

# Operational Analysis of Enumeration of Puerto Rico

## FINAL REPORT

This evaluation study reports the results of research and analysis undertaken by the U.S. Census Bureau. It is part of a broad program, the Census 2000 Testing, Experimentation, and Evaluation (TXE) Program, designed to assess Census 2000 and to inform 2010 Census planning. Findings from the Census 2000 TXE Program reports are integrated into topic reports that provide context and background for broader interpretation of results.

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U S C E N S U S B U R E A U

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## ACKNOWLEDGMENTS

The majority of this report is a compilation of sections from the following reports:

Stackhouse, Herbert F. and Sarah Brady, *Census 2000 Mail Return Rates*, Census 2000 Evaluation Memorandum Series A.7.b, Bureau of the Census, 2002

Pennington, Robin A, *Census 2000 Evaluation of the Update/Leave Operation*, Census 2000 Evaluation Memorandum Series F.10, Bureau of the Census, 2002

Ruhnke, Megan, *Census 2000 Address Listing Operation and Its Impact on the Master Address File*, Census 2000 Evaluation Memorandum Series F.2, Bureau of the Census, 2002

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## EXECUTIVE SUMMARY

Census 2000 was the first time that an Update/Leave mailback methodology was used to conduct the enumeration in Puerto Rico. In 1990, enumerators went door to door to collect information from all identified housing units.

Stateside Update/Leave occurred in areas that were determined to contain some proportion of Rural Route, Post Office Box or other non-city-style addresses. These areas were primarily rural, but not too remote or sparsely populated. In Puerto Rico, Update/Leave was the only type of enumeration.

During the Update/Leave operation, questionnaires with preprinted address labels were hand-delivered to every housing unit on the address list. Existing housing units that were not listed on the address register also required questionnaires, but these questionnaires were hand-addressed and the addresses were added to the address register. Since staff were in the field delivering the questionnaires, they also made corrections, deletions, and additions on the address lists and maps.

### **What operational problems were encountered in the field due to the way the address lists were compiled and processed for Puerto Rico?**

The Assistant Managers for Field Operations who completed the debriefing questionnaire consistently reported working with maps and map spots as the most challenging situation in their job. Map spotting was even more problematic in Puerto Rico due to the rural procedures in an urban location.

Other problems encountered by the Assistant Managers for Field Operations were:

- training manuals arrived late
- maps for Nonresponse Followup and Coverage Improvement Followup were not updated from previous operations
- some maps required a lot of updating, especially in rural areas
- copying updated maps was problematic - not all updates copied well because the originals were wrinkled and/or stained
- merging long and short form questionnaires was a very time consuming process

### **How many addresses were encompassed by the Update/Leave operation?**

There were about 23.5 million addresses in stateside Update/Leave operations and almost 1.5 million in Puerto Rico. This number represents how many addresses had either a labeled questionnaire that was to be delivered during Update/Leave or a hand-addressed questionnaire for a unit that was added to the address list during the Update/Leave operation. Questionnaires were to be distributed to all housing units appearing within Update/Leave areas, which were defined at the block level. Some of the addresses on the Update/Leave address list were deleted as

nonexistent or nonresidential in the Update/Leave operation, and their labeled questionnaires were not delivered. This is included as part of the workload because the effort required to try to locate such housing units is a component of the operation.

**What were the add and delete rates during Update/Leave and how did they compare to the stateside rates calculated by other Update/Leave evaluations?**

Adds accounted for seven percent of the stateside workload and 7.6 percent of the Puerto Rico workload. Of the 1.6 million stateside Update/Leave adds, 85.2 percent (about 1.4 million) were included in the final Census 2000 counts. Of the 111,787 Update/Leave adds in Puerto Rico, 83.7 percent (93,607) were included in the final counts.

There was a slightly higher deletion rate in Puerto Rico than stateside. Deletes accounted for 5.2 percent of the stateside workload and almost 8.4 percent of the Puerto Rico workload.

**What were the mail return/mail response rates and how did they compare to Update/Leave areas stateside?**

As of April 18, 2000 the response rate for Puerto Rico was 48.4 percent and 59.3 percent for stateside. This is a difference of 10.9 percentage points.

Sixty-four percent of the households in Puerto Rico returned their Census 2000 questionnaire by mail, a low return rate when compared with the stateside rate of 77.9 percent. It is important to note that Census 2000 was the first time we conducted an enumeration in Puerto Rico where we asked the respondents to complete the questionnaire and return it by mail (stateside has been responding by mail since 1970). Given that Census 2000 was the first time households in Puerto Rico were asked to follow new procedures, a 64 percent return rate is respectable.

**Were any operational problems encountered during Nonresponse Followup? Coverage Improvement Followup?**

Again, the Assistant Managers for Field Operations who completed the debriefing questionnaire reported working with maps and map spots as the most problematic part of the operation.

Another concern of the Assistant Managers for Field Operations was that maps used in Update/Leave were not updated for the Nonresponse Followup and Coverage Improvement Followup operations.

Many questionnaires that were mailed back were not recorded in the system and became part of the Nonresponse Followup workload. This led to multiple, unnecessary visits to households. One Assistant Manager for Field Operations stated that this caused them to visit thousands of housing units that had already returned their questionnaires.

On a positive note, it appears that they were able to retain qualified Nonresponse Followup enumerators to work on the Coverage Improvement Followup operation the majority of the time.

## **1. BACKGROUND**

## **1.1 1990 Census**

In the 1990 Census, Puerto Rico was enumerated using the List/Enumerate (L/E) methodology, which was consistent with earlier censuses. During the week before Census Day, the Postal Service delivered unaddressed short-form Advance Census Reports (ACRs) to all residences that received mail on the postal routes. Then the L/E enumerators went to their assignment areas with address listing books, and canvassed the assignment areas on a block-by-block basis to record address information for all housing units. The enumerators picked up the completed ACR or enumerated the household on an Enumerator Friendly Questionnaire (EFQ) if the household had not filled out the ACR. If the household was designated for a long form questionnaire, the enumerator transcribed the data from the ACR to an EFQ and asked the long form questions on the EFQ. All of the stateside L/E operations, such as Merge and Sample Tolerance Check were also performed for Puerto Rico.

## **1.2 Census 2000**

After the 1990 Census, the Census Bureau recognized that a large part of Puerto Rico was urbanized enough that a mail census methodology could be implemented. The Census Bureau considered using a Mailout/Mailback strategy for the more urbanized parts of the island for Census 2000 and retaining the L/E methodology, or something similar, for the less urbanized areas on the island.

Instead, the Census Bureau made the decision to utilize an Update/Leave (U/L) methodology for the entire island of Puerto Rico. This decision was made for two primary reasons. The first was that there was an increase in the number of limited-access communities on the island. The second was that the Puerto Rico population mirrors the stateside population in the prevalence of two-income households which makes it difficult for enumerators to find someone at home. There were also significant cost savings involved in having one methodology for the entire island. In addition, the reporting and monitoring requirements for one methodology were simpler.

For Census 2000, the United States was divided into nine type of enumeration areas, determined by address types and special enumeration procedures. The primary enumeration methodology in the United States was Mailout/Mailback, used in areas that have predominantly city-style addresses, such as “121 Main Street” that are used for mail delivery. The second largest enumeration methodology, in terms of number of questionnaires, was U/L. Update/Leave was intended for use in areas with some addresses that were not city-style. Noncity-style addresses, such as Rural Route and Box or Post Office Box, are often not linked to the physical location of the housing unit. When there is only a location description for a unit but no address, mail delivery of the questionnaire is not a possibility. Update/Leave areas are primarily rural but not too remote or sparsely populated. Designations of U/L areas are made by block. In Puerto Rico, U/L was the only type of enumeration.

Housing units in the U/L areas were listed in a pre-census operation called Address Listing. This operation consisted of a complete canvass and listing of residential addresses in the U/L areas. Housing units were denoted on the maps with location markers known as map spots. Map spot numbers for each housing unit structure were assigned on the address register and written on the

maps. Additionally, during address listing, maps were updated to include new features and changes in features and feature names. Housing unit records from this operation were considered to be invalid for any operation subsequent to Address Listing or for the Census if they didn't have an address and a map spot number.

The addresses obtained during address listing were grouped into assignment areas and put into address registers. Questionnaire delivery began on March 3, 2000, with the intent that all questionnaires were to be delivered by Census Day, April 1, 2000. In actuality, some questionnaires were delivered earlier than March 3, 2000 during training exercises and the operation was not complete in some areas until April 6, 2000.

During the U/L operation, questionnaires with preprinted address labels were hand-delivered to every housing unit on the address list. Existing housing units that were not listed on the address register also required questionnaires, but these questionnaires were hand-addressed and added to the address register. Since staff were in the field delivering the questionnaires, they also made corrections, deletions and additions on the address lists and maps. Enumerators delivered Spanish language questionnaires but English language questionnaires were available upon request. The respondents were instructed to fill out their questionnaire and mail it back using the envelope provided.

The Puerto Rico mail returns followed the same processing flow as the stateside U/L mail returns. Using the same schedule as for stateside U/L, housing units that did not return a completed questionnaire by the cutoff date were assigned for Nonresponse Followup (NRFU). After NRFU, there was a Coverage Improvement Followup (CIFU) operation similar to the one used stateside.

The compilation of the address list required a four line address for each living quarters in Puerto Rico, rather than the normal three-line stateside address. The fourth address line was for subdivision or condominium name, which is the only way that an address in Puerto Rico can have a unique ZIP+4 address. This had implications for address label preparation since the address standardizer used to standardize addresses stateside could not be used to parse a four-line address to get the correct information in the appropriate city-style address and location description fields.

The address registers and maps were sent to the National Processing Center (NPC) for keying and map scanning, respectively. After the keying, if a deleted address in one block matched an added address in another block, according to an address-matching program, the action taken on the unit was considered to be a move.

Because there was no time for processing and printing the map updates between the U/L operation and NRFU operation, office clerks were instructed to make three copies of the U/L maps in the Local Census Offices (LCOs) and store them before the U/L operation. Maps with changes from U/L were copied, and the stored copies were then replaced with the copied maps. Maps and address registers from the U/L operation were sent to the NPC for digitizing and keying. The keying of the address registers occurred between March 8, 2000 and May 15, 2000, and map digitizing took place from April 17, 2000 to September 15, 2000. Sometimes the results from the map updates and the address list updates needed to be reconciled at the end.

## **2. METHODS**

The data files used to calculate the mail response rates are:

- Decennial Master Address File (DMAF)
- Hundred percent Census Edited File with the reinstated housing units (HCEF\_D')

### **2.1 Decennial Master Address File (DMAF)**

The March 2001 MAF extracts were used to answer questions about the address list for this evaluation. These files indicate the final Census status of all units ever delivered to the DMAF. There are universe and operation flags on these files that are used for tabulations of the characteristics of interest, with limitations brought on by inconsistencies in the determination of flag values. The characteristics are discussed below.

The universe of units in the U/L operation workload is the set of units that appeared on the U/L address listing pages (and had labeled questionnaires) and the units that were added in U/L. Not all U/L adds were ultimately in the Census. Some added units did not have the appropriate data to be included on the Census 2000 address list, while others were deleted in later operations. Also, a certain percent of units included on the U/L address listing pages were deleted or corrected in later operations. This analysis will use the total number of U/L operation adds, since this gives an indication of how much work was required to add units during the operation. We give separate tallies indicating how many of the adds were deliverable to the DMAF and how many were ultimately in the Census.

### **2.2 Hundred Percent Census Edited File with the Reinstated Housing Units (HCEF\_D')**

The primary file used to calculate the mail return rates was the HCEF\_D'. We used this file to identify the housing units to include in the return rates. The HCEF\_D' contained variables that were used to limit the return rate denominator to occupied housing units in mailback areas which were deliverable. The MAILED variable from the HCEF\_D' identifies the date on which a mail return questionnaire was checked into the Data Capture Centers. The HCEF\_D' also contains information on which form type (short versus long) was received by each housing unit.

### **2.3 Census 2000 Debriefing Questions for Assistant Manager for Field Operations**

The Field Division (FLD) asked the Assistant Managers for Field Operations (AMFOs) to answer questions based on their experience in Census 2000 as AMFOs. We reviewed the debriefing questionnaires for Puerto Rico to address questions in this evaluation.

### **2.4 Quality Assurance Procedures**

We applied quality assurance procedures throughout the creation of this report. They encompassed how we determined evaluation methods, created specifications for project procedures and software, designed and reviewed computer systems, developed clerical and computer procedures, analyzed data, and prepared this report.

## **3. LIMITATIONS**

### **Processing problems with Address Listing files from Puerto Rico**

Almost all units in Puerto Rico are designated as single units because of the file processing of the Address Listing files from Puerto Rico. The Decennial Systems and Contracts Management Office (DSCMO) had problems processing the keyed listing pages from the Address Listing operation in Puerto Rico. The keyed files had a 60-character address field that could contain a city-style address or a location description. The stateside files also had a flag, "A/D", set by the lister that indicated which it was. In the stateside operation, listers wrote "A" for a city-style address or "D" for a location description in the address register. In Puerto Rico, the flag was "D/L", and listers wrote "D" for city-style address and "L" for location description. When the DSCMO processed the files for Puerto Rico through the standardizer, they initially assumed that the "D" in the flag identified a "location description", as it did in the stateside files, but the "D" actually stood for address (the Spanish word for address starts with a "D"). There were additional problems observed such as some listers incorrectly recording city and non-city designations and recording urbanization<sup>1</sup> in the location field.

To address these problems, the Geography Division (GEO) and the DSCMO decided to load the entire address field (city-style and location description information) in the location description field on the MAF. This processing decision continued for all address updating operations that the Census Bureau conducted in Puerto Rico after Address Listing. Due to this problem, there are no address records for Puerto Rico with city-style address information in the appropriate city-style address fields on the MAF extracts used for this evaluation. The effects on the Puerto Rico files are:

- The U/L operation did not result in any block moves, since address matching could not occur.
- Almost all units are single units because matching of city-style addresses is used to identify multi-unit structures. Therefore we do not have an accurate indication of the number of multi-unit housing units in Puerto Rico.

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<sup>1</sup> Urbanization denotes an area, sector, or development within a geographic area. In addition to being a descriptive word, it precedes the name of the area. This descriptor, commonly used in Puerto Rican urban areas, is an important part of the addressing format of Puerto Rico, as it describes the location of a given street.

## 4. RESULTS

### 4.1 What operational problems were encountered in the field due to the way the address lists were compiled and processed for Puerto Rico?

The AMFOs who completed the debriefing questionnaire consistently reported working with maps and map spots as the most challenging situation in their job. Some of the specific problems mentioned were:

- census maps were not topographic and therefore not realistic to the actual terrain
- enumerators got lost due to map errors
- the maps were not easy to understand
- the maps were inverted

Other problems described by some of the AMFOs were:

- training manuals arrived late
- maps for NRFU and CIFU were not updated from previous operations
- some maps required a lot of updating, especially in rural areas
- copying updated maps was problematic - not all updates copied well because the originals were wrinkled and/or stained
- merging long and short form questionnaires was a very time consuming process

### 4.2 How many addresses were encompassed by the Update/Leave operation?

Table 1 provides a tally of addresses included as part of the U/L operation. There were about 23.5 million addresses in stateside U/L operations and almost 1.5 million in Puerto Rico. This number represents how many addresses had either a labeled questionnaire that was to be delivered during U/L or a hand-addressed questionnaire for a unit that was added to the address list during the U/L operation. Questionnaires were to be distributed to all housing units appearing within U/L areas, which were defined at the block level. Some of the addresses on the U/L address list were deleted as nonexistent or nonresidential in the U/L operation, and their labeled questionnaires were not delivered. This is included as part of the workload because the effort required to try to locate such housing units is a component of the operation.

**Addresses in Update/Leave Areas (Table 1)**

	<b>Total U/L Workload</b>	<b>Addresses on the Listing Pages for the U/L Operation</b>	<b>Addresses Added During the U/L Operation</b>
Total	24,996,482	23,240,521	1,755,961
Stateside	23,525,257	21,881,083	1,644,174
Puerto Rico	1,471,225	1,359,438	111,787

Data source: March 2001 MAF extract

### 4.3 What were the add and delete rates during the Puerto Rico Update/Leave and how did they compare to the stateside rates calculated by other Update/Leave evaluations?

Table 1 presented overall workload counts from both stateside and Puerto Rico U/L, and also noted the number of adds from the operation. Below, Tables 2A and 2B present the breakdown and proportion of the stateside and Puerto Rico U/L universe by the action taken in the operation.

Despite the differences in the population, with the majority (94 percent) of Puerto Rico being urban and stateside being mostly rural, there does not appear to be much difference in the action codes. Although it is possible that the hurricane that occurred between the time of address listing and U/L may have affected the add and delete rates with houses being destroyed and rebuilt.

**Counts of Update/Leave Actions (Table 2A)**

	Update/Leave Action Codes					
	Total	Add	Correction	Delete*	Move	Verify**
Total	24,996,482	1,755,961	9,796,970	1,351,802	24,265	12,067,484
Stateside	23,525,257	1,644,174	9,045,814	1,228,987	24,265	11,582,017
Puerto Rico	1,471,225	111,787	751,156	122,815	0***	485,467

Data source: March 2001 MAF extract

\* U/L action delete denotes operation delete and nonresidential actions

\*\* U/L action code verify is mostly blank actions

\*\*\* Due to the processing error explained in Section 3.

**Proportions of Update/Leave Actions (Table 2B)**

	Percent of U/L workload by U/L Action				
	% Add	% Correction	% Delete*	% Move	% Verify**
Total	7.02	39.19	5.41	0.10	48.28
Stateside	6.99	38.45	5.22	0.10	49.23
Puerto Rico	7.60	51.06	8.35	0.00***	33.00

Data source: March 2001 MAF extract

\* U/L action delete denotes operation delete and nonresidential actions

\*\* U/L action code verify is mostly blank actions

\*\*\* Due to the processing error explained in Section 3.1.

#### *Update/Leave adds*

As shown in Table 2B, the U/L operation adds were about the same for the stateside and Puerto Rico workloads. Adds accounted for seven percent of the stateside workload and 7.6 percent of the Puerto Rico workload.

Of the 1.6 million stateside Update/Leave adds, 85.2 percent (about 1.4 million) were included in the final Census 2000 counts. Of the 111,787 U/L adds in Puerto Rico, 83.7 percent (93,607) were included in the final counts.

### *Update/Leave corrections*

We also see in the tables above that there were many corrections in the U/L operation. Corrections accounted for 38.45 percent of the stateside workload and 51.06 percent of the workload in Puerto Rico. One reason for this is that corrections were assigned whenever any data field for a particular record was changed, including phone number and occupant name. Some places underwent wholesale area code changes, requiring a correction to almost every unit. In Puerto Rico, there was also the earlier mentioned problem with the address fields, resulting in large numbers of address corrections.

### *Update/Leave deletes*

Note that, starting with Table 2A, deletes and nonresidential units are grouped together because they were treated similarly in the operation. We can see that there was a slightly higher deletion rate in Puerto Rico than stateside. Deletes accounted for 5.22 percent of the stateside workload and 8.35 percent of the Puerto Rico workload.

#### **4.4 What were the Puerto Rico mail return/mail response rates and how did they compare to Update/Leave areas stateside?**

A mail *response rate* is defined as the number of mail returns received prior to the cut date for the NRFU universe divided by the total number of housing units in mailback areas that were eligible for NRFU. It is a measure that represents the percentage of addresses eligible for NRFU that returned questionnaires prior to the designation of the NRFU universe.

The mail response rate is different from the mail return rate. Mail return rate is essentially a measure of the percentage of occupied housing units that returned their questionnaires by April 18, 2000. It is a more useful rate for determining respondent cooperation and not as good as the response rate for measuring NRFU workload.

A mail *return rate* is defined as the number of mail returns received prior to the cut date for the NRFU universe divided by the total number of **occupied** housing units in mailback areas that were on the DMAF prior to NRFU. Mail returns included in the mail response/mail return rates are actual paper questionnaires, interviews during the Telephone Questionnaire Assistance program, Internet data captures, Be Counted Forms, and Coverage Edit Followup returns. The final rates are similar but include all mail returns through the end of the year.

The denominator of the mail return rate is calculated from the Hundred percent Census Edited File with the reinstated housing units. It includes all occupied housing units in mailback type-of-enumeration areas that were added to the address file prior to NRFU. The denominator of the mail return rate is calculated from the Hundred percent Census Edited File with the reinstated housing units. It includes all occupied housing units in mailback type-of-enumeration areas that were added to the address file prior to NRFU and had addresses that were delivered by the United States Postal Service or during the Census Bureau delivery operation. The response rate denominator is larger than the return rate denominator, largely because the response rate denominator includes vacant housing units, Undeliverable as Addressed addresses, some addresses deleted in U/L and Urban U/L delivery, and deleted in either NRFU or CIFU.

Table 3 compares the Census 2000 mail response/mail return rates for Puerto Rico to the U/L areas stateside. The first column in Table 3 shows the mail response rates broken down by total and form type for the U/L operation as of April 18, 2000. The next column shows the equivalent mail response rates as of December 31, 2000. The third and fourth columns show the return rates for the same dates, respectively.

It is important to note that Census 2000 was the first time we conducted an enumeration in Puerto Rico where we asked the respondents to complete the questionnaire and return it by mail.

As of April 18, 2000 the response rate for Puerto Rico was 48.4 percent and 59.3 percent for stateside. This is a difference of 10.9 percentage points.

The mail return rate for Puerto Rico as of December 31, 2000 was 63.9 percent while stateside had a return rate of 77.9 percent. This is a difference of 14 percentage points.

The national mail return rate as of December 31, 2000 was 78.4 percent.

**Census 2000 Response and Return Rates by Form Type (Table 3)**

	Response Rate as of		Return Rate as of	
	4/18/2000	12/31/2000	4/18/2000	12/31/2000
Puerto Rico				
Total	48.4%	52.6%	55.0%	63.9%
Short	50.5%	54.5%	57.2%	65.9%
Long	37.6%	43.3%	43.7%	53.8%
Stateside				
Total	59.3%	62.6%	69.6%	77.9%
Short	61.9%	64.6%	72.3%	79.9%
Long	51.9%	57.0%	61.9%	72.1%

Data source: HCEF\_D', DMAF, DRF-2, and March 2001 MAF extract

The media message for Census 2000 was very different than that used in previous decennial censuses in Puerto Rico and may have created unintended confusion on the part of respondents regarding what to do with the questionnaire delivered to each household. In the past, media messages directed respondents to complete the questionnaire and hold it until an enumerator arrived to pick it up. This message was conveyed through public service announcements in the print media and by television and radio advertisements. For Census 2000, our paid media messages asked respondents to mail a questionnaire back. Without a specific evaluation of the marketing and advertising programs used in Puerto Rico in 1990 and 2000, it is difficult to quantify the effects this new message had on the mail response rate for Puerto Rico.

Census 2000 budget cost models anticipated a 50 percent response rate.

#### **4.5 Were any operational problems encountered during Nonresponse Followup? Coverage Improvement Followup?**

Again, the AMFOs who completed the debriefing questionnaire reported working with maps and map spots as the most problematic part of the operation. Map spotting was even more problematic in Puerto Rico due to the use of rural procedures in an urban location.

Another concern of the AMFOs was that maps used in the U/L were not updated for the NRFU and CIFU operations.

Many questionnaires that were mailed back were not recorded in the processing system and became part of the NRFU workload. This led to multiple, unnecessary visits to households. One AMFO stated that this caused them to visit thousands of housing units that had already returned their questionnaires.

On a positive note, it appears that they were able to retain qualified NRFU enumerators to work on the CIFU operation the majority of the time.

### **5. RECOMMENDATIONS**

Given that Census 2000 was the first time households in Puerto Rico were asked to follow new procedures, a 63.9 percent response rate was respectable. Still, there is room for improvement.

Census 2000 data classifies over 90 percent of the population in Puerto Rico as urban. Since U/L is primarily a rural methodology, and GEO has developed a MAF for Puerto Rico that is being updated and improved throughout the decade, we recommend that the Census Bureau build on the experience from Census 2000 and the implementation of the American Community Survey in Puerto Rico to use the MO/MB data collection for at least part of the island.

Based on the comments received, we recommend that the Census Bureau conduct further research into ways to improve census maps. Census maps do not mimic commercial highway and street maps. They lack the detail and reference points. To make them easier for enumerators to use, include reference points and change the scale of maps. Look into the feasibility of using Global Positioning System technology to improve the accuracy of map spotting.

We also need to provide enumerators with more extensive training on census maps, specifically map symbols and directional orientation.

While the procedures were to copy the corrected maps from each operation, some AMFOs reported that this did not always happen. We should attempt to automate changes and corrections to census maps from early field operations updated on maps for subsequent field operations (e.g. updates from the U/L operation should appear on maps for the NRFU operation).

In the future, we need to make every effort to ensure that the training materials and training manuals arrive on time.

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