercise more statistical ingenuity to include partial records in our four-year longitudinal analyses.

Remaining Survey Tasks

During the coming year, the Survey Group will finish its work on the HASE housing market surveys. Westat will close its South Bend office and deliver the pertinent administrative records to Rand. The Survey Group will submit final updates (from wave 4 field reports) to HAMISH, prepare the text for the remaining survey codebooks, and document the HASE survey operations.

Revisions during 1978 to the HASE research charter (see "New Research Directions," below) prompted plans for two new surveys to be conducted in 1979. To

supplement information about repairs obtained from renters in the allowance program, the Survey Group will interview (by telephone from Santa Monica) some 1,800 landlords of program participants in St. Joseph County. The two HAOs have engaged Chilton Research Services to interview some 1,300 enrollees who left the allowance program before they qualified for payments, in order to learn more about why they dropped out. Rand will compile and analyze the data from both surveys.

SURVEY DATA PREPARATION

Completed questionnaires and related field reports are sent by the survey subcontractors to the HASE Survey Data Preparation Group (SDPG) in Santa Monica. There, each document is logged and manually edited, and fields with verbatim responses are coded. Machine-readable records are created from the documents, then cleaned of errors and ambiguities by interactive manual and machine editing. The records are then assembled into an "edited field reports file" for each category of document. The files are forwarded to DSG, which reorganizes them into the standard research file format.

During the year covered by this report, SDPG's workload consisted mainly of field reports from the 1977 survey cycle: wave 4 in Brown County and wave 3 in St. Joseph County. Table 3.5 summarizes the workload generated by those surveys (and a few other items), even though the reporting year does not coincide exactly with the period during which the work was done.

Altogether, the 1977 surveys generated over 80,000 documents¹⁵ containing over 23 million response fields. About 487,000 response fields contained verbatim responses (concerning occupation, industry of employment, reasons for moving, opinions about the allowance program) that had to be manually coded into machine-readable categories.

Editing specifications listing all permissible entries in each response field and logical checks for consistency with related entries were designed for each of 51 different field-report forms. Each of the 23 million response fields was checked by machine against its editing specifications, the process yielding 159,000 error messages. Each message had to be resolved by an editor, who checked the source document to clarify ambiguous entries or consulted editing guides for policy decisions on recurring problems. The subcontractors' field offices, the HASE instrument designers, and the analysts who would later use the data 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 the accuracy of the change.

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

¹⁵ 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 1977 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 3.5
 SURVEY DATA PREPARATION WORKLOADS FOR RECENTLY
 COMPLETED CYCLES: BROWN COUNTY (WAVE 4)
 AND ST. JOSEPH COUNTY (WAVE 3)

Workload Measure	Thousands of Items		
	Brown County Wave 4	St. Joseph County Wave 3	Total
<i>Survey Questionnaires</i>			
Documents processed	20 ^a	5	25
Response fields coded	245	242	487
Response fields checked	9,513	7,994	17,507
Error messages resolved	51	86	137
<i>Related Field Reports</i>			
Documents processed	25 ^b	30 ^c	55
Response fields checked	2,614	3,047	5,661
Error messages resolved	10	12	22
<i>Total Workload</i>			
Documents processed	45 ^b	35 ^c	80
Response fields coded	245	242	487
Response fields checked	12,127	11,041	23,168
Error messages resolved	61	98	159

SOURCE: Records of the HASE Survey Data Preparation Group.

NOTE: The table accounts for all field reports associated with the wave 4 surveys in Brown County and the wave 3 surveys in St. Joseph County; and for certain other data collected in the sites, such as tax record abstracts and HAO call reports. Nearly all the work described here was done between 1 October 1977 and 30 September 1978.

^aIncludes 2,129 tax record abstracts with about 273,000 response fields and 11,144 neighborhood observation and abstraction forms with about 836,000 response fields.

^bIncludes logging and filing 6,582 related field reports that did not require data entry or cleaning. Another 7,509 HAO call records that were received on tape are not counted as documents, but were cleaned.

^cIncludes logging and filing 4,664 edit problem forms that did not require data entry or cleaning; and 6,310 HAO call records that were received as hardcopy, entered, and cleaned.

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. The six files jointly document data preparation and provide an audit trail for each response field on every report generated by the survey. For the 1977 survey cycle, 306 such files were delivered to DSG.

Table 3.6 compares workloads generated by the 1975, 1976, and 1977 surveys, each processed mainly during the following year, as indicated by the column headings. Because trends for the different workload measures diverge, the table does not directly indicate whether the total workload increased or decreased from year to year. However, the causes for each measure's trend are identifiable and worth comment.

Several factors account for the changing numbers of documents processed and response fields checked. The survey of neighborhoods and the fullscale survey of residential buildings were conducted in St. Joseph County in 1975 and in Brown County in 1977, adding about 15,000 survey questionnaire documents in each of those years to the annual number (about 9,000) generated by the landlord and

Table 3.6

TRENDS IN SURVEY DATA PREPARATION WORKLOAD

Workload Measure	Thousands of Items, by Year Processed		
	1976 ^a	1977 ^b	1978 ^c
<i>Survey Questionnaires</i>			
Documents processed	33	11	25
Response fields coded	262	346	487
Response fields checked	20,045	24,838	17,507
Error messages resolved	339	247	137
<i>Related Field Reports</i>			
Documents processed	62	82	55
Response fields checked	4,862	6,680	5,661
Error messages resolved	76	29	22
<i>Total Workload</i>			
Documents processed	95	93	80
Response fields coded	262	346	487
Response fields checked	24,907	31,518	23,168
Error messages resolved	415	276	159

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.

^a1975 survey cycle: Brown County, wave 2, and St. Joseph County, wave 1.

^b1976 survey cycle: Brown County, wave 3, and St. Joseph County, wave 2.

^c1977 survey cycle: Brown County, wave 4, and St. Joseph County, wave 3.

household surveys. During the processing year ending in September 1977, SDPG not only handled the 1976 interview surveys, but caught up on coding left over from the preceding year and processed 2,500 tax record abstracts containing about 420,000 response fields. The group also accepted new responsibilities for processing HAO call reports and HAMISH update forms.¹⁶ Although the total number of documents (survey questionnaires and related field reports) processed during 1977 was about the same as in 1976, the number of response fields checked rose by 27 percent. The main survey instruments were substantially shortened for the 1977 survey cycle, reducing both the number of questionnaire documents processed and the number of response fields checked in 1978.

The most time-consuming elements of the workload are coding and error resolution. The coding workload has steadily increased, primarily because the survey instruments for both landlords and households contain long sequences of open-ended questions to be asked of those who are familiar with the allowance program; over time, the number of respondents to whom those question sequences apply has risen sharply. The workload of error resolution has diminished for several reasons: Improved instrument design and field experience have reduced the number of erroneous entries, and improved editing specifications have reduced the number of false error messages. Over the three years shown, the error-message rate has been reduced from 17 to 7 per thousand response fields checked.

In 1979, the workload will include only the wave 4 surveys in St. Joseph County and a variety of file disposition and documentation tasks leading to the termination of HASE survey data preparation activity. The wave 4 work has begun on schedule, and we anticipate no problems in completing it or in closing down the activity. We plan to retain a skeleton staff after October 1979 to respond to queries and resolve data problems encountered by the analysts.

DATA MANAGEMENT

Nearly all HASE data are stored and processed by machine. 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. DAG analysts then audit 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.¹⁷ DSG provides programming and processing support for DAG's further file development and data analysis. HAO administrative records are processed in the same fashion, the main difference being that they are delivered in machine-readable form, thus bypassing SDPG.

The third element of the DSG workload is maintaining and operating HAM-

¹⁶ The HAO call reports are records of telephoned inquiries and complaints received by the two housing allowance offices. The HAMISH update forms contain information relating to a property's survey history or sample status, used in planning the next year's surveys.

¹⁷ The codebooks are prepared jointly by SG, DSG, and DAG.

ISH. That system records the history and current status of every sampled property, building, and dwelling, and identifies the appropriate respondent for each interview. The files are updated every year to reflect new information that will affect fieldwork: physical changes to a property, changes in its ownership or occupants, and outcomes of prior surveys. The updated records are used to select survey samples and produce field materials.

During the year covered by this report, DSG compiled and reformatted the edited field report files for wave 3 surveys in both Brown and St. Joseph counties. HAO administrative records, cumulative through the third year of program operations in each site, were reorganized into research files following a new format designed the preceding year. In its survey support role, the group produced field materials for wave 4 in St. Joseph County. The record management system that produced those materials was updated 97 times during the year, primarily with new information from the field. Finally, DSG programmed 772 analytic requests from DAG and executed the machine jobs needed to produce the requested data. HASE-generated computer jobs supporting file preparation, survey management, and data analysis accounted for 11 percent of the usage of Rand's IBM system 370/158, the same percentage as in the preceding year.

Except for a final update of HAMISH to reflect wave 4 field results, DSG's support of survey operations is complete. During the next two years, the group must format and archive the remaining survey files (wave 4 in both sites) and the final two years of HAO data (through year 5 in each site) and prepare all the files for delivery to HUD. We also expect the number and complexity of DAG's analytic requests to increase as the final round of analysis begins.

FILE DEVELOPMENT AND DOCUMENTATION

After each file is compiled from the edited field reports, it is submitted to DAG for auditing, augmentation, and weighting. The audit findings and weighting procedures are formally reported, the survey responses and added variables are documented by codebooks, and the augmented file is archived as a permanent master file.

The audit entails sample accounting (described earlier), checking field and editing procedures that might affect data quality, accounting for data missing from otherwise usable records, checking for erroneous or implausible responses, and testing for nonresponse or record selection biases. Each record is augmented with a set of derived variables—analytically useful transformations of original responses, or responses collected by a different survey pertaining to the same property, dwelling, or respondent—and with record-condition indicators, helpful in selecting records for specific types of analysis.

Although the main function of the audit is to appraise the completeness and reliability of the data, auditors work to rescue incomplete or incoherent records by consulting hardcopy questionnaires or records of related surveys and, in some cases, by estimating missing values. Auditing and augmentation interact in that many of the most revealing audit checks are run on derived rather than raw variables, and the record-condition indicators both reflect audit findings as to missing or unreliable data and identify the sets of records that must be tested for biases.

Two especially critical tasks in file development are testing the file for nonresponse or record selection biases and weighting the individual records of each survey. Every element (property, building, housing unit) of the sample list for each survey has a well-documented history from which its sampling weight can be calculated. However, the number of field-complete survey records is always less than the full sample because some respondents cannot be contacted or refuse to be interviewed and (occasionally) because errors are made in survey administration. Moreover, even field-complete records often lack data that are essential for a specific analysis because the respondent was unable or unwilling to provide specific information. Hence, sampling history weights must be modified so that analytically complete records collectively represent the population sampled.

To date, field-complete records have been obtained for as much as 89 percent of all interview attempts in one survey, but as little as 63 percent in another (see Table 3.4, above). In the baseline landlord surveys, about 60 percent of all rental property records met our most rigorous test for analytical completeness. Because our sample design anticipated such attrition, the usable samples are large enough for the planned analyses, but may be biased if respondent or property characteristics are correlated with record completeness.

Fortunately, our data gathering plan ensures us considerable information about each property and its owners and occupants, even if the designated respondent was not interviewed. The auditor compares the known characteristics of responding and nonresponding cases (or complete and incomplete records) in each sampling stratum to test whether they differ significantly. The results of those tests enter a weighting algorithm that corrects for nonresponse or record selection bias with little loss of precision in parameter estimates.¹⁸

Auditing, augmenting, and weighting the four baseline surveys (of landlords, households, residential buildings, and neighborhoods) required considerable methodological development on the part of DAG's data analysts. During the year covered by this report, that experience was reviewed, and routine procedures were established for preparing the postbaseline survey files for analysis and archiving.¹⁹ Work teams for each major function were staffed, production schedules were established, and a search began for a general manager of the effort.

By the end of the reporting year, sample accounting for all wave 2 surveys was complete, agreement had been reached on the list of derived variables to be added to each file, and the construction of those variables was well under way. We expect to have all survey files ready for analysis by mid-1979 and to deliver them to HUD, complete with documentation, during 1980.

Work also proceeded on the HAO files covering the first three years of program operations. While analyzing the files prepared earlier from data for the first two years, we learned that the record structures were poorly adapted to our analytic plans, so we redesigned the records before compiling the third year's data. By September 1978, the year 3 file for Brown County had been compiled and audited; work on the corresponding file for St. Joseph County was under way.

¹⁸ The weighting procedures and the theory behind them are described in Daniel A. Relles, *Using Weights To Estimate Population Parameters from Survey Records*, The Rand Corporation, WN-10095-HUD, April 1978.

¹⁹ The postbaseline audit plan is presented in Sec. VII of HASE Staff, *Completing the Supply Experiment*, The Rand Corporation, WN-10223-HUD, June 1978.

Because the last HAO data will not be delivered to Rand until January 1980, cumulative research files covering all five years of program operations cannot be compiled until then. In the meantime, analysts can proceed with year 3 files as an interim data base.

NEW RESEARCH DIRECTIONS

During the year ending in September 1978, HASE researchers focused on two major projects: a systematic summary of interim findings (with supporting topical studies), and plans for a three-year research agenda leading to the completion of the experiment in 1981.

The summary of interim findings, based on the first two years of program operations, was published in HASE's fourth annual report. It reported the early effects of the allowance program on both participants and local housing markets, and analyzed the costs and effectiveness of the program's administrative procedures. Various topical studies underlying that assessment of the program were completed and prepared for publication either before or after their summarization in the fourth annual report.

The central finding from the studies was that, contrary to general expectations, the allowance program had not noticeably perturbed local housing markets and seemed unlikely to do so in the future. Because the measurement of market effects was the core of the HASE research charter, it was appropriate to reconsider the research agenda for the remainder of the experiment. During the summer of 1978, HUD and Rand considered how best to use the time and resources remaining.²⁰ Our joint conclusions were embodied in a contract signed in September 1978 covering the remainder of the experiment.

One important decision was to terminate field surveys in St. Joseph County at the end of wave 4. A parallel decision had been reached in 1977 for Brown County, so the survey data base for each site will consist of reports from four annual survey cycles, the last of which occurred during the allowance program's third year. However, Rand's supervision of the allowance program and its analysis of program records will continue through five full years of program operations.

The data collection plan meshed with a revised research agenda. Although we will seek closure on the questions about market and community effects that dominated the original experimental charter, the majority of the remaining resources will be devoted to two broad topics: the dynamics of eligibility and participation, and the program's effects on its participants.

Eligibility and participation dynamics were chosen as a major topic of study for two reasons. First, enrollment in the allowance program was leveling off at about half the number of households nominally eligible to participate, even though the program was both well known and well liked in both sites. Preliminary studies indicated that the underlying reason for the low participation rate was a rapid turnover in eligibility that affected both enrollment and termination rates.²¹ Sec-

²⁰ Rand's appraisal of the implications of our interim findings for further research is contained in *Completing the Supply Experiment*.

²¹ C. Peter Rydell, John E. Mulford, and Lawrence Kozimor, *Dynamics of Participation in a Housing Allowance Program*, The Rand Corporation, WN-10200-HUD, June 1978.

ond, fragmentary data from other studies suggested that such low participation rates were characteristic of other federal transfer programs such as welfare assistance and food stamps, but could not be accurately measured for lack of concurrent data on the eligible population—data that were available to HASE from the annual surveys of households. Consequently, we proposed and HUD supported a thorough analysis of eligibility changes within the populations of our two sites and of participation decisions among eligibles.

Topical studies summarized in the fourth annual report showed clearly that those who enrolled in the program were responding to the allowance offer in unexpected ways. On the one hand, repairing substandard housing in order to qualify for payments turned out to be far less expensive than anyone anticipated. On the other hand, enrollees were not generally inclined to increase their housing expenditures beyond the amounts needed to bring their dwellings up to standard, even though their allowances far exceeded the repair costs; in other words, the income elasticity of housing demand was much lower than was generally believed. Finally, despite the portability of their allowances, enrollees showed much less inclination to change neighborhoods than most observers had expected.

The initial charter of the Supply Experiment assumed that the program's effects on participants would be adequately studied in the Demand Experiment; in the Supply Experiment, such effects would be measured only insofar as they were instrumental to the analysis of market response. The striking findings noted above, the fact that homeowners are included only in the Supply Experiment, and the fact that the possible term of participation is much longer in the Supply Experiment all led to the conclusion that much could be learned from a more detailed analysis of program data than had formerly been planned.

The original plans for market research were not abandoned, but were modified to reflect the manifest placidity with which two very different communities absorbed the stimuli generated by fullscale allowance programs. It remains important to measure those stimuli carefully and to explain why no greater market disturbance ensued from them. The latter effort has led us to a reformulation of housing market theory that seems to reflect the available evidence and to suggest better ways to measure market tightness (the shortrun balance between housing supply and demand) than the widely used but often misleading vacancy rate.²²

During the coming year, we expect to vigorously pursue the new research agenda, analyzing up to four years of survey data in our studies of market effects and eligibility and three years of program data in our studies of participation and effects on participants. However, we expect to complete relatively few topical studies during 1979, aiming instead for 1980.

ANALYZING PROGRAM ADMINISTRATION

Under its contract with HUD, Rand was responsible for designing the organization and procedures for the HAOs, and has continuing responsibility for guiding and monitoring their performance. In 1976, HUD and Rand agreed to a new ele-

²² For a preliminary statement, see C. Peter Rydell, *Vacancy Duration and Housing Market Condition*, The Rand Corporation, WN-10074-HUD, January 1978. A fuller development of those ideas is now being prepared for publication.

ment on the HASE research agenda—an analysis of HAO procedures from an administrative perspective. Conducted jointly by FPOG and the HAO staffs, the studies address issues of administrative effectiveness and cost.

The initial series of studies was 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. Further such research will focus on the cost and reliability of alternative income certification methods; the effects of experience and scale on administrative costs; and enrollees who never qualify for allowance payments.

We initiated data collection for those studies (including the special survey of enrollees who never qualify for payments that is discussed on p. 41), but FPOG's attention during the second half of 1978 shifted to planning the HAOs' transition to local control (see Sec. II). FPOG's research activity will increase in mid-1979, when transition is complete in Brown County and the data required for the new studies are in hand.

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, illustrated pamphlets, papers for professional conferences, technical monographs, and annual 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 in the hope of enlisting their cooperation by showing them how we use the data they provide. Papers for professional conferences are byproducts of the technical monographs prepared for HUD. They invite criticism from scholars unconnected with the experiment and publicize findings in a way likely to stimulate further research.

We communicate our research to HUD principally in technical monographs called working notes. We have submitted over 140, some of which have been incorporated into larger documents or superseded in other ways; Appendix A lists the 116 current titles. Though all document either 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. HUD deposits copies with the National Technical Information Service, but we ourselves have not sought wider distribution. Some that are of general interest will be revised and republished as Rand notes or reports for distribution to the public, but the exigencies of further research have so far preempted the authors' energies; only one topical working note has thus far been reissued as a report.

Heretofore, HASE annual reports have served the important function of informing the public about the experiment. Each such report has combined a history of the Supply Experiment's most recent year with a summary of salient research

Table 3.7

NUMBER OF ORAL AND WRITTEN PUBLICATIONS PRODUCED BY HASE:
OCTOBER 1971 THROUGH SEPTEMBER 1978

Type of Publication	Oct 1971- Sep 1974	Oct 1974- Sep 1975	Oct 1975- Sep 1976	Oct 1976- Sep 1977	Oct 1977- Sep 1978	Total
Lectures and briefings:						
Federal officials ^a	10	3	4	15	7	39
Other audiences ^b	5	1	6	7	15	34
Illustrated pamphlets ^c	--	2	4	3	1	10
Professional papers ^d	1	1	3	2	5	12
Working notes ^e	38	15	12	19	25	109
Reports ^f	--	1	1	1	2	5

SOURCE: HASE administrative records.

NOTE: Entries include only material prepared and delivered by employees of The Rand Corporation. In addition, employees of 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 separately briefed, 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 allowances offices.

^cPopular summaries of survey findings.

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

^eExcludes notes later republished as parts of more comprehensive reports.

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

findings. Beginning with the present document, annual reports henceforth will perform only the historical function; research findings are to be presented separately in a series of topical reports scheduled for publication at intervals over the next three years. At the end of the experiment, all the findings will be integrated and summarized in a comprehensive final report.

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. For the Supply Experiment, such technical information is preserved in working notes (WN series), copies of which are permanently on file at Rand, HUD, and the National Technical Information Service (NTIS). Although the notes are available to the public from NTIS (Springfield, Virginia 22151), Rand has not sought wider distribution.

Research findings of broader interest are also initially published as working notes for prompt delivery to HUD. Some are subsequently reviewed and revised for publication as Rand reports (R series) or professional papers (P series) that are readily available to the public from Rand or from nearly 350 libraries that subscribe to Rand publications. Other working notes are incorporated into more comprehensive documents such as annual reports. In April 1979, Rand revised its publications system to make research "notes" as well as "reports" more readily available to the public. During the coming year, we expect to reissue many 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.

This appendix lists five reports, 116 working notes, and 13 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 titles appear more than once. Within each subject, publications are listed in order of publication number. Titles appearing on earlier lists but not shown here have been superseded and withdrawn.

RESEARCH DESIGN

General Design

WN-7711-UI. *Testing the Supply Response to Housing Allowances: An Experimental Design.* I. S. Lowry, C. P. Rydell, D. M. de Ferranti. December 1971.

WN-7866-HUD. *Preliminary Design for the Housing Assistance Supply Experiment.* I. S. Lowry. June 1972.

WN-7888-HUD. *Phase II Price Controls and the Housing Assistance Supply Experiment.* D. B. Lewis. July 1972.

WN-7895-HUD. *Failure Mode Analysis for the Housing Allowance Program.* R. 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*. I. S. Lowry, Editor. May 1973.
- WN-8364-HUD. *General Design Report: Supplement*. I. 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*. W. G. Grigsby, M. Shanley, S. B. White. February 1974.
- WN-9026-HUD. *Market Intermediaries and Indirect Suppliers: Reconnaissance and Research Design for Site II*. W. G. Grigsby, M. Shanley, S. B. White. May 1975.
- WN-9051-HUD. *Monitoring the Experiment: An Update of Sec. IV of the General Design Report*. I. S. Lowry. April 1975.
- WN-9098-HUD. *Introduction and Overview: An Update of Secs. I and II of the General Design Report*. I. S. Lowry. May 1975.
- WN-9541-HUD. *Are Further Survey Cycles Needed in Site I?* I. 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*. I. S. Lowry. May 1971.
- P-5302. *The Housing Assistance Supply Experiment: Tensions in Design and Implementation*. I. 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*. R. Dubinsky. January 1973.

Survey Sample Design

- WN-8029-HUD. *Sample Design for the Housing Assistance Supply Experiment*. T. M. Corcoran, E. C. Poggio, T. Repnau. November 1972.
- WN-8174-HUD. *The Effects of Nonresponse on Record Completion in a Panel of Residential Properties*. T. M. Corcoran. April 1973.
- WN-8218-HUD. *The Role of Household Survey Data in the Supply Experiment*. A. P. Massell, Editor. March 1973.
- WN-8640-HUD. *Survey Sample Design for Site I*. T. 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*. L. G. Chesler, D. M. de Ferranti, W. L. Dunn, J. A. Grundfest, R. E. Stanton. February 1974.
- WN-8687-HUD. *Accounting and Auditing Procedures for Rental Property Financial Data*. T. P. Britt, Jr. August 1974.
- WN-10223-HUD. *Completing the Supply Experiment*. Housing Assistance Supply Experiment Staff. June 1978.

Statistical Methods

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

PROGRAM DESIGN

General Design

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

Program Standards

- WN-8105-HUD. *Estimating the Standard Cost of Adequate Housing*. D. B. Lewis, I. S. Lowry. February 1973.
- WN-8574-HUD. *Program Standards for Site I*. I. S. Lowry, B. Woodfill, T. Repnau. January 1974.
- WN-8715-HUD. *Equity and Housing Objectives in Homeowner Assistance*. I. S. Lowry. June 1974.
- WN-8974-HUD. *Program Standards for Site II*. I. M. A. Dade. February 1975.

- WN-9430-HUD. *Inflation in the Standard Cost of Adequate Housing: Site I, 1973-1976.* I. S. Lowry. March 1976.
- WN-9734-HUD. *Rent Inflation in St. Joseph County, Indiana: 1974-77.* J. P. Stucker. September 1977.
- WN-10073-HUD. *Rent Inflation in Brown County, Wisconsin: 1973-78.* J. P. Stucker. August 1978.

Program Estimates

- WN-7901-HUD. *Preliminary Estimates of Enrollment Rates and Allowance Costs.* B. Woodfill. July 1972.
- WN-7974-HUD. *Estimates of Eligibility and Allowance Entitlement under Alternative Housing Allowance Programs.* B. Woodfill, T. Repnau. September 1972.
- WN-8167-HUD. *Additional Estimates of Enrollment and Allowance Payments under a National Housing Allowance Program.* T. Repnau, B. Woodfill. March 1973.
- WN-8439-HUD. *Estimates of Eligibility, Enrollment, and Allowance Payments in Green Bay and Saginaw: 1974 and 1979.* B. Woodfill, T. Repnau, I. S. Lowry. September 1973.
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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	• Rand appoints site manager for Brown County.
22 December	• HUD tentatively designates Brown County as an experimental site, based on progress in negotiating memoranda of understanding with the major units of local government.
1973	
21 February	• 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	• Rand opens a site office in Green Bay.
15 May	• First meeting of the BCHA.
4 June	• BCHA approves a memorandum of understanding with HUD concerning the purposes and organization of the experimental housing allowance program.
19 October	• 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	• HAO board of trustees adopts bylaws, elects officers, and ratifies appointments of HAO director and deputy director.
24 December	• HAO acquires temporary quarters in Green Bay.
1974	
4 January	• Rand submits drafts of final sections of HAO handbook to HUD.
18 February	• 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	• 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 <i>Report to Brown County</i> .
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.

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	
10 January	• Rand publishes first analysis of screening survey data (WN-8574-HUD).
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.
5 August- 18 November	• Rand publishes codebook materials for screening survey (WN-8688-HUD, WN-8689-HUD).
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.
25 November	• Rand publishes audit report on screening survey (WN-8684-HUD).
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.
7 March	• Rand publishes codebook for the baseline survey of residential buildings (WN-8810-HUD).
26 March	• Rand publishes codebook for the baseline survey of landlords (WN-8976-HUD).
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.
8 May	• Rand publishes first analysis of the baseline survey of landlords (WN-8980-HUD).
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.
22 December	• Rand publishes codebook for baseline survey of tenants and homeowners (WN-8809-HUD).
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 January	• Rand publishes audit report on baseline survey of residential buildings (WN-8973-HUD).
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.
25 March	• Rand publishes study of rent inflation in Site I (WN-9430-HUD).
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 refiled questionnaires from wave 2 survey of residential buildings.
31 May	• Rand publishes codebook for HAO client characteristics file, year 1 (WN-9433-HUD).
9 July	• HAO delivers administrative records for second year of program operations to Rand.

10 July	• Rand publishes review of needs for future surveys in Brown County (WN-9541-HUD).
19 July	• Rand publishes codebook for HAO housing characteristics file, year 1 (WN-9504-HUD).
22 July	• Rand releases sample list for wave 3 survey of residential buildings (comparability panel only).
26 July- 27 August	• NORC conducts wave 3 survey of 446 residential buildings (comparability panel only).
16 August	• Rand publishes first analysis of baseline survey of tenants and homeowners (WN-9029-HUD).
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.
15 April	• Rand publishes audit report on baseline survey of neighborhoods (WN-9732-HUD).
10 June	• Rand publishes audit report on baseline survey of landlords (WN-8977-HUD).
7 July	• Rand publishes codebook on baseline survey of neighborhoods (WN-8811-HUD).
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.
17 August	• Rand publishes study of rent inflation in Site I (WN-10073-HUD).
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.

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 • HUD-approved increase in benefit levels reflected in September allowance payments.
- 1 November • Indian Village joins allowance program, whose jurisdiction now includes all of St. Joseph County.

1977

- 2 April • HAO begins third year of open enrollment.
- 15 July • HAO publishes *Report to St. Joseph County*.
- 1 August • HAO opens enrollment to most single persons under 62.
- 1 September • HUD-approved increase in benefit levels reflected in September allowance payments.

1978

- 2 April • HAO begins fourth year of open enrollment.
- 1 July • 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	• Rand completes preliminary design for sample selection (WN-8588-HUD) and obtains list of tax parcels in St. Joseph County.
1 May- 3 July	• Rand conducts tax record search for data on 40,894 properties.
16 May	• Westat opens site office in South Bend.
24 June- 9 August	• Rand releases screening survey sample list of housing units to Westat in installments.
10 July- 6 September	• Westat conducts screening survey of occupants of 9,976 housing units.
23 July- 23 September	• Rand codes, keypunches, and cleans 6,066 completed screening survey questionnaires.
18 September- 28 November	• Westat conducts baseline survey of 12,136 street segments in 86 neighborhoods.
11 November	• Rand releases sample list for baseline survey of landlords.
18 November	• Rand releases sample list for baseline survey of tenants and homeowners.
25 November- 20 June	• Westat conducts baseline surveys of landlords of 3,528 rental properties, 5,803 tenants, and 1,415 homeowners.
2 December	• Rand archives preliminary master file of screening survey records.
1975	
21 April	• Rand releases sample list for baseline survey of residential buildings.
25 April- 2 July	• Westat conducts baseline survey of 5,074 residential buildings.
25 June	• Rand releases sample list for baseline verification survey of nonresidential properties.
6 August- 22 August	• Westat conducts baseline verification survey of 543 nonresidential properties.
31 August	• Rand completes coding, keypunching, and cleaning of 1,922 questionnaires from the baseline survey of landlords.
8 September- 8 October	• 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.
24 October	• Rand publishes report on baseline sample selection (WN-9027-HUD).
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).
 - 23 July • Rand publishes codebook for baseline survey of landlords (WN-9444-HUD).
 - 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).
 - 24 September • Rand publishes report on market intermediaries for year 1 (WN-9400-HUD).
 - 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

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- 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.
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- 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.
 - 24 February • Rand publishes codebook for HAO client characteristics file, year 1 (WN-9621-HUD).
 - 23 March • Rand releases sample list for wave 3 survey of landlords.
 - 6 April • Rand publishes codebook for HAO housing characteristics file, year 1 (WN-9622-HUD).
 - 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.
 - 10 May • Rand publishes report on permanent panel of residential properties (WN-9577-HUD).
 - 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.
 - 5 August • Rand publishes report on community attitudes (WN-9774-HUD).
 - 7 August • Rand releases sample list and field materials for wave 3 survey of residential buildings (comparability panel and new construction only).
 - 17 August • Rand publishes report on market intermediaries and indirect suppliers (WN-9020-HUD).
 - 30 August • Rand completes coding, data entry, and cleaning of 476 field reports from wave 2 survey of residential buildings.
 - 13 September • Rand publishes audit report on baseline survey of neighborhoods (WN-9709-HUD).
 - 26 September-14 November • Westat conducts wave 3 survey of 630 residential buildings.
 - 30 September • Rand publishes first analysis of baseline survey of tenants and homeowners (WN-9737-HUD).
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|--------------|---|
| 30 September | • Rand publishes report on rent inflation (WN-9734-HUD). |
| 30 September | • Rand publishes codebook for baseline survey of residential buildings (WN-9895-HUD). |
| 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. |
| 14 December | • Rand publishes codebook for attitude module of baseline survey of tenants and homeowners (WN-9802-HUD). |
| 16 December | • Rand releases field materials for wave 4 survey of tenants and homeowners. |
| 22 December | • Rand publishes codebook for baseline survey of neighborhoods (WN-9949-HUD). |

1978

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|---------------------------|---|
| 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. |
| 12 January | • Rand publishes audit report on baseline survey of residential buildings (WN-9738-HUD). |
| 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 | • Westat conducts wave 4 survey of neighborhoods (12,828 street segments). |
| 31 July | • Rand releases sample list and field materials for wave 4 survey of residential buildings. |
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|---------------------------|--|
| 14 August | • Rand archives preliminary master file for wave 2 survey of landlords (community attitudes module). |
| 16 August | • Rand publishes audit report on baseline survey of tenants and homeowners (WN-9576-HUD). |
| 28 August-
20 November | • Westat conducts wave 4 survey of 3,132 residential buildings. |
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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



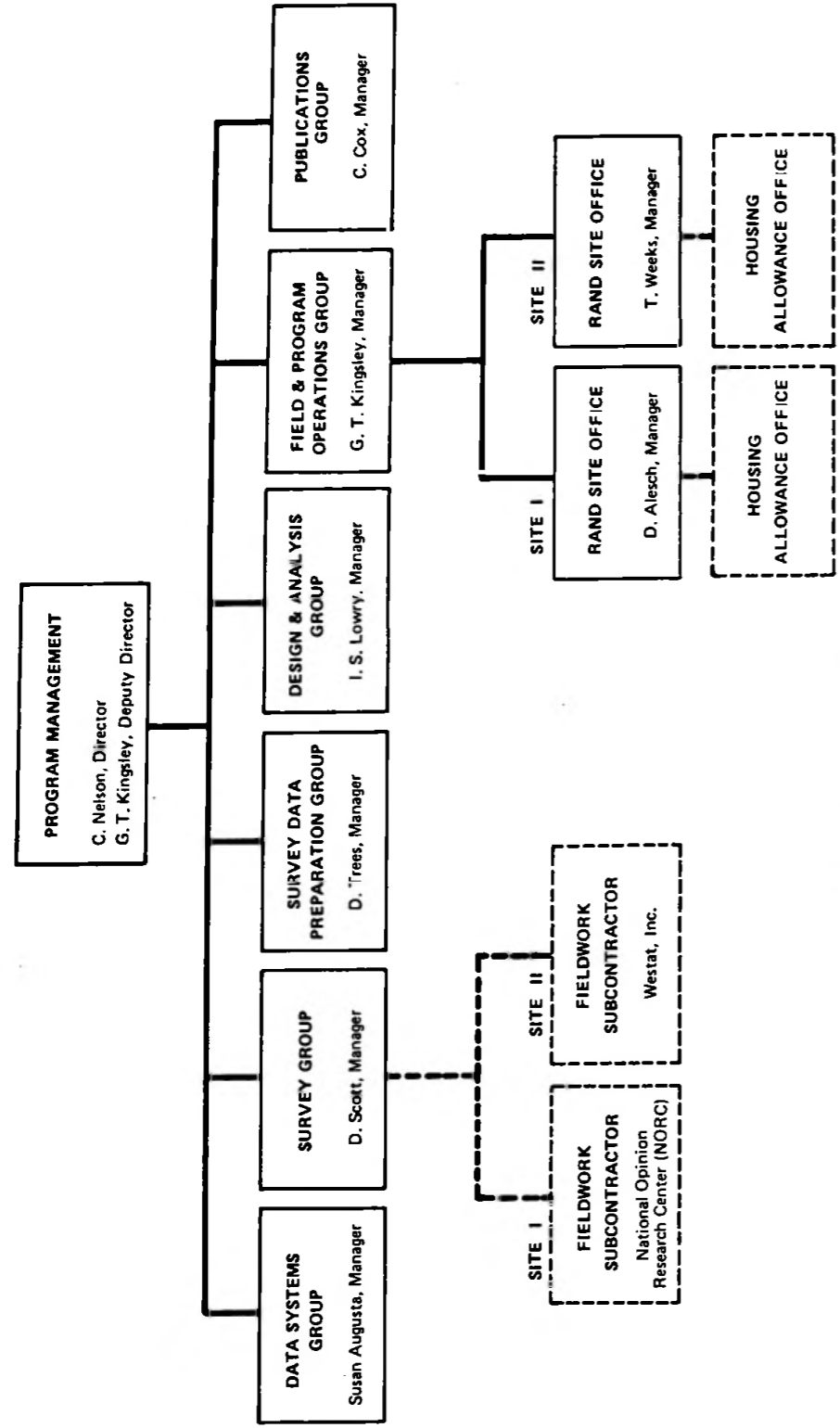
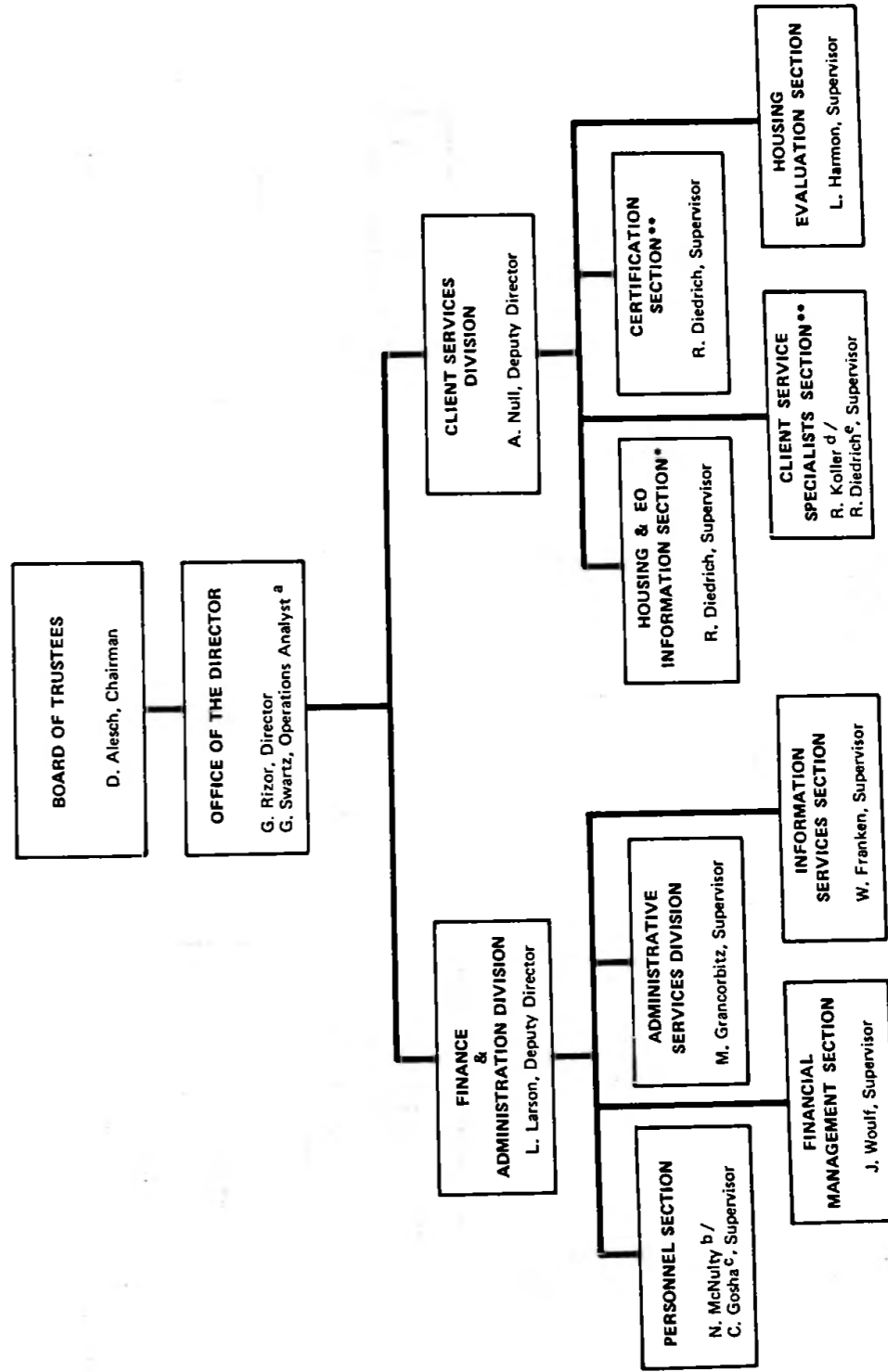
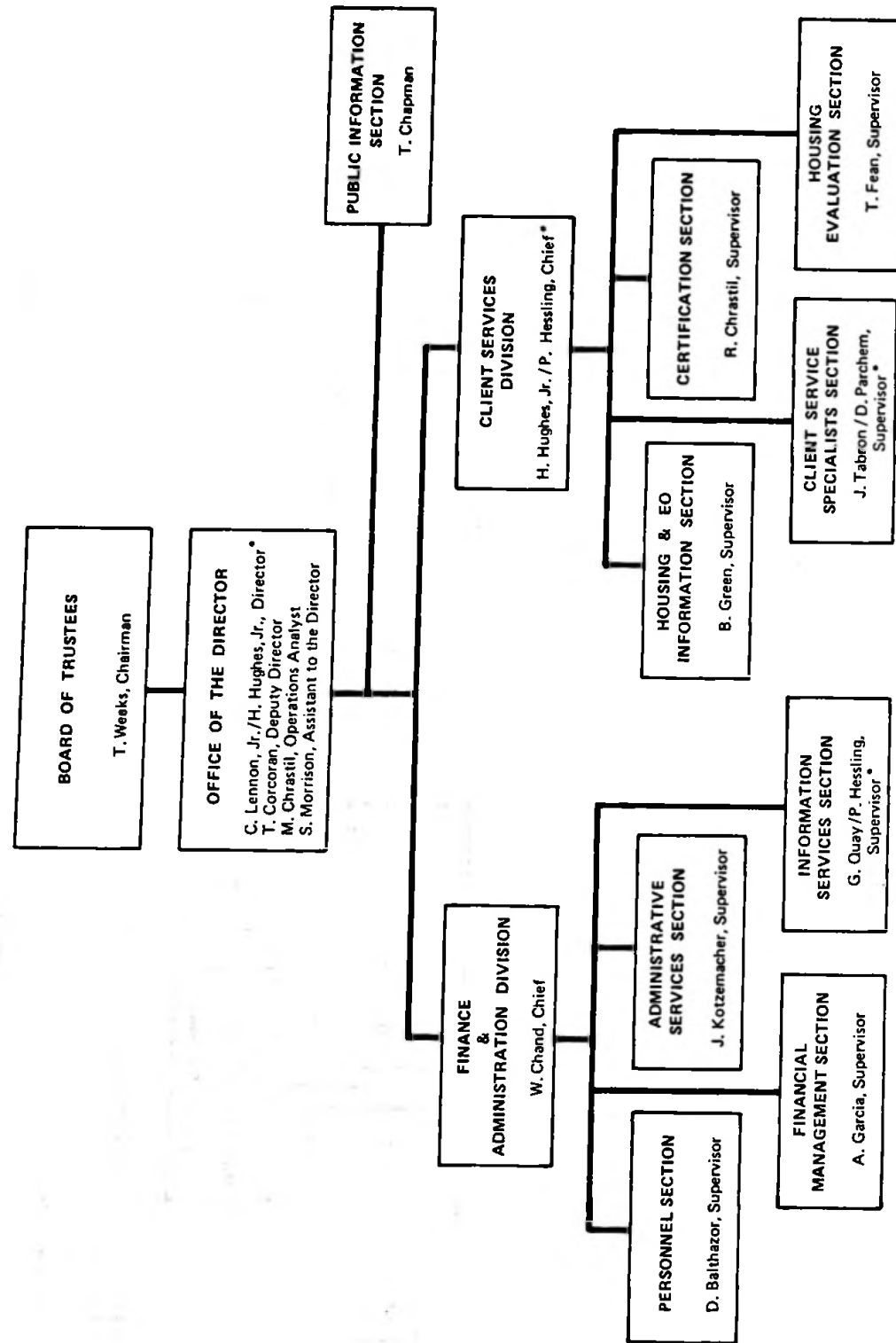


Fig. C.1—Rand's project organization for HASE



a Until August 1978, when position was discontinued.
 b Until July 1978.
 c As of July 1978.
 d Until September 1978.
 e As of September 1978.
 * Section was dissolved August 1977.
 ** Sections were combined September 1978 as Client Services/Certification Section, R. Diedrich, Supervisor.

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 1977—September 1978

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. Since then, the number has fluctuated with seasonal workloads but remains in the range of 100 to 110 fulltime equivalents.

Slightly more than half the staff are professionally rated employees or consultants, most of them working full time 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 this 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 makes 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 1978 are named in Appendix C.

¹ See prior annual reports for staffing during earlier phases of the experiment.

STAFF FOR PHASE II
OCTOBER 1977—SEPTEMBER 1978

PROGRAM MANAGEMENT

Program Director
Charles E. Nelson

Deputy Director
G. Thomas Kingsley

Program Control Officer
Priscilla M. Schlegel

Program Control Assistant
Patricia Meers

FIELD AND PROGRAM OPERATIONS GROUP

Manager
G. Thomas Kingsley

Staff
Deborah R. Both
Iao Katagiri
Sheila Kirby
Priscilla M. Schlegel
Paul E. Tebbets

Site I Staff

Site Manager
Daniel J. Alesch

Site Monitors
Kirk L. Gray
Paul F. Ernst (HAO)

Site II Staff

Site Manager
Thomas W. Weeks

Site Monitors
Nancy O'Neill
Wim Wiewel (HAO)

DESIGN AND ANALYSIS GROUP

Manager

Ira S. Lowry

Deputy Manager,
Operations and Planning
C. Lance Barnett

Administrative Assistant
Ellen T. Friedmann

Deputy Manager,
Reports
Stanley C. Abraham

Topical Analyses

Market Effects

John E. Bala
C. Lance Barnett
Therman P. Britt
Lawrence Helbers
Kevin F. McCarthy
J. Kevin Neels
Charles W. Noland
C. Peter Rydell
Michael G. Shanley
James P. Stucker

Eligibility and Participation

Steve L. Balch
Grace M. Carter
Phyllis L. Ellickson
Lawrence W. Kozimor
John E. Mulford*
C. Peter Rydell

Program Effects on
Participants

John E. Bala
Phyllis L. Ellickson
Lawrence Helbers
David E. Kanouse
Lawrence W. Kozimor
Bruce W. Lamar
James L. McDowell
Robert A. Margo
Mark David Menchik
John E. Mulford
Adele R. Palmer

File Preparation and Survey Audit

Sample Accounting

Tiina Repnau

Administrative Data

Leslie E. Geller
Ann W. Wang

Survey Accounting

Carole A. Beauchemin
John W. Dawson
Carol E. Hillestad
Beverly F. Lowe
Tiina Repnau*
Richard E. Stanton

File Preparation

Patricia M. Boren
Larry A. Day
John Douglas
Heather A. Hanunian
Carol E. Hillestad
Tiina Repnau*
Sally Trude
Kenneth Wong

Attitude Data

Marsha Baran*
Saundra H. Brewer
Roger H. Johnston
Christina J. Witsberger

Public Records

John E. Bala
John W. Dawson
Albert H. Rosenthal

Statistical Methods

Daniel A. Relles
William H. Rogers

*Team leader.

SURVEY GROUP

Manager

Douglas Scott

Administrative Assistant

Patricia Meers

Survey Design and Quality Control OperationsSurvey of Tenants
and Homeowners

Carolyn Rahe

Survey of Landlords

Diane Schoeff

Survey of Residential
Buildings

Carolyn Rahe

Neighborhood Street
Observation Survey

Marilyn Fisher

Neighborhood Local
Sources SurveyCarolyn Rahe
Diane Schoeff**Sample Maintenance and Survey Operations**

Record Management System

Zahava Blum-Doering

Sample Maintenance

Technical Supervisor

Susan Welt Luxenberg

Operations Supervisor*

Mary Wallschlaeger
Sandra TurnerSandra Figge
Mary Morris**Production Unit**

Supervisor*

Nancy Hope
Diane Reingold

Codebooks*

Patricia Boren
Deborah Wesley**Site II, Wave 4 Surveys**

Westat, Inc.

Project Leader

Oscar L. Powers

Site Director*

Mary Ann Fitzgerald
Ann Brunston

*In order of incumbency.

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
Stephanie Knapik
Frank Maltez
Nanci McGuire
Sandy Turner

Data Control Staff*

Barbara Conley
Hallie Day
Alicia Kawamoto
Cordell Pierson
Al Shoden
Barbara Spence**Computer Services**

Supervisor

William H. Allen
Pam McMahon

Computer Services Staff

Tim Carlson
Sandra Edwards
Tom Gayle
Loretta Gray
Karen Hackett
Matthew Howitt
Frank Maltez
Kevin McCardle
Kathleen Ninnis
Randy Onishi
JoAnne Stevenson
Mitch Tuller
Russell Weisz

*Plus 80 parttime consultants.

RAND/R-2434-HUD