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MEMORANDUM FOR ACS Research and Evaluation Workgroup

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Subject: 2021 ACS Regional Office Internet Letter Test Report

Attached is the American Community Survey (ACS) Research and Evaluation report, "2021 ACS Regional Office Internet Letter Test Report." This report evaluates the effect of changes to the Internet Letter sent during the CAPI operation.

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Attachment

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2021 Regional Office Internet Letter (ROIL) Test

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EXECUTIVE SUMMARY

Beginning in October 2020, the American Community Survey program began mailing a newly redesigned “Internet Letter” to all mailable addresses that were selected for the Computer-Assisted Personal Interviewing (CAPI) operation. This pressure seal letter provides information on how to respond online to avoid an in-person interview. The Regional Office Internet Letter (ROIL) Test tested variations on two elements of the letter: the message on the outside of the pressure seal mailer and the response options provided. The goal of the test was not to evaluate the redesigned letter against previous production versions, but to see if the letter could be further improved by modifying these two elements.

The ROIL Test consisted of a control treatment and three experimental treatments that tested variations on two design elements. The message on the outside of the pressure seal mailer was either a “YOUR RESPONSE IS PAST DUE” message or a “YOUR RESPONSE IS REQUIRED BY LAW” message in all capital letters. The response options provided explicitly inside the letter were either the website to the internet instrument as a single response option or both the Telephone Questionnaire Assistance (TQA) phone number and the internet instrument website. The ROIL Test had a fully factorial design of these two elements each with two options.

No difference was found when comparing the overall response rates of treatments using pairwise comparisons, nor when comparing self-response response rates. Additionally, no difference was found between treatments for any of these secondary metrics: refusal rates and average number of contact attempts.

However, when we used logistic regression to isolate the effects of the individual elements, the inclusion of TQA as a response option was found to increase self-response. This self-response increase was driven by an increase in TQA and mail response. Our analysis determined that our current TQA operation could handle the additional TQA calls.

Since there was evidence that the inclusion of TQA as a response option increased self-response when that effect was isolated using logistic regression, we recommend adding TQA as a response option to the Internet Letter. While adding this option would increase the number of TQA calls, the evidence suggests that the current TQA operation could handle this call increase without any changes to their operation.

We also recommend changing the address-side message to the “Your Response is Required by Law” message. In the regression analysis, there was a significant interaction effect between it and offering TQA as a response option on mail response. However, the impact of this change on response would be minimal because the ACS receives so few mail responses during CAPI collection.

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1. INTRODUCTION

The U.S. Census Bureau continually evaluates how the American Community Survey (ACS) mail contact materials and data collection methodology can be improved to increase survey participation and reduce survey costs. Recent tests have shown that self-response increases when mailings contain less text and use visual design elements to draw attention to key messages (Oliver et al., 2016; Risley & Berkley, 2020). Increased self-response can substantially decrease survey costs and improve data quality (Risley & Berkley, 2020).

During the Computer-Assisted Personal Interviewing (CAPI) month, a series of letters are available to field representatives that they can provide to nonrespondent households to motivate them to respond. One of these letters is the Internet Letter, which provides an internet user ID and instructions on how to respond online. However, some regions sent the Internet Letter to all mailable CAPI cases and others sent it at the discretion of the field representative. To combat decreasing CAPI response, the ACS program decided to standardize the use of the letter across all regions. Beginning in October 2020, the Internet Letter was mailed from the National Processing Center (NPC) to all mailable addresses chosen for CAPI.

A new version of the Internet Letter was developed as part of a project to update the letters used by field representatives during CAPI. The letter was redesigned to increase survey cooperation by being less text dense and using visual elements to draw attention to key messages. This redesign also brought it in line with the ACS mail materials used during the self-response phase, which have a similar look and feel and use similar design elements (Risley & Berkley, 2020; Spiers & Heimel, 2021). Because the design changes to the ACS self-response mail materials were successful at increasing self-response, the ACS program decided to implement the changes to the Internet Letter in production without field testing. However, some suggestions for the redesigned letter needed to be tested before implementing.

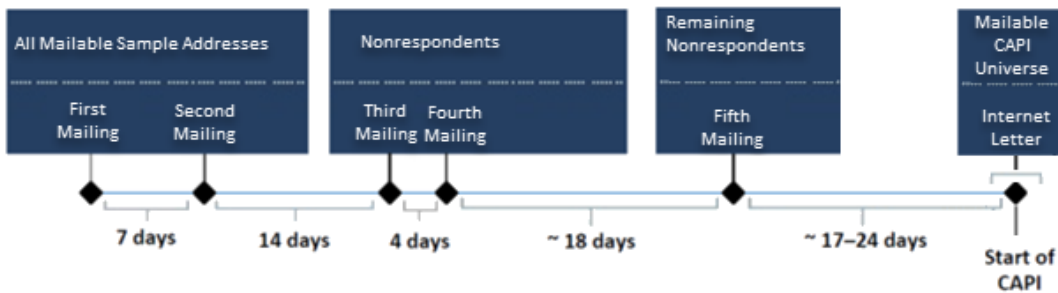
The purpose of the Regional Office Internet Letter (ROIL) Test was to study variations on the new Internet Letter to understand which content options are most effective at increasing self-response and combating decreasing CAPI response rates.

2. BACKGROUND

2.1 Current ACS Data Collection Strategy

The ACS contact strategy used at the time of the field test (June 2021 panel) is detailed below.

2021 ACS Contact Strategy



The initial sample consists of mailable and unmailable addresses. The first two mailings are sent to all mailable addresses in the monthly sample. The first mailing includes a letter, a multilingual brochure, and a card with instructions on how to respond via the internet. The letter contains an invitation to participate in the ACS online, information about the survey, and more information in a *frequently asked questions* format on the back of the letter. A week later, these same addresses are sent a second mailing, a reminder letter in a pressure seal mailer.

Responding addresses are removed from the original mailing universe after the second mailing to create a new mailing universe of nonrespondents; these addresses are sent the third and fourth mailings.¹ The third mailing includes a letter, a paper questionnaire, and a business reply envelope. Four days later, these addresses are sent a fourth mailing, a reminder postcard which encourages them to respond.

After the fourth mailing, responding addresses are again removed from the mailing universe to create a new mailing universe of nonrespondents. The remaining addresses are sent the fifth mailing, an urgent final reminder letter with a due date in a pressure seal mailer.

Two to three weeks later, the universe of addresses eligible for the CAPI nonresponse followup operation is created. This universe is comprised of the remaining mailable nonresponding addresses, the unmailable addresses that were removed from the initial sample, and the addresses that were determined to be undeliverable during the mailing phase. From this universe, a subsample is chosen to be included in the CAPI operation. CAPI interviews start at the beginning of the month following the fifth mailing. If possible, field representatives attempt

¹ Addresses deemed “undeliverable as addressed” (UAA) by the United States Postal Service are also removed from the address files for subsequent mailings.

to interview those selected for CAPI by phone. If they cannot reach them by phone, or if a phone number is not available, they visit the addresses to conduct in-person interviews.

Additional information about the ACS data collection strategy can be found in the ACS and Puerto Rico Community Survey (PRCS) Design and Methodology report (U.S. Census Bureau, 2022).

Starting in October 2020, NPC began sending the Internet Letter to all mailable addresses in the CAPI universe. Designed as a letter that field representatives could provide to respondents to encourage response, this letter provides information on how to respond online to avoid an in-person visit. The letter arrives sometime during the first week of CAPI data collection. In some cases, the letter will arrive prior to contact by a field representative; but in others the letter will arrive after the initial contact. More information about the letter is provided in Section 2.2.

2.2 Letters Available to Field Representatives

During the CAPI month, field representatives attempt to address potential concerns and gain cooperation by requesting letters for respondents that contain additional information. Specific letters can be ordered by field representatives based on the situations they encounter. For example, a field representative who cannot access a locked apartment building may request a “management letter” that is designed to address concerns raised by apartment managers. In total, the field representatives have 12 letters and brochures available to them, four of which they carry with them and can leave at the household’s door. The remaining eight can be sent to the household by the regional office at the request of the field representative.

For several years, one of the most often used letters was the Internet Letter, which encouraged an online response and provided internet login instructions to the recipient. An example of the Internet Letter is shown in Appendix A. There were concerns that the Internet Letter contains a large amount of text that is not connected to the primary purpose of the letter and may obscure salient messages from the reader. This could suggest that recipients are more likely to overlook the instructions on responding online or the benefits of responding.

To address these concerns, changes to the Internet Letter were made in a two-step process. First, a new letter was designed as part of a project to update the CAPI letters sent from the regional offices, shown in Appendix B, and implemented in production in October 2020. The update to the letter was made without first performing a field test because we had strong evidence the messaging and design of the new letter would be more effective at motivating response than the existing letter based on lessons learned from the results of recent ACS testing of self-response materials, as well as the best practices suggested by communications and survey literature (Oliver et al., 2017; Risley & Berkley, 2020).

The second step in the process was this ROIL Test, a field test which tests two aspects of the updated letters to determine which content option will ultimately be the most effective at

increasing self-response and combating decreasing CAPI response rates. The letter implemented into production uses a Past Due message on the outside of the pressure seal mailer and provides an internet response option inside. The two changes tested were:

- Using a “YOUR RESPONSE IS REQUIRED BY LAW” message instead of a “YOUR RESPONSE IS PAST DUE” message in all capital letters on the outside of the pressure seal mailer.
- Providing Telephone Questionnaire Assistance (TQA) as a response option in addition to the internet response option.

In previous testing, a due date and a Required by Law message have both been found to increase self-response (Risley & Berkley, 2020; Risley & Oliver, 2021). However, we were unsure which message would be most effective for this specific mailing.

Providing TQA as a response option for the ACS has been considered for some time. The primary benefit of providing it as a response option during CAPI is that TQA responses are on average cheaper than CAPI responses. However, they are more expensive than self-responses by internet and mail, and there is a concern that enough of an increase in calls could overwhelm the call centers.

2.3 Literature Review

2.3.1 Mail Materials

2.3.1.1 Mail Material Design

In the 2018 Mail Materials Test, design changes and variations on the use of mandatory messaging were tested (Risley & Berkley, 2020). The goals of the letter design changes were:

- Emphasize the Census Bureau brand in ACS mail materials.
- Use visual design principles to draw attention to key messages.
- Create a consistent look and feel across all mailings.

To meet these goals, the following changes were made to the self-response mailings:

- The Census Bureau logo was moved to the top left corner of the letters and envelope to increase prominence.
- Where possible, bulleted lists were used to decrease the amount of text in the letters.
- Bolding and call-out boxes were used to better emphasize key parts of the letter.

The treatment that performed the best included these design elements and features that emphasized mandatory messaging. Shown in Appendix B, the redesigned Internet Letter makes use of these same design principles:

- The amount of text was reduced to provide only information that is required and most salient to motivating self-response.
- Call-out boxes and bolding were used to highlight the most important information.
- A “Your Response is Required by Law” message that was both bolded and at the start of a short paragraph was added.

2.3.1.2 Due Date Messaging

Census Bureau research suggests that the inclusion of a due date can boost self-response; the 2019 ACS Due Date Test was conducted to test the effect of a due date in the fifth mailing on self-response (Risley & Oliver, 2021). The study tested three locations for the due date:

- In the call-out box on the outside of the envelope.
- In the call-out box inside the letter.
- In a contextual message that describes the consequences of not responding by the due date.

The treatment that placed the due date both in the call-out box inside the letter and on the outside of the envelope was found to be the most effective at increasing self-response. Additionally, two of the treatments with a contextual message that describes the consequences of not responding were found to be effective (Risley & Oliver, 2021). Due to its success, a due date in the fifth mailing was implemented into the ACS production materials in October 2020.

The Internet Letter implemented into production (Appendix B) contains a message on the outside of the pressure seal mailer that connects back to this due date by informing recipients that their response is now past due. By reminding recipients of the Internet Letter that their response is late, we attempt to connect back to the sense of urgency created by the due date and create a connection to the consequence messaging. The variation that was tested in the ROIL Test instead used a “Your Response is Required by Law” message, which is used in the five mailings that are part of the self-response phase of data collection and has been consistently shown to increase response (Barth et al., 2016; Oliver et al., 2016; Risley & Berkley, 2020).²

2.3.2 TQA as a Response Option

In the 2012 National Census Test, one treatment included a telephone response option in the initial contact. A telephone number was provided in the first letter that told respondents to call and “provide your census information over the phone.” Compared to the treatment that used the same materials but did not provide a telephone number at all, there was no significant

² The 2015 Envelope Mandatory Messaging Test showed removing the mandatory messaging from the envelope significantly decreased self-response (Barth et al., 2016). Both the 2015 Summer Mandatory Messaging Test and the 2018 Mail Materials Test showed that of the treatments that tested variations on the use of mandatory messaging, the treatment with the most emphasized mandatory messaging performed best (Oliver et al., 2016; Risley & Berkley, 2020).

difference in self-response rate. However, the telephone response rate did increase from 5.3 percent to 9.4 percent. This corresponded with the mail response rate decreasing from 20.3 percent to 17.6 percent (Bentley et al., 2014).

Currently all ACS mail materials provide the TQA telephone number but do not state that it is a response option, only that help is available. By comparing the demographics of those that currently respond by phone by way of TQA and those that respond by personal interview by way of CAPI, we see that, based on 2018 ACS data collection, there are some demographic groups that are both more likely to be part of the CAPI universe as well as more likely to respond by phone. Some of the demographic groups include people reporting to live below the poverty level, without internet access, and who primarily speak a language other than English (U.S. Census Bureau, 2020).³

Table 1. Demographics of Responders

Demographic	All Responders	TQA Responders	CAPI Responders
Percent below poverty level	12.9%	17.1%	19.8%
Percent of households reporting no internet access	12.0%	41.8%	19.1%
Percent that do not speak English “very well”	8.4%	13.5%	13.0%

Source: U.S. Census Bureau, “People and Households Represented in Each American Community Survey Data Collection Mode” data visualization, <https://www.census.gov/library/visualizations/interactive/acs-collection.html>

2.3.3 CAPI Response Rates

The CAPI response rates have been tracked since the inception of the full ACS in 2005. For the first ten years of ACS CAPI data collection, CAPI response rates were in the mid-90s. However, over time, the CAPI response rate began to drop. To combat this drop, a variety of strategies were employed to provide field representatives with more tools to convince households to respond. Unfortunately, despite these efforts, the response rate in CAPI has continued to decline and currently fluctuates around 80 percent.

Internet response during the CAPI month, however, has been increasing. In 2013, when an internet response option was introduced, the portion of internet responses received during the CAPI month was less than one percent. In 2019, it accounted for around 4.4 to 6.2 percent of

³ Starting in October 2020, the new Internet Letter includes Spanish text at the bottom of the letter with instructions on how to respond to the survey in Spanish by phone or online. This is a new feature, although we are not testing the Spanish language with this experiment.

internet responses.⁴ This trend also corresponds to the general increase in internet responses since the introduction of the internet instrument.

3. METHODOLOGY

3.1 Sample Design

The ROIL test was conducted using the June 2021 ACS production sample, with mailout at the end of July. The monthly ACS production sample of approximately 295,000 addresses is divided into 24 methods panel groups, where each group contains approximately 12,000 addresses. Each methods panel group is a representative subsample of the entire monthly sample, and each monthly sample is representative of the entire yearly sample and the country.

For this test, the universe of analysis was limited to the mailable and deliverable portion of the CAPI universe. This portion of each methods panel group contains approximately 2,600 addresses. Each of the four treatments was assigned to six methods panel groups. Hence, each treatment had a sample size of approximately 15,600 addresses. Each treatment received a different Internet Letter. Other than the Internet Letters, the CAPI operation for each treatment was the same. Any differences in an individual field representative strategy should not affect individual treatments due to the randomization and representativeness of the method panel groups.

3.2 Experimental Design

This experimental design isolates each of the two content factors being studied. One factor is the message on the outside of the pressure seal mailer: a Past Due message or a Required by Law message (Address-Side Message). The other content factor is the inclusion of TQA as a response option (Response Option). This experiment used a fully-factorial design with one control treatment and three experimental treatments.

Table 2: 2021 Regional Office Internet Letter Test Experimental Treatments

Treatment	Address-Side Message	Response Option
Treatment 1 (Control)	Past Due	Internet Only
Treatment 2	Past Due	Internet + TQA
Treatment 3	Required by Law	Internet Only
Treatment 4	Required by Law	Internet + TQA

⁴ CAPI response rates and the percent of internet response in the last month of data collection were from an internal Census Bureau tabulation of ACS responses from January 2005 to December 2020.

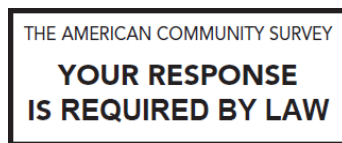
3.2.1 Address-Side Message

Starting in the October 2020 ACS panel there was a due date provided in the fifth mailing. As part of this test, we tested if the message on the outside of the pressure seal mailer should reference back to this due date or use the “Your Response is Required by Law” message, which is used on many of the other mail materials. To determine which message is more effective at increasing self-response, we tested two variations on the messaging used on the address-side:

- The Past Due message:



- The Required by Law message:

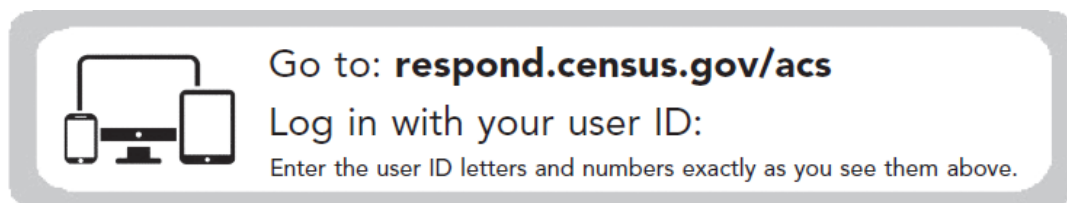


Appendix D shows Treatment 3, where a “Your Response is Required by Law” message is in place of the Past Due message. Appendix E shows Treatment 4, where a “Your Response is Required by Law” message is used in addition to offering both TQA and internet as response options as described in Section 3.2.2.

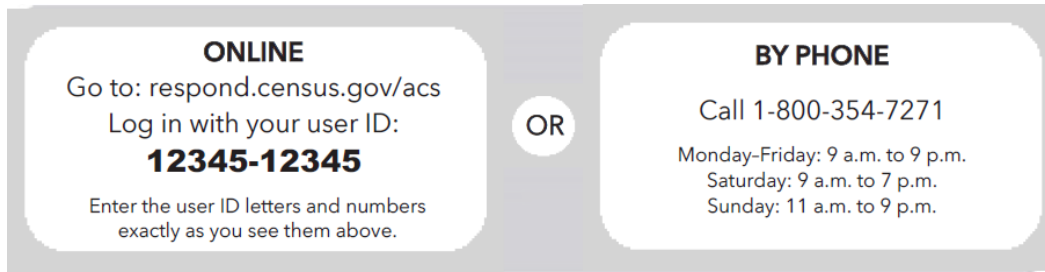
3.2.2 Response Option

Currently all mail materials mention the TQA number but do not state that it is a response option. There are respondents whose first choice would be to respond by telephone; however, it is more expensive than if they responded online or by mail, and there is concern that the call volume would be too much for the current TQA operation to handle. However, since a TQA response is still less expensive than a CAPI response, and the Internet Letter is being sent to a small universe, TQA as a response option is being tested as part of this test. The two variations being tested are internet as the only response option and internet in combination with TQA:

- The Internet Only response option:



- The Internet + TQA response option:



Appendix C shows Treatment 2 where TQA and internet are both provided as response options. Appendix E shows Treatment 4 where TQA and internet are both offered as response options in addition to using a Required by Law address-side message as described in Section 3.2.1.

3.3 Research Questions

1. What is the effect of using a Past Due address-side message vs a Required by Law address-side message on the outside of the pressure seal mailer?
2. What is the effect of using only an internet response option vs both an internet and a TQA response option inside the letter?

3.4 Analysis Metrics

3.4.1 Self-Response Rate in the Mailable CAPI Universe

Calculating the self-response rates, for the addresses that were mailed the Internet Letter, allows us to evaluate the effectiveness of the treatments in increasing self-response during the CAPI month.

$$\text{Self-Response Response Rate} = \frac{\text{Number of mailable and deliverable sample addresses in the CAPI universe that either provided a non-blank}^5 \text{ return by mail, a response by TQA, or a complete or sufficient partial}^6 \text{ response by internet}}{\text{Total number of mailable, deliverable, and eligible sample addresses}^7 \text{ in the CAPI universe}} * 100$$

⁵ A blank form is a form in which there are no persons with sufficient response data and there is no telephone number listed on the form.

⁶ In general, a sufficient partial internet response is one that has at least minimal information, which indicates an attempt to respond. The specific definition of a sufficient partial internet response is sensitive and for Census Bureau internal use only.

⁷ Business addresses, addresses under construction, etc. are not eligible, and we remove addresses deemed to be Undeliverable-as-Addressed by the U.S. Postal Service if no response is received.

3.4.2 Overall Response Rate in the Mailable CAPI Universe

The overall response rate for the addresses that were mailed the Internet Letter provides an additional piece that allows a complete look at the letter design’s effect on response. Restricting the overall response rate to only the mailable CAPI universe allows us to evaluate the impact of the letter design on households who could have possibly seen the Internet Letter. While a change in overall response was not anticipated, it would be important to know if there was a change, increase or decrease.

$$\text{Overall Response Rate} = \frac{\text{Number of mailable and deliverable sample addresses in the CAPI universe that either provided a non-blank}^5 \text{ return by mail, a response by TQA, a complete or sufficient partial}^6 \text{ response by internet, or a CAPI interview}}{\text{Total number of mailable, deliverable, and eligible sample addresses}^7 \text{ in the CAPI universe}} * 100$$

3.4.3 Logistic Regression

In addition to comparing self-response and overall response for the individual treatments, we performed logistic regression to isolate the effects of the individual elements on response. Our model was a binary logit model predicting response using the address-side message and the response options as factors, along with their interaction. The models predicted overall response, self-response, and response by each of the individual modes for a total of six models.

3.4.4 Refusal Rate

We calculated the rate at which mailable CAPI cases ended in a refusal based on the outcome code. This evaluates the effectiveness of the treatments at helping convince respondents to respond. There was hope that the Internet Letter might help increase the perceived legitimacy of the interview attempts, thus decreasing the refusal rate, but it was not a primary goal.

$$\text{Refusal Rate} = \frac{\text{Number of mailable and deliverable sample addresses in the CAPI universe that have a final CAPI outcome code of refusal}}{\text{Total number of mailable, deliverable, and eligible sample addresses}^7 \text{ in the CAPI universe}} * 100$$

⁵ A blank form is a form in which there are no persons with sufficient response data and there is no telephone number listed on the form.

⁶ In general, a sufficient partial internet response is one that has at least minimal information, which indicates an attempt to respond. The specific definition of a sufficient partial internet response is sensitive and for Census Bureau internal use only.

⁷ Business addresses, addresses under construction, etc. are not eligible, and we remove addresses deemed to be Undeliverable-as-Addressed by the U.S. Postal Service if no response is received.

3.4.5 Average Number of Contact Attempts

The average number of contact attempts made by an interviewer during the CAPI operation was compared for each treatment as an additional measure to understand the treatment’s effect on the CAPI operation. This included both personal visits as well as phone contacts. The average was across the entire mailable CAPI universe, with those self-responding before the first interviewer contact counting as zero contacts.

$$\text{Average Number of Contact Attempts} = \frac{\text{Number of contact attempts made by an interviewer to the mailable and deliverable sample addresses in the CAPI universe}}{\text{Total number of mailable, deliverable, and eligible sample addresses}^7 \text{ in the CAPI universe}}$$

3.4.6 Standard Error of the Estimates

We estimated all variances using the Successive Differences Replication (SDR) method with replicate weights, the standard method used for the ACS.⁸ The variance for each rate and difference was calculated using the following formula.

The standard error of an estimate is the square root of the variance:

$$Var(RR_0) = \frac{4}{80} \sum_{r=1}^{80} (RR_r - RR_0)^2$$

where:

RR_0 = rate or difference in rates estimate calculated using the full sample base weights,

RR_r = rate or difference in rates estimate calculated for replicate r .

3.4.7 Weighting

For all calculations, the weights used were the ACS base sampling weight (the inverse of the probability of selection), adjusted with a CAPI subsampling factor. All nonresponding addresses in the initial sample were eligible for the CAPI sample, including unmailable and undeliverable addresses. Addresses eligible for CAPI were sampled at a rate of about one in three.

⁷ Business addresses, addresses under construction, etc. are not eligible, and we remove addresses deemed to be Undeliverable-as-Addressed by the U.S. Postal Service if no response is received.

⁸ See Chapter 12 of the ACS and PRCS Design and Methodology report for details and references regarding the SDR method for variance estimation (U.S. Census Bureau, 2022).

3.4.8 Multiple Comparison Adjustment

Some analyses in this report involved multiple comparisons. For these cases, we adjusted for the Type I familywise error rate at the 0.1 level of significance using the Hochberg method (Hochberg, 1988). For each results table presented in this report, when applicable, the table notes provide brief information on what adjustment was performed and present the adjusted p-values. Below are details on these adjustments:

- In Table 3 through Table 6, the primary metrics of interest were the overall response rate and the self-response rate. To control the familywise error rate, we adjusted for the four sets of pairwise comparisons of overall response rates made across the four tables, as well as the four sets of pairwise comparisons of self-response rates made across those tables. Within a table, or treatment comparison, we adjusted for the response rate comparisons for each individual response mode (internet, mail, TQA, and CAPI).
- We performed the same adjustments as above within each regional office for the response rates comparisons by regional office in Appendix F.

4. ASSUMPTIONS AND LIMITATIONS

4.1 Assumptions

- A single ACS monthly sample is representative of an entire year (twelve panels) and the entire frame sample, with respect to both response rates and cost, as designed.
- A single methods panel group (1/24 of the full monthly sample) is representative of the full monthly sample, as designed.
- There is no difference between treatments in mail delivery timing or subsequent response time. The treatments had the same sample size and used the same postal sort and mailout procedures. Previous research indicated that postal procedures alone could cause a difference in response rates at a given point in time between experimental treatments of different sizes, with response for the smaller sized treatments lagging (Heimel, 2016).
- Any differences in field representative strategies do not affect individual treatments due to the randomization and representativeness of the method panel groups.

4.2 Limitations

- Group quarters and sample housing unit addresses from remote Alaska and Puerto Rico were not included in the sample for the test, so the results of this test can only be generalized to the standard ACS housing unit sample.
- Due to the way TQA call volume is tracked, we were unable to associate calls that did not result in an interview to specific treatments. Thus, potential increases in TQA costs apart from TQA interviews are not captured in Section 5.5.

5. RESULTS

The following sections present the results of the 2021 ROIL Test.

5.1 Overall Response and Self-Response in the Mailable CAPI Universe

We calculated overall response rates and self-response rates for the addresses that were mailed the Internet Letter. We examined differences in response rates between treatments to evaluate the letter design’s effect on response, particularly if a design feature increased self-response during CAPI.

5.1.1 Research Question 1

What is the effect of using a Past Due address-side message vs. a Required by Law address-side message on the outside of the pressure seal mailer?

We performed two comparisons testing the effect of the address-side message: one comparison where both treatments included only an internet response option and one comparison where both treatments included both internet and TQA response options.

Table 3 shows the response rates in the mailable CAPI universe and the distribution by mode between Treatment 1 and Treatment 3. Both treatments had an internet response option only, but Treatment 1 had the Past Due message and Treatment 3 had the Required by Law message.

Table 3. 2021 ROIL Response Rates by Mode: Treatment 1 vs. Treatment 3

	Treatment 1	Treatment 3	Difference	Adjusted P-Value
Overall Response	74.2 (0.5)	74.7 (0.5)	-0.4 (0.6)	0.79
Self-Response	25.9 (0.4)	25.8 (0.5)	<0.1 (0.6)	0.98
Internet	22.8 (0.4)	23.3 (0.5)	-0.4 (0.6)	0.63
Mail	2.8 (0.2)	2.3 (0.2)	0.4 (0.3)	0.42
TQA	0.3 (0.1)	0.2 (<0.1)	<0.1 (0.1)	0.63
CAPI	48.4 (0.5)	48.8 (0.6)	-0.4 (0.7)	0.63

Source: U.S. Census Bureau, American Community Survey, 2021 Regional Office Internet Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

There were no statistically significant differences in the response rates between Treatment 1 and Treatment 3, both overall and by mode.

Table 4 shows the response rates in the mailable CAPI universe and the distribution by mode between Treatment 2 and Treatment 4. Both treatments had an internet and TQA response option, but Treatment 2 had the Past Due message and Treatment 4 had the Required by Law message.

Table 4. 2021 ROIL Response Rates by Mode: Treatment 2 vs. Treatment 4

	Treatment 2	Treatment 4	Difference	Adjusted P-Value
Overall Response	75.3 (0.5)	75.2 (0.4)	0.2 (0.6)	0.79
Self-Response	27.0 (0.5)	27.2 (0.5)	-0.2 (0.7)	0.98
Internet	23.6 (0.5)	23.6 (0.5)	<0.1 (0.7)	0.98
Mail	2.7 (0.2)	3.1 (0.2)	-0.4 (0.2)	0.44
TQA	0.6 (0.1)	0.5 (0.1)	0.1 (0.1)	0.74
CAPI	48.4 (0.6)	48.0 (0.5)	0.4 (0.7)	0.98

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

As with the previous comparison, none of the response rates were significantly different between Treatment 2 and Treatment 4, both overall and by mode. Additional analysis that isolates the effect of the address-side message using logistic regression is shown in Section 5.2.

5.1.2 Research Question 2

What is the effect of using only an internet response option vs both an internet and a TQA response option inside the letter?

We performed two comparisons testing the effect of the response options provided: one comparison where both treatments had the Past Due address-side message and one comparison where both treatments had the Required by Law message.

Table 5 shows the response rates in the mailable CAPI universe and the distribution by mode between Treatment 1 and Treatment 2. Both treatments had the Past Due message, but Treatment 1 had an internet response option only and Treatment 2 had an internet and TQA response option.

Table 5. 2021 ROIL Response Rates by Mode: Treatment 1 vs. Treatment 2

	Treatment 1	Treatment 2	Difference	Adjusted P-Value
Overall Response	74.2 (0.5)	75.3 (0.5)	-1.1 (0.7)	0.44
Self-Response	25.9 (0.4)	27.0 (0.5)	-1.1 (0.7)	0.34
Internet	22.8 (0.4)	23.6 (0.5)	-0.8 (0.7)	0.70
Mail	2.8 (0.2)	2.7 (0.2)	<0.1 (0.2)	0.97
TQA	0.3 (0.1)	0.6 (0.1)	-0.3 (0.1)	<0.01*
CAPI	48.4 (0.5)	48.4 (0.6)	<0.1 (0.7)	0.97

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

As expected, Treatment 2 had higher TQA response among the mailable CAPI addresses compared with Treatment 1. None of the other response rates were significantly different between treatments.

Table 6 shows the response rates in the mailable CAPI universe and the distribution by mode between Treatment 3 and Treatment 4. Both treatments had the Required by Law message, but Treatment 3 had an internet response option only and Treatment 4 had an internet and TQA response option.

Table 6. 2021 ROIL Response Rates by Mode: Treatment 3 vs. Treatment 4

	Treatment 3	Treatment 4	Difference	Adjusted P-Value
Overall Response	74.7 (0.5)	75.2 (0.4)	-0.5 (0.7)	0.79
Self-Response	25.8 (0.5)	27.2 (0.5)	-1.4 (0.7)	0.18
Internet	23.3 (0.5)	23.6 (0.5)	-0.3 (0.7)	0.63
Mail	2.3 (0.2)	3.1 (0.2)	-0.8 (0.2)	<0.01*
TQA	0.2 (<0.1)	0.5 (0.1)	-0.2 (0.1)	0.04*
CAPI	48.8 (0.6)	48.0 (0.5)	0.9 (0.8)	0.54

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

Like the previous comparison, the treatment that provided both internet and TQA response options (Treatment 4) had higher TQA response compared with the treatment that only provided an internet response option (Treatment 3). Treatment 4 also had higher mail response compared with Treatment 3. However, self-response and overall response were not

significantly different between treatments. Additional analysis that isolates the effect of the response options using logistic regression is shown in Section 5.2.

We also performed this response rate comparison for each regional office, which showed similar results. See Appendix F for more information.

5.2 Logistic Regression Models

In addition to the pairwise treatment comparisons in Section 5.1, we performed logistic regression to isolate the effects of the individual elements. Table 7 shows the maximum likelihood estimates for the logistic regression model predicting self-response. The main effect for response option was significant in the model, with the estimated response propensity being higher for the internet and TQA response option compared with the internet only option. This result indicates that the addition of the TQA response option increased self-response.

Table 7. 2021 ROIL Logistic Regression Model: Self-Response

Parameter	Reference Group	Maximum Likelihood Estimate	t-Value	P-Value
Intercept		-1.0 (<0.1)	-74.4	<0.01*
Address-Side Message	Past Due (PD)	<0.1 (<0.1)	0.2	0.83
Response Option	Internet Only (IO)	<0.1 (<0.1)	2.6	0.01*
Interaction Term	PD, IO	<0.1 (<0.1)	0.2	0.81

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level.

This increase in self-response from the TQA response option was due an increase in mail response and in TQA response. Table 8 shows the maximum likelihood estimates for the logistic regression model predicting response by mail, and Table 9 shows the maximum likelihood estimates for the logistic regression model predicting response by TQA. The main effect for response option was significant in both models, with the estimated response propensities being higher for the internet and TQA response option compared with the internet only option.

For the TQA and self-response models, the interaction term was not significant, indicating that there was no combined effect of address-side message and response option on response. For the mail model, however, the interaction term was significant. For the Required by Law message, the estimated response propensities were higher for the internet and TQA response option compared with the internet only option. This result indicates that the interaction of offering the TQA response option and using the “Your Response is Required by Law” message was found to increase mail response. However, the impact of this effect on response is minimal because we receive so few mail responses during CAPI collection, as demonstrated by this interaction not showing up in the self-response (Table 7) or overall response (Table 12) models.

Table 8. 2021 ROIL Logistic Regression Model: Mail Response

Parameter	Reference Group	Maximum Likelihood Estimate	t-Value	P-Value
Intercept		-3.6 (<0.1)	-105.3	<0.01*
Address-Side Message	Past Due (PD)	<0.1 (<0.1)	-0.3	0.27
Response Option	Internet Only (IO)	0.1 (<0.1)	2.6	0.01*
Interaction Term	PD, IO	0.1 (<0.1)	2.5	0.01*

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level.

Table 9. 2021 ROIL Logistic Regression Model: TQA Response

Parameter	Reference Group	Maximum Likelihood Estimate	t-Value	P-Value
Intercept		-5.6 (0.1)	-60.9	<0.01*
Address-Side Message	Past Due (PD)	-0.1 (0.1)	-1.1	0.27
Response Option	Internet Only (IO)	0.4 (0.1)	3.9	<0.01*
Interaction Term	PD, IO	<0.1 (0.1)	-0.3	0.81

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level.

Table 10 shows the maximum likelihood estimates for the logistic regression model predicting internet response. Neither factor was significant, and thus there is no evidence of the treatments affecting internet response.

Table 10. 2021 ROIL Logistic Regression Model: Internet Response

Parameter	Reference Group	Maximum Likelihood Estimate	t-Value	P-Value
Intercept		-1.2 (<0.1)	-81.2	<0.01*
Address-Side Message	Past Due (PD)	<0.1 (<0.1)	0.5	0.63
Response Option	Internet Only (IO)	<0.1 (<0.1)	1.2	0.24
Interaction Term	PD, IO	<0.1 (<0.1)	-0.5	0.63

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level.

Table 11 and Table 12 show the maximum likelihood estimates for the logistic regression models predicting CAPI response and overall response, respectively. None of the estimates

were significant, and thus there is no evidence of the treatments affecting CAPI response nor overall response.

While the analysis found an increase in self-response when offering TQA as a response option, not also finding a significant increase in overall response indicates that, for the treatments with internet and TQA response options, the increase in self-response was due to convincing respondents that were going to respond during CAPI to self-respond.

Table 11. 2021 ROIL Logistic Regression Model: CAPI Response

Parameter	Reference Group	Maximum Likelihood Estimate	t-Value	P-Value
Intercept		-0.1 (<0.1)	-5.9	<0.01*
Address-Side Message	Past Due (PD)	<0.1 (<0.1)	0.1	0.94
Response Option	Internet Only (IO)	<0.1 (<0.1)	-0.8	0.41
Interaction Term	PD, IO	<0.1 (<0.1)	-0.8	0.41

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level.

Table 12. 2021 ROIL Logistic Regression Model: Overall Response

Parameter	Reference Group	Maximum Likelihood Estimate	t-Value	P-Value
Intercept		1.1 (<0.1)	87.4	<0.01*
Address-Side Message	Past Due (PD)	<0.1 (<0.1)	0.3	0.74
Response Option	Internet Only (IO)	<0.1 (<0.1)	1.4	0.16
Interaction Term	PD, IO	<0.1 (<0.1)	-0.7	0.48

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level.

5.3 Refusal Rates

We calculated the rate at which CAPI cases ended in a refusal for the addresses that were mailed the Internet Letter to evaluate if there were any differences in refusals between treatments. We wanted to see if any of the treatments was more effective at convincing respondents to respond to a CAPI interview.

Table 13 through Table 16 show the refusal rates between treatments. Table 13 and Table 14 compare the effect of the address-side message; Table 15 and Table 16 compare the effect of the response option listed. The refusal rates ranged from 15.8 to 16.5 percent. None of the refusal rate comparisons were significantly different between treatments.

Table 13. 2021 ROIL Refusal Rates: Treatment 1 vs. Treatment 3

	Refusal Rate	Treatment 1 – Treatment 3	P-Value
Treatment 1	16.5 (0.5)	---	---
Treatment 3	15.9 (0.4)	0.6 (0.6)	0.33

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level.

Table 14. 2021 ROIL Refusal Rates: Treatment 2 vs. Treatment 4

	Refusal Rate	Treatment 2 – Treatment 4	P-Value
Treatment 2	15.8 (0.4)	---	---
Treatment 4	16.0 (0.4)	-0.2 (0.5)	0.65

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level.

Table 15. 2021 ROIL Refusal Rates: Treatment 1 vs. Treatment 2

	Refusal Rate	Treatment 1 – Treatment 2	P-Value
Treatment 1	16.5 (0.5)	---	---
Treatment 2	15.8 (0.4)	0.7 (0.6)	0.27

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level.

Table 16. 2021 ROIL Refusal Rates: Treatment 3 vs. Treatment 4

	Refusal Rate	Treatment 3 – Treatment 4	P-Value
Treatment 3	15.9 (0.4)	---	---
Treatment 4	16.0 (0.4)	-0.1 (0.5)	0.82

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level.

5.4 Average Number of Contact Attempts

We calculated the average number of interviewer-contact attempts during the CAPI operation for the addresses that were mailed the Internet Letter as an additional measure to understand a treatment's effect on the CAPI operation. The contact attempts were both from personal visits and by phone, and anyone who responded before the first interviewer contact counted as zero contacts.

Table 17 through Table 20 show the average number of contact attempts between treatments. Table 17 and Table 18 compare the effect of the address-side message; Table 19 and Table 20

compare the effect of the response option listed. For each treatment, there were an average four contact attempts to each mailable address in the CAPI operation. None of the contact attempt comparisons were significantly different between treatments.

Table 17. 2021 ROIL Average Number of Contact Attempts: Treatment 1 vs. Treatment 3

	Average Contact		
	Attempts	Treatment 1 – Treatment 3	P-Value
Treatment 1	4.2 (<0.1)	---	---
Treatment 3	4.2 (<0.1)	<0.1 (<0.1)	0.93

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level.

Table 18. 2021 ROIL Average Number of Contact Attempts: Treatment 2 vs. Treatment 4

	Average Contact		
	Attempts	Treatment 2 – Treatment 4	P-Value
Treatment 2	4.3 (<0.1)	---	---
Treatment 4	4.2 (<0.1)	<0.1 (<0.1)	0.70

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level.

Table 19. 2021 ROIL Average Number of Contact Attempts: Treatment 1 vs. Treatment 2

	Average Contact		
	Attempts	Treatment 1 – Treatment 2	P-Value
Treatment 1	4.2 (<0.1)	---	---
Treatment 2	4.3 (<0.1)	<0.1 (<0.1)	0.33

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level.

Table 20. 2021 ROIL Average Number of Contact Attempts: Treatment 3 vs. Treatment 4

	Average Contact		
	Attempts	Treatment 3 – Treatment 4	P-Value
Treatment 3	4.2 (<0.1)	---	---
Treatment 4	4.2 (<0.1)	<0.1 (<0.1)	0.59

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level.

5.5 TQA Call Volume

Since a difference in self-response, due to an increase in TQA responses, was found in Section 5.2, it is important to understand what impact this would have on the TQA operation if providing TQA as a response option was implemented into production. Based on Table 5 and Table 6, it is estimated that the number of TQA responses during the CAPI operation would double.

Assuming the most extreme case, that all the additional TQA responses occur during the first week of CAPI when the Internet Letter is sent, the number of calls received by TQA during that week would increase by about 100 calls. For comparison, during the first week of a month, the projected TQA call volume is between 3,000 and 6,000 calls.⁹ Thus, the TQA operation should be able to handle the additional calls at the current staffing level.

6. CONCLUSIONS

The primary goal of the ROIL Test was to evaluate additional variations on the Internet Letter sent as part of the CAPI operation, specifically variations on the address-side message and the response options listed. Our initial analysis found that each of the four possible letter variations performed equally well; none of the four pairwise comparisons of response rates found a significant difference in self-response or overall response. Additionally, there was no difference found for the secondary metrics of refusal rates and average number of contact attempts.

However, when we isolated the effects of the design elements using logistic regression, there is evidence that the inclusion of TQA as a response option increases not only TQA and mail response, but also total self-response. Therefore, we recommend adding TQA as a response option to the Internet Letter. This addition would result in an increase in the number of calls to TQA, but the number is small enough that the current operation should be able to handle it without issue.

We also recommend considering changing the address-side message to the “Your Response is Required by Law” message because of the significant interaction effect between it and offering TQA as a response option on mail response. However, the impact of this change on response would be minimal because the ACS receives so few mail responses during CAPI collection.

⁹ The projected TQA call volume includes calls from anyone calling about the ACS, and not necessarily CAPI respondents. During the first week of a month, people from three separate ACS panels could potentially call the TQA toll-free number.

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DRB Clearance Number – CBDRB-FY23-ACSO003-B0051

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Appendix A. Previous Production Regional Office Internet Letter – Los Angeles Example





United States[®]
Census
Bureau

U.S. Census Bureau
Los Angeles Regional Office
2300 W. Empire Avenue, Suite 300
Burbank, CA 91504

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Permit No. G-58

ACS-INET LARO(2020) (03-16-2020)

Appendix B. New Production Regional Office Internet Letter with Past Due and Internet Only Option – Los Angeles Example



United States[®]
Census
Bureau

U.S. Census Bureau
Los Angeles Regional Office
Burbank, CA 91504

Dear Resident:

A U.S. Census Bureau employee may have recently contacted you to help you complete the **American Community Survey**. If you have responded, thank you. If you have not responded, we will contact you soon.

Please complete the survey today to avoid an in-person interview:



Go to: **respond.census.gov/acs**

Log in with your user ID:

Enter the user ID letters and numbers exactly as you see them above.

You are required by U.S. law to respond to this survey. The Census Bureau is required by law to keep your information confidential.

If a Census Bureau employee visits you, he or she will present a photo ID that includes their name, a Department of Commerce watermark, and an expiration date. He or she will have a laptop and will contact you between 9 a.m. and 9 p.m. You may also be contacted by phone.

The information from this survey helps identify needs such as affordable housing, job training, and emergency planning. Your response makes a difference! Thank you for helping your community prepare for a better future.

If you have any questions call us at 1-800-992-3530, option 1. We are happy to help you.

Sincerely,

Julie Lam
Regional Director

Por favor complete la Encuesta sobre la Comunidad Estadounidense.

La encuesta está disponible en español.

Por internet: Vaya a respond.census.gov/acs. Haga clic en "Para completar en español, oprima aquí."

Por teléfono: Llame al 1-877-833-5625 para hablar en español con un empleado de la Oficina del Censo.

FOR OFFICE USE ONLY:

Control #:

census.gov/acs



United States[®]
Census
Bureau

U.S. Census Bureau
Los Angeles Regional Office
2300 W. Empire Avenue, Suite 300
Burbank, CA 91504

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THE AMERICAN COMMUNITY SURVEY
**YOUR RESPONSE
IS PAST DUE**

ACS-INET LARO(2021) (12-10-2020)

Appendix C. Revised Regional Office Internet Letter with Past Due and TQA Response Option – Los Angeles Example



United States[®]
Census
Bureau

U.S. Census Bureau
Los Angeles Regional Office
Burbank, CA 91504

Dear Resident:

A U.S. Census Bureau employee may have recently contacted you to help you complete the **American Community Survey**. If you have responded, thank you. If you have not responded, we will contact you soon.

Please complete the survey today to avoid an in-person interview:

ONLINE

Go to: respond.census.gov/acs
Log in with your user ID:
12345-12345

Enter the user ID letters and numbers exactly as you see them above.

OR

BY PHONE

Call 1-800-354-7271
Monday–Friday: 9 a.m. to 9 p.m.
Saturday: 9 a.m. to 7 p.m.
Sunday: 11 a.m. to 9 p.m.

You are required by U.S. law to respond to this survey. The Census Bureau is required by law to keep your information confidential.

If a Census Bureau employee visits you, he or she will present a photo ID that includes their name, a Department of Commerce watermark, and an expiration date. He or she will have a laptop and will contact you between 9 a.m. and 9 p.m. You may also be contacted by phone.

The information from this survey helps identify needs such as affordable housing, job training, and emergency planning. Your response makes a difference! Thank you for helping your community prepare for a better future.

If you have any questions call us at 1-800-992-3530, option 1. We are happy to help you.

Sincerely,

Julie Lam
Regional Director

Por favor complete la Encuesta sobre la Comunidad Estadounidense.

La encuesta está disponible en español.

Por internet: Vaya a respond.census.gov/acs. Haga clic en "Para completar en español, oprima aquí."

Por teléfono: Llame al 1-877-833-5625 para hablar en español con un empleado de la Oficina del Censo.

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THE AMERICAN COMMUNITY SURVEY
**YOUR RESPONSE
IS PAST DUE**

ACS-INET LAROX-ROIL-T1 (12-10-2020)

Appendix D. Revised Regional Office Internet Letter with Your Response is Required by Law and Internet Only Option – Los Angeles Example



United States[®]
Census
Bureau

U.S. Census Bureau
Los Angeles Regional Office
Burbank, CA 91504

Dear Resident:

A U.S. Census Bureau employee may have recently contacted you to help you complete the **American Community Survey**. If you have responded, thank you. If you have not responded, we will contact you soon.

Please complete the survey today to avoid an in-person interview:



Go to: **respond.census.gov/acs**

Log in with your user ID:

Enter the user ID letters and numbers exactly as you see them above.

You are required by U.S. law to respond to this survey. The Census Bureau is required by law to keep your information confidential.

If a Census Bureau employee visits you, he or she will present a photo ID that includes their name, a Department of Commerce watermark, and an expiration date. He or she will have a laptop and will contact you between 9 a.m. and 9 p.m. You may also be contacted by phone.

The information from this survey helps identify needs such as affordable housing, job training, and emergency planning. Your response makes a difference! Thank you for helping your community prepare for a better future.

If you have any questions call us at 1-800-992-3530, option 1. We are happy to help you.

Sincerely,

Julie Lam
Regional Director

Por favor complete la Encuesta sobre la Comunidad Estadounidense.

La encuesta está disponible en español.

Por internet: Vaya a respond.census.gov/acs. Haga clic en "Para completar en español, oprima aquí."

Por teléfono: Llame al 1-877-833-5625 para hablar en español con un empleado de la Oficina del Censo.

FOR OFFICE USE ONLY:

Control #:

census.gov/acs



United States[®]
Census
Bureau

U.S. Census Bureau
Los Angeles Regional Office
2300 W. Empire Avenue, Suite 300
Burbank, CA 91504

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THE AMERICAN COMMUNITY SURVEY
**YOUR RESPONSE IS
REQUIRED BY LAW**

ACS-INET LAROX-ROIL-T2 (12-10-2020)

Appendix E. Revised Regional Office Internet Letter with Your Response is Required by Law and TQA Response Option – Los Angeles Example



United States[®]
Census
Bureau

U.S. Census Bureau
Los Angeles Regional Office
Burbank, CA 91504

Dear Resident:

A U.S. Census Bureau employee may have recently contacted you to help you complete the **American Community Survey**. If you have responded, thank you. If you have not responded, we will contact you soon.

Please complete the survey today to avoid an in-person interview:

ONLINE

Go to: respond.census.gov/acs
Log in with your user ID:
12345-12345

Enter the user ID letters and numbers exactly as you see them above.

OR

BY PHONE

Call 1-800-354-7271
Monday–Friday: 9 a.m. to 9 p.m.
Saturday: 9 a.m. to 7 p.m.
Sunday: 11 a.m. to 9 p.m.

You are required by U.S. law to respond to this survey. The Census Bureau is required by law to keep your information confidential.

If a Census Bureau employee visits you, he or she will present a photo ID that includes their name, a Department of Commerce watermark, and an expiration date. He or she will have a laptop and will contact you between 9 a.m. and 9 p.m. You may also be contacted by phone.

The information from this survey helps identify needs such as affordable housing, job training, and emergency planning. Your response makes a difference! Thank you for helping your community prepare for a better future.

If you have any questions call us at 1–800–992–3530, option 1. We are happy to help you.

Sincerely,

Julie Lam
Regional Director

Por favor complete la Encuesta sobre la Comunidad Estadounidense.

La encuesta está disponible en español.

Por internet: Vaya a respond.census.gov/acs. Haga clic en "Para completar en español, oprima aquí."

Por teléfono: Llame al 1–877–833–5625 para hablar en español con un empleado de la Oficina del Censo.

FOR OFFICE USE ONLY:

Control #:

census.gov/acs



United States[®]
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Bureau

U.S. Census Bureau
Los Angeles Regional Office
2300 W. Empire Avenue, Suite 300
Burbank, CA 91504

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THE AMERICAN COMMUNITY SURVEY
**YOUR RESPONSE IS
REQUIRED BY LAW**

ACS-INET LAROX-ROIL-T3 (12-10-2020)

Appendix F. Response Comparison by Region

F.1 Atlanta

Table 21. 2021 ROIL Response Rates by Mode for the Atlanta Regional Office: Treatment 1 vs. Treatment 3

	Treatment 1	Treatment 3	Difference	Adjusted P-Value
Overall Response	77.5 (1.1)	77.4 (1.1)	0.1 (1.4)	0.94
Self-Response	21.4 (1.1)	21.3 (1.0)	0.1 (1.5)	0.96
Internet	19.5 (1.1)	19.7 (1.0)	-0.2 (1.4)	0.99
Mail	1.7 (0.3)	1.6 (0.3)	0.1 (0.4)	0.99
TQA	0.2 (0.1)	0.1 (0.1)	0.2 (0.1)	0.99
CAPI	56.1 (1.1)	56.1 (1.3)	<0.1 (1.8)	0.99

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

Table 22. 2021 ROIL Response Rates by Mode for the Atlanta Regional Office: Treatment 2 vs. Treatment 4

	Treatment 2	Treatment 4	Difference	Adjusted P-Value
Overall Response	75.3 (1.2)	77.6 (1.0)	-2.3 (1.4)	0.46
Self-Response	21.6 (1.3)	23.3 (1.1)	-1.6 (1.6)	0.92
Internet	18.5 (1.2)	20.0 (1.1)	-1.4 (1.6)	0.75
Mail	2.4 (0.3)	2.9 (0.5)	-0.5 (0.6)	0.75
TQA	0.7 (0.2)	0.4 (0.1)	0.3 (0.3)	0.75
CAPI	53.7 (1.3)	54.3 (1.3)	-0.6 (1.9)	0.75

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

Table 23. 2021 ROIL Response Rates by Mode for the Atlanta Regional Office: Treatment 1 vs. Treatment 2

	Treatment 1	Treatment 2	Difference	Adjusted P-Value
Overall Response	77.5 (1.1)	75.3 (1.2)	2.2 (1.7)	0.64
Self-Response	21.4 (1.1)	21.6 (1.3)	-0.2 (1.7)	0.96
Internet	19.5 (1.1)	18.5 (1.2)	0.9 (1.6)	0.56
Mail	1.7 (0.3)	2.4 (0.3)	-0.7 (0.5)	0.34
TQA	0.2 (0.1)	0.7 (0.2)	-0.5 (0.2)	0.11
CAPI	56.1 (1.1)	53.7 (1.3)	2.4 (1.7)	0.34

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

Table 24. 2021 ROIL Response Rates by Mode for the Atlanta Regional Office: Treatment 3 vs. Treatment 4

	Treatment 3	Treatment 4	Difference	Adjusted P-Value
Overall Response	77.4 (1.1)	77.6 (1.0)	-0.2 (1.6)	0.94
Self-Response	21.3 (1.0)	23.3 (1.1)	-1.9 (1.6)	0.89
Internet	19.7 (1.0)	20.0 (1.1)	-0.3 (1.5)	0.85
Mail	1.6 (0.3)	2.9 (0.5)	-1.3 (0.6)	0.10*
TQA	0.1 (0.1)	0.4 (0.1)	-0.4 (0.2)	0.14
CAPI	56.1 (1.3)	54.3 (1.3)	1.7 (1.9)	0.71

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

F.2 Chicago

Table 25. 2021 ROIL Response Rates by Mode for the Chicago Regional Office: Treatment 1 vs. Treatment 3

	Treatment 1	Treatment 3	Difference	Adjusted P-Value
Overall Response	73.9 (1.3)	75.4 (1.1)	-1.5 (1.8)	0.88
Self-Response	25.1 (1.2)	25.0 (1.0)	<0.1 (1.7)	0.98
Internet	21.9 (1.2)	22.3 (1.0)	-0.4 (1.6)	0.83
Mail	2.9 (0.5)	2.6 (0.4)	0.3 (0.6)	0.83
TQA	0.2 (0.1)	0.1 (0.1)	0.1 (0.1)	0.83
CAPI	48.8 (1.3)	50.3 (1.3)	-1.6 (1.9)	0.83

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

Table 26. 2021 ROIL Response Rates by Mode for the Chicago Regional Office: Treatment 2 vs. Treatment 4

	Treatment 2	Treatment 4	Difference	Adjusted P-Value
Overall Response	76.6 (1.1)	76.7 (1.2)	-0.1 (1.6)	0.96
Self-Response	27.5 (1.3)	27.5 (1.2)	0.1 (1.9)	0.98
Internet	24 (1.2)	22.3 (1.1)	1.7 (1.7)	0.88
Mail	3.0 (0.4)	4.3 (0.6)	-1.4 (0.6)	0.65
TQA	0.5 (0.2)	0.8 (0.3)	-0.3 (0.4)	0.10
CAPI	49.0 (1.4)	49.2 (1.4)	-0.2 (2.0)	0.94

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

Table 27. 2021 ROIL Response Rates by Mode for the Chicago Regional Office: Treatment 1 vs. Treatment 2

	Treatment 1	Treatment 2	Difference	Adjusted P-Value
Overall Response	73.9 (1.3)	76.6 (1.1)	-2.7 (1.6)	0.36
Self-Response	25.1 (1.2)	27.5 (1.3)	-2.5 (1.8)	0.54
Internet	21.9 (1.2)	24.0 (1.2)	-2.1 (1.7)	0.72
Mail	2.9 (0.5)	3.0 (0.4)	<0.1 (0.7)	0.97
TQA	0.2 (0.1)	0.5 (0.2)	-0.4 (0.2)	0.51
CAPI	48.8 (1.3)	49.0 (1.4)	-0.3 (2.1)	0.97

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

Table 28. 2021 ROIL Response Rates by Mode for the Chicago Regional Office: Treatment 3 vs. Treatment 4

	Treatment 3	Treatment 4	Difference	Adjusted P-Value
Overall Response	75.4 (1.1)	76.7 (1.2)	-1.3 (1.7)	0.88
Self-Response	25.0 (1.0)	27.5 (1.2)	-2.4 (1.4)	0.35
Internet	22.3 (1.0)	22.3 (1.1)	<0.1 (1.4)	0.99
Mail	2.6 (0.4)	4.3 (0.6)	-1.7 (0.6)	0.03*
TQA	0.1 (0.1)	0.8 (0.3)	-0.7 (0.3)	0.06*
CAPI	50.3 (1.3)	49.2 (1.4)	1.1 (1.9)	0.99

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

F.3 Denver

Table 29. 2021 ROIL Response Rates by Mode for the Denver Regional Office: Treatment 1 vs. Treatment 3

	Treatment 1	Treatment 3	Difference	Adjusted P-Value
Overall Response	73.1 (1.1)	71.7 (1.5)	1.5 (1.8)	0.76
Self-Response	28.4 (1.3)	28.9 (1.1)	-0.5 (1.8)	0.77
Internet	25.5 (1.4)	26.3 (1.0)	-0.7 (1.8)	0.99
Mail	2.7 (0.5)	2.4 (0.4)	0.2 (0.6)	0.99
TQA	0.2 (0.2)	0.2 (0.1)	<0.1 (0.2)	0.99
CAPI	44.7 (1.3)	42.7 (1.3)	2.0 (1.8)	0.99

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

Table 30. 2021 ROIL Response Rates by Mode for the Denver Regional Office: Treatment 2 vs. Treatment 4

	Treatment 2	Treatment 4	Difference	Adjusted P-Value
Overall Response	73.7 (1.2)	72.5 (1.1)	1.2 (1.5)	0.76
Self-Response	29.1 (1.2)	30.6 (1.1)	-1.5 (1.7)	0.77
Internet	26.4 (1.3)	27.7 (1.1)	-1.2 (1.8)	0.68
Mail	2.2 (0.4)	2.4 (0.3)	-0.2 (0.5)	0.68
TQA	0.5 (0.2)	0.6 (0.2)	-0.1 (0.3)	0.68
CAPI	44.6 (1.4)	41.9 (1.2)	2.7 (1.7)	0.46

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

Table 31. 2021 ROIL Response Rates by Mode for the Denver Regional Office: Treatment 1 vs. Treatment 2

	Treatment 1	Treatment 2	Difference	Adjusted P-Value
Overall Response	73.1 (1.1)	73.7 (1.2)	-0.5 (1.7)	0.76
Self-Response	28.4 (1.3)	29.1 (1.2)	-0.7 (1.8)	0.77
Internet	25.5 (1.4)	26.4 (1.3)	-0.9 (1.8)	0.93
Mail	2.7 (0.5)	2.2 (0.4)	0.5 (0.6)	0.93
TQA	0.2 (0.2)	0.5 (0.2)	-0.2 (0.2)	0.93
CAPI	44.7 (1.3)	44.6 (1.4)	0.1 (1.8)	0.93

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

Table 32. 2021 ROIL Response Rates by Mode for the Denver Regional Office: Treatment 3 vs. Treatment 4

	Treatment 3	Treatment 4	Difference	Adjusted P-Value
Overall Response	71.7 (1.5)	72.5 (1.1)	-0.9 (1.8)	0.76
Self-Response	28.9 (1.1)	30.6 (1.1)	-1.7 (1.5)	0.77
Internet	26.3 (1.0)	27.7 (1.1)	-1.4 (1.5)	0.91
Mail	2.4 (0.4)	2.4 (0.3)	0.1 (0.6)	0.91
TQA	0.2 (0.1)	0.6 (0.2)	-0.3 (0.2)	0.59
CAPI	42.7 (1.3)	41.9 (1.2)	0.8 (1.7)	0.91

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

F.4 Los Angeles

Table 33. 2021 ROIL Response Rates by Mode for the Los Angeles Regional Office: Treatment 1 vs. Treatment 3

	Treatment 1	Treatment 3	Difference	Adjusted P-Value
Overall Response	82.8 (1.0)	84.1 (1.1)	-1.3 (1.5)	0.98
Self-Response	32.4 (1.3)	30.9 (1.3)	1.5 (1.7)	0.80
Internet	28.5 (1.2)	28.0 (1.2)	0.5 (1.7)	0.77
Mail	3.5 (0.5)	2.7 (0.5)	0.8 (0.7)	0.77
TQA	0.3 (0.1)	0.2 (0.1)	0.1 (0.2)	0.77
CAPI	50.4 (1.4)	53.2 (1.2)	-2.8 (1.8)	0.51

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

Table 34. 2021 ROIL Response Rates by Mode for the Los Angeles Regional Office: Treatment 2 vs. Treatment 4

	Treatment 2	Treatment 4	Difference	Adjusted P-Value
Overall Response	83.2 (1.0)	84.1 (1.0)	-0.9 (1.4)	0.98
Self-Response	31.9 (1.2)	30.2 (1.2)	1.7 (1.8)	0.80
Internet	27.9 (1.1)	27.4 (1.1)	0.5 (1.7)	0.77
Mail	3.8 (0.5)	2.7 (0.4)	1.1 (0.7)	0.45
TQA	0.3 (0.1)	0.2 (0.1)	0.1 (0.2)	0.77
CAPI	51.2 (1.3)	53.8 (1.1)	-2.7 (1.9)	0.46

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

Table 35. 2021 ROIL Response Rates by Mode for the Los Angeles Regional Office: Treatment 1 vs. Treatment 2

	Treatment 1	Treatment 2	Difference	Adjusted P-Value
Overall Response	82.8 (1.0)	83.2 (1.0)	-0.4 (1.5)	0.98
Self-Response	32.4 (1.3)	31.9 (1.2)	0.4 (1.7)	0.80
Internet	28.5 (1.2)	27.9 (1.1)	0.7 (1.6)	0.93
Mail	3.5 (0.5)	3.8 (0.5)	-0.3 (0.8)	0.93
TQA	0.3 (0.1)	0.3 (0.1)	<0.1 (0.2)	0.93
CAPI	50.4 (1.4)	51.2 (1.3)	-0.8 (1.8)	0.93

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

Table 36. 2021 ROIL Response Rates by Mode for the Los Angeles Regional Office: Treatment 3 vs. Treatment 4

	Treatment 3	Treatment 4	Difference	Adjusted P-Value
Overall Response	84.1 (1.1)	84.1 (1.0)	<0.1 (1.4)	0.98
Self-Response	30.9 (1.3)	30.2 (1.2)	0.7 (1.7)	0.80
Internet	28.0 (1.2)	27.4 (1.1)	0.6 (1.7)	0.98
Mail	2.7 (0.5)	2.7 (0.4)	<0.1 (0.6)	0.98
TQA	0.2 (0.1)	0.2 (0.1)	<0.1 (0.2)	0.98
CAPI	53.2 (1.2)	53.8 (1.1)	-0.6 (1.7)	0.98

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

F.5 New York

Table 37. 2021 ROIL Response Rates by Mode for the New York Regional Office: Treatment 1 vs. Treatment 3

	Treatment 1	Treatment 3	Difference	Adjusted P-Value
Overall Response	62.3 (1.4)	65.5 (1.2)	-3.2 (1.9)	0.33
Self-Response	23.1 (1.2)	24.8 (1.2)	-1.7 (1.8)	0.59
Internet	19.8 (1.2)	21.9 (1.1)	-2.1 (1.7)	0.87
Mail	2.9 (0.4)	2.6 (0.4)	0.3 (0.6)	0.92
TQA	0.3 (0.2)	0.3 (0.2)	<0.1 (0.2)	0.92
CAPI	39.2 (1.5)	40.8 (1.3)	-1.6 (2.1)	0.92

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

Table 38. 2021 ROIL Response Rates by Mode for the New York Regional Office: Treatment 2 vs. Treatment 4

	Treatment 2	Treatment 4	Difference	Adjusted P-Value
Overall Response	64.8 (1.4)	65.9 (1.2)	-1.1 (1.7)	0.79
Self-Response	25.1 (1.2)	26.0 (1.2)	-0.9 (1.7)	0.59
Internet	21.9 (1.2)	22.6 (1.1)	-0.7 (1.6)	0.96
Mail	2.6 (0.5)	2.8 (0.4)	-0.2 (0.7)	0.96
TQA	0.6 (0.2)	0.6 (0.2)	<0.1 (0.3)	0.96
CAPI	39.6 (1.4)	39.9 (1.2)	-0.3 (1.9)	0.96

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

Table 39. 2021 ROIL Response Rates by Mode for the New York Regional Office: Treatment 1 vs. Treatment 2

	Treatment 1	Treatment 2	Difference	Adjusted P-Value
Overall Response	62.3 (1.4)	64.8 (1.4)	-2.4 (1.9)	0.55
Self-Response	23.1 (1.2)	25.1 (1.2)	-2.0 (1.6)	0.59
Internet	19.8 (1.2)	21.9 (1.2)	-2.1 (1.5)	0.69
Mail	2.9 (0.4)	2.6 (0.5)	0.3 (0.6)	0.82
TQA	0.3 (0.2)	0.6 (0.2)	-0.3 (0.3)	0.82
CAPI	39.2 (1.5)	39.6 (1.4)	-0.4 (2.0)	0.82

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

Table 40. 2021 ROIL Response Rates by Mode for the New York Regional Office: Treatment 3 vs. Treatment 4

	Treatment 3	Treatment 4	Difference	Adjusted P-Value
Overall Response	65.5 (1.2)	65.9 (1.2)	-0.4 (1.5)	0.79
Self-Response	24.8 (1.2)	26.0 (1.2)	-1.2 (1.8)	0.59
Internet	21.9 (1.1)	22.6 (1.1)	-0.7 (1.7)	0.70
Mail	2.6 (0.4)	2.8 (0.4)	-0.2 (0.6)	0.70
TQA	0.3 (0.2)	0.6 (0.2)	-0.3 (0.3)	0.70
CAPI	40.8 (1.3)	39.9 (1.2)	0.9 (1.9)	0.70

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

F.6 Philadelphia

Table 41. 2021 ROIL Response Rates by Mode for the Philadelphia Regional Office: Treatment 1 vs. Treatment 3

	Treatment 1	Treatment 3	Difference	Adjusted P-Value
Overall Response	73.3 (1.1)	72.4 (1.3)	0.9 (1.7)	0.98
Self-Response	25.3 (0.9)	24.7 (1.1)	0.6 (1.4)	0.67
Internet	21.9 (0.9)	21.9 (1.1)	<0.1 (1.3)	0.97
Mail	3.2 (0.5)	2.3 (0.4)	0.9 (0.6)	0.65
TQA	0.2 (0.1)	0.5 (0.2)	-0.2 (0.2)	0.97
CAPI	48.0 (1.2)	47.6 (1.3)	0.4 (1.8)	0.97

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

Table 42. 2021 ROIL Response Rates by Mode for the Philadelphia Regional Office: Treatment 2 vs. Treatment 4

	Treatment 2	Treatment 4	Difference	Adjusted P-Value
Overall Response	77.8 (1.1)	72.4 (1.4)	5.3 (1.8)	0.01*
Self-Response	27.8 (1.4)	26.0 (1.4)	1.8 (2.0)	0.67
Internet	24.1 (1.4)	22.0 (1.3)	2.2 (1.9)	0.25
Mail	2.8 (0.4)	3.8 (0.5)	-1.1 (0.7)	0.21
TQA	0.9 (0.3)	0.2 (0.1)	0.7 (0.3)	0.12
CAPI	50.0 (1.4)	46.4 (1.5)	3.5 (2.1)	0.21

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

Table 43. 2021 ROIL Response Rates by Mode for the Philadelphia Regional Office: Treatment 1 vs. Treatment 2

	Treatment 1	Treatment 2	Difference	Adjusted P-Value
Overall Response	73.3 (1.1)	77.8 (1.1)	-4.5 (1.6)	0.02*
Self-Response	25.3 (0.9)	27.8 (1.4)	-2.4 (1.7)	0.65
Internet	21.9 (0.9)	24.1 (1.4)	-2.2 (1.8)	0.50
Mail	3.2 (0.5)	2.8 (0.4)	0.4 (0.7)	0.50
TQA	0.2 (0.1)	0.9 (0.3)	-0.6 (0.3)	0.18
CAPI	48.0 (1.2)	50.0 (1.4)	-1.9 (1.9)	0.50

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.

Table 44. 2021 ROIL Response Rates by Mode for the Philadelphia Regional Office: Treatment 3 vs. Treatment 4

	Treatment 3	Treatment 4	Difference	Adjusted P-Value
Overall Response	72.4 (1.3)	72.4 (1.4)	<0.1 (1.9)	0.97
Self-Response	24.7 (1.1)	26.0 (1.4)	-1.3 (1.5)	0.67
Internet	21.9 (1.1)	22.0 (1.3)	<0.1 (1.5)	0.99
Mail	2.3 (0.4)	3.8 (0.5)	-1.5 (0.5)	0.03*
TQA	0.5 (0.2)	0.2 (0.1)	0.2 (0.2)	0.73
CAPI	47.6 (1.3)	46.4 (1.5)	1.2 (2.0)	0.99

Source: U.S. Census Bureau, American Community Survey, Regional Office Internet Field Letter Test, DRB Approval Number: CBDRB-FY23-ACSO003-B0051.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. An asterisk (*) indicates a statistically significant result. Significance was tested based on a two tailed t-test at the $\alpha=0.1$ level. P-values were adjusted for multiple comparisons using the Hochberg method.