

# Census 2000 Mail Response Rates

## FINAL REPORT

This evaluation 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

*Helping You Make Informed Decisions*

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## EXECUTIVE SUMMARY

The response rate is a measure that represents the percentage of addresses eligible for Nonresponse Followup that returned questionnaires prior to the designation of the Nonresponse Followup universe. Response rates are the result of a combination of the level of respondent cooperation in Census 2000, the housing unit vacancy rate, and the quality of the Decennial Master Address File.

Preliminary analysis indicates that self-enumerated returns have a lower imputation rate than enumerator returns.<sup>1</sup> Due to the higher level of data quality and the lower cost associated with self-enumerated responses relative to enumerator-collected responses, it is important for response rates to be as high as possible.

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

The mail response rate is different from the mail return rate. The 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 the Nonresponse Followup workload. 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 Nonresponse Followup 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 Update/Leave and Urban Update/Leave delivery, and deleted in either Nonresponse Followup or Coverage Improvement Followup.

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<sup>1</sup>U.S. Bureau of the Census, 2001b, *Study Plan for B.1: Evaluation of the Analysis of the Imputation Process for 100 Percent Household Population Items*, Decennial Statistical Studies Division Census 2000 Procedures and Operations Memorandum Series #Y-1, October 1, 2001.

## What were the National Mail Response Rates?

The mail response rate as of April 18, 2000 was 64.3 percent, which was slightly lower than the 1990 mail response rate of 65.0 percent.<sup>2</sup> This rate represents 75,608,035 mail returns that were received by April 18, 2000 out of a response rate denominator of 117,661,748 households. Another 3,703,140 questionnaires were returned after April 18, resulting in a final response rate of 67.4 percent, as of December 31, 2000.

Reflecting the higher response burden of the long form questionnaire, the short form mail response rate of 66.4 percent was 12.5 percentage points higher than the long form mail response rate of 53.9 percent. In 1990, the mail response rate for short forms and long forms were 65.9 percent and 60.6 percent, respectively.<sup>3</sup>

Approximately 14.3 percent of mail returns were long forms, a substantially lower percentage than the overall 17.1 percent sampling rate. However, many residents with long forms held onto them and returned them after April 18. After that date, a larger proportion of long forms were returned than short forms. The final response rate was 69.1 percent for short forms and 59.4 percent for long forms.

Mailout/Mailback areas had a mail response rate of 65.4 percent, which is higher than either the Update/Leave areas mail response rate of 59.3 percent or the Urban Update/Leave areas mail response rate of 50.5 percent. Final response rates by type of enumeration area were 68.5 percent for Mailout/Mailback, 62.6 percent for Update/Leave, and 54.8 percent for Urban Update/Leave.

Most questionnaires were returned in the period between March 15, when questionnaires in Mailout/Mailback areas were mailed, and March 28. There were slight surges in the number of mail returns corresponding to the delivery of reminder postcards beginning on March 20 and on Census Day (April 1). These two surges in response were more pronounced for long forms than short forms.

Between the initial cut for the Nonresponse Followup universe on April 10 and the final cut on April 18, 2,535,382 questionnaires (2.2 percent) were received. Had the final Nonresponse Followup cut been on April 10, the Nonresponse Followup workload would have increased by this number of housing units.

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<sup>2</sup>U.S. Bureau of the Census, 1991, *1990 Census Mailback Questionnaire Check-in Rates*, Decennial Planning Division, March 14, 1991.

<sup>3</sup>U.S. Bureau of the Census, 1991, *1990 Census Mailback Questionnaire Check-in Rates*, Decennial Planning Division, March 14, 1991.

The cut for the Nonresponse Followup universe was as of April 18; an additional 1,052,712 returns were received between April 18 and April 25, representing 28.4 percent of the mail returns checked in after April 18. These returns represent a potential decrease in the Nonresponse Followup workload of 2.5 percent, resulting in a potential cost savings of over \$28.4 million. Therefore, work needs to be done to determine what is the optimal date for determining the Nonresponse Followup universe, by considering the cost benefits versus the operational challenges to other operations. In addition, research should be conducted to determine a more efficient way of updating the Nonresponse Followup lists.

After April 18, the number of mail returns declined until very few forms were being received by May 6. For the total return rate, 3,703,140 mail returns were checked in after April 18. This was an increase in the return rate of 3.1 percentage points. The last date on which questionnaires were checked in was October 19, 2000. The last date on which enough forms were received that resulted in an increase in the rate was June 15 for short forms and June 29 for long forms.

The mail response rate was compared with the mail return rate. The mail return rate as of April 18, was 74.1 percent, 9.9 percentage points higher than the mail response rate. The difference between the two rates is greater for short forms than long forms and greater for Urban Update/Leave and Update/Leave areas than for Mailout/Mailback areas.

The final response rate was compared to the final return rate. The final return rate is similar to the mail return rate but includes all mail returns through the end of the year 2000. The total final return rate was 78.4 percent, 11.0 percentage points higher than the final response rate of 67.4 percent. This is a greater difference than the difference in the mail response and return rates. The difference between the final return and the final response rates for long forms is about the same as the difference for short forms. However, the difference between the final return rate and the final response rate is greater in Urban Update/Leave and Update/Leave areas than in Mailout/Mailback areas.

# 1. BACKGROUND

This evaluation provides the response rates for Census 2000 and an analysis of the rates at the national level. The mail response rate is a measure of the Nonresponse Followup (NRFU) workload that identifies the percentage of Census 2000 addresses on the address file for mailback areas that were eligible for NRFU and returned their questionnaires by April 18, 2000. The final response rate is similar but also includes mail returns through the end of the year. This report also examines response rate differentials for long and short forms and for different types of enumeration areas.

## 1.1 Previous Censuses

Mail response rates were first measured for the 1970 Census. In 1970, the mail response rate was 78.3 percent. The mail response rate by form type is not available for the 1970 Census.

In 1980, the mail response rate was 75.0 percent, which is a decrease from the 1970 mail return rate. Similar to 1970, the mail response rate by form type is not available for the 1980 Census. The decrease in return rate from 1970 to 1980 was the beginning of a trend of decline in respondent cooperation, as a decrease in response rates also occurred between the 1980 and the 1990 censuses.

In the 1990 Census, the United States Postal Service (USPS) was the primary vehicle for delivering census questionnaires. Based on a master address list, the Census Bureau mailed questionnaires to about 86.2 million housing units in areas designated as being Mailout/Mailback (MO/MB). Occupants were asked to complete the forms and mail them back in the provided postage paid envelope. In areas designated as Update/Leave (U/L), enumerators visited approximately 10.3 million housing units, verified addresses, and left questionnaires for occupants to complete and mail back in the provided postage paid envelope (U.S. Bureau of the Census, 1999a).

In the 1990 Census, both a questionnaire and a mail reminder card were delivered to all housing units in the Mailout/Mailback universe. The reminder card was delivered on March 30, approximately seven days after the questionnaire mailout. Census Day was officially April 1.

The mail response rate was defined as the ratio of the number of housing units returning a census questionnaire by mail to the total number of housing units that were on the address file to receive a census questionnaire delivered by mail or by a census enumerator.

The date for the mail return rate varied by District Office (DO) type (Type 1, 2, 2A, and 3). District Offices are similar to Local Census Offices in 2000. There were 449 stateside DOs in 1990. Of these, 103 were Type 1 DOs, which were located in urban areas. Type 2 DOs were located in small cities, suburbs, and rural areas, accounting for 276 of the 449 DOs. Seventy-nine of these were Type 2A, which handled the Update/Leave operation in addition to



the Mailout/Mailback Questionnaires. Most of the 70 Type 3 DOs were located in rural, sparsely settled areas, and few were located in small cities. The date for the mail return rates in 1990 was April 19 for Type 1 DOs and April 28 for Type 2, 2A, and 3 (U.S. Bureau of the Census, 1991).

For the 1990 Census the overall mail response rate was approximately 65.0 percent (U.S. Bureau of the Census, 1991). The mail response rate was 65.9 percent for short forms and 60.6 percent for long forms, resulting in a difference of 5.3 percentage points between form types (U.S. Bureau of the Census, 1991).

## **1.2 Census 2000 Dress Rehearsal**

The Census 2000 Dress Rehearsal was conducted in three areas: Sacramento, California; Columbia, South Carolina, and 11 surrounding counties; and Menominee County, Wisconsin, including the Menominee American Indian Reservation. Each site was selected because of its demographic and geographic characteristics to provide experience with some of the expected Census 2000 environments. The Sacramento site was entirely Mailout/Mailback, South Carolina site was a mixture of Mailout/Mailback and Update/Leave addresses, and the Menominee site was entirely Update/Leave.

There were four components of the Mailout/Mailback delivery: an advance letter, an initial questionnaire, a reminder card, and a “blanket” replacement questionnaire (mailed to all addresses). These items used first-class postage and were distributed by the USPS as part of the regular postal routes. The advance letter was mailed to each address between March 24 and 27, 1998. The initial questionnaire was mailed between March 28 and 31. The reminder card was sent to housing units between April 3 and 6. Replacement questionnaires were mailed between April 15 and 17. Census Day was officially April 18.

The Update/Leave methodology involved Census Bureau enumerators delivering questionnaires at the same time they updated maps and the list of addresses. The Update/Leave delivery of questionnaires took place between March 14 and April 10, 1998. In ZIP codes that consisted entirely of Update/Leave housing units, the USPS delivered an advance letter to “postal patrons” using third-class postage.

Under both methodologies, respondents were asked to mail back their questionnaires in provided postage paid envelopes.

Short and long form questionnaires were included in both delivery methodologies. Every housing unit received either a short or a long form. The long form sampling rate for the dress rehearsal varied within site.

Response rate was defined to include in its numerator the number of housing units in the mailback universe that returned a questionnaire that was not blank. The response rate denominator included the number of housing units in the mailback universe that were either

mailed a questionnaire or - in Update/Leave areas - received one delivered by a census enumerator. Housing units with an undeliverable status were included in these denominators.

Table 1 contains the mail response rates for the three Dress Rehearsal test sites by form type (short versus long). Dress Rehearsal response rates are typically lower than those for the census. This is due to the fact that the dress rehearsal does not have a “census environment.” A “census environment” allows for a higher response rate due to the publicity surrounding the census.

**Table 1. Dress Rehearsal Mail Response Rates**

Site	Total	Form Type	
		Short	Long
Sacramento	53.0 %	55.4 %	40.7 %
South Carolina	53.4 %	55.4 %	43.7 %
Menominee	39.4 %	40.6 %	32.4 %

### 1.3 Census 2000

In Census 2000, the questionnaire Mailout/Mailback system was the primary means of census taking. Cities, towns, and suburban areas with city-style addresses (house number and street name) as well as rural areas where city-style addresses are used for mail delivery comprised the Mailout/Mailback areas. Update/Leave areas consisted of addresses that are predominantly not city-style. Census enumerators delivered addressed questionnaires to Update/Leave housing units. Update/Leave enumerators also made any necessary corrections or additions to census maps and address lists as they delivered the questionnaires. In both delivery methodologies, the housing units were provided with first-class postage paid envelopes for returning their questionnaires.

#### 1.3.1 Types of Mailback Questionnaires

Census 2000 included two types of questionnaires for mailback:

- A short form was delivered to approximately 83 percent of all housing units. This form allowed the respondent to list up to 12 household members. It provided space for reporting the basic population and housing data (i.e. name, relationship, age, sex, race, Hispanic origin, and tenure) for up to six household members and the housing unit.
- A long form was delivered to a sample – approximately 17 percent – of all housing units. This form allowed the respondent to list up to 12 household members. It included all the questions on the short form, as well as additional housing unit questions and additional person questions for up to six household members.

There is one difference between the Mailout/Mailback questionnaire and the Update/Leave questionnaire. The Update/Leave questionnaire gave the respondent the opportunity to correct address information.

### *1.3.2 Multiple Mailing Strategy*

The Census Bureau used a mail strategy consisting of multiple contacts for Census 2000 in Mailout/Mailback areas. These contacts were:

- an advance notice letter to every mailout address that alerted households that the census form would be sent to them soon,
- a questionnaire to every mailout address, and
- a postcard to every mailout address that served as a thank you for respondents who had mailed back their questionnaire or as a reminder to those who had not.

This multiple mailing strategy used first-class postage for all mailing pieces in Mailout/Mailback areas. The volume for Mailout/Mailback areas was approximately 100 million pieces for each mailing.

There was also a mailout strategy used in Update/Leave areas for advance notice letters and reminder postcards. Advance notice letters were mailed to Update/Leave housing units that had “good” addresses using first-class mail. Reminder cards were sent to housing units in ZIP codes that consist entirely of Update/Leave housing units. The reminder postcards were addressed to “Residential Customer” and delivered using third-class postage. Consequently, some housing units received the advance notice letter and not the reminder card, some received the reminder card and not the advance notice letter, some received both, and some received neither. The expected volume for Update/Leave areas was about 22 million questionnaires (U.S. Bureau of the Census, 2001a).

### *1.3.3 Key Dates in Mailback Schedule*

Mailout/Mailback Enumeration Areas:

<u>Event</u>	<u>Date</u>
Advance notice letter delivered	March 6 - March 8
Mailout of Questionnaire	March 13 - March 15
Delivery of Reminder Cards	March 20 - March 22
Census Day	April 1
Cut for Nonresponse Followup (NRFU)	April 11
Late Cut for NRFU	April 18

Update/Leave Enumeration Areas:

<u>Event</u>	<u>Date</u>
Delivery of Advance Notice Letters	March 1 - March 3
Delivery of Questionnaires	March 3 - March 30
Delivery of Reminder Cards	March 27 - March 29
Census Day	April 1
Initial Cut for NRFU	April 11
Late Cut for NRFU	April 18

*1.3.4 Delivery of Questionnaires in Other Languages*

The Census Bureau mailed census forms in five other languages (Chinese, Korean, Spanish, Tagalog, and Vietnamese) to housing units that requested them. The advance notice letter provided the respondent with the opportunity to make this request.

## **2. METHODOLOGY**

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

- Decennial Master Address File (DMAF)
- Decennial Response File - Stage 2 (DRF-2)

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

The primary file used to calculate the mail response rates was the DMAF. We used this file to identify the housing units to include in the response rates. The DMAF contained variables that were used to limit the response rate denominator to housing units in mailback areas which were NRFU eligible. The MAILD variable from the DMAF identifies the date on which a mail return questionnaire was checked into the Data Capture Centers (DCCs). The DMAF also contains information on which form type (short versus long) was designated for each address. The definitions of the DMAF variables can be found in Appendix A.

### **2.2 Decennial Response File Stage 2 (DRF-2)**

The DRF-2 is the file representing the capture of questionnaire data from Census 2000 and was used to determine which housing units had a valid mail return. We created a variable called DC\_DRF from the RSOURCE variable on the DRF-2 to identify those addresses with a mail return. The DC\_DRF variable was created based on all returns for an address on the DRF-2. This variable was merged onto the Decennial Statistical Studies Division's (DSSD's) version of the DMAF in order to calculate the response rates. For information on how this variable was

defined, see Appendix B. The definitions of the DRF-2 variables used in calculating response rates can also be found in Appendix B.

## **2.3 Calculation of the Mail Response Rate**

The mail response rate denominator included housing units in mailback areas that were eligible for NRFU. The mail response rate numerator included housing units in the denominator that had a valid mail return and a mail return check-in date of April 18, 2000 (the date of the cut for the NRFU universe) or earlier (variable MAILD, values of '0101' through '0418', inclusive). Addresses with a valid mail return but no MAILD date (MAILD values of '0000', '0099', and '2000') were included in the mail response rate numerator if they did not have a NRFU or Coverage Improvement Followup (CIFU) data capture as determined using the DRF-2. The mail response rate was calculated for the geographic levels of tract, county, and state by summing the housing units up to each geographic level, dividing the numerator by the denominator, and rounding to the nearest tenth of a percentage point. The national mail response rate was created by summing the state numerators and denominators to the national level.

### *2.3.1 Mail Response Rate Denominator*

Several criteria were used to identify addresses on the DMAF for the mail response rate denominator. Only housing units (GQFLG= 0 or 3) in mailback areas (Type of Enumeration Area (TEA) variable, values of 1, 2, 6, 7, or 9) were included in the denominator. Additionally, only addresses that were not pre-identified as having inadequate addresses for the mailout were included in the denominator (UAA variable≠8). One of the DMAF variables, NRFU Universe (NRU variable, values of 1, 2, 3, or 4) was used to eliminate addresses not eligible for NRFU from the response rate denominator. The definitions of these DMAF variables can be found in Appendix A.

Separate mail response rate denominators were created for each of the three TEAs, for each of the two form types (short versus long), and for each TEA by form type. The three TEAs are Mailout/Mailback (TEA variable value of 1 or 6), Update/Leave (value of 2 or 9) and Urban Update Leave (UU/L) (value of 7). Questionnaire form type was determined using the ASAM variable (value of 1 for short form and 6 for long forms).

### *2.3.2 Mail Response Rate Numerator*

For a housing unit to be in the mail response rate numerator, it had to be a mail return that was in the response rate denominator. Mail returns were determined using the DC\_DRF variable from the DRF-2. An address had a valid mail return if this variable indicated that it had a data capture in the form of a paper mail return, an Internet return, a Be Counted form, a Telephone Questionnaire Assistance (TQA) return, or a Coverage Edit Followup (CEFU) return.

The MAILD variable from the DMAF was used to determine the date of a mail return's check-in. If the MAILD variable indicated that a return for the housing unit was received on or before April 18, 2000 ('0101' ≤ MAILD ≤ '0418'), then the address also was in the mail response rate numerator.

There were some addresses with mail returns according to DC\_DRF but no MAILD date (values of '0000', '0099', or '2000'). These addresses were assigned to the mail response rate numerator based on whether or not they had data captures in the NRFU or CIFU operations (DC\_DRF variable digits 6 or 7). Only addresses with no mail returns on April 18, 2000 were supposed to be included in those two followup operations. Therefore, addresses with neither a NRFU nor a CIFU data capture were assigned to the mail response rate numerator.

## **2.4 Calculation of the Final Response Rate**

Like the mail response rate, the final response rate is a measure of respondent participation in Census 2000. The difference is that the final response rate is not restricted to mail returns received before the cut for the NRFU universe. As with the mail response rates, the final response rates were calculated by dividing the numerator by the denominator and rounding to the nearest tenth of a percentage point.

### *2.4.1 Final Response Rate Denominator*

The final response rates have the same denominators calculated from the DMAF as the mail response rates (see Section 2.3.1).

### *2.4.2 Final Response Rate Numerator*

The final response rate numerator was calculated by including all valid mail returns as determined by the DC\_DRF variable from the DRF-2 that were in the response rate denominator. Most of these mail returns had MAILD check-in dates between January 1 and October 19, 2000 (October 19 was the last day we received a mail return). Mail returns with no MAILD date which the DC\_DRF variable showed with NRFU or CIFU data captures were assigned to the final response rate and not the mail response rate.

## **2.5 Calculation of the Daily Response Rates**

The daily response rates were calculated in a manner similar to the mail and final response rates. For the cumulative daily response rates, the denominators were the same for all rates. The numerators for each date of the year 2000 were calculated by limiting the numerators to addresses with mail return check-in dates on or before the particular date. For instance, the daily cumulative response rate numerator for May 5 was limited to addresses with a MAILD value less than or equal to '0505'. As previously stated, the final date on which questionnaires with a MAILD date were received was October 19 (MAILD='1019'). To determine the daily increase

in the response rate, the numerators were calculated by limiting the numerators to addresses with mail return check-in dates on a particular date. For those mail returns in the denominator that did not have a valid MAILD date on the DMAF, we assigned a date of either April 18 or December 31 based on the existence of a NRFU or CIFU data capture. If these mail returns had neither a NRFU nor a CIFU data capture, then they were assigned a date of April 18. Those mail returns with either a NRFU or a CIFU data capture were assigned to the December 31 response rate.

## **2.6 Application of Quality Assurance Procedures**

Quality Assurance procedures were applied to the design, implementation, analysis, and preparation of this report. A description of the procedures used is provided in the “Census 2000 Evaluation Program Quality Assurance Process.”

# **3. LIMITATIONS**

## **3.1 Missing Check-in Dates for Some Mail Returns**

Appendix C shows a table with nineteen categories into which all addresses in the response rate denominator can be grouped based on their values for the DRF-2 variable DC\_DRF and the DMAF variable MAILD. The rows of data in the table depend on the values of the DC\_DRF variable from the DRF-2. The columns in the table are the values of MAILD on the DMAF.

There were 418,845 valid mail returns (0.4 percent of the response rate denominator) for which the DMAF variable MAILD did not indicate a check-in date (cells 1A, 1B, 2A, 2B, 6A, 6B, 7A, and 7B of the table). These returns were assigned to either the mail response rate or the final response rate based on whether or not their addresses also had a NRFU and CIFU return. Housing units with a valid mail return, no check-in date, and no data capture for NRFU or CIFU were assigned a date of April 18 and included in the mail response rate. These 11,188 mail returns are shown in cells 1A, 2A, 6A, and 7A of the table. Mail returns without a valid MAILD value and with a data capture for NRFU or CIFU were assigned a date of December 31 and only included in the final response rate. These 407,657 housing units are shown in cells 1B, 2B, 6B, and 7B of the table. The other problem with the MAILD variable is that it only reflects the date of check-in at the DCC, not the date on which a questionnaire was completed, mailed, or even the date on which the form was received by the DCC.

## **3.2 No Precise Cut-off Date for Nonresponse Followup Universe**

A housing unit was counted toward the mail response rate numerator if MAILD indicated a check-in date prior to the late cut for NRFU. That date was set at April 18, 2000 but users of the rates should keep in mind that there was some noise in the data with respect to the date since the NRFU universe was generated on a flow basis. That is, the NRFU universe of all housing units

was not set instantaneously at midnight of April 18. The actual cut might have fallen on either side of that date for some housing units.

### **3.3 Housing Units in Denominator Not in Mailout**

Some housing units on the DMAF from Mailout/Mailback and Update/Leave areas were added after the mailback universe was set. Hence, they are being counted toward the response rate denominator but did not have a chance to respond by mailback means prior to the late cut for NRFU.

### **3.4 Issues with Comparison of Results to Previous Censuses**

The definition of mail response rate for Census 2000 is not exactly the same as that from previous censuses. These differences are the following:

- The TEAs in previous censuses were defined differently than those in 2000 and included different parts of the country.
- The timing of the mailout and the cut for NRFU were different for each of the 1970, 1980, 1990, and 2000 censuses.

Specifically for comparing 2000 to 1990:

- Like the 2000 final response rates, 1990 mail response rates at the state, county, and tract levels in 1990 were calculated based on all returns during the year. The 1990 national response rate was calculated with returns through the cut for NRFU.

### **3.5 Form Type of Mail Returns Based on Form Type in Mailout**

Since this report does not analyze item non-response on valid mail returns, it is possible that some long forms that were returned did not contain complete data. The response rate analysis by form type was done based on which form the addresses were sent by the Census Bureau.

## **4. RESULTS**

### **4.1 What were the Response Rates for the Nation?**

The results presented in this report are for the fifty states and the District of Columbia. They do not include the response rate for Puerto Rico. There were 117,661,748 housing units in mailback areas in Census 2000 that were eligible for NRFU and to which the USPS or the Census Bureau attempted to deliver questionnaires. This number is the national response rate denominator. Of this number, 20,082,777 housing units or 17.1 percent of the housing units received a long form



questionnaire. Thus, the sampling rate for the long forms was slightly above one in six or 16.7 percent.

Table 2 shows the total mail response rates and these rates by form type based on mail returns received on or before April 18, 2000. The data presented in the table are grouped into three TEAs - MO/MB (TEAs 1 and 6), U/L (TEAs 2 and 9), and UU/L (TEA 7). The national mail response rate was 64.3 percent, meaning that 75,608,035 housing units returned their questionnaires in time to avoid the necessity of enumeration in Nonresponse Followup. This mail response rate is less than one percentage point below the mail response rate of 65.0 percent in the 1990 Census (U.S. Bureau of the Census, 1991). The numerators and denominators for the mail response rates by TEA can be found in Appendix D.

The table shows that 66.4 percent or 64,792,554 housing units who received short forms returned them by April 18, 2000. In contrast, only about 53.9 percent of housing units who were delivered long forms returned them by that date. This 12.5 percentage point discrepancy means that a higher proportion of the data was collected by Census Bureau interviewers in NRFU on long forms than was the case for short form households. For information about the quality of data collected during NRFU for long forms and short forms, see Census 2000 Evaluation B.1: Analysis of the Imputation Process for 100 Percent Household Population Item (U.S. Bureau of the Census, 2001b). Approximately 14.3 percent of mail returns were long forms, a substantially lower percentage than the overall 17.1 percent sampling rate.

**Table 2. National Mail Response Rates as of April 18, 2000 by Form Type and Type of Enumeration Area for the Fifty States and the District of Columbia**

	Total	Form Type		Difference
		Short	Long	
TOTAL	64.3%	66.4%	53.9%	12.5%
Mailout/Mailback	65.4%	67.3%	54.6%	12.7%
Update/Leave	59.3%	61.9%	51.9%	10.0%
Urban Update/Leave	50.5%	52.2%	41.2%	11.0%

Source: DMAF and DRF-2.

The difference in response rates by form type is not surprising, given the difference in response burden between the short form and the long form. The short form only included seven questions. Person one was asked for name, age, sex, race, Hispanic ethnicity, and tenure. In addition to name, age, sex, race, and Hispanic ethnicity, persons two through six were also asked relationship to person one. In comparison, the long form had a total of 53 questions on a variety of topics including income, utilities, ancestry, and occupation. This gap between short form mail response rates and long form mail response rates varies by TEA, with MO/MB households having the greatest difference in response rates by form type and households in U/L areas having the smallest gap.

Another noticeable variation in response rates is that housing units in MO/MB areas returned a much greater proportion (65.4 percent) of their forms than those in U/L (59.3 percent) and, especially, UU/L (50.5 percent) areas. One explanation for this difference is that MO/MB areas are generally more prosperous and have greater exposure to media advertising the census than more sparsely populated U/L areas and inner-city UU/L areas. Another potential explanation is the delivery schedule for U/L and UU/L areas is longer than the schedule for MO/MB (March 3-30 vs. March 13-15). Residents in U/L and UU/L areas that received their questionnaires at the end of the delivery schedule had less time to fill them out than residents in MO/MB areas that received their questionnaires at the end of the MO/MB schedule. Additionally, there are often problems with postal delivery in UU/L and U/L areas and those households were less likely to receive the advance notice and reminder postcard. As a result of this discrepancy, a smaller proportion of residents of U/L and UU/L areas were self-enumerated than residents of primarily urban and suburban MO/MB areas with city-style addresses. For the mail response rates by form type for each of the fifty states, the District of Columbia, and Puerto Rico, see U.S. Bureau of the Census, 2002b.

Table 3 shows the final response rates as of December 31, 2000 by TEA and form type. The number of households in mailback areas that returned their questionnaires after April 18, 2000 was 3,703,140, increasing the final response rate by 3.1 percentage points over the mail response rate. The final response rate of 67.4 percent indicates the percentage of addresses in mailback areas that returned their questionnaires by the end of the year. Note the last form which was received and processed was October 19, 2000.

**Table 3. National Final Mail Response Rates as of December 31, 2000 by Form Type and Type of Enumeration Area for the Fifty States and the District of Columbia**

<b>Type of Enumeration</b>	<b>Form Type</b>			<b>Difference</b>
	<b>Total</b>	<b>Short</b>	<b>Long</b>	
TOTAL	67.4%	69.1%	59.4%	9.6%
Mailout/Mailback	68.5%	70.0%	60.4%	9.6%
Update/Leave	62.6%	64.6%	57.0%	7.6%
Urban Update/Leave	54.8%	56.1%	47.5%	8.7%

Source: DMAF and DRF-2.

Most of the patterns in the response rates revealed in Table 3 are similar to those in Table 2, though final response rates for all groups are, of course, higher. Short form final response rates (69.1 percent) are higher than long form final response rates (59.4 percent) and this difference is greatest in MO/MB areas. The MO/MB areas have the highest final response rate (68.5 percent) among TEAs and UU/L areas have the lowest (54.8 percent). One noteworthy difference between final and mail response rates is that the discrepancy between short form response rates and long form response rates is substantially lower for final response rates (9.6 percent) than for mail response rates (12.5 percent). Many households with long forms returned those forms at a

later date than households who received short forms. The form type gap decline in the final response rates was true for all TEAs.

Table 4 compares the mail response rates and the final response rates for the national total and for each of the three TEAs. The data reveal that there was a greater increase in UU/L and U/L areas between April 18 and the end of the year than in MO/MB areas. Thus, the gap among the TEAs that is evident in the mail response rates is not as great for the final response rates. The MO/MB mail response rate is 6.1 percentage points higher than the U/L mail response rate, while the MO/MB final response rate is about 5.9 percentage points higher than the U/L final response rate.

**Table 4. Comparison of Mail Response Rates as of April 18, 2000 and Final Response Rates as of December 31, 2000 by Type of Enumeration Area for the Fifty States and the District of Columbia**

Type of Enumeration	As of:		
	4/18/2000	12/31/2000	Difference
TOTAL	64.3%	67.4%	3.1%
Mailout/Mailback	65.4%	68.5%	3.1%
Update/Leave	59.3%	62.6%	3.3%
Urban Update/Leave	50.5%	54.8%	4.3%

Source: DMAF and DRF-2.

In Table 5, we compare mail response rates and final response rates by TEA for short forms. The patterns of these data are similar to those observed in Table 4, although the increase from mail response rates to final response rates (2.7 percent) is smaller for short forms than for the overall response rates (3.1 percent).

**Table 5. Comparison of Mail Response Rates as of April 18, 2000 and Final Response Rates as of December 31, 2000 for Short Forms by Type of Enumeration Area for the Fifty States and the District of Columbia**

	As of:		
	4/18/2000	12/31/2000	Difference
TOTAL	66.4%	69.1%	2.7%
Mailout/Mailback	67.3%	70.0%	2.7%
Update/Leave	61.9%	64.6%	2.6%
Urban Update/Leave	52.2%	56.1%	4.0%

Source: DMAF and DRF-2.

Table 6 shows the same rates as Tables 4 and 5, but for long forms. It is clear that a particularly large proportion of long form households in all areas returned mailback questionnaires after April 18, as compared to the short forms (Table 5).

**Table 6. Comparison of Mail Response Rates as of April 18, 2000 and Final Response Rates as of December 31, 2000 for Long Forms by Type of Enumeration Area for the Fifty States and the District of Columbia**

	As of:		Difference
	4/18/2000	12/31/2000	
TOTAL	53.9%	59.4%	5.6%
Mailout/Mailback	54.6%	60.4%	5.7%
Update/Leave	51.9%	57.0%	5.1%
Urban Update/Leave	41.2%	47.5%	6.3%

Source: DMAF and DRF-2.

**4.2 What were the Daily Response Rates?**

Figure 1, as shown in Appendix E, shows the cumulative mail response rates by form type for each day from March 3 until April 18, 2000. These dates correspond to the start of questionnaire delivery by Census Bureau staff in U/L areas and the cut for the NRFU universe, respectively. Addresses for which mail returns were received after April 18 were still visited by enumerators in NRFU. The x-axis on the figure shows the date and the y-axis shows the cumulative response rate for each date. The light-shaded line indicates the response rates for long forms, the medium-shaded line for short forms, and the thickest and darkest line is the total cumulative daily response rate. The data for Figures 1- 4 can be found in Appendices F and G. Appendix F shows the daily increase and cumulative mail returns for both the response rate numerator and the response rate, as well as key census dates. Appendix G-1 shows the same data for short forms and Appendix G-2 for long forms.

As indicated by Figure 1, the response rates gradually increased after the beginning of U/L delivery until about March 15. On that date, the mailout of questionnaires (March 13 through 15) in MO/MB areas caused a surge in the response rates as a large majority of households received their questionnaires and many began to return them. Due to the time required for the USPS to deliver mail, there is approximately a two day lag between the date that householders mailed their forms and their check-in at the DCCs. As expected, based on the lower overall response rates for long forms, the line indicating long form response rates increases more gradually than the lines for total and short form response rates. Within a week of the mailout of questionnaires, a substantial gap is evident between long form response rates and the higher short form and total response rates. Since most questionnaires are short forms, it is not surprising that the pattern of returns for short forms is parallel but slightly higher than that for the total response rate.

Aside from the initial surge in mail returns beginning March 15, the general pattern evidenced in Figure 1 is one in which the response rate increased rapidly for a few weeks and then began to level off. A second period of accelerated returns after the March 15 to 17 period occurred around March 20 with declines in the slope of the lines after March 23 and March 28. By the cut for the

NRFU universe on April 18, the increase in the response rates has become gradual, indicating that most households who are likely to return their forms had done so on that date.

Figure 2 (see Appendix E) better reveals some of the patterns mentioned above. This figure shows the daily increase of the response rates rather than the cumulative rates for each date from March 3 through April 18, 2000. As in Figure 1, different lines indicate the mail returns for the total and for each form type. This figure reveals certain interesting patterns in the daily return of questionnaires. As described before, a higher proportion of short form mail returns were received at earlier dates. Due to the greater amount of time and effort in filling out the long form, many long form households took longer to return their questionnaires. The initial peak period of returns after the mailout was much greater for short forms than long forms and occurred on earlier days. On March 15, 2.8 percent of short forms were returned and 1.0 percent of long forms were checked in. Two days later, on March 17, 4.6 percent of short forms were checked in and 1.9 percent of long forms were received.

As Figures 1 and 2 show, most short form mail returns came in between March 15 and March 28. Long forms were returned in the greatest numbers between March 20 and April 1. In fact, contrary to the short form pattern, the March 27/28 spike in returns was relatively much greater for long forms than the March 16/17 spike. For most of the period after March 28, long forms were actually being returned at a higher rate than short forms and the gap between the cumulative response rates for the two form types decreased. This is clear in Figure 2 which shows the line for long forms to be higher than that for short forms for almost every date after March 28. This indicates that a late cut for NRFU (April 18) resulted in a lower long form workload for NRFU, as compared to an April 10 date, and resulted in reducing the respondent burden. However, the rate of returns for both form types was well below one percent for every date after April 10.

The data indicate an increase in mail returns after the reminder postcards were mailed between March 20 and March 22. For both long forms and short forms, the greatest increase in mail response rates occurred on these dates and the days immediately following. The DCCs received short form returns at an especially high rate from March 20 through 23, with a peak daily increase of 5.2 percentage points on March 22, 2000. For long forms, this peak occurred from March 21 through 24 with the greatest daily increase of 4.2 percentage points on March 23 and 24.

Figure 2 also indicates that households, particularly those with long forms, exhibited some tendency to hold their questionnaires until Census Day (April 1, 2000). Figure 2 shows a major spike in long form returns and a smaller increase in short form returns on April 3 and 4, two days after Census Day. Between the initial cut for NRFU on April 10 and the final cut on April 18, households continued to send in mail returns at a substantial, though relatively low and dwindling, rate. During that period, 626,467 long forms or 3.1 percent of long forms were returned and 1,908,915 short forms or 2.0 percent of short forms were checked in. Without a final NRFU universe cut on April 18, the NRFU workload would have been increased by this number of housing units.

Figure 3 (see Appendix E) shows the increase in response rates by form type for the entire year of 2000. The left side of this figure is the same as Figure 1, but Figure 3 extends the timeline of cumulative mail returns from April 18 to December 31. The figure reveals that the response rates leveled off after April 18 with a gradually flattening slope for all three lines. The pattern was similar for the different form types although the gap in rates between long and short forms gradually narrowed as time passed. For the total response rate, 3,703,140 mail returns were checked in after April 18. These forms resulted in an increase in the response rate of 3.1 percentage points. Between April 18 and the end of the year, the short form response rate increased by 2.6 percentage points (2,588,285 housing units) and the long form increased by 5.6 percentage points (1,114,855 housing units). For nearly every single date after March 28, the daily percentage increase in response rate was greater for long forms than for short forms. As Appendices F and G show, the last confirmed date on which questionnaires were checked in was October 19, 2000, when three short forms were received. Prior to that day, 50 short forms and 13 long forms were checked in to the DCCs on September 15. The last date for which we have check-ins which resulted in a rate increase was June 15 for short forms when the short form response rate reached 68.7 percent. For long forms, this date was June 29 when the long form response rate leveled off at 58.9 percent.

Figure 4, as shown in Appendix E, is an extension of Figure 2 through the end of 2000. It shows the daily increase in the response rates by form type for the entire year. After April 18, the number of mail returns continued to decline until very few forms were being received by May 6. As noted above, a relatively higher increase was observed for long forms than short forms for these mail returns in late April, May, and June. The figure shows several small weekly peaks on Fridays in May when a substantial number of forms were checked in to the DCCs. It appears that shipments of mail returns may have arrived at the DCCs on Fridays or that the DCC staff may have held mail returns during the week to check in on Friday. The largest single-day receipt of mail returns after April 18 was on June 15 when 95,721 long forms and 146,022 short forms were checked in.

The final increase in the response rates that appears on Figure 4 is on December 31, 2000. Those 407,657 questionnaires are the mail returns for which no mail return check-in date was recorded and for which there was a NRFU or CIFU data capture in addition to a mail return data capture. Since only mail returns received after April 18 could be in the NRFU or CIFU workloads, we determined that these mail returns came in after that date. We assigned a check-in date of December 31 to these mail returns and they were included in the final response rate. Mail returns without a check-in date that were not in the NRFU and CIFU universe were assigned a date of April 18 and included in the mail response rate.

The data presented in Figure 4 and in Appendices F and G show the potential effect on the NRFU workload of using a later cut date for the NRFU universe. In between April 19 and April 25, 1,052,712 mail returns were checked in, representing 28.4 percent of the returns received after April 18. If the final NRFU cut had occurred one week later, around April 25 instead of April 18, then the NRFU workload would have been reduced by 1,052,712 housing

units, or about 2.5 percent of the NRFU workload. This reduction in the workload would have saved close to \$28.4 million, given that the cost of enumerating one housing unit in NRFU is just under \$27 (see U.S. Bureau of the Census, 2002c). Since mail returns that were received after April 18 were disproportionately long forms, the savings were potentially even greater. If the cut for the NRFU universe had been delayed one more week until May 2, then the NRFU workload would have been reduced by approximately 598,000 additional housing units. However, a later start of the NRFU operation, despite a lower workload, could result in greater scheduling challenges.

Some of the daily fluctuation of mail returns observed in Figures 2 and 4 can be explained by the effect of the day of the week. More questionnaires were checked in on Thursdays (17.7 percent of all mail returns during the year), Fridays (16.4 percent), and Wednesdays (16.3 percent) than on other days of the week. Relatively few questionnaires came in on Sundays (9.3 percent) and Saturdays (11.0 percent). The dearth of check-ins on Sunday is probably the result of the fact that the USPS does not normally deliver mail on Sunday and that the DCCs worked fewer hours on weekends and thus checked in fewer forms on those days. Also, if respondents held their questionnaires until the beginning of a work week (Monday) to mail, then their forms would likely have arrived Wednesday or Thursday at the DCCs, explaining the increase in check-ins on those days.

#### **4.3 How much did the Response Rates Differ from Census 2000 Return Rates?**

Table 7 compares the mail response rates for Census 2000 to the mail return rates. 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 the NRFU workload. The denominator of the mail return rate is calculated from the Hundred percent Census Edited File with the reinstated housing units (HCEF\_D'). It includes all occupied housing units in mailback TEAs that were added to the address file prior to NRFU and had addresses that were delivered by the USPS or during the Census Bureau delivery operation. The March 2001 MAF extract provided information on which addresses were added prior to NRFU. The response rate denominator (117,661,748 housing units) is larger than the return rate denominator (101,398,131), largely because the response rate denominator includes vacant housing units, Undeliverable As Addressed (UAA) addresses, some addresses deleted in U/L and UU/L delivery, and deleted in either NRFU or CIFU. The return rate numerator (75,163,020 housing units) is calculated similarly to the response rate numerator (75,608,035 housing units). For more information on mail return rates and their calculation see U.S. Bureau of the Census, 2002b.

The first column of data in Table 7 shows the mail response rates broken down by total, form type, TEA, and form type and TEA. The next column shows the equivalent mail return rates and the last column shows the difference between the two rates. The total national mail return rate was 74.1 percent, 9.9 percentage points higher than the mail response rate. The difference

between the two rates is greater for short forms than long forms and greater for UU/L and U/L than for MO/MB areas.

**Table 7. Mail Response and Mail Return Rates as of April 18, 2000 by Form Type and Type of Enumeration for the Fifty States and the District of Columbia**

		Rate		
		Response	Return	Difference
TOTAL		64.3%	74.1%	9.9%
Form Type	Short	66.4%	76.4%	10.0%
	Long	53.9%	63.0%	9.2%
Type of Enumeration	Mailout/Mailback	65.4%	75.1%	9.7%
	Update/Leave	59.3%	69.6%	10.3%
	Urban Update/Leave	50.5%	63.7%	13.1%
Form Type and Type of Enumeration	Short			
	Mailout/Mailback	67.3%	77.2%	9.9%
	Update/Leave	61.9%	72.3%	10.4%
	Urban Update/Leave	52.2%	65.7%	13.5%
	Long			
	Mailout/Mailback	54.6%	63.4%	8.8%
	Update/Leave	51.9%	61.9%	10.0%
Urban Update/Leave	41.2%	52.3%	11.1%	

Source: HCEF\_D', DMAF, DRF-2, and March 2001 MAF Extract.

Table 8 compares the final return and final response rates by form type and TEA. The final return rate is similar to the mail return rate but includes all mail returns through the end of the year 2000. The total final return rate was 78.4 percent (79,530,100 housing units), 11.0 percentage points higher than the 67.4 percent (79,311,175) final response rate. This is a greater difference than the difference in the mail response and return rates. The differences between final return and response rates are about the same for both form types and are greater in UU/L and U/L areas than in MO/MB areas.



**Table 8. Final Response and Final Return Rates as of December 31, 2000 by Form Type and Type of Enumeration for the Fifty States and the District of Columbia**

		<b>Rate</b>		
		<b>Response</b>	<b>Return</b>	<b>Difference</b>
TOTAL		67.4%	78.4%	11.0%
Form Type	Short	69.1%	80.1%	11.0%
	Long	59.4%	70.5%	11.1%
Type of Enumeration	Mailout/Mailback	68.5%	78.6%	10.1%
	Update/Leave	62.6%	77.9%	15.3%
	Urban Update/Leave	54.8%	70.8%	16.0%
Form Type and Type of Enumeration	Short			
	Mailout/Mailback	70.0%	80.1%	10.1%
	Update/Leave	64.6%	79.9%	15.4%
	Urban Update/Leave	56.1%	72.3%	16.2%
	Long			
	Mailout/Mailback	60.4%	69.9%	9.5%
	Update/Leave	57.0%	72.1%	15.1%
Urban Update/Leave	47.5%	62.5%	15.0%	

Source: HCEF\_D', DMAF, DRF-2, and March 2001 MAF Extract.

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## Appendix A: Decennial Master Address File (DMAF) Variable Definitions

<b>ST</b>	<b>Collection FIPS State Code</b>
<b>COU</b>	<b>Collection FIPS County Code</b>
<b>TRACT</b>	<b>Collection Census Tract</b>
<b>MAFID</b>	<b>MAF and DMAF ID</b> characters 1-2 = state code when the MAF ID was assigned characters 3-5 = county code when the MAF ID was assigned characters 6-12 = control ID
<b>TEA</b>	<b>Type of Enumeration Area</b> 1 = Mailout Mailback 2 = Update Leave 3 = List Enumerate 4 = Remote List Enumerate 5 = Rural Update Enumerate 6 = Military in Update Leave Area 7 = Urban Update Leave 8 = Urban Update Enumerate 9 = Update Leave (converted from TEA 1)
<b>GQFLG</b>	<b>Group Quarters Housing Unit Flag</b> 0 = Housing Unit 1 = Special Place 2 = Group Quarters 3 = GQ Embedded Housing Unit
<b>ASAM</b>	<b>A Priori Sample</b> 1 = Short Form 6 = Long Form
<b>NRU</b>	<b>Nonresponse Followup Universe</b> 0 = Universe not set 1 = Not in NRFU; data received (This indicates that a form was checked in; it does not guarantee that the form has any data.) 2 = Not in NRFU; but NRD, NRS, NRC and NRPOP will be set by Update/Enumerate or List/Enumerate 3 = In NRFU, Nonresponse 4 = In NRFU, Too late for mailout

**DC\_DRF(12) Source of Data Capture<sup>4</sup>**

0 = None

1 = Some Data Capture

The types of data capture for housing units are -

- (1) Mail Return (*RSOURCE: 1, 4 - 10*)
- (2) Telephone Questionnaire Assistance (TQA) (*RSOURCE: 31*)
- (3) Internet (*RSOURCE: 30*)
- (4) Be Counted Form (BCF) (*RSOURCE: 11, 12*)
- (5) CEFU Data Capture (*RSOURCE: 34 - 36*)
- (6) NRFU Data Capture (*RSOURCE: 17 - 21*)
- (7) CIFU Data Capture (*RSOURCE: 22 - 24*)
- (8) TQA/BCF (*RSOURCE: 3, 32, 33*)
- (9) List Enumerate/Update Enumerate (*RSOURCE: 13 - 16*)
- (10) Group Quarters (*RSOURCE: 25 - 29*)
- (11) Orphans (*RSOURCE: 37*)
- (12) Other (*RSOURCE: -1*)

**MAILD**

**Mail Return Check-in Month and Day**

0000 = No Mail Return Check-in

0099 = Reverse Check-in

0101 - 1231 = Check-in Day of 1<sup>st</sup> Return

2000 = Check-in, Date Unknown

**UAA**

**Undeliverable As Addressed (UAA)**

0 = No UAA check-in

1 = UAA check-in in NPC only

2 = UAA check-in in NPC; in LCO check-in; no LCO check-out

3 = UAA check-in in NPC; no LCO check-in; in LCO check-out

4 = UAA check-in in NPC; in LCO check-in; in LCO check-out

5 = No UAA check-in in NPC; in LCO check-in; no LCO check-out

6 = No UAA check-in in NPC; no LCO check-in; in LCO check-out

7 = No UAA check-in in NPC; in LCO check-in; in LCO check-out

8 = Not enough Address information - Excluded from the Mailout

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<sup>4</sup>This is a DRF2 variable and is based on the *RSOURCE* variable from the DRF-2. It was appended to the DMAF SAS dataset produced by the DSSD.

## Appendix B: Decennial Response File Stage 2 (DRF-2) Variable Definitions

<b>RST</b>	<b>Collection FIPS State Code</b>
<b>RUID</b>	<b>Unit ID Number (DMAF)</b> characters 1-2 = state (when MAF ID was assigned) characters 3-5 = county characters 6-12 = sequence ID
<b>RSOURCE</b>	<b>Source of Return</b> -1 = Not Computed 1 = Paper mail back questionnaire from mail out 2 = Paper mail back questionnaire from TQA mail out WITH ID 3 = Paper mail back questionnaire from TQA mail out with NO ID 4 = Paper mail back questionnaire from Update Leave 5 = Paper mail back questionnaire from Update Leave ADD 6 = Paper mail back questionnaire from Update Leave SUBSTITUTE 7 = Paper mail back questionnaire from Urban Update Leave 8 = Paper mail back questionnaire from Urban Update Leave ADD 9 = Paper mail back questionnaire from Urban Update Leave SUBSTITUTE 10 = Paper mail back questionnaire from Request for Foreign Language 11 = Paper mail back questionnaire from BCF marked as whole household 12 = Paper mail back questionnaire from BCF partial household (i.e., NOT marked as whole household) 13 = Paper enumerator questionnaire from List Enumerate 14 = Paper enumerator questionnaire from Update Enumerate 15 = Paper enumerator questionnaire from Update Enumerate ADD 16 = Paper enumerator questionnaire from Update Enumerate SUBSTITUTE 17 = Paper enumerator questionnaire from Nonresponse Followup (NRFU) 18 = Paper enumerator questionnaire from NRFU ADD 19 = Paper enumerator questionnaire from NRFU SUBSTITUTE 20 = Paper enumerator questionnaire from NRFU Whole Household Usual Home Elsewhere (WHUHE) 21 = Paper enumerator questionnaire from NRFU In-mover 22 = Paper enumerator questionnaire from Coverage Improvement Followup (CIFU) 23 = Paper enumerator questionnaire from CIFU ADD 24 = Paper enumerator questionnaire from CIFU SUBSTITUTE 25 = Paper enumerator questionnaire from T-Night 26 = Paper questionnaire for UHE from Service-based Enumeration (SBE) (Individual Census Questionnaire (ICQ)) 27 = Paper questionnaire for UHE from Group Quarters (GQ) enumeration (Individual Census Questionnaire (ICQ)) 28 = Paper questionnaire for UHE from Military GQ enumeration (Military Census Report (MCR)) 29 = Paper questionnaire for UHE from Shipboard GQ enumeration (Shipboard Census Report (SCR))

- 30 = Electronic short form from IDC
- 31 = Electronic TQA reverse-CATI short form
- 32 = Electronic TQA reverse-CATI BCF for whole household
- 33 = Electronic TQA reverse-CATI BCF for partial household
- 34 = Electronic Coverage Edit Followup (CEFU) from long or short form
- 35 = Electronic CEFU from BCF for whole household
- 36 = Electronic CEFU from IDC
- 37 = Paper enumerator continuation form - unlinked “orphan”

**DC\_DRF(12) Source of Data Capture**

- 0 = None
- 1 = Some Data Capture

The types of data capture for housing units are -

- (1) Mail Return (*RSOURCE: 1, 4 - 10*)
- (2) Telephone Questionnaire Assistance (TQA) (*RSOURCE: 31*)
- (3) Internet (*RSOURCE: 30*)
- (4) Be Counted Form (BCF) (*RSOURCE: 11, 12*)
- (5) CEFU Data Capture (*RSOURCE: 34 - 36*)
- (6) NRFU Data Capture (*RSOURCE: 17 - 21*)
- (7) CIFU Data Capture (*RSOURCE: 22 - 24*)
- (8) TQA/BCF (*RSOURCE: 3, 32, 33*)
- (9) List Enumerate/Update Enumerate (*RSOURCE: 13 - 16*)
- (10) Group Quarters (*RSOURCE: 25 - 29*)
- (11) Orphans (*RSOURCE: 37*)
- (12) Other (*RSOURCE: -1*)

**Appendix C: Nineteen Response Categories of Housing Units in the Response Rate Denominator**

		Mail Check in Date (MAILD)										
Data Capture Flags (DC_DRF from DRF-2)		No Mail Check in (0000 or 2000)		Reverse Check in (0099)		Mail Returns Jan 1 - Apr 10 (0101 - 0410)	Late Mail Returns Apr 11 - Apr 18 (0411 - 0418)	Late Late Mail Returns Apr 19 - Dec 31 (0419 - 1231)	Total			
		1A*	1B*	2A*	2B*	3	4	5				
Mail Returns	Paper Mail Return or TQA or Internet or Be Counted or TQA/Be Counted	1,939	401,666	8,657	2,646	71,943,511	2,460,317	3,247,472	78,066,208			
		6A*	6B*	7A*	7B*	8	9	10				
	CEFU	13	2,592	579	753	1,129,142	63,877	48,011	1,244,967			
Non- Mail Returns	NRFU or CIFU or No Data Capture or Other Data Capture	11		12		13	14	15				
		28,270,977		987,902		122,671	6,020	8,963,003	38,350,573			
	Total	28,677,187		1,000,537		73,195,324	2,530,214	12,258,486	117,661,748			

\* A - Neither NRFU nor CIFU data capture      B-Either NRFU or CIFU data capture



**Appendix D: Response Rate Numerators and Denominators**

		<b>Numerator-April 18, 2000</b>			<b>Numerator-December 31, 2000</b>			<b>Denominator</b>		
		<b>Form Type</b>			<b>Form Type</b>			<b>Form Type</b>		
<b>State</b>	<b>Total</b>	<b>Short</b>	<b>Long</b>	<b>Total</b>	<b>Short</b>	<b>Long</b>	<b>Total</b>	<b>Short</b>	<b>Long</b>	
TOTAL	75,608,035	64,792,554	10,815,481	79,311,175	67,380,839	11,930,336	117,661,748	97,578,971	20,082,777	
Mailout/ Mailback	62,890,520	54,955,537	7,934,983	65,887,892	57,119,451	8,768,441	96,184,164	81,658,117	14,526,047	
Type of Enumeration	Update/ Leave	12,591,087	9,726,223	2,864,864	13,286,080	10,142,192	3,143,888	21,227,339	15,708,543	5,518,796
	Urban Update/ Leave	126,428	110,794	15,634	137,203	119,196	18,007	250,245	212,311	37,934

Source: DMAF and DRF-2

Note: National totals do not include Puerto Rico.

**Appendix E: Four Figures Illustrating the Mail Response Rates as of April 18, 2000 and the Final Mail Response Rates as of December 31, 2000 by Day and Form Type and Daily Percentage Increase in Response Rates by Day and Form Type**

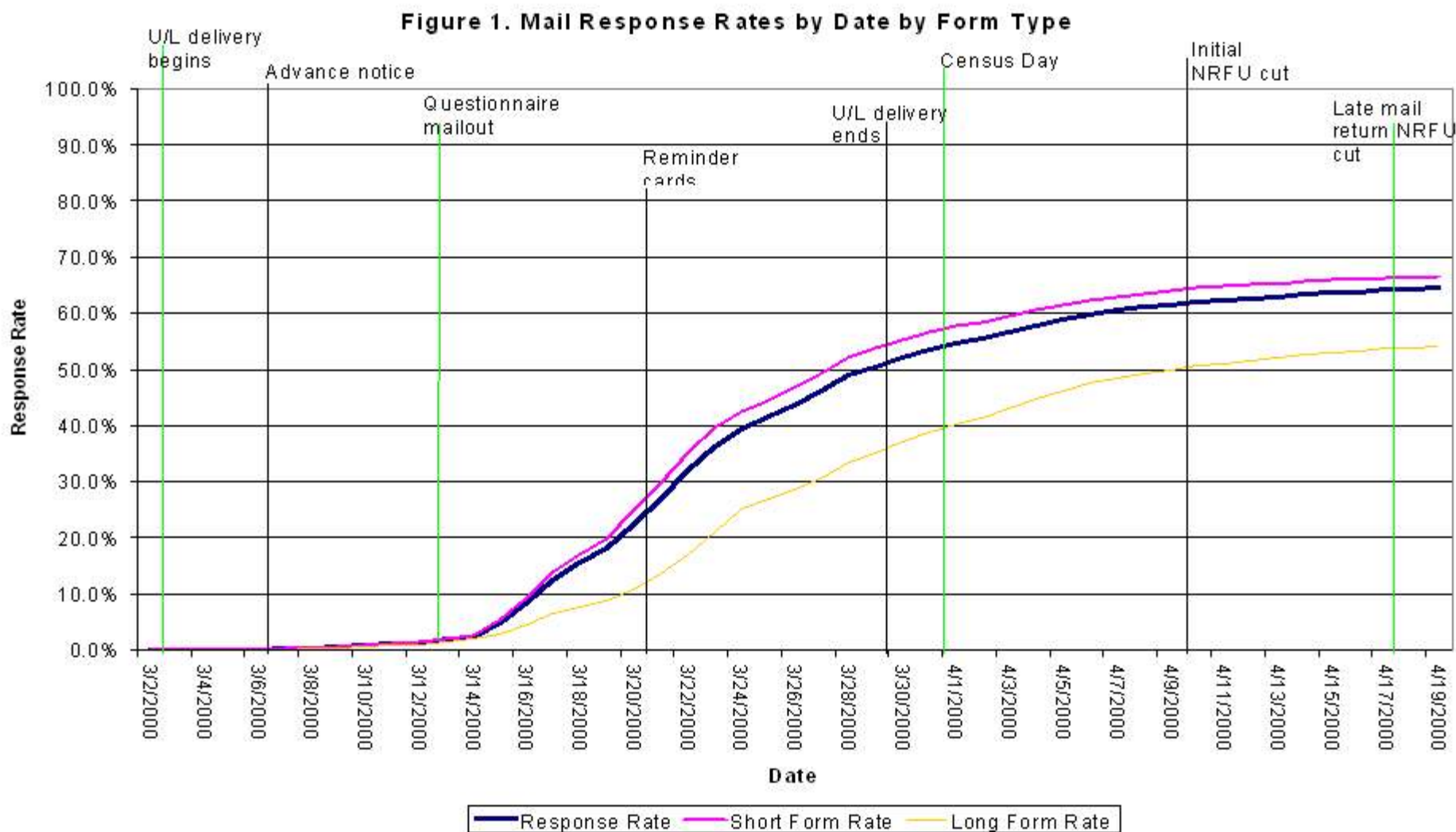
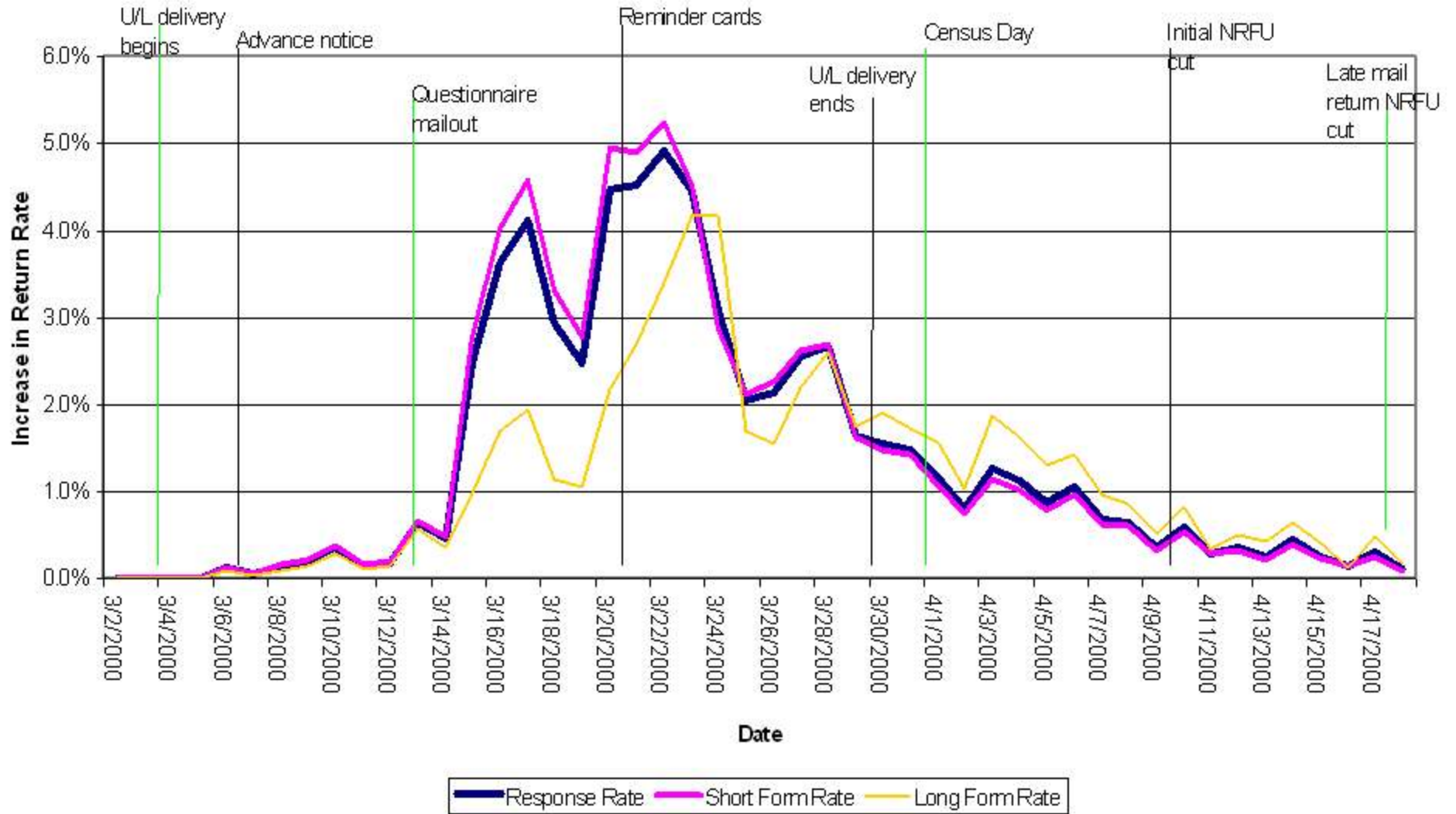


Figure 2. Daily Percentage Increase in Mail Response Rates by Form Type



**Figure 3. Response Rates by Date by Form Type**

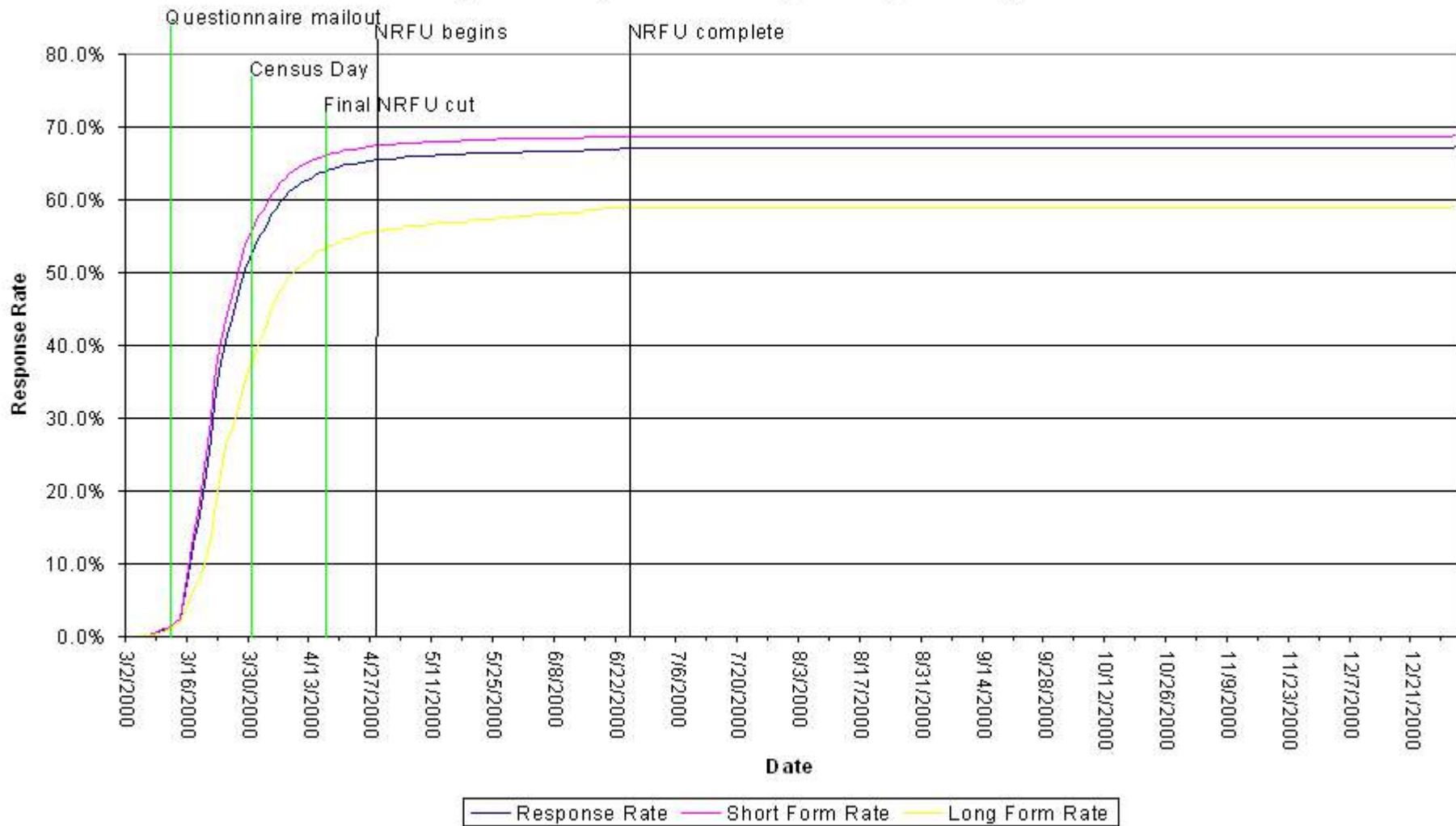
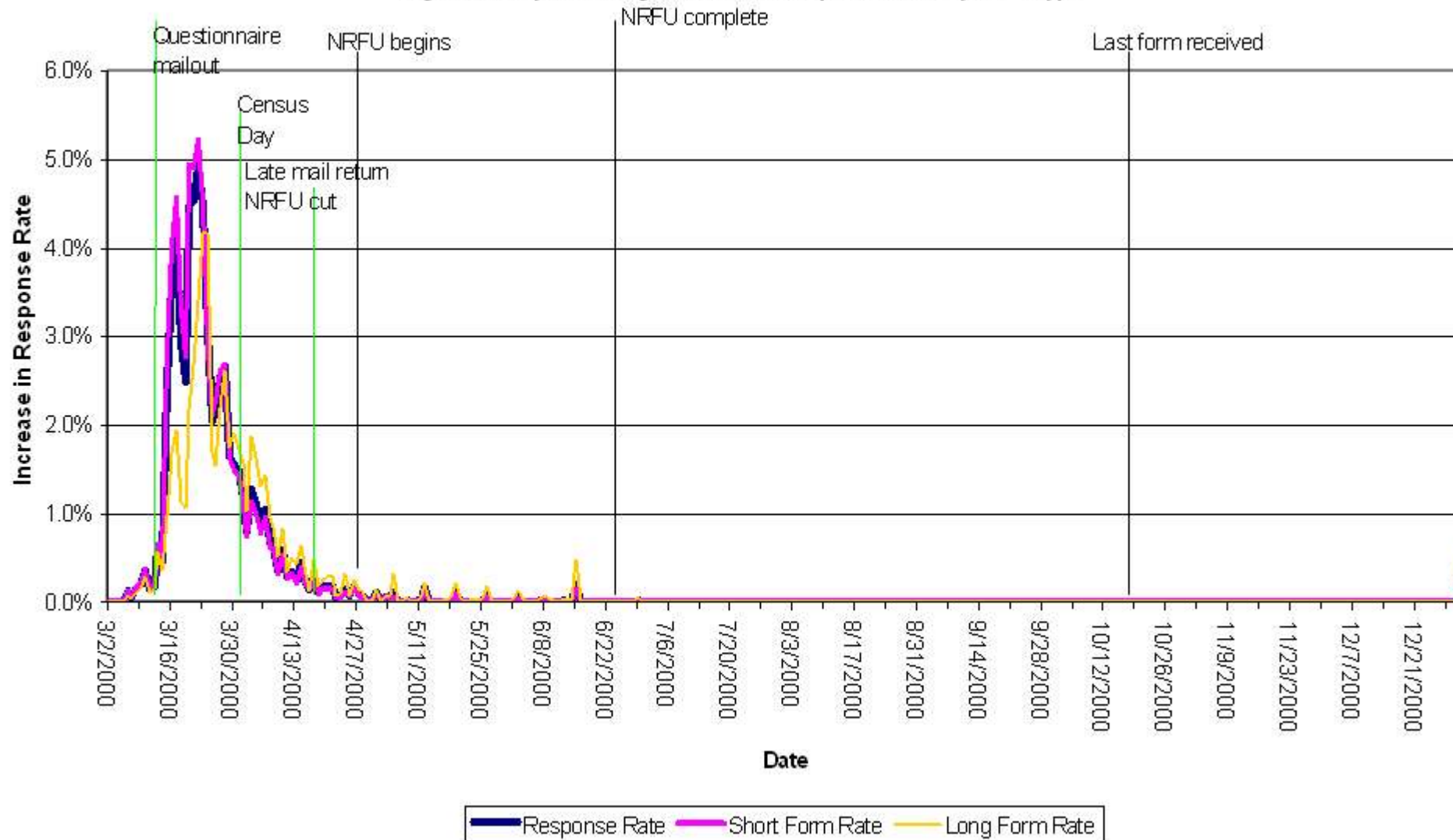


Figure 4. Daily Percentage Increase in Response Rates by Form Type



## Appendix F: Mail Response Numerators and Rates by Day

Day	Date	Mail Response Numerator		Mail Response Rate		Key dates
		Daily Increase	Cumulative	Daily Increase	Cumulative	
Thursday	03/02/2000	-	0	0.0%	0.0%	
Friday	03/03/2000	1,397	1,397	0.0%	0.0%	U/L delivery begins
Saturday	03/04/2000	65	1,462	0.0%	0.0%	
Sunday	03/05/2000	52	1,514	0.0%	0.0%	
Monday	03/06/2000	149,634	151,148	0.1%	0.1%	Advance notice delivery begins
Tuesday	03/07/2000	62,469	213,617	0.1%	0.2%	
Wednesday	03/08/2000	176,971	390,588	0.2%	0.3%	Advance notice delivery ends
Thursday	03/09/2000	235,918	626,506	0.2%	0.5%	
Friday	03/10/2000	422,723	1,049,229	0.4%	0.9%	
Saturday	03/11/2000	180,427	1,229,656	0.2%	1.0%	
Sunday	03/12/2000	217,372	1,447,028	0.2%	1.2%	
Monday	03/13/2000	756,539	2,203,567	0.6%	1.9%	Questionnaire mailout delivery begins
Tuesday	03/14/2000	550,444	2,754,011	0.5%	2.3%	
Wednesday	03/15/2000	2,915,464	5,669,475	2.5%	4.8%	Questionnaire mailout delivery ends
Thursday	03/16/2000	4,269,016	9,938,491	3.6%	8.4%	
Friday	03/17/2000	4,851,766	14,790,257	4.1%	12.6%	
Saturday	03/18/2000	3,454,841	18,245,098	2.9%	15.5%	
Sunday	03/19/2000	2,923,374	21,168,472	2.5%	18.0%	
Monday	03/20/2000	5,262,381	26,430,853	4.5%	22.5%	Reminder card delivery begins
Tuesday	03/21/2000	5,326,760	31,757,613	4.5%	27.0%	
Wednesday	03/22/2000	5,791,069	37,548,682	4.9%	31.9%	Reminder card delivery ends
Thursday	03/23/2000	5,250,239	42,798,921	4.5%	36.4%	
Friday	03/24/2000	3,627,566	46,426,487	3.1%	39.5%	
Saturday	03/25/2000	2,420,556	48,847,043	2.1%	41.5%	
Sunday	03/26/2000	2,511,970	51,359,013	2.1%	43.7%	
Monday	03/27/2000	2,993,679	54,352,692	2.5%	46.2%	

**Appendix F: Mail Response Numerators and Rates by Day**

Day	Date	Mail Response Numerator		Mail Response Rate		Key dates
		Daily Increase	Cumulative	Daily Increase	Cumulative	
Tuesday	03/28/2000	3,141,074	57,493,766	2.7%	48.9%	
Wednesday	03/29/2000	1,939,206	59,432,972	1.6%	50.5%	
Thursday	03/30/2000	1,829,908	61,262,880	1.6%	52.1%	U/L delivery ends
Friday	03/31/2000	1,744,944	63,007,824	1.5%	53.6%	
Saturday	04/01/2000	1,365,370	64,373,194	1.2%	54.7%	Census Day
Sunday	04/02/2000	943,350	65,316,544	0.8%	55.5%	
Monday	04/03/2000	1,490,946	66,807,490	1.3%	56.8%	
Tuesday	04/04/2000	1,320,770	68,128,260	1.1%	57.9%	
Wednesday	04/05/2000	1,034,302	69,162,562	0.9%	58.8%	
Thursday	04/06/2000	1,233,153	70,395,715	1.0%	59.8%	
Friday	04/07/2000	800,075	71,195,790	0.7%	60.5%	
Saturday	04/08/2000	765,257	71,961,047	0.6%	61.2%	
Sunday	04/09/2000	419,715	72,380,762	0.4%	61.5%	
Monday	04/10/2000	691,891	73,072,653	0.6%	62.1%	Initial NRFU cut
Tuesday	04/11/2000	342,541	73,415,194	0.3%	62.4%	
Wednesday	04/12/2000	411,695	73,826,889	0.3%	62.7%	
Thursday	04/13/2000	302,181	74,129,070	0.3%	63.0%	
Friday	04/14/2000	523,441	74,652,511	0.4%	63.4%	
Saturday	04/15/2000	305,789	74,958,300	0.3%	63.7%	
Sunday	04/16/2000	167,706	75,126,006	0.1%	63.8%	
Monday	04/17/2000	352,030	75,478,036	0.3%	64.1%	
Tuesday	04/18/2000	129,999	75,608,035	0.1%	64.3%	Late mail return NRFU cut
Wednesday	04/19/2000	210,358	75,818,393	0.2%	64.4%	
Thursday	04/20/2000	209,631	76,028,024	0.2%	64.6%	
Friday	04/21/2000	215,905	76,243,929	0.2%	64.8%	
Saturday	04/22/2000	68,345	76,312,274	0.1%	64.9%	

## Appendix F: Mail Response Numerators and Rates by Day

Day	Date	Mail Response Numerator		Mail Response Rate		Key dates
		Daily Increase	Cumulative	Daily Increase	Cumulative	
Sunday	04/23/2000	81,653	76,393,927	0.1%	64.9%	
Monday	04/24/2000	175,577	76,569,504	0.1%	65.1%	
Tuesday	04/25/2000	91,243	76,660,747	0.1%	65.2%	
Wednesday	04/26/2000	207,548	76,868,295	0.2%	65.3%	
Thursday	04/27/2000	108,341	76,976,636	0.1%	65.4%	NRFU begins
Friday	04/28/2000	90,307	77,066,943	0.1%	65.5%	
Saturday	04/29/2000	28,058	77,095,001	0.0%	65.5%	
Sunday	04/30/2000	1,157	77,096,158	0.0%	65.5%	
Monday	05/01/2000	139,211	77,235,369	0.1%	65.6%	
Tuesday	05/02/2000	23,404	77,258,773	0.0%	65.7%	
Wednesday	05/03/2000	76,067	77,334,840	0.1%	65.7%	
Thursday	05/04/2000	92,806	77,427,646	0.1%	65.8%	
Friday	05/05/2000	126,560	77,554,206	0.1%	65.9%	
Saturday	05/06/2000	29,679	77,583,885	0.0%	65.9%	
Sunday	05/07/2000	1,912	77,585,797	0.0%	65.9%	
Monday	05/08/2000	24,577	77,610,374	0.0%	66.0%	
Tuesday	05/09/2000	9,107	77,619,481	0.0%	66.0%	
Wednesday	05/10/2000	15,482	77,634,963	0.0%	66.0%	
Thursday	05/11/2000	40,721	77,675,684	0.0%	66.0%	
Friday	05/12/2000	190,053	77,865,737	0.2%	66.2%	
Saturday	05/13/2000	4,321	77,870,058	0.0%	66.2%	
Sunday	05/14/2000	8,041	77,878,099	0.0%	66.2%	
Monday	05/15/2000	3,937	77,882,036	0.0%	66.2%	
Tuesday	05/16/2000	11,945	77,893,981	0.0%	66.2%	
Wednesday	05/17/2000	17,286	77,911,267	0.0%	66.2%	
Thursday	05/18/2000	34,993	77,946,260	0.0%	66.2%	



## Appendix F: Mail Response Numerators and Rates by Day

Day	Date	Mail Response Numerator		Mail Response Rate		Key dates
		Daily Increase	Cumulative	Daily Increase	Cumulative	
Friday	05/19/2000	134,413	78,080,673	0.1%	66.4%	
Saturday	05/20/2000	28,279	78,108,952	0.0%	66.4%	
Sunday	05/21/2000	6,373	78,115,325	0.0%	66.4%	
Monday	05/22/2000	9,765	78,125,090	0.0%	66.4%	
Tuesday	05/23/2000	8,310	78,133,400	0.0%	66.4%	
Wednesday	05/24/2000	18,270	78,151,670	0.0%	66.4%	
Thursday	05/25/2000	33,353	78,185,023	0.0%	66.4%	
Friday	05/26/2000	98,298	78,283,321	0.1%	66.5%	
Saturday	05/27/2000	13,414	78,296,735	0.0%	66.5%	
Sunday	05/28/2000	6,801	78,303,536	0.0%	66.6%	
Monday	05/29/2000	1,057	78,304,593	0.0%	66.6%	
Tuesday	05/30/2000	7,864	78,312,457	0.0%	66.6%	
Wednesday	05/31/2000	7,935	78,320,392	0.0%	66.6%	
Thursday	06/01/2000	17,131	78,337,523	0.0%	66.6%	
Friday	06/02/2000	67,302	78,404,825	0.1%	66.6%	
Saturday	06/03/2000	14,539	78,419,364	0.0%	66.6%	
Sunday	06/04/2000	6,880	78,426,244	0.0%	66.7%	
Monday	06/05/2000	9,015	78,435,259	0.0%	66.7%	
Tuesday	06/06/2000	9,931	78,445,190	0.0%	66.7%	
Wednesday	06/07/2000	24,731	78,469,921	0.0%	66.7%	
Thursday	06/08/2000	32,955	78,502,876	0.0%	66.7%	
Friday	06/09/2000	17,698	78,520,574	0.0%	66.7%	
Saturday	06/10/2000	8,450	78,529,024	0.0%	66.7%	
Sunday	06/11/2000	5,937	78,534,961	0.0%	66.7%	
Monday	06/12/2000	20,851	78,555,812	0.0%	66.8%	
Tuesday	06/13/2000	10,689	78,566,501	0.0%	66.8%	

**Appendix F: Mail Response Numerators and Rates by Day**

Day	Date	Mail Response Numerator		Mail Response Rate		Key dates
		Daily Increase	Cumulative	Daily Increase	Cumulative	
Wednesday	06/14/2000	11,928	78,578,429	0.0%	66.8%	
Thursday	06/15/2000	241,743	78,820,172	0.2%	67.0%	
Friday	06/16/2000	9,857	78,830,029	0.0%	67.0%	
Saturday	06/17/2000	3,672	78,833,701	0.0%	67.0%	
Sunday	06/18/2000	3,127	78,836,828	0.0%	67.0%	
Monday	06/19/2000	4,632	78,841,460	0.0%	67.0%	
Tuesday	06/20/2000	3,883	78,845,343	0.0%	67.0%	
Wednesday	06/21/2000	3,705	78,849,048	0.0%	67.0%	
Thursday	06/22/2000	3,425	78,852,473	0.0%	67.0%	
Friday	06/23/2000	2,496	78,854,969	0.0%	67.0%	
Saturday	06/24/2000	1,067	78,856,036	0.0%	67.0%	
Sunday	06/25/2000	493	78,856,529	0.0%	67.0%	
Monday	06/26/2000	2,612	78,859,141	0.0%	67.0%	NRFU complete
Tuesday	06/27/2000	1,953	78,861,094	0.0%	67.0%	
Wednesday	06/28/2000	2,239	78,863,333	0.0%	67.0%	
Thursday	06/29/2000	24,147	78,887,480	0.0%	67.0%	
Friday	06/30/2000	1,580	78,889,060	0.0%	67.0%	
Saturday	07/01/2000	765	78,889,825	0.0%	67.0%	
Sunday	07/02/2000	127	78,889,952	0.0%	67.0%	
Monday	07/03/2000	-	78,889,952	0.0%	67.0%	
Tuesday	07/04/2000	-	78,889,952	0.0%	67.0%	
Wednesday	07/05/2000	-	78,889,952	0.0%	67.0%	
Thursday	07/06/2000	-	78,889,952	0.0%	67.0%	
Friday	07/07/2000	-	78,889,952	0.0%	67.0%	
Saturday	07/08/2000	-	78,889,952	0.0%	67.0%	
Sunday	07/09/2000	-	78,889,952	0.0%	67.0%	

**Appendix F: Mail Response Numerators and Rates by Day**

Day	Date	Mail Response Numerator		Mail Response Rate		Key dates
		Daily Increase	Cumulative	Daily Increase	Cumulative	
Monday	07/10/2000	2,146	78,892,098	0.0%	67.1%	
Tuesday	07/11/2000	-	78,892,098	0.0%	67.1%	
Wednesday	07/12/2000	-	78,892,098	0.0%	67.1%	
Thursday	07/13/2000	349	78,892,447	0.0%	67.1%	
Friday	07/14/2000	-	78,892,447	0.0%	67.1%	
Saturday	07/15/2000	-	78,892,447	0.0%	67.1%	
Sunday	07/16/2000	-	78,892,447	0.0%	67.1%	
Monday	07/17/2000	-	78,892,447	0.0%	67.1%	
Tuesday	07/18/2000	-	78,892,447	0.0%	67.1%	
Wednesday	07/19/2000	-	78,892,447	0.0%	67.1%	
Thursday	07/20/2000	-	78,892,447	0.0%	67.1%	
Friday	07/21/2000	-	78,892,447	0.0%	67.1%	
Saturday	07/22/2000	6,552	78,898,999	0.0%	67.1%	
Sunday	07/23/2000	1,107	78,900,106	0.0%	67.1%	
Monday	07/24/2000	-	78,900,106	0.0%	67.1%	
Tuesday	07/25/2000	-	78,900,106	0.0%	67.1%	
Wednesday	07/26/2000	-	78,900,106	0.0%	67.1%	
Thursday	07/27/2000	-	78,900,106	0.0%	67.1%	
Friday	07/28/2000	501	78,900,607	0.0%	67.1%	
Saturday	07/29/2000	-	78,900,607	0.0%	67.1%	
Sunday	07/30/2000	-	78,900,607	0.0%	67.1%	
Monday	07/31/2000	133	78,900,740	0.0%	67.1%	
Tuesday	08/01/2000	-	78,900,740	0.0%	67.1%	
Wednesday	08/02/2000	-	78,900,740	0.0%	67.1%	
Thursday	08/03/2000	-	78,900,740	0.0%	67.1%	
Friday	08/04/2000	-	78,900,740	0.0%	67.1%	

**Appendix F: Mail Response Numerators and Rates by Day**

Day	Date	Mail Response Numerator		Mail Response Rate		Key dates
		Daily Increase	Cumulative	Daily Increase	Cumulative	
Saturday	08/05/2000	-	78,900,740	0.0%	67.1%	
Sunday	08/06/2000	-	78,900,740	0.0%	67.1%	
Monday	08/07/2000	-	78,900,740	0.0%	67.1%	
Tuesday	08/08/2000	-	78,900,740	0.0%	67.1%	
Wednesday	08/09/2000	602	78,901,342	0.0%	67.1%	
Thursday	08/10/2000	-	78,901,342	0.0%	67.1%	
Friday	08/11/2000	-	78,901,342	0.0%	67.1%	
Saturday	08/12/2000	-	78,901,342	0.0%	67.1%	
Sunday	08/13/2000	-	78,901,342	0.0%	67.1%	
Monday	08/14/2000	-	78,901,342	0.0%	67.1%	
Tuesday	08/15/2000	-	78,901,342	0.0%	67.1%	
Wednesday	08/16/2000	289	78,901,631	0.0%	67.1%	
Thursday	08/17/2000	-	78,901,631	0.0%	67.1%	
Friday	08/18/2000	715	78,902,346	0.0%	67.1%	
Saturday	08/19/2000	957	78,903,303	0.0%	67.1%	
Sunday	08/20/2000	-	78,903,303	0.0%	67.1%	
Monday	08/21/2000	-	78,903,303	0.0%	67.1%	
Tuesday	08/22/2000	-	78,903,303	0.0%	67.1%	
Wednesday	08/23/2000	-	78,903,303	0.0%	67.1%	
Thursday	08/24/2000	-	78,903,303	0.0%	67.1%	
Friday	08/25/2000	8	78,903,311	0.0%	67.1%	
Saturday	08/26/2000	-	78,903,311	0.0%	67.1%	
Sunday	08/27/2000	-	78,903,311	0.0%	67.1%	
Monday	08/28/2000	-	78,903,311	0.0%	67.1%	
Tuesday	08/29/2000	-	78,903,311	0.0%	67.1%	
Wednesday	08/30/2000	-	78,903,311	0.0%	67.1%	

**Appendix F: Mail Response Numerators and Rates by Day**

<b>Day</b>	<b>Date</b>	<b>Mail Response Numerator</b>		<b>Mail Response Rate</b>		<b>Key dates</b>
		<b>Daily Increase</b>	<b>Cumulative</b>	<b>Daily Increase</b>	<b>Cumulative</b>	
Thursday	08/31/2000	-	78,903,311	0.0%	67.1%	
Friday	09/01/2000	-	78,903,311	0.0%	67.1%	
Saturday	09/02/2000	141	78,903,452	0.0%	67.1%	
Sunday	09/03/2000	-	78,903,452	0.0%	67.1%	
Monday	09/04/2000	-	78,903,452	0.0%	67.1%	
Tuesday	09/05/2000	-	78,903,452	0.0%	67.1%	
Wednesday	09/06/2000	-	78,903,452	0.0%	67.1%	
Thursday	09/07/2000	-	78,903,452	0.0%	67.1%	
Friday	09/08/2000	-	78,903,452	0.0%	67.1%	
Saturday	09/09/2000	-	78,903,452	0.0%	67.1%	
Sunday	09/10/2000	-	78,903,452	0.0%	67.1%	
Monday	09/11/2000	-	78,903,452	0.0%	67.1%	
Tuesday	09/12/2000	-	78,903,452	0.0%	67.1%	
Wednesday	09/13/2000	-	78,903,452	0.0%	67.1%	
Thursday	09/14/2000	-	78,903,452	0.0%	67.1%	
Friday	09/15/2000	63	78,903,515	0.0%	67.1%	
Saturday	09/16/2000	-	78,903,515	0.0%	67.1%	
Sunday	09/17/2000	-	78,903,515	0.0%	67.1%	
Monday	09/18/2000	-	78,903,515	0.0%	67.1%	
Tuesday	09/19/2000	-	78,903,515	0.0%	67.1%	
Wednesday	09/20/2000	-	78,903,515	0.0%	67.1%	
Thursday	09/21/2000	-	78,903,515	0.0%	67.1%	
Friday	09/22/2000	-	78,903,515	0.0%	67.1%	
Saturday	09/23/2000	-	78,903,515	0.0%	67.1%	
Sunday	09/24/2000	-	78,903,515	0.0%	67.1%	
Monday	09/25/2000	-	78,903,515	0.0%	67.1%	

**Appendix F: Mail Response Numerators and Rates by Day**

Day	Date	Mail Response Numerator		Mail Response Rate		Key dates
		Daily Increase	Cumulative	Daily Increase	Cumulative	
Tuesday	09/26/2000	-	78,903,515	0.0%	67.1%	
Wednesday	09/27/2000	-	78,903,515	0.0%	67.1%	
Thursday	09/28/2000	-	78,903,515	0.0%	67.1%	
Friday	09/29/2000	-	78,903,515	0.0%	67.1%	
Saturday	09/30/2000	-	78,903,515	0.0%	67.1%	
Sunday	10/01/2000	-	78,903,515	0.0%	67.1%	
Monday	10/02/2000	-	78,903,515	0.0%	67.1%	
Tuesday	10/03/2000	-	78,903,515	0.0%	67.1%	
Wednesday	10/04/2000	-	78,903,515	0.0%	67.1%	
Thursday	10/05/2000	-	78,903,515	0.0%	67.1%	
Friday	10/06/2000	-	78,903,515	0.0%	67.1%	
Saturday	10/07/2000	-	78,903,515	0.0%	67.1%	
Sunday	10/08/2000	-	78,903,515	0.0%	67.1%	
Monday	10/09/2000	-	78,903,515	0.0%	67.1%	
Tuesday	10/10/2000	-	78,903,515	0.0%	67.1%	
Wednesday	10/11/2000	-	78,903,515	0.0%	67.1%	
Thursday	10/12/2000	-	78,903,515	0.0%	67.1%	
Friday	10/13/2000	-	78,903,515	0.0%	67.1%	
Saturday	10/14/2000	-	78,903,515	0.0%	67.1%	
Sunday	10/15/2000	-	78,903,515	0.0%	67.1%	
Monday	10/16/2000	-	78,903,515	0.0%	67.1%	
Tuesday	10/17/2000	-	78,903,515	0.0%	67.1%	
Wednesday	10/18/2000	-	78,903,515	0.0%	67.1%	
Thursday	10/19/2000	3	78,903,518	0.0%	67.1%	Last mail return with check-in date received
Sunday	12/31/2000	407,657	79,311,175	0.3%	67.4%	

Source: DMAF and DRF-2.

Note: Rates are based on a response rate denominator of 117,661,748 housing units.

Note: No forms with a valid check-in date were received after October 19, 2000. Mail returns from addresses which also were enumerated in NRFU or CIFU with no check-in date were assigned a date of December 31, 2000.

Note: Rates do not include Puerto Rico.

**Appendix G-1: Mail Response Numerators and Rates for Short Forms**

Day	Date	Mail Response Numerator		Response Rate		Key dates
		Daily Increase	Cumulative	Daily Increase	Cumulative	
Thursday	03/02/2000	-	-	0.0%	0.0%	
Friday	03/03/2000	1,392	1,392	0.0%	0.0%	U/L delivery begins
Saturday	03/04/2000	65	1,457	0.0%	0.0%	
Sunday	03/05/2000	52	1,509	0.0%	0.0%	
Monday	03/06/2000	132,094	133,603	0.1%	0.1%	Advance notice delivery begins
Tuesday	03/07/2000	54,851	188,454	0.1%	0.2%	
Wednesday	03/08/2000	157,425	345,879	0.2%	0.4%	Advance notice delivery ends
Thursday	03/09/2000	207,263	553,142	0.2%	0.6%	
Friday	03/10/2000	365,553	918,695	0.4%	0.9%	
Saturday	03/11/2000	156,911	1,075,606	0.2%	1.1%	
Sunday	03/12/2000	187,111	1,262,717	0.2%	1.3%	
Monday	03/13/2000	642,139	1,904,856	0.7%	2.0%	Questionnaire mailout delivery begins
Tuesday	03/14/2000	477,701	2,382,557	0.5%	2.4%	
Wednesday	03/15/2000	2,717,701	5,100,258	2.8%	5.2%	Questionnaire mailout delivery ends
Thursday	03/16/2000	3,929,051	9,029,309	4.0%	9.3%	
Friday	03/17/2000	4,462,221	13,491,530	4.6%	13.8%	
Saturday	03/18/2000	3,226,454	16,717,984	3.3%	17.1%	
Sunday	03/19/2000	2,710,376	19,428,360	2.8%	19.9%	
Monday	03/20/2000	4,825,753	24,254,113	4.9%	24.9%	Reminder card delivery begins
Tuesday	03/21/2000	4,785,396	29,039,509	4.9%	29.8%	
Wednesday	03/22/2000	5,107,438	34,146,947	5.2%	35.0%	Reminder card delivery ends
Thursday	03/23/2000	4,412,890	38,559,837	4.5%	39.5%	
Friday	03/24/2000	2,790,988	41,350,825	2.9%	42.4%	
Saturday	03/25/2000	2,080,348	43,431,173	2.1%	44.5%	
Sunday	03/26/2000	2,200,925	45,632,098	2.3%	46.8%	
Monday	03/27/2000	2,553,064	48,185,162	2.6%	49.4%	

**Appendix G-1: Mail Response Numerators and Rates for Short Forms**

Day	Date	Mail Response Numerator		Response Rate		Key dates
		Daily Increase	Cumulative	Daily Increase	Cumulative	
Tuesday	03/28/2000	2,616,985	50,802,147	2.7%	52.1%	
Wednesday	03/29/2000	1,586,934	52,389,081	1.6%	53.7%	
Thursday	03/30/2000	1,446,048	53,835,129	1.5%	55.2%	U/L delivery ends
Friday	03/31/2000	1,398,330	55,233,459	1.4%	56.6%	
Saturday	04/01/2000	1,049,115	56,282,574	1.1%	57.7%	Census Day
Sunday	04/02/2000	735,306	57,017,880	0.8%	58.4%	
Monday	04/03/2000	1,113,753	58,131,633	1.1%	59.6%	
Tuesday	04/04/2000	994,482	59,126,115	1.0%	60.6%	
Wednesday	04/05/2000	771,809	59,897,924	0.8%	61.4%	
Thursday	04/06/2000	945,438	60,843,362	1.0%	62.4%	
Friday	04/07/2000	607,170	61,450,532	0.6%	63.0%	
Saturday	04/08/2000	593,514	62,044,046	0.6%	63.6%	
Sunday	04/09/2000	314,340	62,358,386	0.3%	63.9%	
Monday	04/10/2000	525,253	62,883,639	0.5%	64.4%	Initial NRFU cut
Tuesday	04/11/2000	273,694	63,157,333	0.3%	64.7%	
Wednesday	04/12/2000	312,637	63,469,970	0.3%	65.0%	
Thursday	04/13/2000	216,264	63,686,234	0.2%	65.3%	
Friday	04/14/2000	392,869	64,079,103	0.4%	65.7%	
Saturday	04/15/2000	223,567	64,302,670	0.2%	65.9%	
Sunday	04/16/2000	140,207	4,442,877	0.1%	66.0%	
Monday	04/17/2000	255,300	64,698,177	0.3%	66.3%	
Tuesday	04/18/2000	94,377	64,792,554	0.1%	66.4%	Late mail return NRFU cut
Wednesday	04/19/2000	159,543	64,952,097	0.2%	66.6%	
Thursday	04/20/2000	152,556	65,104,653	0.2%	66.7%	
Friday	04/21/2000	153,237	65,257,890	0.2%	66.9%	
Saturday	04/22/2000	54,291	65,312,181	0.1%	66.9%	



**Appendix G-1: Mail Response Numerators and Rates for Short Forms**

Day	Date	Mail Response Numerator		Response Rate		Key dates
		Daily Increase	Cumulative	Daily Increase	Cumulative	
Sunday	04/23/2000	61,795	65,373,976	0.1%	67.0%	
Monday	04/24/2000	111,230	65,485,206	0.1%	67.1%	
Tuesday	04/25/2000	75,580	65,560,786	0.1%	67.2%	
Wednesday	04/26/2000	157,419	65,718,205	0.2%	67.3%	
Thursday	04/27/2000	78,608	65,796,813	0.1%	67.4%	NRFU begins
Friday	04/28/2000	62,802	65,859,615	0.1%	67.5%	
Saturday	04/29/2000	27,293	65,886,908	0.0%	67.5%	
Sunday	04/30/2000	932	65,887,840	0.0%	67.5%	
Monday	05/01/2000	109,058	65,996,898	0.1%	67.6%	
Tuesday	05/02/2000	20,264	66,017,162	0.0%	67.7%	
Wednesday	05/03/2000	62,649	66,079,811	0.1%	67.7%	
Thursday	05/04/2000	75,532	66,155,343	0.1%	67.8%	
Friday	05/05/2000	61,303	66,216,646	0.1%	67.9%	
Saturday	05/06/2000	24,327	66,240,973	0.0%	67.9%	
Sunday	05/07/2000	1,246	66,242,219	0.0%	67.9%	
Monday	05/08/2000	13,180	66,255,399	0.0%	67.9%	
Tuesday	05/09/2000	7,161	66,262,560	0.0%	67.9%	
Wednesday	05/10/2000	13,167	66,275,727	0.0%	67.9%	
Thursday	05/11/2000	26,125	66,301,852	0.0%	67.9%	
Friday	05/12/2000	146,001	66,447,853	0.1%	68.1%	
Saturday	05/13/2000	2,697	66,450,550	0.0%	68.1%	
Sunday	05/14/2000	3,434	66,453,984	0.0%	68.1%	
Monday	05/15/2000	2,699	66,456,683	0.0%	68.1%	
Tuesday	05/16/2000	8,423	66,465,106	0.0%	68.1%	
Wednesday	05/17/2000	11,631	66,476,737	0.0%	68.1%	
Thursday	05/18/2000	21,719	66,498,456	0.0%	68.1%	

**Appendix G-1: Mail Response Numerators and Rates for Short Forms**

Day	Date	Mail Response Numerator		Response Rate		Key dates
		Daily Increase	Cumulative	Daily Increase	Cumulative	
Friday	05/19/2000	91,378	66,589,834	0.1%	68.2%	
Saturday	05/20/2000	14,615	66,604,449	0.0%	68.3%	
Sunday	05/21/2000	3,953	66,608,402	0.0%	68.3%	
Monday	05/22/2000	5,180	66,613,582	0.0%	68.3%	
Tuesday	05/23/2000	4,344	66,617,926	0.0%	68.3%	
Wednesday	05/24/2000	11,828	66,629,754	0.0%	68.3%	
Thursday	05/25/2000	22,708	66,652,462	0.0%	68.3%	
Friday	05/26/2000	59,220	66,711,682	0.1%	68.4%	
Saturday	05/27/2000	8,691	66,720,373	0.0%	68.4%	
Sunday	05/28/2000	3,811	66,724,184	0.0%	68.4%	
Monday	05/29/2000	755	66,724,939	0.0%	68.4%	
Tuesday	05/30/2000	4,966	66,729,905	0.0%	68.4%	
Wednesday	05/31/2000	4,865	66,734,770	0.0%	68.4%	
Thursday	06/01/2000	9,096	66,743,866	0.0%	68.4%	
Friday	06/02/2000	39,681	66,783,547	0.0%	68.4%	
Saturday	06/03/2000	6,885	66,790,432	0.0%	68.4%	
Sunday	06/04/2000	4,099	66,794,531	0.0%	68.5%	
Monday	06/05/2000	5,358	66,799,889	0.0%	68.5%	
Tuesday	06/06/2000	6,827	66,806,716	0.0%	68.5%	
Wednesday	06/07/2000	14,982	66,821,698	0.0%	68.5%	
Thursday	06/08/2000	16,036	66,837,734	0.0%	68.5%	
Friday	06/09/2000	8,888	66,846,622	0.0%	68.5%	
Saturday	06/10/2000	4,308	66,850,930	0.0%	68.5%	
Sunday	06/11/2000	2,981	66,853,911	0.0%	68.5%	
Monday	06/12/2000	13,022	66,866,933	0.0%	68.5%	
Tuesday	06/13/2000	5,597	66,872,530	0.0%	68.5%	

**Appendix G-1: Mail Response Numerators and Rates for Short Forms**

Day	Date	Mail Response Numerator		Response Rate		Key dates
		Daily Increase	Cumulative	Daily Increase	Cumulative	
Wednesday	06/14/2000	7,890	66,880,420	0.0%	68.5%	
Thursday	06/15/2000	146,022	67,026,442	0.1%	68.7%	
Friday	06/16/2000	4,348	67,030,790	0.0%	68.7%	
Saturday	06/17/2000	2,280	67,033,070	0.0%	68.7%	
Sunday	06/18/2000	1,281	67,034,351	0.0%	68.7%	
Monday	06/19/2000	1,531	67,035,882	0.0%	68.7%	
Tuesday	06/20/2000	2,168	67,038,050	0.0%	68.7%	
Wednesday	06/21/2000	2,270	67,040,320	0.0%	68.7%	
Thursday	06/22/2000	2,300	67,042,620	0.0%	68.7%	
Friday	06/23/2000	1,388	67,044,008	0.0%	68.7%	
Saturday	06/24/2000	687	67,044,695	0.0%	68.7%	
Sunday	06/25/2000	269	67,044,964	0.0%	68.7%	
Monday	06/26/2000	1,695	67,046,659	0.0%	68.7%	NRFU complete
Tuesday	06/27/2000	1,217	67,047,876	0.0%	68.7%	
Wednesday	06/28/2000	1,557	67,049,433	0.0%	68.7%	
Thursday	06/29/2000	11,067	67,060,500	0.0%	68.7%	
Friday	06/30/2000	980	67,061,480	0.0%	68.7%	
Saturday	07/01/2000	620	67,062,100	0.0%	68.7%	
Sunday	07/02/2000	67	67,062,167	0.0%	68.7%	
Monday	07/03/2000	-	67,062,167	0.0%	68.7%	
Tuesday	07/04/2000	-	67,062,167	0.0%	68.7%	
Wednesday	07/05/2000	-	67,062,167	0.0%	68.7%	
Thursday	07/06/2000	-	67,062,167	0.0%	68.7%	
Friday	07/07/2000	-	67,062,167	0.0%	68.7%	
Saturday	07/08/2000	-	67,062,167	0.0%	68.7%	
Sunday	07/09/2000	-	67,062,167	0.0%	68.7%	

**Appendix G-1: Mail Response Numerators and Rates for Short Forms**

Day	Date	Mail Response Numerator		Response Rate		Key dates
		Daily Increase	Cumulative	Daily Increase	Cumulative	
Monday	07/10/2000	1,886	67,064,053	0.0%	68.7%	
Tuesday	07/11/2000	-	67,064,053	0.0%	68.7%	
Wednesday	07/12/2000	-	67,064,053	0.0%	68.7%	
Thursday	07/13/2000	232	67,064,285	0.0%	68.7%	
Friday	07/14/2000	-	67,064,285	0.0%	68.7%	
Saturday	07/15/2000	-	67,064,285	0.0%	68.7%	
Sunday	07/16/2000	-	67,064,285	0.0%	68.7%	
Monday	07/17/2000	-	67,064,285	0.0%	68.7%	
Tuesday	07/18/2000	-	67,064,285	0.0%	68.7%	
Wednesday	07/19/2000	-	67,064,285	0.0%	68.7%	
Thursday	07/20/2000	-	67,064,285	0.0%	68.7%	
Friday	07/21/2000	-	67,064,285	0.0%	68.7%	
Saturday	07/22/2000	4,660	67,068,945	0.0%	68.7%	
Sunday	07/23/2000	754	67,069,699	0.0%	68.7%	
Monday	07/24/2000	-	67,069,699	0.0%	68.7%	
Tuesday	07/25/2000	-	67,069,699	0.0%	68.7%	
Wednesday	07/26/2000	-	67,069,699	0.0%	68.7%	
Thursday	07/27/2000	-	67,069,699	0.0%	68.7%	
Friday	07/28/2000	316	67,070,015	0.0%	68.7%	
Saturday	07/29/2000	-	67,070,015	0.0%	68.7%	
Sunday	07/30/2000	-	67,070,015	0.0%	68.7%	
Monday	07/31/2000	82	67,070,097	0.0%	68.7%	
Tuesday	08/01/2000	-	67,070,097	0.0%	68.7%	
Wednesday	08/02/2000	-	67,070,097	0.0%	68.7%	
Thursday	08/03/2000	-	67,070,097	0.0%	68.7%	
Friday	08/04/2000	-	67,070,097	0.0%	68.7%	

**Appendix G-1: Mail Response Numerators and Rates for Short Forms**

Day	Date	Mail Response Numerator		Response Rate		Key dates
		Daily Increase	Cumulative	Daily Increase	Cumulative	
Saturday	08/05/2000	-	67,070,097	0.0%	68.7%	
Sunday	08/06/2000	-	67,070,097	0.0%	68.7%	
Monday	08/07/2000	-	67,070,097	0.0%	68.7%	
Tuesday	08/08/2000	-	67,070,097	0.0%	68.7%	
Wednesday	08/09/2000	350	67,070,447	0.0%	68.7%	
Thursday	08/10/2000	-	67,070,447	0.0%	68.7%	
Friday	08/11/2000	-	67,070,447	0.0%	68.7%	
Saturday	08/12/2000	-	67,070,447	0.0%	68.7%	
Sunday	08/13/2000	-	67,070,447	0.0%	68.7%	
Monday	08/14/2000	-	67,070,447	0.0%	68.7%	
Tuesday	08/15/2000	-	67,070,447	0.0%	68.7%	
Wednesday	08/16/2000	209	67,070,656	0.0%	68.7%	
Thursday	08/17/2000	-	67,070,656	0.0%	68.7%	
Friday	08/18/2000	519	67,071,175	0.0%	68.7%	
Saturday	08/19/2000	548	67,071,723	0.0%	68.7%	
Sunday	008/20/2000	-	67,071,723	0.0%	68.7%	
Monday	08/21/2000	-	67,071,723	0.0%	68.7%	
Tuesday	08/22/2000	-	67,071,723	0.0%	68.7%	
Wednesday	08/23/2000	-	67,071,723	0.0%	68.7%	
Thursday	08/24/2000	-	67,071,723	0.0%	68.7%	
Friday	08/25/2000	5	67,071,728	0.0%	68.7%	
Saturday	08/26/2000	-	67,071,728	0.0%	68.7%	
Sunday	08/27/2000	-	67,071,728	0.0%	68.7%	
Monday	08/28/2000	-	67,071,728	0.0%	68.7%	
Tuesday	08/29/2000	-	67,071,728	0.0%	68.7%	
Wednesday	08/30/2000	-	67,071,728	0.0%	68.7%	

**Appendix G-1: Mail Response Numerators and Rates for Short Forms**

Day	Date	Mail Response Numerator		Response Rate		Key dates
		Daily Increase	Cumulative	Daily		
				Increase	Cumulative	
Thursday	08/31/2000	-	67,071,728	0.0%	68.7%	
Friday	09/01/2000	-	67,071,728	0.0%	68.7%	
Saturday	09/02/2000	104	67,071,832	0.0%	68.7%	
Sunday	09/03/2000	-	67,071,832	0.0%	68.7%	
Monday	09/04/2000	-	67,071,832	0.0%	68.7%	
Tuesday	09/05/2000	-	67,071,832	0.0%	68.7%	
Wednesday	09/06/2000	-	67,071,832	0.0%	68.7%	
Thursday	09/07/2000	-	67,071,832	0.0%	68.7%	
Friday	09/08/2000	-	67,071,832	0.0%	68.7%	
Saturday	09/09/2000	-	67,071,832	0.0%	68.7%	
Sunday	09/10/2000	-	67,071,832	0.0%	68.7%	
Monday	09/11/2000	-	67,071,832	0.0%	68.7%	
Tuesday	09/12/2000	-	67,071,832	0.0%	68.7%	
Wednesday	09/13/2000	-	67,071,832	0.0%	68.7%	
Thursday	09/14/2000	-	67,071,832	0.0%	68.7%	
Friday	09/15/2000	50	67,071,882	0.0%	68.7%	
Saturday	09/16/2000	-	67,071,882	0.0%	68.7%	
Sunday	09/17/2000	-	67,071,882	0.0%	68.7%	
Monday	09/18/2000	-	67,071,882	0.0%	68.7%	
Tuesday	09/19/2000	-	67,071,882	0.0%	68.7%	
Wednesday	09/20/2000	-	67,071,882	0.0%	68.7%	
Thursday	09/21/2000	-	67,071,882	0.0%	68.7%	
Friday	09/22/2000	-	67,071,882	0.0%	68.7%	
Saturday	09/23/2000	-	67,071,882	0.0%	68.7%	
Sunday	09/24/2000	-	67,071,882	0.0%	68.7%	
Monday	09/25/2000	-	67,071,882	0.0%	68.7%	

**Appendix G-1: Mail Response Numerators and Rates for Short Forms**

Day	Date	Mail Response Numerator		Response Rate		Key dates
		Daily Increase	Cumulative	Daily Increase	Cumulative	
Tuesday	09/26/2000	-	67,071,882	0.0%	68.7%	
Wednesday	09/27/2000	-	67,071,882	0.0%	68.7%	
Thursday	09/28/2000	-	67,071,882	0.0%	68.7%	
Friday	09/29/2000	-	67,071,882	0.0%	68.7%	
Saturday	09/30/2000	-	67,071,882	0.0%	68.7%	
Sunday	10/01/2000	-	67,071,882	0.0%	68.7%	
Monday	10/02/2000	-	67,071,882	0.0%	68.7%	
Tuesday	10/03/2000	-	67,071,882	0.0%	68.7%	
Wednesday	10/04/2000	-	67,071,882	0.0%	68.7%	
Thursday	10/05/2000	-	67,071,882	0.0%	68.7%	
Friday	10/06/2000	-	67,071,882	0.0%	68.7%	
Saturday	10/07/2000	-	67,071,882	0.0%	68.7%	
Sunday	10/08/2000	-	67,071,882	0.0%	68.7%	
Monday	10/09/2000	-	67,071,882	0.0%	68.7%	
Tuesday	10/10/2000	-	67,071,882	0.0%	68.7%	
Wednesday	10/11/2000	-	67,071,882	0.0%	68.7%	
Thursday	10/12/2000	-	67,071,882	0.0%	68.7%	
Friday	10/13/2000	-	67,071,882	0.0%	68.7%	
Saturday	10/14/2000	-	67,071,882	0.0%	68.7%	
Sunday	10/15/2000	-	67,071,882	0.0%	68.7%	
Monday	10/16/2000	-	67,071,882	0.0%	68.7%	
Tuesday	10/17/2000	-	67,071,882	0.0%	68.7%	
Wednesday	10/18/2000	-	67,071,882	0.0%	68.7%	
Thursday	10/19/2000	3	67,071,885	0.0%	68.7%	Last mail return with check-in date received
Sunday	12/31/2000	308,954	67,380,839	0.3%	69.1%	

Source: DMAF and DRF-2.

Note: Short form return rates are based on a denominator of 97,578,971.

Note: No forms with a valid check-in date were received after October 19, 2000. Mail returns from addresses which also were enumerated in NRFU or CIFU with no check-in date were assigned a date of December 31, 2000.

Note: Rates do not include Puerto Rico.

**Appendix G-2: Mail Response Numerators and Rates for Long Forms**

Day	Date	Mail Response Numerator		Response Rate		Key dates
		Daily Increase	Cumulative	Daily Increase	Cumulative	
Thursday	03/02/2000	-	-	0.0%	0.0%	
Friday	03/03/2000	5	5	0.0%	0.0%	U/L delivery begins
Saturday	03/04/2000	-	5	0.0%	0.0%	
Sunday	03/05/2000	-	5	0.0%	0.0%	
Monday	03/06/2000	17,540	17,545	0.1%	0.1%	Advance notice delivery begins
Tuesday	03/07/2000	7,618	25,163	0.0%	0.1%	
Wednesday	03/08/2000	19,546	44,709	0.1%	0.2%	Advance notice delivery ends
Thursday	03/09/2000	28,655	73,364	0.1%	0.4%	
Friday	03/10/2000	57,170	130,534	0.3%	0.6%	
Saturday	03/11/2000	23,516	154,050	0.1%	0.8%	
Sunday	03/12/2000	30,261	184,311	0.2%	0.9%	
Monday	03/13/2000	114,400	298,711	0.6%	1.5%	Questionnaire mailout delivery begins
Tuesday	03/14/2000	72,743	371,454	0.4%	1.8%	
Wednesday	03/15/2000	197,763	569,217	1.0%	2.8%	Questionnaire mailout delivery ends
Thursday	03/16/2000	339,965	909,182	1.7%	4.5%	
Friday	03/17/2000	389,545	1,298,727	1.9%	6.5%	
Saturday	03/18/2000	228,387	1,527,114	1.1%	7.6%	
Sunday	03/19/2000	212,998	1,740,112	1.1%	8.7%	
Monday	03/20/2000	436,628	2,176,740	2.2%	10.8%	Reminder card delivery begins
Tuesday	03/21/2000	541,364	2,718,104	2.7%	13.5%	
Wednesday	03/22/2000	683,631	3,401,735	3.4%	16.9%	Reminder card delivery ends
Thursday	03/23/2000	837,349	4,239,084	4.2%	21.1%	
Friday	03/24/2000	836,578	5,075,662	4.2%	25.3%	
Saturday	03/25/2000	340,208	5,415,870	1.7%	27.0%	
Sunday	03/26/2000	311,045	5,726,915	1.5%	28.5%	
Monday	03/27/2000	440,615	6,167,530	2.2%	30.7%	
Tuesday	03/28/2000	524,089	6,691,619	2.6%	33.3%	
Wednesday	03/29/2000	352,272	7,043,891	1.8%	35.1%	
Thursday	03/30/2000	383,860	7,427,751	1.9%	37.0%	U/L delivery ends
Friday	03/31/2000	346,614	7,774,365	1.7%	38.7%	



**Appendix G-2: Mail Response Numerators and Rates for Long Forms**

Day	Date	Mail Response Numerator		Response Rate		Key dates
		Daily Increase	Cumulative	Daily Increase	Cumulative	
Saturday	04/01/2000	316,255	8,090,620	1.6%	40.3%	Census Day
Sunday	04/02/2000	208,044	8,298,664	1.0%	41.3%	
Monday	04/03/2000	377,193	8,675,857	1.9%	43.2%	
Tuesday	04/04/2000	326,288	9,002,145	1.6%	44.8%	
Wednesday	04/05/2000	262,493	9,264,638	1.3%	46.1%	
Thursday	04/06/2000	287,715	9,552,353	1.4%	47.6%	
Friday	04/07/2000	192,905	9,745,258	1.0%	48.5%	
Saturday	04/08/2000	171,743	9,917,001	0.9%	49.4%	
Sunday	04/09/2000	105,375	10,022,376	0.5%	49.9%	
Monday	04/10/2000	166,638	10,189,014	0.8%	50.7%	Initial NRFU cut
Tuesday	04/11/2000	68,847	10,257,861	0.3%	51.1%	
Wednesday	04/12/2000	99,058	10,356,919	0.5%	51.6%	
Thursday	04/13/2000	85,917	10,442,836	0.4%	52.0%	
Friday	04/14/2000	130,572	10,573,408	0.7%	52.6%	
Saturday	04/15/2000	82,222	10,655,630	0.4%	53.1%	
Sunday	04/16/2000	27,499	10,683,129	0.1%	53.2%	
Monday	04/17/2000	96,730	10,779,859	0.5%	53.7%	
Tuesday	04/18/2000	35,622	10,815,481	0.2%	53.9%	Late mail return NRFU cut
Wednesday	04/19/2000	50,815	10,866,296	0.3%	54.1%	
Thursday	04/20/2000	57,075	10,923,371	0.3%	54.4%	
Friday	04/21/2000	62,668	10,986,039	0.3%	54.7%	
Saturday	04/22/2000	14,054	11,000,093	0.1%	54.8%	
Sunday	04/23/2000	19,858	11,019,951	0.1%	54.9%	
Monday	04/24/2000	64,347	11,084,298	0.3%	55.2%	
Tuesday	04/25/2000	15,663	11,099,961	0.1%	55.3%	
Wednesday	04/26/2000	50,129	11,150,090	0.2%	55.5%	
Thursday	04/27/2000	29,733	11,179,823	0.1%	55.7%	NRFU begins
Friday	04/28/2000	27,505	11,207,328	0.1%	55.8%	
Saturday	04/29/2000	765	11,208,093	0.0%	55.8%	
Sunday	04/30/2000	225	11,208,318	0.0%	55.8%	

**Appendix G-2: Mail Response Numerators and Rates for Long Forms**

Day	Date	Mail Response Numerator		Response Rate		Key dates
		Daily Increase	Cumulative	Daily Increase	Cumulative	
Monday	05/01/2000	30,153	11,238,471	0.2%	56.0%	
Tuesday	05/02/2000	3,140	11,241,611	0.0%	56.0%	
Wednesday	05/03/2000	13,418	11,255,029	0.1%	56.0%	
Thursday	05/04/2000	17,274	11,272,303	0.1%	56.1%	
Friday	05/05/2000	65,257	11,337,560	0.3%	56.5%	
Saturday	05/06/2000	5,352	11,342,912	0.0%	56.5%	
Sunday	05/07/2000	666	11,343,578	0.0%	56.5%	
Monday	05/08/2000	11,397	11,354,975	0.1%	56.5%	
Tuesday	05/09/2000	1,946	11,356,921	0.0%	56.6%	
Wednesday	05/10/2000	2,315	11,359,236	0.0%	56.6%	
Thursday	05/11/2000	14,596	11,373,832	0.1%	56.6%	
Friday	05/12/2000	44,052	11,417,884	0.2%	56.9%	
Saturday	05/13/2000	1,624	11,419,508	0.0%	56.9%	
Sunday	05/14/2000	4,607	11,424,115	0.0%	56.9%	
Monday	05/15/2000	1,238	11,425,353	0.0%	56.9%	
Tuesday	05/16/2000	3,522	11,428,875	0.0%	56.9%	
Wednesday	05/17/2000	5,655	11,434,530	0.0%	56.9%	
Thursday	05/18/2000	13,274	11,447,804	0.1%	57.0%	
Friday	05/19/2000	43,035	11,490,839	0.2%	57.2%	
Saturday	05/20/2000	13,664	11,504,503	0.1%	57.3%	
Sunday	05/21/2000	2,420	11,506,923	0.0%	57.3%	
Monday	05/22/2000	4,585	11,511,508	0.0%	57.3%	
Tuesday	05/23/2000	3,966	11,515,474	0.0%	57.3%	
Wednesday	05/24/2000	6,442	11,521,916	0.0%	57.4%	
Thursday	05/25/2000	10,645	11,532,561	0.1%	57.4%	
Friday	05/26/2000	39,078	11,571,639	0.2%	57.6%	
Saturday	05/27/2000	4,723	11,576,362	0.0%	57.6%	
Sunday	05/28/2000	2,990	11,579,352	0.0%	57.7%	
Monday	05/29/2000	302	11,579,654	0.0%	57.7%	
Tuesday	05/30/2000	2,898	11,582,552	0.0%	57.7%	

**Appendix G-2: Mail Response Numerators and Rates for Long Forms**

Day	Date	Mail Response Numerator		Response Rate		Key dates
		Daily Increase	Cumulative	Daily Increase	Cumulative	
Wednesday	05/31/2000	3,070	11,585,622	0.0%	57.7%	
Thursday	06/01/2000	8,035	11,593,657	0.0%	57.7%	
Friday	06/02/2000	27,621	11,621,278	0.1%	57.9%	
Saturday	06/03/2000	7,654	11,628,932	0.0%	57.9%	
Sunday	06/04/2000	2,781	11,631,713	0.0%	57.9%	
Monday	06/05/2000	3,657	11,635,370	0.0%	57.9%	
Tuesday	06/06/2000	3,104	11,638,474	0.0%	58.0%	
Wednesday	06/07/2000	9,749	11,648,223	0.0%	58.0%	
Thursday	06/08/2000	16,919	11,665,142	0.1%	58.1%	
Friday	06/09/2000	8,810	11,673,952	0.0%	58.1%	
Saturday	06/10/2000	4,142	11,678,094	0.0%	58.2%	
Sunday	06/11/2000	2,956	11,681,050	0.0%	58.2%	
Monday	06/12/2000	7,829	11,688,879	0.0%	58.2%	
Tuesday	06/13/2000	5,092	11,693,971	0.0%	58.2%	
Wednesday	06/14/2000	4,038	11,698,009	0.0%	58.2%	
Thursday	06/15/2000	95,721	11,793,730	0.5%	58.7%	
Friday	06/16/2000	5,509	11,799,239	0.0%	58.8%	
Saturday	06/17/2000	1,392	11,800,631	0.0%	58.8%	
Sunday	06/18/2000	1,846	11,802,477	0.0%	58.8%	
Monday	06/19/2000	3,101	11,805,578	0.0%	58.8%	
Tuesday	06/20/2000	1,715	11,807,293	0.0%	58.8%	
Wednesday	06/21/2000	1,435	11,808,728	0.0%	58.8%	
Thursday	06/22/2000	1,125	11,809,853	0.0%	58.8%	
Friday	06/23/2000	1,108	11,810,961	0.0%	58.8%	
Saturday	06/24/2000	380	11,811,341	0.0%	58.8%	
Sunday	06/25/2000	224	11,811,565	0.0%	58.8%	
Monday	06/26/2000	917	11,812,482	0.0%	58.8%	
Tuesday	06/27/2000	736	11,813,218	0.0%	58.8%	
Wednesday	06/28/2000	682	11,813,900	0.0%	58.8%	
Thursday	06/29/2000	13,080	11,826,980	0.1%	58.9%	

NRFU complete

**Appendix G-2: Mail Response Numerators and Rates for Long Forms**

Day	Date	Mail Response Numerator		Response Rate		Key dates
		Daily Increase	Cumulative	Daily		
				Increase	Cumulative	
Friday	06/30/2000	600	11,827,580	0.0%	58.9%	
Saturday	07/01/2000	145	11,827,725	0.0%	58.9%	
Sunday	07/02/2000	60	11,827,785	0.0%	58.9%	
Monday	07/03/2000	-	11,827,785	0.0%	58.9%	
Tuesday	07/04/2000	-	11,827,785	0.0%	58.9%	
Wednesday	07/05/2000	-	11,827,785	0.0%	58.9%	
Thursday	07/06/2000	-	11,827,785	0.0%	58.9%	
Friday	07/07/2000	-	11,827,785	0.0%	58.9%	
Saturday	07/08/2000	-	11,827,785	0.0%	58.9%	
Sunday	07/09/2000	-	11,827,785	0.0%	58.9%	
Monday	07/10/2000	260	11,828,045	0.0%	58.9%	
Tuesday	07/11/2000	-	11,828,045	0.0%	58.9%	
Wednesday	07/12/2000	-	11,828,045	0.0%	58.9%	
Thursday	07/13/2000	117	11,828,162	0.0%	58.9%	
Friday	07/14/2000	-	11,828,162	0.0%	58.9%	
Saturday	07/15/2000	-	11,828,162	0.0%	58.9%	
Sunday	07/16/2000	-	11,828,162	0.0%	58.9%	
Monday	07/17/2000	-	11,828,162	0.0%	58.9%	
Tuesday	07/18/2000	-	11,828,162	0.0%	58.9%	
Wednesday	07/19/2000	-	11,828,162	0.0%	58.9%	
Thursday	07/20/2000	-	11,828,162	0.0%	58.9%	
Friday	07/21/2000	-	11,828,162	0.0%	58.9%	
Saturday	07/22/2000	1,892	11,830,054	0.0%	58.9%	
Sunday	07/23/2000	353	11,830,407	0.0%	58.9%	
Monday	07/24/2000	-	11,830,407	0.0%	58.9%	
Tuesday	07/25/2000	-	11,830,407	0.0%	58.9%	
Wednesday	07/26/2000	-	11,830,407	0.0%	58.9%	
Thursday	07/27/2000	-	11,830,407	0.0%	58.9%	
Friday	07/28/2000	185	11,830,592	0.0%	58.9%	
Saturday	07/29/2000	-	11,830,592	0.0%	58.9%	

**Appendix G-2: Mail Response Numerators and Rates for Long Forms**

Day	Date	Mail Response Numerator		Response Rate		Key dates
		Daily Increase	Cumulative	Daily	Cumulative	
				Increase		
Sunday	07/30/2000	-	11,830,592	0.0%	58.9%	
Monday	07/31/2000	51	11,830,643	0.0%	58.9%	
Tuesday	08/01/2000	-	11,830,643	0.0%	58.9%	
Wednesday	08/02/2000	-	11,830,643	0.0%	58.9%	
Thursday	08/03/2000	-	11,830,643	0.0%	58.9%	
Friday	08/04/2000	-	11,830,643	0.0%	58.9%	
Saturday	08/05/2000	-	11,830,643	0.0%	58.9%	
Sunday	08/06/2000	-	11,830,643	0.0%	58.9%	
Monday	08/07/2000	-	11,830,643	0.0%	58.9%	
Tuesday	08/08/2000	-	11,830,643	0.0%	58.9%	
Wednesday	08/09/2000	252	11,830,895	0.0%	58.9%	
Thursday	08/10/2000	-	11,830,895	0.0%	58.9%	
Friday	08/11/2000	-	11,830,895	0.0%	58.9%	
Saturday	08/12/2000	-	11,830,895	0.0%	58.9%	
Sunday	08/13/2000	-	11,830,895	0.0%	58.9%	
Monday	08/14/2000	-	11,830,895	0.0%	58.9%	
Tuesday	08/15/2000	-	11,830,895	0.0%	58.9%	
Wednesday	08/16/2000	80	11,830,975	0.0%	58.9%	
Thursday	08/17/2000	-	11,830,975	0.0%	58.9%	
Friday	08/18/2000	196	11,831,171	0.0%	58.9%	
Saturday	08/19/2000	409	11,831,580	0.0%	58.9%	
Sunday	08/20/2000	-	11,831,580	0.0%	58.9%	
Monday	08/21/2000	-	11,831,580	0.0%	58.9%	
Tuesday	08/22/2000	-	11,831,580	0.0%	58.9%	
Wednesday	08/23/2000	-	11,831,580	0.0%	58.9%	
Thursday	08/24/2000	-	11,831,580	0.0%	58.9%	
Friday	08/25/2000	3	11,831,583	0.0%	58.9%	
Saturday	08/26/2000	-	11,831,583	0.0%	58.9%	
Sunday	08/27/2000	-	11,831,583	0.0%	58.9%	
Monday	08/28/2000	-	11,831,583	0.0%	58.9%	

**Appendix G-2: Mail Response Numerators and Rates for Long Forms**

Day	Date	Mail Response Numerator		Response Rate		Key dates
		Daily Increase	Cumulative	Daily		
				Increase	Cumulative	
Tuesday	08/29/2000	-	11,831,583	0.0%	58.9%	
Wednesday	08/30/2000	-	11,831,583	0.0%	58.9%	
Thursday	08/31/2000	-	11,831,583	0.0%	58.9%	
Friday	09/01/2000	-	11,831,583	0.0%	58.9%	
Saturday	09/02/2000	37	11,831,620	0.0%	58.9%	
Sunday	09/03/2000	-	11,831,620	0.0%	58.9%	
Monday	09/04/2000	-	11,831,620	0.0%	58.9%	
Tuesday	09/05/2000	-	11,831,620	0.0%	58.9%	
Wednesday	09/06/2000	-	11,831,620	0.0%	58.9%	
Thursday	09/07/2000	-	11,831,620	0.0%	58.9%	
Friday	09/08/2000	-	11,831,620	0.0%	58.9%	
Saturday	09/09/2000	-	11,831,620	0.0%	58.9%	
Sunday	09/10/2000	-	11,831,620	0.0%	58.9%	
Monday	09/11/2000	-	11,831,620	0.0%	58.9%	
Tuesday	09/12/2000	-	11,831,620	0.0%	58.9%	
Wednesday	09/13/2000	-	11,831,620	0.0%	58.9%	
Thursday	09/14/2000	-	11,831,620	0.0%	58.9%	
Friday	09/15/2000	13	11,831,633	0.0%	58.9%	
Saturday	09/16/2000	-	11,831,633	0.0%	58.9%	
Sunday	09/17/2000	-	11,831,633	0.0%	58.9%	
Monday	09/18/2000	-	11,831,633	0.0%	58.9%	
Tuesday	09/19/2000	-	11,831,633	0.0%	58.9%	
Wednesday	09/20/2000	-	11,831,633	0.0%	58.9%	
Thursday	09/21/2000	-	11,831,633	0.0%	58.9%	
Friday	09/22/2000	-	11,831,633	0.0%	58.9%	
Saturday	09/23/2000	-	11,831,633	0.0%	58.9%	
Sunday	09/24/2000	-	11,831,633	0.0%	58.9%	
Monday	09/25/2000	-	11,831,633	0.0%	58.9%	
Tuesday	09/26/2000	-	11,831,633	0.0%	58.9%	
Wednesday	09/27/2000	-	11,831,633	0.0%	58.9%	

**Appendix G-2: Mail Response Numerators and Rates for Long Forms**

Day	Date	Mail Response Numerator		Response Rate		Key dates
		Daily Increase	Cumulative	Daily Increase	Cumulative	
Thursday	09/28/2000	-	11,831,633	0.0%	58.9%	
Friday	09/29/2000	-	11,831,633	0.0%	58.9%	
Saturday	09/30/2000	-	11,831,633	0.0%	58.9%	
Sunday	10/01/2000	-	11,831,633	0.0%	58.9%	
Monday	10/02/2000	-	11,831,633	0.0%	58.9%	
Tuesday	10/03/2000	-	11,831,633	0.0%	58.9%	
Wednesday	10/04/2000	-	11,831,633	0.0%	58.9%	
Thursday	10/05/2000	-	11,831,633	0.0%	58.9%	
Friday	10/06/2000	-	11,831,633	0.0%	58.9%	
Saturday	10/07/2000	-	11,831,633	0.0%	58.9%	
Sunday	10/08/2000	-	11,831,633	0.0%	58.9%	
Monday	10/09/2000	-	11,831,633	0.0%	58.9%	
Tuesday	10/10/2000	-	11,831,633	0.0%	58.9%	
Wednesday	10/11/2000	-	11,831,633	0.0%	58.9%	
Thursday	10/12/2000	-	11,831,633	0.0%	58.9%	
Friday	10/13/2000	-	11,831,633	0.0%	58.9%	
Saturday	10/14/2000	-	11,831,633	0.0%	58.9%	
Sunday	10/15/2000	-	11,831,633	0.0%	58.9%	
Monday	10/16/2000	-	11,831,633	0.0%	58.9%	
Tuesday	10/17/2000	-	11,831,633	0.0%	58.9%	
Wednesday	10/18/2000	-	11,831,633	0.0%	58.9%	
Thursday	10/19/2000	-	11,831,633	0.0%	58.9%	Last mail return with check-in date received
Sunday	12/31/2000	98,703	11,930,336	0.5%	59.4%	

Source: DMAF and DRF-2.

Note: Long form return rates have a denominator of 20,082,777.

Note: No forms with a valid check-in date were received after October 19, 2000. Mail returns from addresses which also were enumerated in NRFU or CIFU with no check-in date were assigned a date of December 31, 2000.

Note: Rates do not include Puerto Rico.