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MEMORANDUM FOR ACS Research and Evaluation Steering Committee

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Subject: Evaluation of the ACS Mail Materials and Mailing Strategy during
the 2010 Census

Attached is the final American Community Survey Research and Evaluation report for Evaluation of the ACS Mail Materials and Mailing Strategy during the 2010 Census. This report describes the results of testing messaging and design changes to the ACS mailing materials to minimize the negative impact of 2010 Census activities on ACS mail response rates.

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Attachment: (Final Report for the Evaluation of the ACS Mail Materials and Mailing Strategy during the 2010 Census)

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Evaluation of the ACS Mail Materials and Mailing Strategy during the 2010 Census

FINAL REPORT

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EXECUTIVE SUMMARY

During Census 2000, the American Community Survey (ACS) experienced an increase in mail response in the months prior to Census Day (April 1, 2000) and a decline in response in the months following. We hypothesize that the Census 2000 increase in the ACS mail response rate occurred because some respondents believed that the ACS form was the Census 2000 form and completed it more readily. However, ACS mail response decreased from March 2000 through the rest of the year, possibly because respondents who had already completed the Census 2000 form believed the ACS was another census form. The Census Bureau expected the 2010 Census environment to similarly impact ACS mail response as well.

To minimize the negative impact of the 2010 Census activities on ACS mail response, we enhanced the ACS envelope and letter to give the ACS a more distinct identity, and also to pair its importance with the 2010 Census and the Census Bureau. We tested three different strategies using a combination of the new envelopes and letters and compared them to the current ACS letters and envelopes. This evaluation examined the impact of the different strategies on the ACS mail response before, during, and after the Census. The results below detail the impact of the letter and envelope design changes on ACS mail response.

Envelope Color and Messaging

- The new white envelopes with messaging linking the American Community Survey to the Census Bureau improved respondent participation compared to that of the current envelopes prior to and during the census and maintained the same level of participation post-census.
- Adding green color to the new envelopes reduced participation across the census time periods compared to that of the new white envelopes.

Letter Content

- The new letter with text addressing possible confusion between the 2010 Census and ACS improved participation compared to the current letter across the census time periods, when they were sent with the new white envelopes.

Envelope Color and Messaging Combined with Letter Content

- All of the test treatment letter and envelope combinations improved participation compared to the current ACS letters and envelopes across the three census time periods.
- Of the three combinations, the new letters paired with the new white envelopes resulted in the greatest increase in respondent participation across all three time periods.

1. Background

During Census 2000, the ACS experienced an increase in mail response in the months prior to Census Day (April 1, 2000) and a decline in response in the months following. We hypothesize that prior to Census Day some respondents believed that the ACS form was the Census 2000 form and completed it more readily. However, ACS mail response decreased from March 2000 through the rest of the year. We conjecture that respondents who had already completed the Census 2000 form believed the ACS form was another census form.

The ACS is an annual survey that collects data on population and housing characteristics using three sequential modes of data collection (mail, Computer Assisted Telephone Interviewing (CATI), and Computer Assisted Personal Interviewing (CAPI)). Sampled addresses are initially mailed a self-administered questionnaire. The 2010 mailing strategy for the ACS (referred to as the “current strategy” throughout this report) consists of a pre-notice letter, initial questionnaire package, reminder postcard, and a replacement questionnaire if the initial questionnaire was not returned in a timely manner.

In preparation for fielding the ACS during the 2010 Census, a workgroup consisting of staff from the American Community Survey Office (ACSO), the Decennial Statistical Studies Division (DSSD), the Center for Survey Methods Research (CSM), the Decennial Management Division (DMD), the Field Division (FLD), and the Public Information Office (PIO) considered ways to minimize confusion for households selected for the ACS during the 2010 Census. The workgroup sponsored cognitive testing of new mailing prototypes that attempted to distinguish the ACS from the 2010 Census and legitimize the ACS. The prototypes included both envelopes and letters for the mail mode of the survey. After evaluating the results of cognitive testing, the workgroup recommended an experiment using three different combinations of envelopes and letters in the 2010 ACS. The motivation for this experiment stemmed from unresolved questions about the effect of the changes in the mailing materials on response, and whether the impact of the new messaging depended on the proximity to Census day. For more details on the results of this cognitive testing, see DeMaio et al. (2008).

The goal of this evaluation was to determine which combination of revised mailing materials minimized any negative impact of 2010 Census activities on ACS mail response rates.

2. Methodology

2.1 Test Design

This test was designed to measure the impact of changing the design and wording of ACS mail materials on ACS mail response by proximity to Census Day (April 1, 2010). To measure the potential impact, we constructed the experimental design shown in Table 1. We tested three treatments (each consisting of an envelope and letter combination) during three time periods in 2010: pre-census (January and February), census (March through May), and post-census (June through November).

Table 1. Experimental Design for each Census Reference Period (pre-census, census, post-census)

Envelope	Letter	
	New Letter (NL)	Current Letter (CL)
New Envelope <u>with</u> Green – Green Envelope (GE)	Treatment 1 (NLGE)	X
New Envelope <u>without</u> Green Color – White Envelope (WE)	Treatment 2 (NLWE)	Treatment 3 (CLWE)
Current Envelope	X	Control

We tested two new envelope designs:

- “Green Envelopes” – These envelopes were used for the pre-notice letter, initial questionnaire mailing, and replacement questionnaire mailing. They contained a new box with a green background with “U.S. Census Bureau The American Community Survey” above the address window. The current box with “Your Response is Required by Law” (on the questionnaire mailing packages only) was also filled with a green background and the font size was increased. The green color was selected to match the green that is the primary color for the ACS questionnaire. See Figures B-1 and B-2 in Appendix B.
- “White Envelopes” – These envelopes had the same boxes and text as the “Green Envelopes”, but without the green background. See Figures B-3 and B-4 in Appendix B.

The current ACS envelopes that served as the control can be seen in Figures B-5 and B-6 in Appendix B. For comparison, Figure B-7 in Appendix B shows the 2010 Census envelope design.

In addition, we tested one set of new letters against our current letters. A set included the pre-notice letter and cover letters for the initial and replacement questionnaires¹. The new letters contained information informing the housing unit about the requirement to respond to both the ACS and the 2010 Census. See Figures B-8 and B-9 in Appendix B.

We allocated the existing ACS production sample among the three treatments and control group for each of our three census reference periods (pre-census, census, and post-census). In each time period, there was one treatment that we anticipated resulting in the highest ACS mail response rate for that time period, based on proximity to Census day (April 1st). We allocated the balance of the production sample to this treatment after allocating smaller sample sizes to the three other treatments to minimize the risk of decreasing participation in the ACS. Each treatment had the same sample size for each month within each time period. Table 2 shows the sample sizes by treatment for each time period. Keathley (2009) documents the assignment of the ACS sample to the treatments.

¹ The reminder postcards were not changed from the current reminder postcards due to a lack of additional space on the postcard.

Table 2. Sample Size by Treatment and Census Reference Period

Treatment	Sample Size by Census Reference Period		
	Pre-Census (Jan-Feb)	Census (Mar-May)	Post-Census (Jun-Nov)
NLGE	30,000	45,000	60,000
NLWE	30,000	577,416	1,212,627
CLWE	20,000	30,000	60,000
Control	384,909	45,000	60,000

For each of the three time periods, we calculated a mail response rate and a mail return rate for each treatment at the national level. These two rates are the primary evaluation measures. Note that we used the *sample panel month* (**not** the month in which a questionnaire was returned and processed) to determine the time period (or month) for analysis. This means that if a household was in sample in January, they were counted in the January panel even if they returned the questionnaire in February or March.

The mail response rate for a given time period and treatment was calculated as the ratio of the weighted count of completed questionnaires returned by eligible households² and the weighted count of eligible households sampled for that time period and treatment (cf. Marquette, 2009). The mail return rate for a given time period and treatment was calculated as the ratio of the weighted count of non-blank returned mail forms (includes unconfirmed vacant cases and cases checked-in prior to the end date of the data collection period for a given sample panel month) and the weighted count of forms mailed for that group. Note that no CATI or CAPI interviews were included in the numerator of the rate. TQA calls that result in interviews are excluded from the numerator of the rate.

$$\text{Mail Response Rate} = \frac{\text{Weighted number of mail interviews}}{\text{Weighted number of cases eligible}^2 \text{ to respond}}$$

$$\text{Mail Return Rate} = \frac{\text{Weighted number of returned mail forms}}{\text{Weighted number of forms mailed}}$$

We calculated both the mail response rate and the mail return rates at three different points in time for a particular sample panel month to identify any possible confounds due to our unequal sample allocation among treatments combined with the multi-mode follow-up data collection design of the ACS: (1) the cut-off date for identifying the CATI follow-up universe, (2) the cut-off date for identifying the CAPI follow-up universe, and (3) the end date for the data collection period. So for each treatment within each time period – that is, for each set of data – we calculated six rates:

- pre-CATI response,
- pre-CATI return,
- pre-CAPI response,
- pre-CAPI return,

²Eligible households are those sampled addresses that the Census Bureau ultimately determined to be occupied – units determined to be vacant or nonexistent are not considered eligible to respond. Note that cases designated as Undeliverable as Addressed (UAA) by the United States Postal Service (USPS) are not taken into account.

- final response, and
- final return.

In Section 4.1, 4.2, and 4.3 of this evaluation, we compared the mail response and mail return rates among the treatment and control groups to assess the effects of envelope messaging and color in addition to letter messaging. These comparisons are outlined in Table 3 below. Throughout the report our focus is mainly on the final mail response rates since this measure more accurately reflects respondent participation. However, the mail return rate results are included in Appendix A and are similar to the mail response rate results included in the body of the report. In addition, the pre-CATI and pre-CAPI mail return and response rates are included in Appendix A.

Table 3. Planned Comparisons to Evaluate Potential Messaging and Design Effects within each Census Reference Period

Effect	Comparison	Population of inference limited to those who received...
Envelope Color	NLGE vs. NLWE	New envelopes and new letter only
Envelope Messaging	CLWE vs. Control	White envelopes and current letter only
Letter Messaging	NLWE vs. CLWE	New white envelopes only
Envelope Color/Messaging and Letter Messaging Combined	NLGE vs. Control	No limitation
Envelope Messaging and Letter Messaging Combined	NLWE vs. Control	No limitation
Envelope Color and Letter Messaging Combined	NLGE vs. CLWE	New envelopes only

2.2 Year-to-Year Analysis

In Section 4.4 of this evaluation, we also compared the change in the overall mail response rates from 2009³-to-2010 to the 2008-to-2009 change for the same time periods to provide a comparison of the trend experienced during a Decennial Census cycle to that of during an off-Census cycle. We used the treatment that had the largest portion of the sample to calculate the 2010 mail response rates for computing the 2009-to-2010 mail response rate changes. Note that year-to-year differences in rates are not used as evaluation criteria of the treatments in this test.

2.3 Daily Return Rates

From January through December 2010, Baumgardner (2010) calculated daily mail return rates for the ACS and compared them to the daily rates for 2009 on a national level, by state, by Census Audience Segmentation strata (cf. Bates and Mulry, 2008), and by the treatment group for each envelope-letter combination used for this evaluation. Findings from this comparison show a higher rate of questionnaires checked-in daily for 2010 compared to 2009 for the January to March ACS panels with March having the highest rate. Starting in April and continuing through May, the 2010 rate of questionnaires checked in daily drops significantly compared to

³ In March 2009, because of a difference in mail production, only control cases from the Additional Mailing Test panel in that month were used as the data for comparison.

the 2009 check-in results. By June and July we observe a rebound in the daily questionnaire check-in rates to the 2009 levels. Briefings on the national mail return rates were disseminated in a weekly report to senior level staff and those involved with this evaluation.

2.4 Statistical Testing Methods

For all statistical tests performed in this report, we use two-sided t-tests at an $\alpha = 0.10$ significance level to determine comparisons that are significantly different. For any analysis that requires a family of pair-wise comparisons, we use the Bonferroni method for controlling the family-wise error rate.

3. Limitations

Because this test was done using the ACS production sample, we were unwilling to equally allocate sample to each of the treatment groups in fear of lower response rates for the treatments that we felt were more risky. Therefore, in each time period, the one treatment that we anticipated resulting in the highest ACS mail response rate for that time period was assigned the majority of the sample. The other three treatments had lower sample sizes. Comparisons that include those treatment groups with the smaller sample sizes provide less statistical power for detecting smaller measurable differences between treatments.

Households designated to a specific census reference period for analysis purposes received their mail materials during the given reference period, but may not have actually opened their mail materials until after their assigned time period.

4. Research Questions and Results

4.1 Which envelope design worked better?

We tested two new envelopes: the new green color envelopes and the new white envelopes. We examined the difference in mail response rates in two steps (see Appendix A for the corresponding final mail return rates and pre-CATI, pre-CAPI, mail response and return rates). First, we compared the treatment group CLWE with the control group to determine whether the new white envelopes with added messaging perform better than the current ACS envelopes. Second, we compared the treatment groups NLGE and NLWE to determine whether adding green color to the new envelopes further improves respondent participation, given the same new letter.

Table 4 shows the mail response rates for the CLWE treatment group and the control group by census time period. During the pre-census time period, the largest portion of the ACS sample was allocated to receive the current production envelopes and letters since we expected that group would have the highest response prior to census materials being mailed. However, from Table 4, we see that the new white envelope has a significantly higher mail response rate (62.1 percent) compared to the current envelope (61.4 percent), when both treatments included the same letter. Note that while the difference between these response rates is statistically

significant we caution making a strong conclusion here as well as in subsequent comparisons where the magnitude of the difference is not substantive.

Table 4. Envelope Messaging – Mail Response Rates for CLWE versus Control by Census Time Period

Time Period	CLWE (%)	Standard Error	Control (%)	Standard Error	Difference		Significant*
					(CLWE-Control)	Standard Error	
Pre-Census	62.1	0.5	61.4	0.1	0.7	0.1	Yes
Census	56.5	0.4	56.0	0.3	0.5	0.1	Yes
Post-Census	52.2	0.4	52.1	0.3	0.1	<0.1	Yes

Source: January 2010 – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level

During the census period, we observe that the messaging on the envelopes increases the mail response rate by 0.5 percentage points, but decreases the mail return rate by 0.3 percentage points (see Table A-1 in Appendix A). Given that the mail response rate is based strictly on completed mail interviews, we conclude that the envelope messaging increased household participation in the ACS for those households receiving white envelopes with the current letters. Note that while these results are significant, the magnitudes of the differences are not substantive.

During the post-census time period, this comparison shows that the new messaging on the envelopes slightly increases the level of participation in the ACS compared to that of the control for those households receiving white envelopes with the current letters. Table A-1 in Appendix A shows a significant decline, but not substantive, in the return rate of mail questionnaires.

The purpose of these comparisons was to test whether introducing new messaging on the envelope improves participation across the different census time periods. Based on these results, we conclude that the messaging does improve participation during the pre-census and census time periods for those households receiving white envelopes with the current letters and maintains the same level of participation compared to the control during the post-census time period. Note that the pre-CATI, pre-CAPI, and final mail return and response rates in Tables A-1 through A-5, in Appendix A, support these findings with the exception of a non-substantive decline in the pre-CATI mail response rate. In addition, we found no evidence of an impact on the pre-CAPI mail response rate due to the new envelope messaging during the post-census period.

To isolate whether the green color introduced on the new envelope improved respondent participation, we compared the treatment groups NLGE and NLWE. Table 5 shows the mail response rates for the NLGE and NLWE treatments by census time period. Based on these results, we find that the green color added to the new envelopes results in a significant decrease in the mail response rate across all three time periods for those households receiving the new envelopes and new letters only. This drop in the mail response rates across the pre-census, census, and post-census time periods range from 0.6 to 1.2 percentage points. The pre-CATI, pre-CAPI, and final mail return and response rates in Tables A-6 through A-10, in Appendix A, support these findings with the exception of a non-substantive increase in the pre-CATI mail return rate during the census period.

Table 5. Envelope Color – Mail Response Rates for NLGE versus NLWE by Census Time Period

Time Period	NLGE (%)	Standard Error	NLWE (%)	Standard Error	Difference		Significant*
					(NLGE- NLWE)	Standard Error	
Pre-Census	61.8	0.4	62.8	0.4	-1.0	0.1	Yes
Census	57.6	0.4	58.2	0.1	-0.6	<0.1	Yes
Post-Census	53.4	0.4	54.6	0.1	-1.2	<0.1	Yes

Source: January 2010 – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level

4.2 Which letter worked better?

In addition to evaluating changes to the envelope design, we also tested the content changes made to the letters included in the ACS mailing pieces (pre-notice and cover letters for initial and replacement mailing packages). We compared the treatment groups NLWE and CLWE to determine whether the content of the new letters increase participation compared to the current letters, given the same new white envelope design.

Table 6 shows the mail response rates for the NLWE and CLWE treatment groups. Comparing these rates for each time period we find that the NLWE leads to a significant increase in the mail response rate. Interestingly, the improvement in mail response rates due to the new letter grows across the sequential time periods, suggesting that the new letter messaging is most effective once the census is in full effect or wrapping up. We conclude that the modifications to the letter content in the pre-notice, initial questionnaire package, and replacement questionnaire package increase participation for households receiving the new white envelope. The pre-CATI, pre-CAPI, and final mail return and response rates in Tables A-11 through A-15, in Appendix A, support these findings.

Table 6. Letter Messaging – Mail Response Rates for NLWE versus CLWE

Time Period	NLWE (%)	Standard Error	CLWE (%)	Standard Error	Difference		Significant*
					(NLWE- CLWE)	Standard Error	
Pre-Census	62.8	0.4	62.1	0.5	0.7	0.1	Yes
Census	58.2	0.1	56.5	0.4	1.7	<0.1	Yes
Post-Census	54.6	0.1	52.2	0.4	2.4	<0.1	Yes

Source: January 2010 – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level

4.3 How did each of the test treatment letter-envelope combinations fare against the current ACS?

To evaluate which of the combined new envelope and letter changes resulted in the largest improvement in ACS participation before, during, and after the 2010 Census, we compared each test treatment against each other and the control group.

Table 7 shows all of the comparisons between the test treatments and the control during the pre-census time period. The majority of the sample in January and February (pre-census) received the current ACS production mailings (control). When we compare mail response rates

for the test treatment groups to the control group in Table 7, we find that each of the letter-envelope combinations used in the test treatments leads to an increase in the ACS mail response rate compared to that of the control group during the pre-census time period. Furthermore, of the three letter-envelope combinations used in the test treatments, the new letters combined with the new white envelopes produces the largest gain in the ACS mail response rate (1.4 percentage points). The pre-CATI, pre-CAPI, and final mail return and response rates in Tables A-16 through A-20, in Appendix A, support these findings, with the exception of finding no evidence of an impact on the pre-CAPI mail response rate due to the new letters and green envelopes as seen in Table A-20, Appendix A.

Table 7. Mail Response Rates for the Test Treatments versus Control, Pre-Census

	Treatment (%)	Standard Error	Control (%)	Standard Error	Difference (Treatment-Control)	Standard Error	Significant*
NLGE vs. Ctrl	61.8	0.4	61.4	0.1	0.4	<0.1	Yes
NLWE vs. Ctrl	62.8	0.4	61.4	0.1	1.4	<0.1	Yes
CLWE vs. Ctrl	62.1	0.5	61.4	0.1	0.7	0.1	Yes

Source: January – February 2010 American Community Survey (http://www.census.gov/acs/www/SBasics/design_meth.htm)

*Significant at the $\alpha = 0.10$ significance level, Bonferroni adjustment used to control the family-wise error rate

Once again, when we compare each test treatment to control during the census time frame, we find in Table 8 that each of the test treatments result in an increase in the ACS mail response rate and of the three test treatments, the new letter combined with the new white envelope produced the largest increase in response (2.2 percentage points). Note that our decision to allocate the largest portion of the ACS sample to receive the new letters and white envelopes (NLWE) during the census time period in anticipation of a higher response during these time periods for this treatment was confirmed by these results. The pre-CATI, pre-CAPI, and final mail return and response rates in Tables A-21 through A-25, in Appendix A, support these findings, with the exception of a nominal decrease in the pre-CATI, pre-CAPI, and final mail return rates due to the current letters and new white envelopes as seen in Tables A-21, A-22, and A-23, Appendix A.

Table 8. Mail Response Rates for the Test Treatments versus Control, Census

	Treatment (%)	Standard Error	Control (%)	Standard Error	Difference (Treatment-Control)	Standard Error	Significant*
NLGE vs. Ctrl	57.6	0.4	56.0	0.3	1.6	<0.1	Yes
NLWE vs. Ctrl	58.2	0.1	56.0	0.3	2.2	<0.1	Yes
CLWE vs. Ctrl	56.5	0.4	56.0	0.3	0.5	0.1	Yes

Source: March – May 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level, Bonferroni adjustment used to control the family-wise error rate

Once again, we did not believe that production mailing materials would work best during the months after Census, so the majority of the ACS sample was allocated to NLWE treatment group. When we compared each of the test treatments to the control group in Table 9, we find that the test treatment groups using the new letter lead to substantive increases in the mail response rate, while the test treatment using the current letters produces a nominal increase of one tenth of a percentage point. The test treatment using the new letters in combination with the new white envelopes produced the largest gain in mail response (2.5 percentage points) relative

to the control group during the post-census time period. Note that our decision to allocate the largest portion of the ACS sample to receive the new letters and white envelopes (NLWE) during the post-census time period in anticipation of a higher response during these time periods for this treatment was supported by these results. The pre-CATI, pre-CAPI, and final mail return and response rates in Tables A-26 through A-30, in Appendix A, support these findings, with the exception of a slight decrease in the pre-CATI, pre-CAPI, and final mail return rates due to the current letters and new white envelopes as seen in Tables A-26, A-27, and A-28 in Appendix A. We also observe a nominal decline in the pre-CATI mail response rate due to the current letters and new white envelopes in Table A-29, Appendix A. In Table A-30, we have no evidence that the pre-CAPI mail response rate is affected by the current letters and new white envelopes compared to that of the control.

Table 9. Mail Response Rates for the Test Treatments versus Control, Post-Census

	Treatment (%)	Standard Error	Control (%)	Standard Error	Difference (Treatment-Control)	Standard Error	Significant*
NLGE vs. Ctrl	53.4	0.4	52.1	0.3	1.3	0.1	Yes
NLWE vs. Ctrl	54.6	0.1	52.1	0.3	2.5	<0.1	Yes
CLWE vs. Ctrl	52.2	0.4	52.1	0.3	0.1	<0.1	Yes

Source: June – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level, Bonferroni adjustment used to control the family-wise error rate

4.4 How did the year-to-year change in mail response rates from 2009 to 2010 compare to the change from 2008 to 2009?

For the months corresponding to each of our census time periods, we compared the year-to-year change in mail response rates from the years 2009 to 2010 to the change from 2008 to 2009 to provide a comparison of the trend experienced during a decennial census cycle to that during an off-census cycle. Note that the 2010 mail response rates used to calculate the 2009 to 2010 change include only those rates corresponding to the treatment group that received the largest sample allocation for a given census time period (see Table 2). From Table 10, we observe that in the months corresponding to the pre-census time period, the year-to-year change from 2009 to 2010 was 3.1 percentage points greater than the 2008 to 2009 change, evidence of a substantial impact on ACS response rates due to the pre-census environment. This could be due to some seasonal fluctuations, but we expected an increase in response from January through February 2010 because of the publicity of Census 2010.

Table 10. Comparison of Year-to-Year Change in Mail Response Rates for each Census Reference Period

	MRR ₂₀₁₀ - MRR ₂₀₀₉ (%)	Standard Error	MRR ₂₀₀₉ - MRR ₂₀₀₈ (%)	Standard Error	Difference	Standard Error	Significant*
Pre-Census	3.6	<0.1	0.5	<0.1	3.1	<0.1	Yes
Census	0.2	<0.1	1.0	<0.1	-0.8	<0.1	Yes
Post-Census	-2.0	<0.1	0.8	<0.1	-2.7	<0.1	Yes

Source: 2008, 2009, and 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level

Following the pre-census time period, we expected to see a decrease in the year-to-year change in response rates for the months corresponding to the census time period due to the extra burden

respondents experienced from having already filled out their Census form. Indeed, Table 10 shows that the year-to-year change in response rates decreased by 0.8 percentage points during the months corresponding to the Census time frame.

Reviewing the year-to-year changes in Table 10 for the months corresponding to the post-census time frame, we observe that the decline in response to the ACS is further exacerbated during this time frame with a decrease of 2.7 percentage points in the year-to-year change in response rates.

To observe the impact of the Census on the ACS had we not made any design changes to the envelopes or letters, we compared the 2008 to 2009 year-to-year change to the 2009 to 2010 year-to-year change using the control group only for the 2010 mail response rates. Table 11 shows the results of this comparison. Since the control group during the pre-census time period received the largest sample allocation, the difference in the year-to-year changes for this time period is the same result discussed previously in Table 10.

Table 11. Comparison of Year-to-Year Change in Mail Response Rates for each Census Reference Period (Control Group only for the 2010 Mail Response Rates)

	MRR ₂₀₁₀ - MRR ₂₀₀₉ (%)	Standard Error	MRR ₂₀₀₉ - MRR ₂₀₀₈ (%)	Standard Error	Difference	Standard Error	Significant*
Pre-Census	3.6	<0.1	0.5	<0.1	3.1	<0.1	Yes
Census	-2.0	<0.1	1.0	<0.1	-3.0	<0.1	Yes
Post-Census	-4.5	<0.1	0.8	<0.1	-5.2	<0.1	Yes

Source: 2008, 2009, and 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level

Following the pre-census time period, Table 11 shows that for the census and post-census time periods, the year-to-year change in response rates declined by 3.0 and 5.2 percentage points respectively. These results suggest that the absence of design changes to the letters and envelopes addressing the 2010 Census produces a much greater decline in respondent participation in the ACS during the census and post-census time periods (note that statistical tests between the results from Table 10 and Table 11 validate this conclusion).

5. Summary

Similar to the response rate trend we observed during Census 2000, the ACS experienced a boost in respondent participation through mail prior to the 2010 Census and a decline afterwards. The results of this evaluation showed that changes to the design and messaging of the ACS mail materials can minimize the negative impact of the 2010 Census. Specifically the new white envelopes with messaging linking the American Community Survey to the U.S. Census Bureau improved respondent participation compared to that of the current envelopes prior to and during the census and maintained the same level of participation post-census. Adding green color to the new envelopes reduced participation across the census time periods compared to that of the new white envelopes.

In addition to studying the impact of the new envelope, we studied the effect of the new letters on respondent participation for those households who received the new white envelopes and

found that the new letters improved participation compared to the current letter across all three census time periods.

When we studied the effects of the different letter and envelope combinations, we found that all of the test treatment letter-envelope combinations improved participation compared to the current letter-envelope combination across all three census time periods. Of the three combinations, the new letters paired with the new white envelopes resulted in the greatest increase in respondent participation across all three time periods.

References

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Appendix A

Table A-1. Envelope Messaging – Mail Return Rates for CLWE versus Control by Census Time Period

Time Period	CLWE (%)	Standard Error	Control (%)	Standard Error	Difference		Significant*
					(CLWE-Control)	Standard Error	
Pre-Census	51.2	0.4	50.7	0.1	0.6	<0.1	Yes
Census	45.9	0.3	46.2	0.2	-0.3	<0.1	Yes
Post-Census	42.6	0.3	42.8	0.2	-0.3	<0.1	Yes

Source: January 2010 – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)
 *Significant at the $\alpha = 0.10$ significance level

Table A-2. Envelope Messaging – Pre-CATI Mail Return Rates for CLWE versus Control by Census Time Period

Time Period	CLWE (%)	Standard Error	Control (%)	Standard Error	Difference		Significant*
					(CLWE-Control)	Standard Error	
Pre-Census	31.5	0.3	31.3	0.1	0.2	<0.1	Yes
Census	31.5	0.3	31.8	0.2	-0.3	<0.1	Yes
Post-Census	30.9	0.2	31.2	0.2	-0.3	<0.1	Yes

Source: January 2010 – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)
 *Significant at the $\alpha = 0.10$ significance level

Table A-3. Envelope Messaging – Pre-CAPI Mail Return Rates for CLWE versus Control by Census Time Period

Time Period	CLWE (%)	Standard Error	Control (%)	Standard Error	Difference		Significant*
					(CLWE-Control)	Standard Error	
Pre-Census	47.2	0.3	46.7	0.1	0.5	<0.1	Yes
Census	44.9	0.3	45.3	0.2	-0.4	<0.1	Yes
Post-Census	41.4	0.3	41.7	0.2	-0.3	<0.1	Yes

Source: January 2010 – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)
 *Significant at the $\alpha = 0.10$ significance level

Table A-4. Envelope Messaging – Pre-CATI Mail Response Rates for CLWE versus Control by Census Time Period

Time Period	CLWE (%)	Standard Error	Control (%)	Standard Error	Difference		Significant*
					(CLWE-Control)	Standard Error	
Pre-Census	40.6	0.4	40.4	0.1	0.3	<0.1	Yes
Census	40.8	0.4	40.3	0.3	0.5	<0.1	Yes
Post-Census	37.3	0.3	37.4	0.3	-0.1	<0.1	Yes

Source: January 2010 – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)
 *Significant at the $\alpha = 0.10$ significance level

Table A-5. Envelope Messaging – Pre-CAPI Mail Response Rates for CLWE versus Control by Census Time Period

Time Period	CLWE (%)	Standard Error	Control (%)	Standard Error	Difference		Significant*
					(CLWE- Control)	Standard Error	
Pre-Census	57.9	0.5	57.3	0.1	0.6	<0.1	Yes
Census	55.3	0.4	54.9	0.3	0.3	0.1	Yes
Post-Census	50.7	0.4	50.7	0.3	0.0	<0.1	No

Source: January 2010 – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level

Table A-6. Envelope Color – Mail Return Rates for NLGE versus NLWE by Census Time Period

Time Period	NLGE (%)	Standard Error	NLWE (%)	Standard Error	Difference		Significant*
					(NLGE- NLWE)	Standard Error	
Pre-Census	51.2	0.3	51.8	0.3	-0.6	0.1	Yes
Census	47.5	0.3	47.9	0.1	-0.4	<0.1	Yes
Post-Census	44.1	0.3	45.1	0.1	-1.0	<0.1	Yes

Source: January 2010 – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level

Table A-7. Envelope Color – Pre-CATI Mail Return Rates for NLGE versus NLWE by Census Time Period

Time Period	NLGE (%)	Standard Error	NLWE (%)	Standard Error	Difference		Significant*
					(NLGE- NLWE)	Standard Error	
Pre-Census	32.8	0.3	33.1	0.3	-0.3	<0.1	Yes
Census	34.0	0.2	34.0	0.1	-0.0	<0.1	No
Post-Census	33.3	0.2	34.3	0.1	-1.1	<0.1	Yes

Source: January 2010 – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level

Table A-8. Envelope Color – Pre-CAPI Mail Return Rates for NLGE versus NLWE by Census Time Period

Time Period	NLGE (%)	Standard Error	NLWE (%)	Standard Error	Difference		Significant*
					(NLGE- NLWE)	Standard Error	
Pre-Census	47.1	0.3	47.7	0.3	-0.6	<0.1	Yes
Census	46.5	0.3	46.9	0.1	-0.3	<0.1	Yes
Post-Census	43.0	0.3	43.9	0.1	-0.9	<0.1	Yes

Source: January 2010 – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level

Table A-9. Envelope Color – Pre-CATI Mail Response Rates for NLGE versus NLWE by Census Time Period

Time Period	NLGE (%)	Standard Error	NLWE (%)	Standard Error	Difference		Significant*
					(NLGE- NLWE)	Standard Error	
Pre-Census	41.7	0.4	42.7	0.4	-1.0	0.1	Yes
Census	43.3	0.4	43.3	0.1	-0.1	<0.1	Yes
Post-Census	39.8	0.4	41.1	0.1	-1.3	<0.1	Yes

Source: January 2010 – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level

Table A-10. Envelope Color – Pre-CAPI Mail Response Rates for NLGE versus NLWE by Census Time Period

Time Period	NLGE (%)	Standard Error	NLWE (%)	Standard Error	Difference		Significant*
					(NLGE-NLWE)	Standard Error	
Pre-Census	57.3	0.4	58.4	0.4	-1.1	0.1	Yes
Census	56.4	0.4	57.0	0.1	-0.5	<0.1	Yes
Post-Census	52.1	0.4	53.2	0.1	-1.1	<0.1	Yes

Source: January 2010 – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level

Table A-11. Letter Messaging – Mail Return Rates for NLWE versus CLWE by Census Time Period

Time Period	NLWE (%)	Standard Error	CLWE (%)	Standard Error	Difference		Significant*
					(NLWE-CLWE)	Standard Error	
Pre-Census	51.8	0.3	51.2	0.4	0.6	<0.1	Yes
Census	47.9	0.1	45.9	0.3	2.0	<0.1	Yes
Post-Census	45.1	0.1	42.6	0.3	2.5	<0.1	Yes

Source: January 2010 – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level

Table A-12. Letter Messaging – Pre-CATI Mail Return Rates for NLWE versus CLWE by Census Time Period

Time Period	NLWE (%)	Standard Error	CLWE (%)	Standard Error	Difference		Significant*
					(NLWE-CLWE)	Standard Error	
Pre-Census	33.1	0.3	31.5	0.3	1.7	<0.1	Yes
Census	34.0	0.1	31.5	0.3	2.5	<0.1	Yes
Post-Census	34.3	0.1	30.9	0.2	3.5	<0.1	Yes

Source: January 2010 – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level

Table A-13. Letter Messaging – Pre-CAPI Mail Return Rates for NLWE versus CLWE by Census Time Period

Time Period	NLWE (%)	Standard Error	CLWE (%)	Standard Error	Difference		Significant*
					(NLWE-CLWE)	Standard Error	
Pre-Census	47.7	0.3	47.2	0.3	0.5	<0.1	Yes
Census	46.9	0.1	45.0	0.4	2.0	<0.1	Yes
Post-Census	43.9	0.1	41.4	0.3	2.5	<0.1	Yes

Source: January 2010 – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level

Table A-14. Letter Messaging – Pre-CATI Mail Response Rates for NLWE versus CLWE by Census Time Period

Time Period	NLWE (%)	Standard Error	CLWE (%)	Standard Error	Difference		Significant*
					(NLWE-CLWE)	Standard Error	
Pre-Census	42.7	0.4	40.6	0.4	2.1	0.1	Yes
Census	43.3	0.1	40.8	0.4	2.5	<0.1	Yes
Post-Census	41.1	0.1	37.3	0.3	3.8	<0.1	Yes

Source: January 2010 – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level

Table A-15. Letter Messaging – Pre-CAPI Mail Response Rates for NLWE versus CLWE by Census Time Period

Time Period	NLWE (%)	Standard Error	CLWE (%)	Standard Error	Difference		Significant*
					(NLWE-CLWE)	Standard Error	
Pre-Census	58.4	0.4	57.9	0.5	0.5	0.1	Yes
Census	57.0	0.1	55.3	0.4	1.7	<0.1	Yes
Post-Census	53.2	0.1	50.7	0.4	2.5	<0.1	Yes

Source: January 2010 – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level

Table A-16. Mail Return Rates for the Test Treatments versus Control, Pre-Census

	Treatment (%)	Standard Error	Control (%)	Standard Error	Difference		Significant*
					(Treatment-Control)	Standard Error	
NLGE vs. Ctrl	51.2	0.3	50.7	0.1	0.6	<0.1	Yes
NLWE vs. Ctrl	51.8	0.3	50.7	0.1	1.1	<0.1	Yes
CLWE vs. Ctrl	51.2	0.4	50.7	0.1	0.6	<0.1	Yes

Source: January – February 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level, Bonferroni adjustment used to control the family-wise error rate

Table A-17. Pre-CATI Mail Return Rates for the Test Treatments versus Control, Pre-Census

	Treatment (%)	Standard Error	Control (%)	Standard Error	Difference		Significant*
					(Treatment-Control)	Standard Error	
NLGE vs. Ctrl	32.8	0.3	31.3	0.1	1.5	<0.1	Yes
NLWE vs. Ctrl	33.1	0.3	31.3	0.1	1.9	<0.1	Yes
CLWE vs. Ctrl	31.5	0.3	31.3	0.1	0.2	<0.1	Yes

Source: January – February 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level, Bonferroni adjustment used to control the family-wise error rate

Table A-18. Pre-CAPI Mail Return Rates for the Test Treatments versus Control, Pre-Census

	Treatment (%)	Standard Error	Control (%)	Standard Error	Difference		Significant*
					(Treatment-Control)	Standard Error	
NLGE vs. Ctrl	47.1	0.3	46.7	0.1	0.3	<0.1	Yes
NLWE vs. Ctrl	47.7	0.3	46.7	0.1	0.9	<0.1	Yes
CLWE vs. Ctrl	47.2	0.3	46.7	0.1	0.5	<0.1	Yes

Source: January – February 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level, Bonferroni adjustment used to control the family-wise error rate

Table A-19. Pre-CATI Mail Response Rates for the Test Treatments versus Control, Pre-Census

	Treatment (%)	Standard Error	Control (%)	Standard Error	Difference		Significant*
					(Treatment-Control)	Standard Error	
NLGE vs. Ctrl	41.7	0.4	40.3	0.1	1.3	<0.1	Yes
NLWE vs. Ctrl	42.7	0.4	40.3	0.1	2.3	<0.1	Yes
CLWE vs. Ctrl	40.6	0.4	40.3	0.1	0.3	<0.1	Yes

Source: January – February 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level, Bonferroni adjustment used to control the family-wise error rate

Table A-20. Pre-CAPI Mail Response Rates for the Test Treatments versus Control, Pre-Census

	Treatment (%)	Standard Error	Control (%)	Standard Error	Difference (Treatment-Control)	Standard Error	Significant*
NLGE vs. Ctrl	57.3	0.4	57.3	0.1	-0.0	<0.1	No
NLWE vs. Ctrl	58.4	0.4	57.3	0.1	1.1	<0.1	Yes
CLWE vs. Ctrl	57.9	0.5	57.3	0.1	0.6	0.1	Yes

Source: January – February 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level, Bonferroni adjustment used to control the family-wise error rate

Table A-21. Mail Return Rates for the Test Treatments versus Control, Census

	Treatment (%)	Standard Error	Control (%)	Standard Error	Difference (Treatment-Control)	Standard Error	Significant*
NLGE vs. Ctrl	47.5	0.3	46.2	0.2	1.3	<0.1	Yes
NLWE vs. Ctrl	47.9	0.1	46.2	0.2	1.7	<0.1	Yes
CLWE vs. Ctrl	45.9	0.4	46.2	0.2	-0.3	<0.1	Yes

Source: March – May 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level, Bonferroni adjustment used to control the family-wise error rate

Table A-22. Pre-CATI Mail Return Rates for the Test Treatments versus Control, Census

	Treatment (%)	Standard Error	Control (%)	Standard Error	Difference (Treatment-Control)	Standard Error	Significant*
NLGE vs. Ctrl	34.0	0.2	31.8	0.2	2.2	<0.1	Yes
NLWE vs. Ctrl	34.0	0.1	31.8	0.2	2.2	<0.1	Yes
CLWE vs. Ctrl	31.5	0.3	31.8	0.2	-0.3	<0.1	Yes

Source: March – May 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level, Bonferroni adjustment used to control the family-wise error rate

Table A-23. Pre-CAPI Mail Return Rates for the Test Treatments versus Control, Census

	Treatment (%)	Standard Error	Control (%)	Standard Error	Difference (Treatment-Control)	Standard Error	Significant*
NLGE vs. Ctrl	46.5	0.3	45.3	0.2	1.3	<0.1	Yes
NLWE vs. Ctrl	46.9	0.1	45.3	0.2	1.6	<0.1	Yes
CLWE vs. Ctrl	44.9	0.4	45.3	0.2	-0.4	<0.1	Yes

Source: March – May 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level, Bonferroni adjustment used to control the family-wise error rate

Table A-24. Pre-CATI Mail Response Rates for the Test Treatments versus Control, Census

	Treatment (%)	Standard Error	Control (%)	Standard Error	Difference (Treatment-Control)	Standard Error	Significant*
NLGE vs. Ctrl	43.3	0.4	40.3	0.3	2.9	<0.1	Yes
NLWE vs. Ctrl	43.3	0.1	40.3	0.3	3.0	<0.1	Yes
CLWE vs. Ctrl	40.8	0.4	40.3	0.3	0.5	<0.1	Yes

Source: March – May 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level, Bonferroni adjustment used to control the family-wise error rate

Table A-25. Pre-CAPI Mail Response Rates for the Test Treatments versus Control, Census

	Treatment (%)	Standard Error	Control (%)	Standard Error	Difference (Treatment-Control)	Standard Error	Significant*
NLGE vs. Ctrl	56.4	0.4	54.9	0.3	1.5	0.1	Yes
NLWE vs. Ctrl	57.0	0.1	54.9	0.3	2.0	<0.1	Yes
CLWE vs. Ctrl	55.3	0.4	54.9	0.3	0.3	0.1	Yes

Source: March – May 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level, Bonferroni adjustment used to control the family-wise error rate

Table A-26. Mail Return Rates for the Test Treatments versus Control, Post-Census

	Treatment (%)	Standard Error	Control (%)	Standard Error	Difference (Treatment-Control)	Standard Error	Significant*
NLGE vs. Ctrl	44.1	0.3	42.8	0.2	1.3	<0.1	Yes
NLWE vs. Ctrl	45.1	0.1	42.8	0.2	2.2	<0.1	Yes
CLWE vs. Ctrl	42.6	0.3	42.8	0.2	-0.2	<0.1	Yes

Source: June – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level, Bonferroni adjustment used to control the family-wise error rate

Table A-27. Pre-CATI Mail Return Rates for the Test Treatments versus Control, Post-Census

	Treatment (%)	Standard Error	Control (%)	Standard Error	Difference (Treatment-Control)	Standard Error	Significant*
NLGE vs. Ctrl	33.3	0.2	31.2	0.2	2.1	<0.1	Yes
NLWE vs. Ctrl	34.3	0.1	31.2	0.2	3.1	<0.1	Yes
CLWE vs. Ctrl	30.9	0.2	31.2	0.2	-0.3	<0.1	Yes

Source: June – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level, Bonferroni adjustment used to control the family-wise error rate

Table A-28. Pre-CAPI Mail Return Rates for the Test Treatments versus Control, Post-Census

	Treatment (%)	Standard Error	Control (%)	Standard Error	Difference (Treatment-Control)	Standard Error	Significant*
NLGE vs. Ctrl	43.0	0.3	41.7	0.2	1.3	<0.1	Yes
NLWE vs. Ctrl	44.0	0.1	41.7	0.2	2.2	<0.1	Yes
CLWE vs. Ctrl	41.4	0.3	41.7	0.2	-0.3	<0.1	Yes

Source: June – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level, Bonferroni adjustment used to control the family-wise error rate

Table A-29. Pre-CATI Mail Response Rates for the Test Treatments versus Control, Post-Census

	Treatment (%)	Standard Error	Control (%)	Standard Error	Difference (Treatment-Control)	Standard Error	Significant*
NLGE vs. Ctrl	39.8	0.4	37.4	0.3	2.3	<0.1	Yes
NLWE vs. Ctrl	41.1	0.1	37.4	0.3	3.7	<0.1	Yes
CLWE vs. Ctrl	37.3	0.3	37.4	0.3	-0.1	<0.1	Yes

Source: June – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level, Bonferroni adjustment used to control the family-wise error rate

Table A-30. Pre-CAPI Mail Response Rates for the Test Treatments versus Control, Post-Census

	Treatment (%)	Standard Error	Control (%)	Standard Error	Difference (Treatment-Control)	Standard Error	Significant*
NLGE vs. Ctrl	52.1	0.4	50.7	0.3	1.4	<0.1	Yes
NLWE vs. Ctrl	53.2	0.1	50.7	0.3	2.5	<0.1	Yes
CLWE vs. Ctrl	50.7	0.4	50.7	0.3	0.0	<0.1	No

Source: June – November 2010 American Community Survey (http://www.census.gov/acs/www/methodology/methodology_main/)

*Significant at the $\alpha = 0.10$ significance level, Bonferroni adjustment used to control the family-wise error rate

Appendix B

Figure B-1. New ACS Envelope with Color

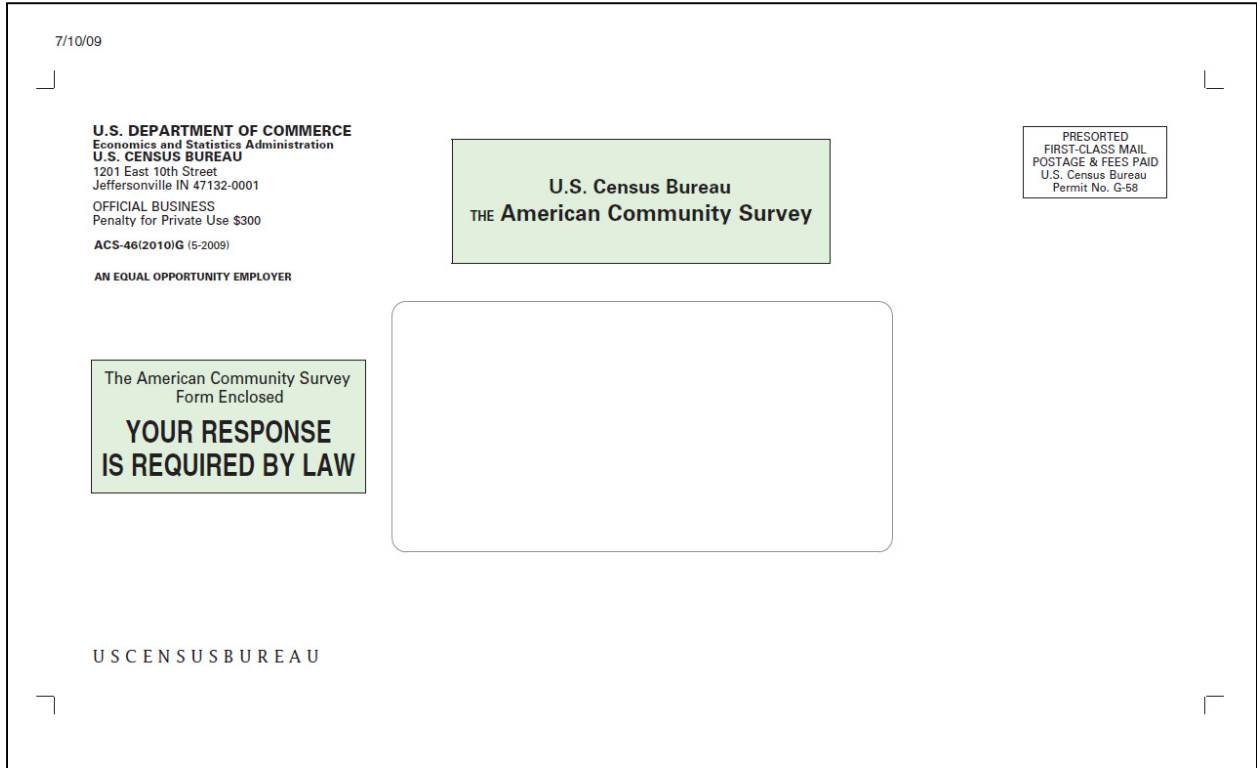


Figure B-2. New Pre-Notice Envelope with Color

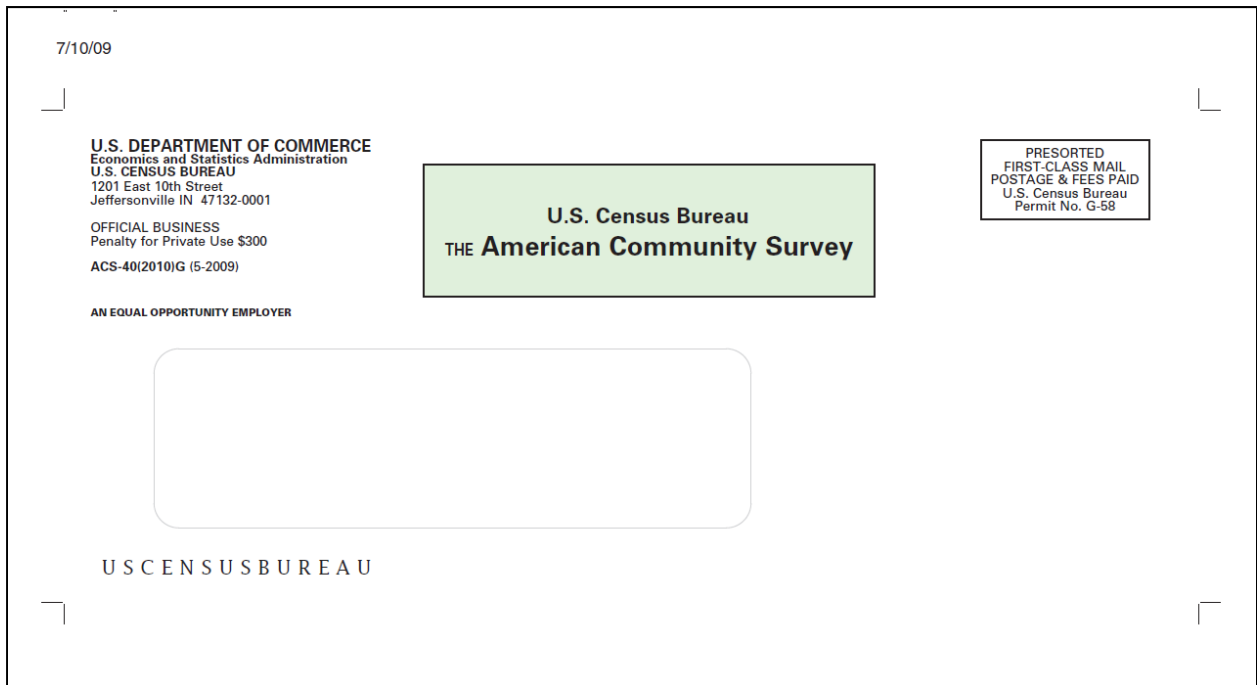


Figure B-3. New ACS Envelope without Color

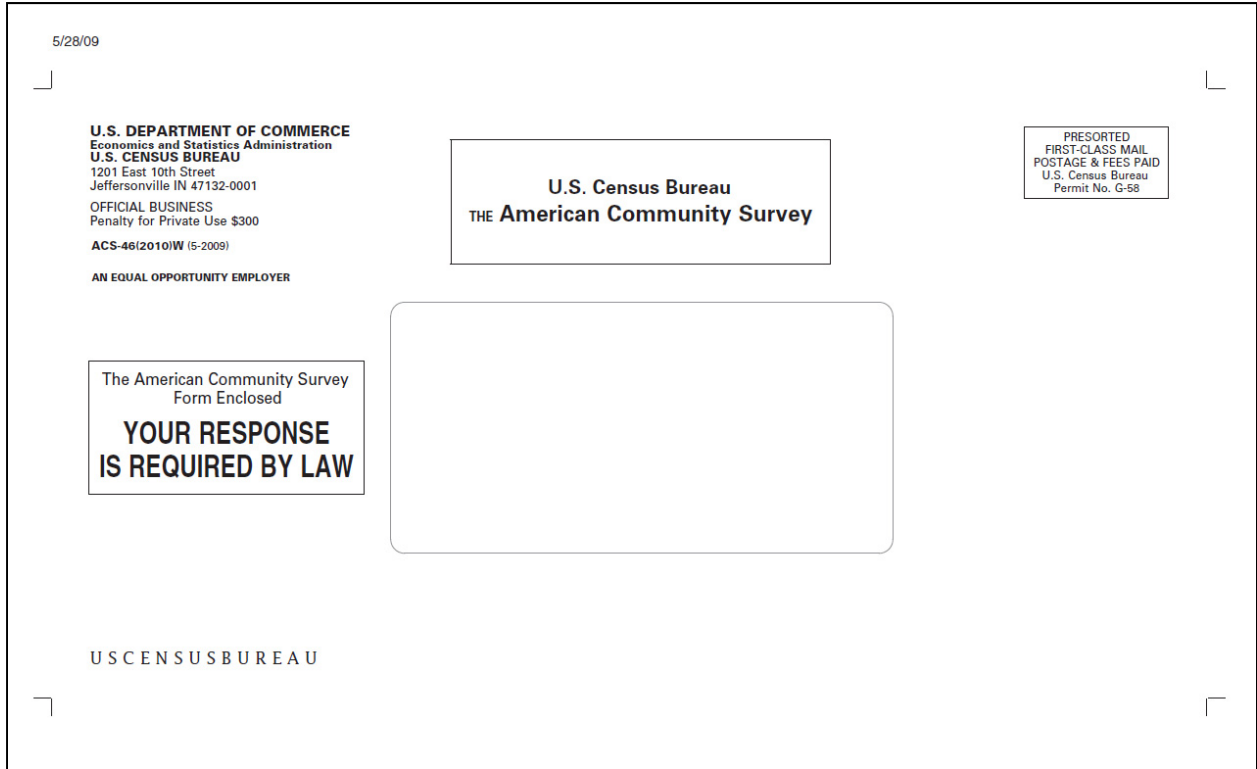


Figure B-4. New Pre-Notice Envelope without Color

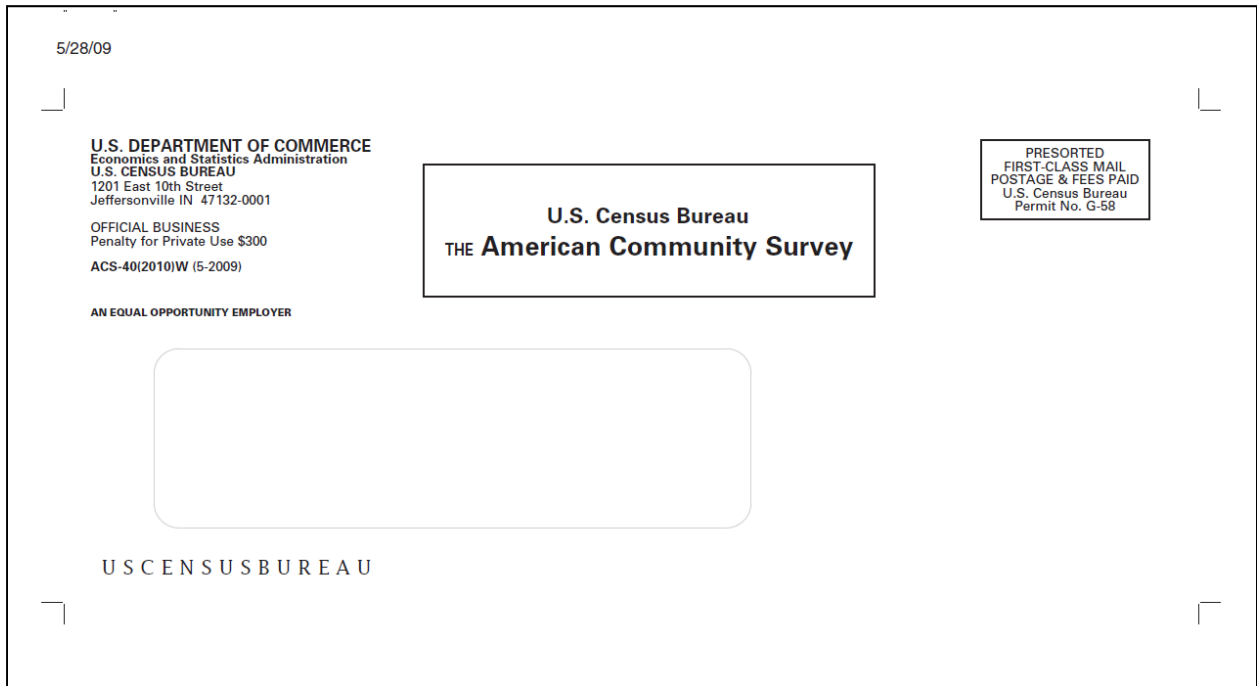


Figure B-5. Current ACS Envelope

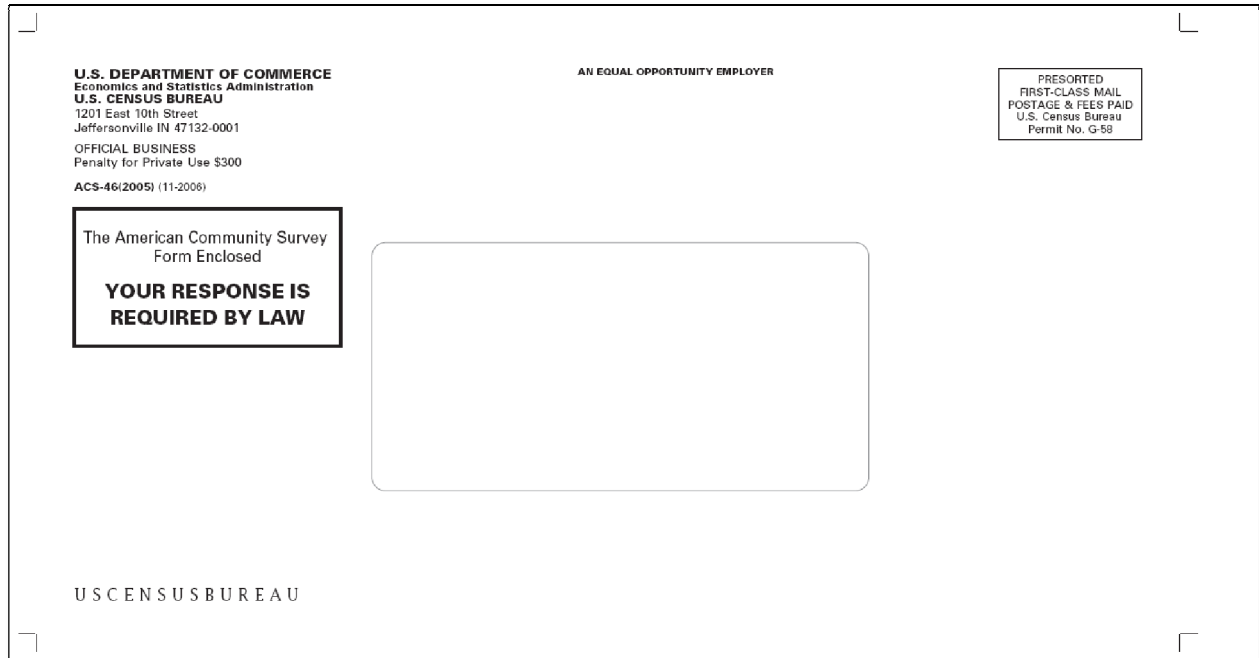


Figure B-6. Current Pre-Notice Envelope



Figure B-7. Census 2010 Envelope

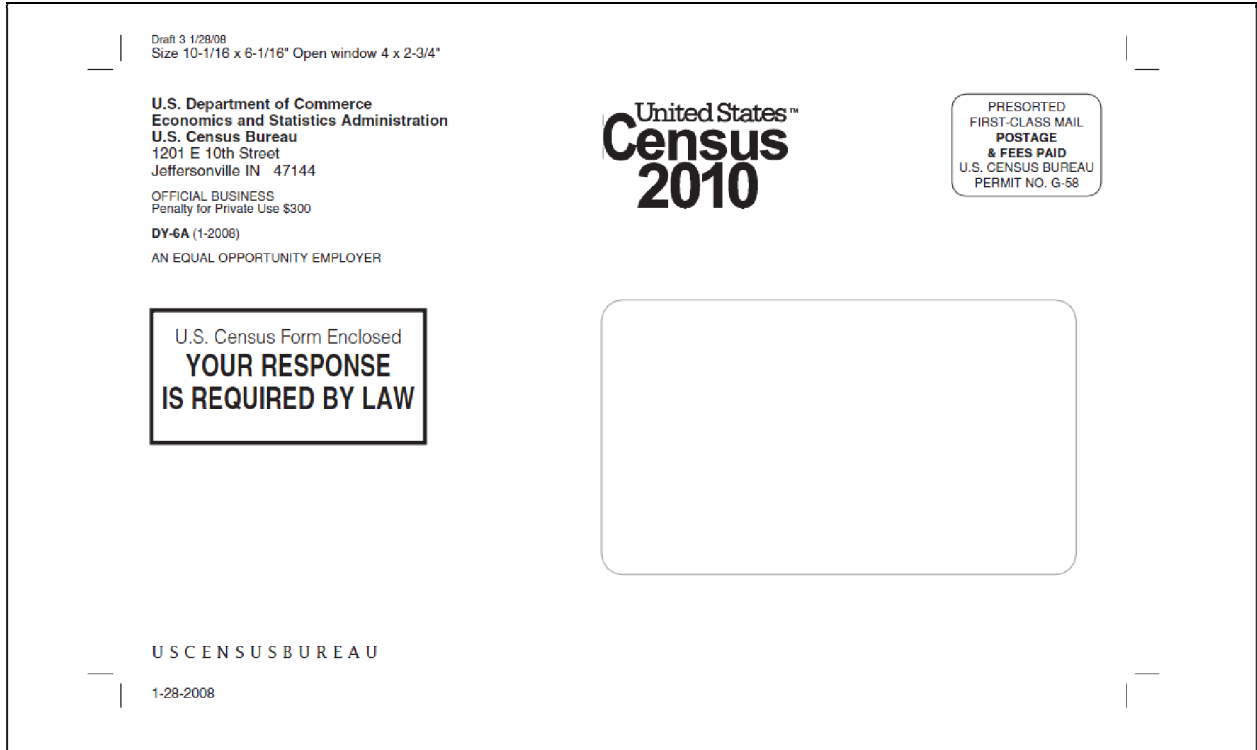


Figure B-8. New ACS Pre-Notice Letter

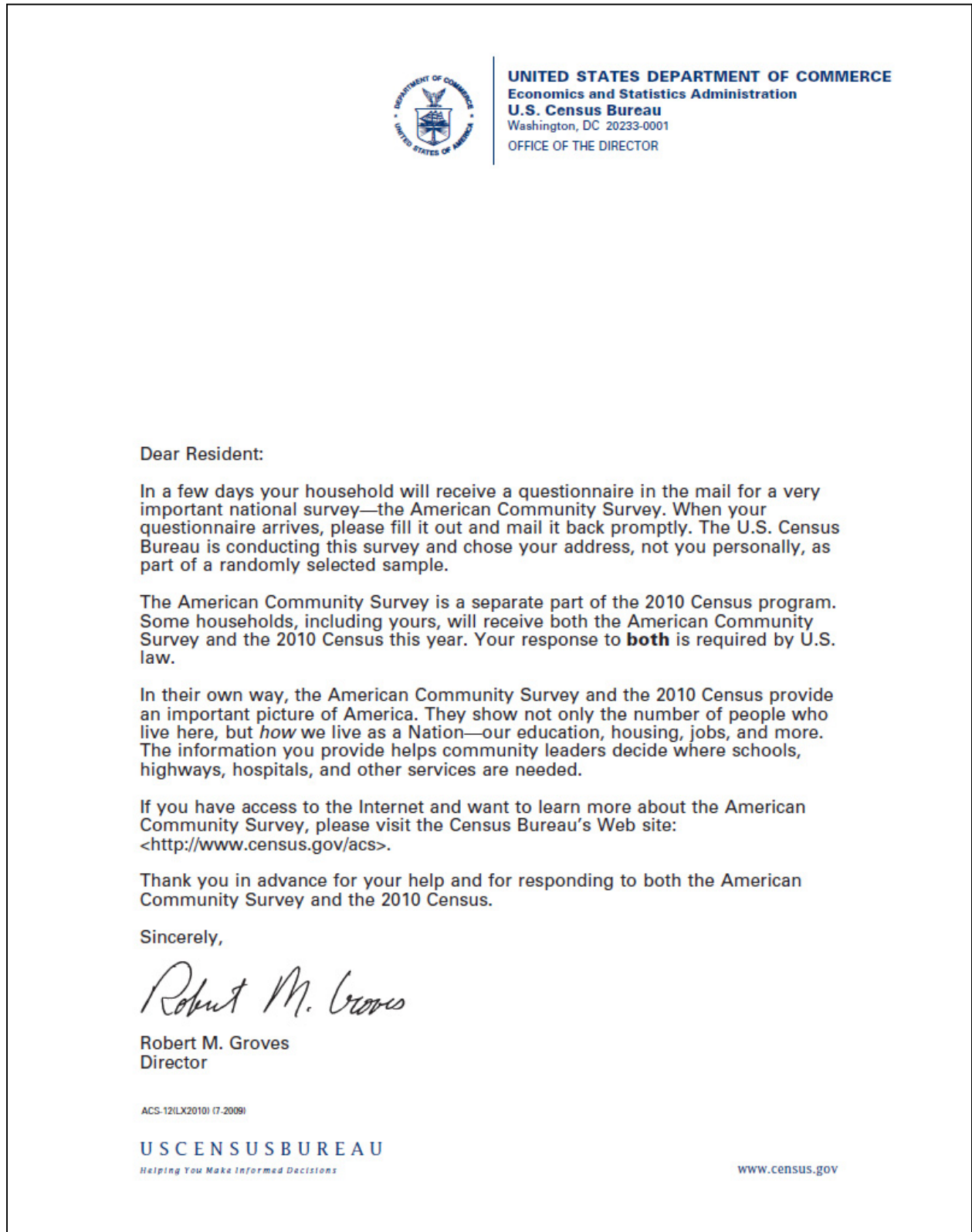


Figure B-9. New ACS Letter Enclosed in Initial Mail Package

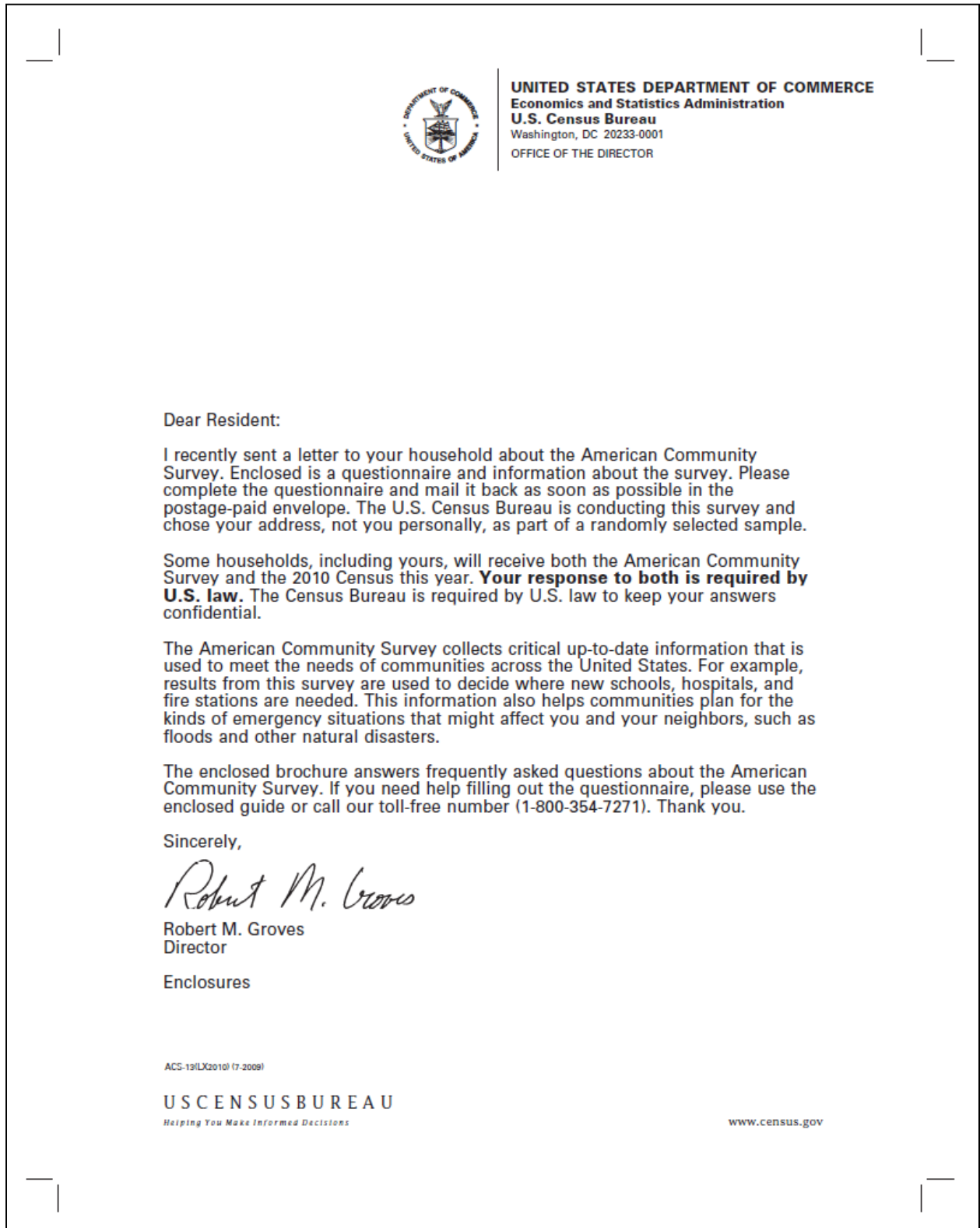


Figure B-10. New ACS Letter Enclosed in Second Mail Package

