

## THE PRELIST RECANVASS AND LOCAL REVIEW COVERAGE IMPROVEMENT OPERATIONS

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The Prelist Recanvass and Local Review Operations were two procedures conducted during the 1980 Decennial Census to help improve the coverage of housing units and persons. Prelist recanvass was done in selected prelist (not urban) areas of the United States. Prelist recanvass was a check on the Census Bureau's listings of housing units in the selected areas. Local review elicited the review of the Bureau's census counts by local officials. A description of the implementation and results of both of these programs are discussed in this paper.

### Prelist Recanvass Operation

#### I. Background

The 1980 Census was the second of its kind to be conducted in the United States that relied on extensive use of the mails for the collection of population and housing data. It represented a transition in data capture methodology from the conventional technique requiring door-to-door enumerator canvass to one of self-enumeration using the mails for sending and returning questionnaires. Areas containing approximately 60 percent of the housing units were contacted by mail in 1970; the remaining 40 percent, located in rural areas and small towns, were contacted by enumerators. On the basis of its success in 1970 and practicality for the following census, the mail census system was extended to areas containing 95.5 percent of the housing units in 1980. The advantages of this methodology include first, an improvement in the quality of response by eliminating enumerator bias and by allowing respondents time to complete the forms at their convenience; second, an improvement in coverage achieved through the compilation of accurate address lists and reduction in the possibility of missing units and third, an efficient means of making contact with individuals.

The undercount and the implications of its disproportionate impact on minority groups became a significant issue in 1980. Within the framework of the Census Bureau's own continuing commitment to coverage improvement, a major effort was made to develop methods that would improve coverage especially among hard-to-enumerate segments of the population. In addition to improving overall coverage, it was hoped that a reduction in coverage differentials could be achieved. The 1980 Coverage Improvement Program consisted of fourteen distinct operations that were designed with the general aims of either enhancing public awareness and cooperation with the census or improving census-taking procedures that would reduce the possibility of persons being missed. The Prelist Recanvass Operation belongs among the procedural operations that focused on improvements in the compilation of the address lists which are critical for the success of a mail census.

Corresponding to the methodological changes consistent with a mail census system, the

entire country was categorized into Conventional, TAR (Tape Address Register) and Prelist Areas. The distinction between TAR and Prelist Areas depended on the method used in preparing address lists. In Prelist Areas the mailing lists were generated by enumerator canvass, whereas in TAR areas they were prepared independently by commercial firms and then updated by a combination of Post Office review and prec canvass by census enumerators.

Prelist Recanvass was developed during the course of taking the census in response to concern over the completeness of the address lists in prelist areas. In TAR areas the address lists had undergone a process of four reviews. The first of these was conducted by the U.S. Postal Service with an advance check in May and June of 1979, an additional check was provided by the prec canvass coverage improvement operation in mid-February, two more Postal Service reviews were made in early March and late March just before Census Day, at the time of delivery of the questionnaires. In contrast, the Advance Post Office Check (APOC) - a major postal review - had been cancelled in Prelist Areas, no prec canvass had been conducted there, and the two postal reviews conducted in early and late March were considered a potential source of duplicate enumeration arising from incorrectly geocoded postal adds. As a corrective measure, the Prelist Recanvass operation was introduced during the final stages of the 1980 census in anticipation of difficulties foreseen in prelist areas.

#### II. Operation

The objectives of the recanvass operation were to add and enumerate housing units that had been missed in previous census operations, to delete listed units that were located outside the boundaries of the recanvassed enumeration district, to reinstate deleted listings where appropriate, and to eliminate duplicate listings. Prelist Recanvass was conducted in a total of 137 district offices. Of these, 134 were decentralized offices and 3 were "two-procedure" offices where both conventional and decentralized procedures were used for operations. Selection of district offices for recanvass was made according to criteria established by the Census Bureau's Field Division in consultation with planners of other divisions. Some offices were selected by virtue of their location in the more rural parts of the prelist area where past evidence had shown coverage problems to be relatively severe. Other district offices in prelist areas which had not initially been chosen for recanvass became recanvassed as time permitted. Field Division reported that in some district offices scheduled for the recanvass, only selected enumeration districts within the district offices were recanvassed. The operation was conducted after Census Day during the second phase of field follow-up (the first phase was non-response follow-up). The workload for this phase included cases left over from the first phase follow-up operation,

failed edit questionnaires, as well as a check on units that had been described as vacant or had been deleted during nonresponse follow-up. The "vacant and delete check", also known as Unit Status Review, had been a major coverage improvement operation.

The core of the operation called for the recanvass of a selected area in order to establish a correspondence between every housing unit encountered there and its corresponding listing in the address register. The Follow-up II enumerator was required to make a systematic canvass of the area according to canvassing procedures developed for 1980. With the Follow-up Address Register (FAR) in hand, the enumerator was expected to do a ground-to-book verification of all housing units. For units not listed in the register, the enumerator added the listing and interviewed the occupants of the housing unit. For either units or listings that the enumerator could not verify, the appropriate forms were filled out and returned to the respective district office where the cases were resolved.

### III. Results

For the prelist area covered by this evaluation, prelist recanvass added an estimated 105,463 (s.e.= 36,357) housing units or about 0.8 percent increase to the count of housing units. An additional 8,146 housing units which had been deleted were reinstated. However, since these reinstated housing units were found in just two of the sample district offices they have been mentioned separately from the other units added by the operation. An estimated 217,025 (s.e.= 61,724) persons were added by this operation. Of these persons added 79% were White, 19% Black and 2% Other. In comparison, the breakdown of racial groups counted by the Census in the same area were as follows: 83% White, 16% Black and 1% Other.

### IV. Evaluation

As a means of evaluating component operations of the 1980 Coverage Improvement Program, a Coverage Improvement Evaluation Sample (CIE) was designed along the lines of a two-stage stratified random sample. Prior to sampling, the 409 district offices that were set up for the census were separated into six strata according to the following criteria. Stratum I corresponded to centralized DOs in cities with 1,000,000 or more population; Stratum II corresponded to the balance of centralized DOs, Stratum III corresponded to decentralized DOs without Prelist Recanvass; Stratum IV corresponded to decentralized DOs with Prelist Recanvass-Urban; Stratum V corresponded to decentralized DOs with Prelist Recanvass-Rural; and Stratum VI corresponded to conventional plus two-procedure DOs.

The results in this report are based upon sample data from Strata IV and V of the CIE sample. The distinction between decentralized urban (Stratum IV) and decentralized rural (Stratum V) in prelist areas has to do with criteria developed for this sample rather than significant geographic differences in these areas. The sample design is two-stage. The

first stage of sampling consisted of a simple random sample of district offices from all district offices in the stratum. At the second stage of sampling a 15 percent simple random sample of enumeration districts was taken from the sample district offices.

Materials for the evaluation included Follow-up Address Registers (FARs), Master Address Registers (MARs), Record of Potential Add, Form D-187, and the Record of Potential Delete, Form D-186. These materials were processed for a total of 16 district offices belonging to Stratum IV (8 offices) and Stratum V (8 offices). Out of eight district offices in Stratum IV there were difficulties connected with four offices. In one of these DOs only 34 percent of the FARs were available. This represented too few materials to justify full processing. In the three other offices field records show that the operation had never been implemented. In Stratum V all materials were available; however, the operation had not been implemented in one of the eight district offices in this stratum. Therefore, from 16 sample offices only 11 were usable in determining the impact of this operation.

Since those district offices that were decentralized and which did not have the Prelist Recanvass were categorized in Stratum III, Prelist Recanvass had not originally been planned for these district offices. Nevertheless, when time considerations allowed for the operation being implemented in some of these DOs, it was carried out as time permitted. Although various records indicate which DOs performed prelist recanvass, there is no definitive information regarding the EDs or even the number of EDs per DO involved in the operation.

The evaluation of the recanvass operation was accomplished in two phases. In the first phase, the Follow-up Address Registers were matched with the corresponding Master Address Registers to determine the number of housing units that were added to the census by recanvass. A MAR to FAR match was also done as a control measure. In the second phase, the MARs were examined to determine how many listings were reinstated or deleted through prelist recanvass. This determination was made by examining the MARs for the appropriate entries and by matching the D-187 and D-186 Forms with MARs to establish how many potential adds and potential deletes were actually added or deleted from the MAR. Processing requirements resulted in a downward bias in total yield.

This report focuses on yield information from the results of the operation in the sample district offices. There was a total of 13,112,622 prelist housing units in our sample. Yield includes a determination of the number of Prelist Recanvass Adds, the number of units reinstated, and the number of duplicates that were deleted.

### V. Conclusions

The recanvass operation added a small proportion of housing units that otherwise would have been missed by the Census, of reinstating deleted units where appropriate and

of eliminating duplicate listings. Our findings show that an estimated 113,609 housing units were added by the operation in the prelist area. It is evident that the operation reinstated units and eliminated duplicate units; however, since these gains were only observable for two district offices only, we are unable to address the magnitude with respect to the entire prelist area. In comparing recanvass adds by race with census counts for the same area, it appears that the operation did not pick up minority groups at a higher rate than the racial composition of the area given by the census. Therefore, the operation made no improvement in differential coverage with respect to minority populations.

The cost of this operation has been estimated at about \$10,290,000 for adding 113,609 housing units or approximately \$59.30 per unit. It appears to have cost a great deal of money to add few housing units. It is possible, of course, that what seems to be a low add rate reflects that the prelist area had a low undercoverage rate. Although a definitive answer to this is beyond the scope of our evaluation, we think that the level of adds had to do with some operational factors.

The operation was implemented during the final stages of the census in response to anticipated difficulties in prelist areas. The procedures were written at the last minute, were highly complicated, and in most cases arrived late at the district offices. Observers of the field operation have indicated that the level of complexity negatively impacted the quality of the operation. Additionally, the operation was not quality controlled. We think that these factors were connected with the lack of materials for processing that accounted for the loss of the one sample office. Also, coordination of the operation would have accounted for all sample DOs having been recanvassed.

#### Local Review Operation in the 1980 Census

##### I. Background

The Local Review Program was designed to evaluate and improve the accuracy of the census data. The objectives were to invite local officials to participate in identifying and resolving errors in census counts so that necessary corrections could be made before district offices closed and the counts were finalized. By involving local officials in the review, the Census Bureau established a viable municipal relationship. This rapport with local officials brought about an awareness of census operations which provided the Bureau additional resources with supportive evidence to improve the accuracy of the census counts.

##### II. 1980 Procedures

The Local Review Operation done in 1980 attempted to involve local official participation before the preliminary census counts were finalized. Local review occurred in all 409 district offices. In addition to providing local officials an opportunity to review preliminary counts, local review provided the census staff an opportunity to

perform some internal checks and review the preliminary counts for potential problems.

Local officials reviewed census counts as of the first follow-up, nonresponse follow-up. Local officials commented on the counts and sent their comments to the census district offices. Local officials were to comment on counts of housing units, political boundary problems, and group quarters problems, along with other data problems. The district office reviewed the comments and reviewed census counts, to take into account the results of census operations occurring during the review. When a review of counts did not resolve a comment, district office managers decided which areas required a recanvass to try to resolve a discrepancy. After recanvass, local officials were presented with the results of the efforts of the Bureau's attempts to resolve discrepancies.

##### III. Results

Of the 39,000 jurisdictions on the Local Review Mailing List, about 12,392 (32%) contacted census officials as part of Local Review. (Refer to Table 1 below). Of the local official responses 6,563 jurisdictions (53%) reported problems, the other 5,829 jurisdictions (47%) expressed either satisfaction with the census count or a disinterest in participating.

Of the responding governments that noted problems 2,543 governments (39%) (20% of total responding governments) submitted responses based on "hard evidence" (responses based on counts of building permits, tax or utility records, aerial photography, etc.) 4,020 governments (61%), (32% of the total responding governments) submitted unacceptable data, not based on "hard evidence."

Table 1: Government Responses	Governments
Total	39,000
Non-responses	26,608
Responses	12,392
No Problems/Satisfaction	5,829
Problems	6,563
Acceptable	2,543
Boundary Discrepancies	797
Housing Unit Discrepancies	597
Group Quarter Discrepancies	213
Combination of Discrepancies	381
Miscellaneous Discrepancies	555
Not Acceptable	4,020
Miscellaneous= Vacancy rate, Average Population/Household Multiunit Enumerated as Single unit	

Of the 27,686 enumeration districts (ED) with reported problems 20,114 of them were resolved in the census district offices. The remaining 7,577 ED's required recanvassing.

The total number of housing units recanvassed in these ED's was 2,632,589. The yields from office reviews and recanvassing of these households are as follows:

Housing Unit Changes	- 20,334 Deleted
	28,125 Transferred
	53,222 Added
Population Changes	- 56,328 Transferred
	75,941 Added

Some of these adds and changes may not accurately reflect findings for large urban areas where an on-going communication occurred between local officials and the Census Bureau.

#### IV. Conclusions

In areas where local officials participated, improvements did occur. In part, the Bureau's objectives were not fully accomplished because of the low response rates, only 32% of the 39,000 government jurisdictions responded. As to why the response for local entities was low, documented evaluations of local review staff, both regional and headquarters, substantiate that there were operational problems with local review. Some of the problems were from changes in the program, timing, lack of proper planning, and training of personnel to carry

out the task of implementing the program and educating the local officials (liaisons) as to the purpose, intent, and requirements of the program.

While local review did not appear to add large numbers of housing units and persons to the census, it must be remembered that one of local review's objectives was to identify problem areas before they became enumeration problems. Particularly in the nation's largest cities, the local review program served as a vehicle for a continuous dialogue between local governments and the census offices. Thus, the Bureau was able to concentrate efforts on areas that might have become problems. Such efforts, of course, cannot be quantified.