GUIDEBOOK

Conducting Local Income Surveys in the COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM

Department of Housing and Urban Development | Office of Community Planning and Development

Table of Contents

Table of Contents *continued*

List of Tables

List of Figures

List of Acronyms

ACRONYM	DEFINITION
ACS	American Community Survey
AMI	Area Median Income
CDBG	Community Development Block Grant
GIS	Geographic Information System
HUD	U.S. Department of Housing and Urban Development
LMISD	Low- and Moderate-Income Survey Data
MOE	Margin of Error
QR	Quick Response

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Insight Policy Research contributed to the survey plan and pilot studies. Debra Wright and Marietta Bowman were the key staff, with other staff members working as field surveyors.

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*The use of this Guidebook and associated tools is **not** required by HUD for the purpose of conducting local income surveys. The Guidebook and supplemental materials are technical assistance resources, and their use is completely optional.*

*The use of the Guidebook and other items in the CDBG Income Survey Toolkit to conduct a survey does **not** guarantee acceptance of survey results by HUD for the purpose of qualifying activities as benefiting low- and moderate-income persons on an area basis.*

1 Introduction

This guidebook provides information on how to conduct a local income survey that meets the U.S. Department of Housing and Urban Development's (HUD) guidelines for the Community Development Block Grant (CDBG) program. Most communities in the United States are eligible to receive CDBG funds: Larger cities and urban counties are funded directly by HUD, while smaller cities and towns receive funding through their respective States. CDBG funds have many eligible uses, and all activities must meet a national objective. Certain activities may qualify if they benefit all the residents of an area and at least 51 percent of the residents are low- and moderate-income (LMI) (family incomes below 50 and 80 percent of area median income, respectively).

The tools provided in this guidebook and in the CDBG Income Survey Toolkit (Toolkit) were developed as part of a survey pilot in five communities. The team field-tested Survey123, Fulcrum, and Microsoft Forms. The letters to residents, flyers, reminder post cards, paper surveys, and case management resources included in the Toolkit were also part of the survey pilot. The Guidebook and Toolkit focus on a multimodal survey approach, using online and in-person data collection, which is intended to reduce administrative burden, maintain data quality, and provide good response rates.

1.1. Why Undertake a Local Income Survey?

Communities must demonstrate that the population of the service area where they propose to undertake CDBG-funded activities is at least 51 percent LMI. HUD's regulatory requirements for conducting a survey to determine the percentage of LMI persons in the service area of a CDBG-funded activity are located at 24 CFR 570.208(a)(1)(vi) for the Entitlement program and 24 CFR 570.483(b)(1)(i) for the State program. HUD publishes LMI Summary Data (LMISD) for U.S. Census geographies, including place and block group data. These data are often sufficient to qualify a proposed CDBG activity for area benefit; in many cases, however, the available geographies may not conform to the activity's service area, or the community may think that the data are inaccurate. In those cases, the community may consider conducting a local income survey, as described in this guidebook.

- **General Information on LMI Data:** https://www.hudexchange.info/programs/cdbg/cdbg-low-moderate-income-data/.
- **Updates on Income Data:** https://files.hudexchange.info/resources/documents/Notice-CPD-1902-Low-and-Moderate-Income-Summary-Data-Updates.pdf.
- **Check with your state agency for local requirements.**

1.2. Key Concepts

There are several terms and concepts used throughout the guidebook that may be familiar if you are or have been a CDBG recipient/grantee. We cover them here to make sure everyone is on the same page.

When planning for an income survey, "family," "household," and "person" all have specific meanings. The definition of *family* includes a single person or a group of people living together, which can include children. Family members may be of any sexual orientation, gender identity, disability status, age, or marital status. A *person* is any individual. A *household* is all persons, related or unrelated, occupying a housing unit. For an income survey, we must count both families, persons, and LMI persons. For the purposes of reporting LMI, a family means anyone related by blood, marriage, or adoption, and can also be a single person.

States may establish their own definitions of income, provided that they are explicit, reasonable, and not plainly inconsistent with the Housing and Community Development Act of 1974. Entitlement grantees may use any of the three definitions established in HUD regulations: (1) the definition under the Section 8 Housing Assistance Payments program; (2) annual income as reported for the most recent available decennial Census; or (3) adjusted gross income as defined for purposes of reporting under the Internal Revenue Service Form 1040.

HUD regulations equate the **CDBG definition of LMI** with the **Section 8 definition of low-income established by HUD.** Following these regulations, an LMI person means a member of a family with an income equal to or less than the Section 8 low-income limit established by HUD. The Section 8 low-income limit is defined as less than or equal to 80 percent area median income (AMI). Thus, when conducting an income survey, an LMI person is defined as having an income less than or equal to 80 percent AMI.

The final concept is "service area." The principal responsibility for determining the area served by the activity rests with each CDBG applicant. LMISD must be used to the fullest extent feasible to determine a service area's qualification for low and moderate income area activities. If the available LMISD geographies do not reasonably correspond to the service area, or if the applicant considers the LMISD data for the area to be incorrect, the applicant may carry out an income survey to provide updated information to use in the application process. LMISD and income survey data cannot be used in conjunction to qualify for low and moderate area activities.

1.3. Survey Strategy

When planning a survey, one of the first steps is deciding which data collection mode to use. Mail, telephone, web-based, and door-to-door are all acceptable modes of data collection. The choice of which mode to use should be based on the available time and resources, as well as specific characteristics of your community. For example, if you decide that in-person interviewing is not feasible but you have current address, phone, or email information, you may rely on a mail or telephone survey. For other communities, including an in-person survey

may be critical to ensuring responses from households that lack internet access or a valid mailing address.

This guidebook outlines a multimodal data collection approach that uses multiple strategies to contact people and allows them to respond in more than one way. A multimodal approach can maximize responses to surveys and help minimize costs. Such an approach begins with a "primary" mode and follows up with another mode that is intended to reach people who have not yet responded. An example is a mail invitation to complete an online survey, which includes a toll-free number allowing respondents to call and take the survey over the phone. This letter might be followed by a reminder postcard, which also includes the toll-free number. Finally, a survey team would go door-to-door and interview people in-person, using a handheld tablet (or a pen and paper survey) to collect responses.

Full Definition of Family

Family includes, but is not limited to, the following, regardless of actual or perceived sexual orientation, gender identity, or marital status:

(1) A single person, who may not be an elderly person, displaced person, or any other single person; or

(2) A group of persons residing together, and such group includes, but is not limited to:

(i) A family with or without children (a child who is temporarily away from the home because of placement in foster care is considered a member of the family);

(ii) An elderly family;

(iii) A near-elderly family;

(iv) A disabled family;

(v) A displaced family; and

(vi) The remaining member of a tenant family

1.4. Overview of Guidebook

In the following sections, we discuss methods for conducting a survey, spreading the word about the survey to increase response rates, and calculating potential costs. In Section 2, there is an overview of the survey process and how to get started. In Section 3, details are provided on data collection tools and how to decide which one(s) to use. Section 4 provides instructions for cleaning a sampling list and drawing a sample. Section 5 provides details on how to manage mailing outreach. Section 6 describes in-person interviewing components and protocols. Section 7 provides details on case management. Section 8 discusses data cleaning and analysis. Appendix A provides details on alternative survey applications. Supplemental materials that you can use to develop your own survey effort is available on the HUD Exchange website.

Throughout the guidebook, an example of a town going through the survey process will be detailed in boxes labeled "Anytown Example." The Anytown example will help guide you through the series of decisions that need to be made when launching a local income survey. The complete Anytown write-up is in Appendix B.

Appendix C contains a list and short description of every item that is available as part of the Toolkit on the HUD Exchange.

Citations for the Terms Used in the Guidebook

Family: 24 CFR 5.403, 24 CFR 570.3

Household: 24 CFR 570.3

Income: 24 CFR 570.481(a) (States), 24 CFR 570.3 (Entitlements)

Low-Income: 24 CFR 570.3

Moderate-Income: 24 CFR 570.3

Low-and-Moderate Income: 24 CFR 570.3

2 Survey Process

Fielding a survey requires planning. You will need to determine the geography for the survey area, obtain a list of addresses, publicize the survey, decide on a survey strategy, determine a data collection timeline, prepare outreach materials, and train individuals to execute in-person interviewing (if applicable). These steps are discussed in detail throughout this guidebook. A few parts of the process can occur simultaneously, but others should happen in a specific order. It is helpful to prepare a timeline that clarifies when each task should happen. Make sure that everyone working with the survey process is aware of the need for the confidentiality of any data collected; the survey should be designed and administered in such a way that confidentiality pledges are kept.

2.1. Critical Survey Elements

1. **Confidentiality:** Confidentiality is critical for both the respondents and the organization that gathers data. Data on individuals must not be shared with any staff members inside the organization other than those performing data analysis. Even then, it is best if the team works with de-identified data. Do not keep names or addresses in the final dataset. Keep a separate file that crosslinks the names and address with a unique ID, which can be checked in case of a data discrepancy. In outreach materials to survey recipients, this unique ID is referred to as a "Family ID." Keep electronic files in a secure location. Lock any paper surveys in a drawer. Keep electronic files on a secure hard drive and password protect them. If files are stored in the "cloud," save them in a secure folder and protect them with a password.
2. **Correct income limits:** HUD publishes LMISD regularly (24 CFR 570.208(a), 24 CFR 570.483(b)(1)). Make sure you use the most recent income limit data in the survey.
3. **Distinct family units:** Count one family per survey. A *family* is a group of people who are related by blood, marriage, or adoption. A *household* can contain multiple families and encompasses all the people living in a dwelling unit. Unrelated individuals are considered one-person families for the purpose of the income survey. (24 CFR 5.403, 24 CFR 570.3).

TIP Make sure to have a confidentiality policy in place before collecting data.

Table 1 shows the process of conducting an income survey.

ANYTOWN EXAMPLE: Income Survey Process

Table 1. Income Survey Process

TASK	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7
Public Outreach							
■ Prepare news release/newsletter items.	■						
■ Present at public meetings.		■					
■ Send notices to local papers, newsletters, and Listservs.		■					
Survey Design and Programming							
■ Decide which survey method(s) to use.	■						
■ Obtain a list of residential addresses in service area.	■						
■ Establish toll-free or local line. Assign staff to take calls.		■					
■ Draw sample.		■					
■ Update and program survey.			■				
■ Prepare case management log.			■				
Materials Design							
■ Prepare flyer/update flyers.	■						
■ Compose letters with reply options, such as mail, phone, or online.		■					
■ Design postcards.				■			
Mailing							
■ Perform mail merge, print letters, and print envelopes/ labels.			■				
■ Send letters.			■				
■ Prepare and send follow-up postcards—remove addresses of households that have already responded.					■		
■ Send last reminder (either letter with paper survey or additional postcard).						■	
Field Work Preparation							
■ Conduct training for surveyors.						■	
■ Send field teams for door-to-door surveying.							■

2.2. Define Geography and Obtain Address List

The first step in preparing to conduct a local income survey is to define the geography for the survey area. You will need to determine the service area for the activity you are planning. It could be a city, county, water district, or a smaller area inside a town. The area must also be primarily residential. You can use the Geographic Information System (GIS) tools available from HUD to help define the area. The GIS tools will also allow you to assess the reported income levels for the area. After defining the service area, the next step is to find a list of all addresses for that area from which to draw a sample. This list is the "sampling frame." Sampling frames are usually address lists taken from utility or tax rolls. Any list that includes all (or most) of the residential addresses in your service area can be used. In many cases, addresses from outside the service area must be excluded from the list.

After you obtain the sampling frame, you will need to clean and validate it to ensure that the addresses are all complete and represent residential units. Any commercial or retail locations, government offices, churches, courthouses, shops, or factories should be removed from the sampling frame. Known vacant units should also be removed before sampling. The details of cleaning sample lists and sample selection are discussed in Section 4.

2.3. Publicizing the Survey

It is very important to publicize your survey to community residents before data collection begins. Publicizing the survey in advance will help raise awareness and potentially increase response rates. Providing information about the survey will increase people's comfort level with the purpose of data collection and motivate them to participate. It is helpful to emphasize that the survey results will only be used for the purposes of applying for federal funds to improve the community, and that the participation of each resident will ensure that these data are accurate. Every survey response is important. You should state that all data will be kept confidential, no personally identifiable information will be associated with the results, and none of the data collected will be used for any commercial purposes.

There are many ways to let area residents know about the survey, including public meetings, informational mailings, public notices (such as at libraries, town halls, grocery stores, or other notice boards), newspaper articles, community Listservs, social media, and city council meetings. Encourage people to spread the word about the survey. Even though not everyone will be asked to participate, the more people know about the survey, the greater the acceptance of the survey will be. See Appendix C for a link to a sample flyer with language that can be adapted for press releases.

ANYTOWN EXAMPLE

In January, Mayor Smith of Anytown (population 2,000), learns that the town does not meet the income requirements to apply for CDBG funds from the state because the estimated percentage of LMI persons from American Community Survey (ACS) is below the 51 percent threshold. Mayor Smith reviews ACS guidance from HUD and sees that the margin of error (MOE) for her city is 25 percent, which indicates that a more precise estimate of LMI might be possible. She decides to carry out an income survey.

Reviewing the CDBG Income Survey guidebook, Mayor Smith tasks the town clerk, Roberta Jones, with taking the lead on the survey. As one of her first tasks, Ms. Jones drafts a confidentiality statement for all the town staff to sign stating that any information they collect will not be shared and will remain confidential. Ms. Jones also draws up a timeline for the survey steps and works with the Mayor and other staff to finalize it.

TIP Details on how to use the MOE are in Section 4.

2.4. Determining Your Survey Approach

Next, you will need to determine what type of survey approach you will use. The following list summarizes the types of data collection modes:

- **Web-based survey:** Distribute via mail or email with a web survey link and Quick Response (QR) code for respondents to access the survey.
- **Paper survey:** Mail respondents a letter that includes a questionnaire and prepaid return envelope.
- **Telephone survey:** Contact respondents via telephone or provide a toll-free number for respondents to call to take the survey. Record responses via web, tablet-based survey application, Excel spreadsheet, or on paper.

- **In-person interviewing:** Send interviewers to sampled addresses to conduct the survey and collect data with a handheld tablet or paper survey.

The guidebook provides details on a multimodal approach that combines any of these methods. The reason to use a multimodal approach is that the smaller the number of in-person interviews needed, the less costly the process will be. A less expensive mail strategy can capture completed surveys from the most willing respondents with little additional effort, but a mail outreach alone will often not yield sufficient response rates to support the required sample sizes. If possible, incorporate at least one additional data collection mode before beginning the in-person interviewing, depending on the timeline and resources available. In-person interviewing is the most labor-intensive mode, but also the most likely to increase participation rates.

2.5. Materials

Copies of survey instruments, user guides for applications, templates for outreach letters and flyers, and other items are available as part of the Toolkit. A complete list of these items may be found in Appendix C. You can modify the documents to add details about your community and your contact information, or modify the language if you prefer different phrasing. We also recommend translating the survey and outreach materials into any local languages. Most of the items available in the Toolkit are already available in English and Spanish.

ANYTOWN EXAMPLE: Cost Considerations

Table 2. Example of Cost Considerations for a Sample of Approximately 100 Housing Units

TASK	DOLLAR AMOUNT
Plain Envelopes	$30 (250 #10 size)
First-Class Stamps	$55 (100 x $0.55)
Postcard Paper	$30 for 100 (50 perforated sheets)
Postcard Stamps	$33.25 (95 x $0.35)
Plain Paper for Mailing, Flyers, Other Materials	$7.50 (500 sheets)
Card Stock for “Sorry We Missed You” Notes	$18 (250 sheets)
Translation Services (if applicable)	$200 for all materials
Toll-Free Phone Line	$15/month
Handheld Tablet	$125–$200/each
Total Materials Cost	**Approximately $775**

2.6. Calculating Costs

Cost will likely be a primary factor in a community's decision in selecting a data collection method or outsourcing to a contractor. Table 2 (above) lists the items that should be considered when calculating the material costs for fielding a survey. We based these estimates on the pilot surveys. This is meant to serve as an example; actual costs will vary. When revising these costs to match your community, make sure to budget enough staff labor hours to execute the task. In preparing a mailing, for example, staff members will need to edit the advance letters to include local contact information and details about your community, complete the mail merge process to create the letter(s), and assemble the mailings. The time cost is probably higher than the out-of-pocket cost for the materials, but it may be absorbed if these are considered normal duties for your staff.

You will need handheld tablets if you decide to use Fulcrum or Survey123 in the field for surveying. Relatively low-cost tablets are available, but tend to be less functional than higher-cost versions. A 7–10-inch Android tablet in the $125–$200 range would be sufficient for either Fulcrum or Survey123; Microsoft Forms functionality depends entirely on the operating system. Lower-cost Amazon Fire tablets will not work due to the constraints of their proprietary operating systems.

ANYTOWN EXAMPLE

Ms. Jones reviews all the available HUD materials and uses some of the language from the sample flyer to draft a press release. She updates the flyer to add details about Anytown, including how they used CDBG funds in the past and what they plan to do if the town receives funding again. Staff members post the flyers at town hall, the post office, and a popular coffee shop to get the word out. The mayor asks the local newspaper to publish a story about the upcoming survey.

3 Data Collection Tools

If you decide to incorporate a web-based or technology-assisted in-person interview into your data collection effort, you will need to decide which software you will use to administer the survey. This chapter provides an overview of factors to consider and discussion of the products used for the pilot testing.

3.1. How to Choose the Data Collection Tool

The tool you choose will depend on your budget, the size of the sample, and your staff capacity for data analysis and data management. This guidebook includes a review of several available technologies, which are listed in Appendix A. Detailed user guides are provided as separate documents for Survey123, Fulcrum, Microsoft Forms, and Qualtrics. Each community should identify the approach that best fits their needs and budget.

If you choose a survey application, a cost will be incurred on either an annual or monthly basis, with prices ranging from thousands of dollars a year to less than $50 a month (see Appendix A for a cost comparison of survey applications). If your community anticipates doing multiple surveys in a year and the survey application would be shared across more than one location, a more expensive application might be appropriate. While the cost of an application might seem high, they save processing time after data have been collected. Data from applications can easily be exported to Microsoft Excel to make the necessary calculations for determining the percentage of LMI persons. If you plan to use an electronic application (or "app") for door-to-door surveying, you should include a budget for handheld tablets. These factors should be considered in your decision on which approach to choose.

3.2. Survey Instrument

The survey instrument should have the following elements:

1. **Informed Consent:** Provides respondent with information about the purpose of the survey, intended use of data, estimated time for completion, and informs the respondent that participation is voluntary.
2. **Household/Family Count:** The number of household members, number of families in the household, and number of members in each family.
3. **Family Income:** Total combined gross annual income of all family members. This question may be designed to request an absolute dollar amount for the family income, or to solicit an "above" or "below" reply based on the corresponding income limit. The latter is generally considered to be somewhat less sensitive, resulting in higher response rates.
4. **Demographics:** Optional questions, which may include race, gender, age, or disability status.

ANYTOWN EXAMPLE

Ms. Jones decides that Anytown will use a multimodal approach to data collection to maximize response rates and minimize staff effort. They will first send a mailing, directing people to take the survey online, then follow up in-person. Anytown finds that they have access to Survey123 via an Esri license, so they elect to use that as the online survey application. Ms. Jones downloads the sample survey from the HUD website and edits the introduction to add the name of her town. She updates the income limits in the template to reflect her county's most recent limits, posted by HUD. Ms. Jones then consults the User Guide for Survey123 to make sure she understands all the technical requirements. The next steps must wait until after she has a clean address list and has drawn the sample.

3.3. Survey123

Esri's Survey123 can be used for both online and in-person data collection. It is user-friendly and has an offline mode. If used for in-person collection, a data connection is not required, which is critical in remote or rural areas. Survey123 can also be taken directly by respondents in most web browsers via a link or QR code (aka self-administration). In offline mode, it can be administered via a tablet in a door-to-door survey effort, with the records uploaded when a mobile or Wi-Fi connection is made. It can be accessed through a dedicated iOS or Android application. The functionality of the interface is reasonably intuitive and easy to use. Data on income limits can be loaded on an area-by-area basis. Unique family IDs can be linked to addresses and they will populate when the ID is entered. The Survey123 app can be programmed to display the appropriate income level when the respondent enters their family size. This makes the data entry process simpler for the interviewer and the respondent, as the respondent only needs to look at one number and state if their income is above, at, or below the amount displayed.

At the time of the test, the cost of Esri's licensing for its GIS tools is $500–$800 per year; many states and local governments already have Esri licenses. Survey123 is included in the Field Apps Bundle with ArcGIS Online. For more details, see https://www.esri.com/en-us/arcgis/products/arcgis-online/pricing.

3.4. Microsoft Forms

Microsoft Forms is a simple online survey application. It has a user-friendly interface and it is easy to add additional survey questions and share with other Microsoft Office users. While offline versions are available for some handheld devices, they are dependent on the app version and the specific device. Microsoft Forms can be used for online data collection (in which respondents take the survey themselves, a.k.a. self-administration) in combination with other tools, such as Fulcrum, which can be used by surveyors in the field. You cannot link unique family IDs to respondent addresses, so address data must be entered manually. IDs should still be included in the letters, as a way of protecting respondent confidentiality. Microsoft Forms could not be programmed to display the LMI for the family size based on the respondent's input, a feature available in both Survey123 and Fulcrum; this proved not to be a major limitation. Microsoft Forms is often included with an Office 365 subscription, so the costs will vary depending on the subscription type.

3.5. Paper

This is the most flexible and lowest cost option. Even if you decide to use a survey application, you should have paper surveys ready as a backup. A paper instrument is easy to customize for the local area, and there are no programming complications if new questions are added. The main challenges of paper surveys are that completed surveys must be kept secure to protect respondent confidentiality and results must be entered in Excel (or other spreadsheet application) for analysis, which requires additional time.

TIP

Always carry paper surveys as a backup, even if you collect data using a handheld device.

3.6. Fulcrum

Fulcrum can be accessed through a web interface or through a dedicated iOS or Android app. The app can collect data while offline, then upload records after reestablishing a mobile or Wi-Fi connection. Fulcrum can be used for direct data entry in a door-to-door or telephone survey, or for entering responses transcribed from a mail or paper survey. Fulcrum also supports data imports and exports. Unique family IDs can be linked to addresses that will populate in the survey when the ID is entered. Fulcrum can also be programmed to display the appropriate income level when the respondent enters their family size, similar to Survey123. The Fulcrum interface is not intuitive, however, and is not suitable for self-administration of surveys.

Fulcrum refers to its data collection forms as "apps." These apps live in web libraries, which makes sharing easy for Fulcrum subscribers. Communities that purchase a Fulcrum license can upload the standard survey and share it with other users. Fulcrum supports some data analysis and generates basic reports, but exporting the data into the Excel analysis tool is recommended.

The professional Fulcrum license is required for the instrument used in the pilot testing. At the time of the testing, it cost $30 per month for an annual license ($360/year) or $38 per month if a month-to-month license is purchased.

4 Sampling

Proper sampling is necessary to get results that will be representative of your community. A simple random sample is an appropriate approach to gathering reliable information about the percent of LMI persons living in the service area. The goal is to produce an independent sample that will allow for meeting target response levels and minimizing bias for the chosen survey strategy.

The simple random sampling process begins with determining the minimum number of responses that are required for the service area. Next, you must obtain and clean a sampling frame. The sampling frame is a list of addresses for the geographic area you are planning to survey. After you have cleaned the addresses in the frame, you are ready to draw the sample. The steps for drawing the sample involve utilizing a random number generator, sorting the frame by the random numbers, and selecting the number of addresses needed, which must be more than the minimum number of addresses required; this practice is called "oversampling." Most of your time will be spent cleaning the list, as drawing the sample is a straightforward process.

ANYTOWN EXAMPLE

The next step for Anytown is to locate a good list of all the occupied residential addresses in the area. Ms. Jones decides to use the local utility roll. Many utility customers have a street address and a P.O. Box as the mailing address, and many of the P.O. Boxes are out of town. In those cases, the P.O. Box is probably for the owner of the property, not the resident. Ms. Jones also knows that local mail delivery only goes to P.O. Boxes. She reviews the list and adds the names of the Anytown residents she knows that are not already listed. Though there is no local P.O. Box listed for the residents at several street addresses, these households still need to be included in the sampling frame. If these addresses are included in the random sample, they will need to receive an in-person visit rather than a mailing. Ms. Jones creates a column in her address spreadsheet to indicate whether each address is a "field" or "mail" address. Ms. Jones removes any addresses she knows have been vacant for a long term or are commercial properties, as well as businesses, offices, churches, and the community center.

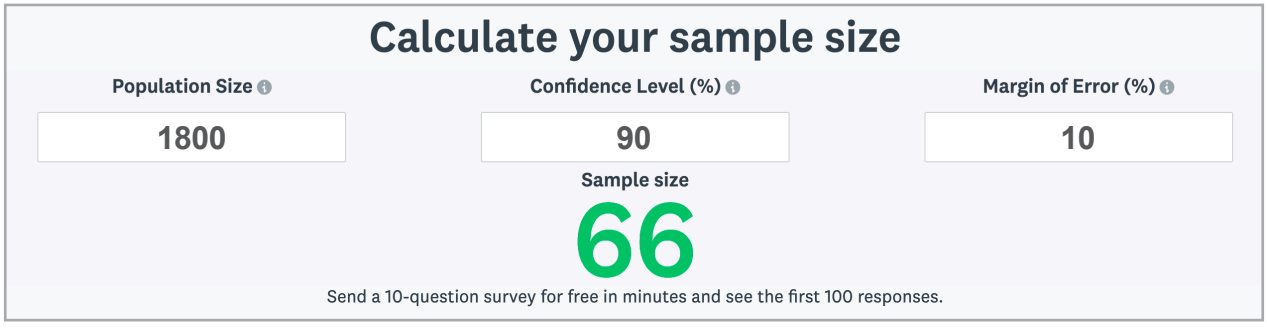
4.1. Calculating the Number of Responses Required

Prior to drawing the sample, you need to estimate the number of responses required for the survey. HUD guidelines include a minimum number of responses required for the survey to be considered valid—see the HUD guidance at https://files.hudexchange.info/resources/documents/Notice-CPD-1902-Low-and-Moderate-Income-Summary-Data-Updates.pdf.

Many sample size calculators are available online, and most use the same (or similar) underlying calculations. The example below is from SurveyMonkey: https://www.surveymonkey.com/mp/sample-size-calculator/. When you access the page, scroll down until you find the sample size calculator, as shown in Figure 1.

In the "Population Size" box, enter the estimated number of housing units in your area. The confidence level must be set at a minimum of 90 percent, and the margin of error (MOE) must be no higher than 10 percent. If the MOE associated with the ACS estimate for the area is lower than 10 percent, the lower MOE must be used. For more reliable survey estimates, increase the confidence level and decrease the MOE, which will increase the sample size. As illustrated by Figure 1, if you have an estimated population of 1,800, the minimum required number of responses is 66. You are not required to stop at 66 responses; you can collect as many more as you have time and funding to support. If you have the time and staffing available to gather more responses, it will improve the estimate for your area.

Figure 1. Example of a Sample Size Calculator



4.2. Preparing the Sampling Frame

The first step in preparing the sampling frame is to identify a list of local residential addresses. This can be a utility roll, 911 addresses, or other list of town residents.

4.2.1. Cleaning the Sampling Frame

Prior to drawing the sample, the sampling frame must be cleaned. All vacant and commercial/retail addresses must be removed. Only residential addresses should be sampled. Follow the steps below to ensure a clean list of addresses for the sample:

1. Work with the lists in a spreadsheet (such as Excel), which will facilitate mailing, sorting, and comparing lists, if necessary. It can also help identify duplicate addresses.
2. Review all the addresses and ensure that they are complete. If you cannot correct an incomplete address, remove it from the frame and save to a different worksheet.
3. You may need to merge or rearrange fields to create a usable mailing list, including arranging the spreadsheet with one address per row. Later in the process of sampling or while conducting the survey, if more than one family lives at the same address, you will add one row for each family at that address. Complete all of these edits before sampling. Note: You may use the name of the resident for the physical mailing of survey communications—but this is the only time it will be part of the survey effort. Alternatively, you may address the letters to "Current Resident."
4. Depending on the source of the list, you may have two addresses for each name: a street address and a mailing address. Plan to send the surveys to the mailing address, if it is local.
5. If the mailing address is in a different city than the street address, it may be for the owner and not the resident. The goal is to send the survey invitation to the resident.
6. For locations where residents primarily receive mail at a P.O. Box, but only a street address is provided, you may either include them in the mailing or reserve them for an in-person visit. If the letter is sent to a street address where P.O. Boxes are used, it may be returned as undeliverable. These locations should be visited in-person.
7. Remove any vacant addresses from the list. Remove commercial addresses such as stores, churches, community centers, and similar locations. Only residential addresses should be part of the list.
8. If there are multi-unit buildings, make sure each unit has a separate row in the spreadsheet. This includes retirement homes, assisted living, or other congregate housing.
9. Each row needs the following fields: address 1, address 2 (for the unit number), city, state, and ZIP code. (Additional fields will be discussed later.)

4.2.2. Assigning Unique Family IDs

Before drawing the sample, you must assign three unique family IDs to each of the addresses in the sample. This will allow for multiple surveys to be completed at a single address if there is more than one family in residence. Based on the pilot study, three unique IDs were sufficient for each address. The IDs will be used to access either a web survey or the survey administered by the in-person interviewer. It is important to assign the IDs **before** drawing the sample; if you assign them later, it will be difficult to ensure that the IDs are unique if you need to resample or add cases. Random.org can be used to generate IDs and random numbers. Other sites with random number generators include Calculator.net and CalculatorSoup.com. Microsoft Excel also includes a function to generate random numbers.

After you have cleaned the list, it is time to generate and add the unique family IDs. The following steps will help you generate the three IDs (see Figure 2):

1. Go to Random.org (or another site of your choosing) and select "Lists & More" at the top of the page. Select "Strings" or "String Generator." The string is a series of letters.
2. In the box next to "Generate," enter the number of strings you need (the maximum is 10,000).
3. The number of IDs will depend on the total number of addresses in the clean sampling frame. For example, if you have 1,800 addresses, you will need 5,400 IDs (3×1,800). Three IDs were sufficient in each of the pilot test sites.
4. Choose "Uppercase letters"—this will avoid confusion for respondents and interviewers when they enter the IDs.
5. Check "Each string should be unique."
6. Click "Get Strings."
7. The strings will appear on a new page as a text list. Cut and paste the list into an Excel file and then paste the IDs next to the addresses in the sampling frame.

Figure 2. Random String Generator (Random.org)

ANYTOWN EXAMPLE

Ms. Jones is now confident that she has a correctly formatted list of all the residential addresses in Anytown. This is the sampling frame from which survey participants will be selected. She next generates IDs for each address. She decides to go to "Random.org" and follow the suggestions in the guidebook. She has 1,800 addresses in the list and, therefore, will need 5,400 unique IDs. After generating the IDs, she copies and pastes them into the three columns that she already created. She also generates 1,800 random numbers, which she pastes into the previously created column called "Random Number" to assist with the random sampling process.

4.3. Drawing the Sample

After the list is cleaned and the unique IDs are assigned, you may generate the random numbers and proceed to sampling. Drawing the sample is a crucial step in the survey process—be sure to carefully review the steps below before you begin.

TIP

Draw at least 150 to 200 percent of the sample required to account for non-responses. This is oversampling, which is a statistically sound approach.

The information generated in this process will be entered in the same Excel spreadsheet as the sampling frame. Create a new field for the random numbers. This will be used to sort the data for sampling. You should draw at least 150–200 percent of the number of addresses required to account for non-responses. This will ensure that you receive a sufficient number of responses to the survey to meet the required sample size stipulated in the guidelines. In the example used previously, 66 is the minimum number of responses needed. Consider drawing a sample of 132 addresses to ensure that the minimum number of complete surveys is achieved. Drawing an oversample is a statistically sound approach, which recognizes the reality that 100 percent response rates are very unlikely. Follow the steps below to generate random numbers:

- Draw random decimals from Random.org

1. Under "Step 1: The Fractions," put the number of fractions needed. This number is equal to the number of addresses in the cleaned sampling frame (one per row). In our working example, it is 1,800.
2. Use five decimal places.
3. Format in "1" column.
4. Click "Get Fractions."
5. Copy the list and paste into the "Random Number" column in the sampling frame.
6. Select all the columns with data.
7. Sort by the Random Number column. Now the addresses are in a random order.
8. The first 132 rows are the random sample for the example of 1,800 addresses.

ANYTOWN EXAMPLE

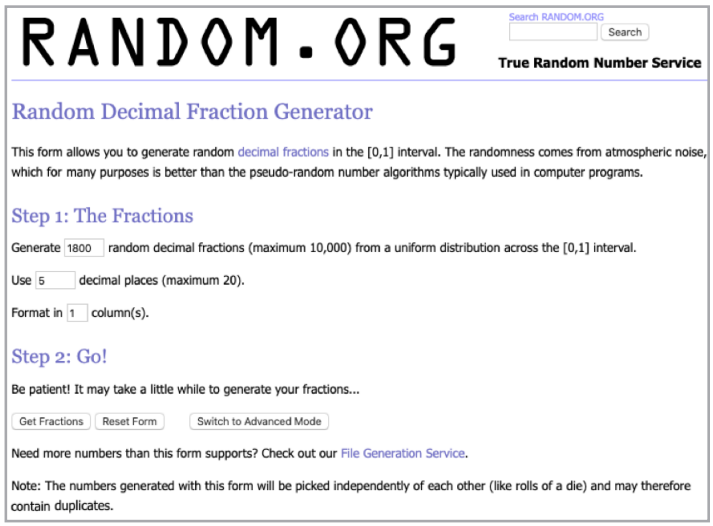
Ms. Jones updates the background files for Survey123, which include the local ZIP Codes, the addresses, and the unique IDs for each address. She pastes **all** the clean residential addresses into the files in case she needs to add an additional sample for any reason. She refers to the Survey123 user guide for this part of the process.

After updating the background files, it is time to draw the sample. To do this in Excel, Ms. Jones selects all the columns. She then sorts by the column "Random Number," sorting the addresses into a completely randomized order. Ms. Jones uses the sample size calculator in the Toolkit to determine the minimum number of completed surveys to meet HUD's recommendation for valid data. Because Anytown's ACS estimate had a MOE of 25 percent, HUD's guidance suggests that a maximum 10 percent MOE should be used to calculate the sample size for the local survey. The calculator determines that 66 completed surveys are needed; Ms. Jones decides to oversample by 100 percent to allow for up to half of the selected households to not respond to the survey while still meeting the minimum number of survey responses necessary. Since the town must complete at least 66 surveys, she selects the first 132 addresses on her list. She copies the 132 addresses to a new tab of the workbook that she names "Full Sample."

4.3.1. Subareas and Overlapping Samples

When a community has a project with a large service area encompassing multiple neighborhoods or rural towns, it is possible to conduct multiple separate surveys simultaneously. If the areas have similar population sizes, the results can be combined to determine the overall LMI percentage. Subarea surveys can also provide helpful information about income variations within the overall area. Subareas can be combined in multiple ways to create distinct service areas to demonstrate compliance for future activities.

Figure 3. Random Decimal Fraction Generator (Random.org)



NOTE: the subareas formula (below) cannot include overlapping areas. The subareas of an activity service area would be combined and a new LMI percentage calculated as shown in CPD Notice 19-02:

$$\text{LMI \%} = \frac{\text{LMI Persons Geography A + LMI Persons Geography B + LMI Persons Geography C…}}{\text{LMI Universe Geography A + LMI Universe Geography B +LMI Universe Geography C…}}$$

Alternatively, when the sample for a larger area includes a smaller geography (such as a water district that contains a town), a "nested" approach may be used.[1] For this approach, two lists would be created, one with only the town addresses and the other with both the town and water district addresses. A sample is then drawn from each list, following the steps discussed earlier. Unlike subareas, nested samples can be combined when you field the survey but must be separated to calculate the results. The town addresses found on both lists should be counted twice: once in each area. This will ensure that the minimum sample size is met in both areas.

TIP Careful case management is essential when there are overlapping samples.

1 Weighting may be appropriate when one area contributes disproportionately to the sample. This can happen when a smaller area has a relatively larger sample size than a larger area or if one area has a much higher or lower response rate. If you combine areas that do not have similar population sizes, you can weight the results so that the smaller area does not overly influence the results. A short discussion of weighting may be found here: https://www.decisionanalyst.com/blog/dataweighting/.

5 Distributing the Survey

This section describes the process of setting up mailings to the addresses included in the sample. You may find a sample flyer and a sample letter as part of the Toolkit. The flyer can be customized using your town's logo or letterhead. You may add details specific to your community, such as the proposed project for which the community is conducting this survey, and add contact information for your community. Customizable templates of all materials are available as part of the Toolkit.

5.1. Working with the Initial Sample

After you randomize the sampling list as described in the last chapter, select the number of addresses you need and copy them into a separate tab in the sampling frame workbook—this is the full sample. Double check to make sure they are all valid addresses. Some of these may be designated as "field" addresses because they have no good mailing address, as discussed above. Take the remaining addresses to be used for the mailing and copy them into another separate tab. If you need to add more addresses later, you can select an additional group from the main list.

5.2. Setting Up the Letter and Mail Merge

You can customize the sample letter provided in the CDBG Income Survey Tool Kit with details about your community, or compose your own letter. The sample letter in the tool kit is designed to use the mail merge feature in Microsoft Word to add the addresses, names, and IDs from an Excel spreadsheet to the letters. You can also use Word to create address labels or print addresses directly on envelopes. If you have names associated with the addresses, you may use them, but this is the only time in the survey process that the name and the ID for that address are linked. If names are not available, or if you think it is important to not link names to the initial survey request, you may address envelopes to "Current Resident."

Letters should include options for modes of response to the survey, such as: (1) a website, (2) a paper survey with a return envelope, (3) a phone number, or (4) a combination of all three. For a multimodal approach that starts with a request to take the survey online, each letter should include a website address (URL). Some survey apps will create a "short" address, but you can also use a short web address generator such as TinyURL to create a more intuitive name. Some apps will also provide a QR code that can be scanned with a mobile phone, which will take respondents to the survey website. Each letter should include the three unique IDs, the URL, and a QR code if one is available. If you are using a toll-free line, that number should also be included. The IDs and names will be different for each letter, while the URL, QR code, and phone number will be the same. You should designate a contact person at your office to answer questions and include their contact information in the introductory letter. You may decide that the designated contact can also conduct surveys over the phone via a local number rather than including the toll-free number.

The first step in the mail merge process is to set up a sheet in the sampling frame workbook with the fields you will use in the letter. To do this, copy the mailing addresses and paste into a new tab in the workbook. When you set up the mail merge, choose the mailing list tab as the data source. It is helpful to name the tab something that makes it clear that it is the mailing list and not the full sample. If you are using residents' names, you may also alphabetize the list at this point. This will make it easier to put the letters into the correct envelopes.

After you have the mailing list in a separate Excel tab, you can set up the Word document for the mail merge. Open the letter you plan to use and click the "Mailings" tab. Under "Start Mail Merge," choose "Letters" or "Step-by-Step Mail Merge Wizard" to guide you through the process. Next, "Select Recipients" and click "Choose an Existing List." You will choose the sampling frame workbook and the designated tab for the mailings. You can then place the merge fields into the appropriate places in the letter. The key merge fields are as follows:

- Address-related: Name, address, city, state, ZIP Code.
- The three unique IDs for each address.

You can preview the merge before you finalize it to make sure that the fields are placed properly. After you perform the merge, you will have a large file with one letter for each address. At this point, you can print the letters. It is important to use your community's letterhead to add legitimacy to the survey request.

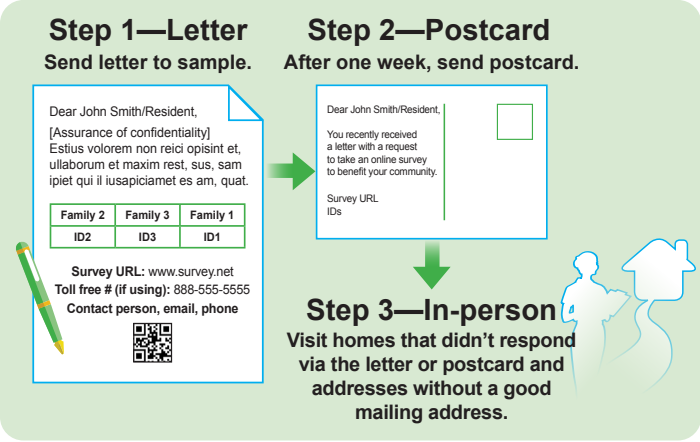
If you are using the Spanish translation of the letter, located on the second page of the example provided as part of the Toolkit, make sure to add the merge fields there too.

Use the same list and process in Word to merge the addresses for printing mailing labels or the individual envelopes. To set up mailing labels, use the "Labels" tab under "Start Mail Merge" or the "Step-by-Step Mail Merge Wizard." If you have the brand and number of the label, you can simply enter that information into Word. If you are not using resident names in the mailing, consider putting the first ID in the right-hand corner of each mailing label to make sure the letters and envelopes match correctly.

Print the letters and keep them in order, ensuring that the labels are also in order. Because each ID is tied to an address, it is vital that the correct letter goes in the correct envelope. The IDs ensure that each entry is unique.

After everything is printed, you can place labels and stamps on the envelopes. Fold the letter and flyer together into thirds. If possible, fold them in such a way that the large logo on the flyer is the first thing visible when residents open the letter. For the mailings, consider using first-class postage to ensure speedy delivery. Depending on the size of the mailing, you may find it more efficient to carry the letters to the post office, but bundling is not required for first-class letters.

Figure 4. Multimodal Survey Process



ANYTOWN EXAMPLE

Ms. Jones now prepares the mailing from the "Full Sample" list. She sorts the list by the "Mailing" column, which indicates whether there is a local mailing address for the household or whether it can only be contacted through an in-person visit. She copies all the addresses that she plans to send a letter to into a new tab of the workbook called "Mailing List." The mailing list has 100 addresses. Ms. Jones finalizes the letter, adds the mayor's signature, and sets up the mail merge in Microsoft Word. She will add the name of the resident, their address, and the unique IDs as merge fields in the letter. She also includes the URL for the survey and adds the QR code in the header of the letter. She prints the addresses on mailing labels, as well as an informational flyer for each letter. Ms. Jones works with other staff members to prepare the mailing. They fold letter and flyer together so that the banner on the flyer is the first thing someone would see when opening the envelope.

After mailing the letters, Ms. Jones creates another spreadsheet to track the responses. She decides to do this in Google Sheets to make it easy to access remotely. She adapts the spreadsheet example from the HUD guidebook and adds columns for the three unique IDs, the address, spaces for surveyors to add their initials, and a column for the different types of responses. She also adds fields for the random number and whether the address got a mailing.

After a week, Anytown receives 20 responses online via Survey123. Ms. Jones marks those responses as "Online Complete" in the case management log. She prepares a postcard mailing to the 80 addresses that did not respond yet. After another week, they get 10 more responses.

6 Field Work: In-Person Interviewing

This chapter provides guidance on in-person interviewing activities, including hiring, training, and protocols for visiting sampled households. In-person interviewing will likely be necessary to collect enough survey responses to inform the income estimates, even if a multimodal survey approach is used. The chapter ends with a summary of potential challenges your team may encounter and how to resolve them.

6.1. Materials

> **TIP** Name badges add legitimacy to the survey team.

To prepare for knocking on doors of sampled households, staff should be equipped with a variety of materials. These are both the tools that they will need to conduct the survey and materials they can share with residents to address questions or concerns. Providing a consistent and clear message about the study is critical to bring legitimacy to the study in the eyes of residents and gain their participation. Examples of the key documents are available as part of the CDBG Income Survey Toolkit. For a list of all materials and links to their locations, please refer to Appendix C. A short description of the most important items follows:

- **Name badge:** A badge with the town logo and the full name of the interviewer will add legitimacy and make it clear that teams are not soliciting.
- **Advance letter:** Copies of any previous communications sent to households should be given to interviewers as reference when they approach residents. This will provide legitimacy and credibility. It is possible for a resident not to remember the letter when asked, but then recall the letter when they see the copy. This can also serve as an icebreaker when the resident opens the door. This can be a "generic" version of the letter sent requesting participation in the survey.
- **Informational flyer:** A flyer with basic information about the study's purpose and reason for the in-person visit to households is a helpful tool for interviewers to display or leave with residents. Make the flyer colorful, with an attractive design that includes the municipal or county logo. This legitimizes the study and allows residents to see that the interviewer is connected to their community. Brief "Frequently Asked Questions and Answers" can provide a quick-read format that directly targets the potential concerns of residents. This is the same flyer included in the mailing.
- **Letter of support from town:** This may be signed by the mayor or other local leader and can be shown to demonstrate that the study is legitimate.
- **"Sorry We Missed You" card:** This is a smaller version of the flyer, with basic information about the study's purpose and directions for completing the survey online. There should be a blank space for the interviewer to fill in web survey codes. These cards should be left behind for residents.

> **TIP** Do not leave the "Sorry We Missed You" card in the mailbox—it is a violation of federal law. Leave cards by the front door or outside the mailbox.

- **Survey instrument application:** If your team is using a survey app to administer the survey, download it to the tablets and smartphones you plan to use in the field. Survey123 and Fulcrum have apps that can be used in an off-line mode in most operating systems. Qualtrics has an off-line mode in some payment tiers. MS Forms has limited availability to use as an app depending on the operating system of the tablet or phone.
- **Paper surveys:** Even if your team is equipped with tablets to administer the survey, paper surveys should be carried as backup in the event of technical problems. If you use paper surveys as the primary survey method rather than tablets, make sure to have enough copies for each team. Part of the survey instrument is an "income card" that must be updated to the current income limits for the area being surveyed. The instrument itself must be updated as well with the name of the community.
- **Case management logs:** These are critical for keeping track of which households your team has visited and the outcome of each visit. Formats for these logs are discussed in the following section in greater detail.
- **Community maps:** If the interviewers are not local to your community, it is helpful to provide maps to serve as a reference for planning daily trips within each community. Programming addresses into an online mapping program ahead of time can also be helpful for planning visits in unfamiliar locations. An example is the RouteXL.com tool, which can help plan routes for visiting multiple sites to reduce travel time and fuel costs.
- **Language translation services:** Depending on the demographics of your community, you may want to provide interviewers with language cards to be used with residents who do not speak English. This would be a single laminated card or flyer that explains the study purpose and includes a request for participation printed in the relevant foreign language. The card may be handed to residents who do not speak English. The interviewer can also try to identify another household member who can speak English to take or translate the survey. All the sample outreach materials are translated into Spanish.
- **Miscellaneous:** Additional materials to support interviewers on the go (such as tablet chargers, styli, pens, and clipboards).

6.2. Hiring and Training Interviewers

How interviewers are recruited and managed is up to each community. Staff members do not need extensive field data collection experience to conduct interviews, but they will need training on the study purpose, materials, outreach strategies, contacting protocols, and confidentiality procedures. If there are local municipal staff members available to assist, that may be sufficient. Communities may want to consider hiring non-local experienced interviewers to work for a week or two in a concentrated fashion. If the community is near a university or community college, hiring students for the survey effort may be an option. There are several factors to consider in the staffing plan:

1. Size of the sample in your community.
2. Availability of municipal staff or a contractor to serve as interviewers.
3. Availability of funds to hire staff to serve as interviewers.
4. Availability of candidates to hire short term as interviewers.
5. Any community-specific consideration (i.e., specific privacy concerns that would make use of municipal staff collecting their neighbors' income data undesirable).

TIP

A local community college or university may have students or faculty who can help with the survey effort.

Once hired, all interviewers must be trained on the study's purpose and protocols. Training content for each community will vary depending whether local or non-local interviewers are used. This may include the following:

- Study background and goals.
- Schedule and data collection design.
- Respondent outreach materials.
- Case management log and related technology training.
- Survey administration and troubleshooting.
- Confidentiality requirements necessary for protecting respondent information.

6.3. Interviewing Protocols

To make the field data collection effort most effective, interviewers should be provided with a contacting strategy for approaching each sampled address. This ensures consistency and efficiency in each interaction. For the pilot study, there were three stages to the contacting strategy: (1) identify and gain access to the correct address, (2) determine eligibility and gain cooperation, and (3) administer the survey. Each of these stages are discussed in greater detail below.

These steps should be considered a framework for interviewers to follow, but it is expected they will be individualized based on interactions with residents and information provided by the supervisor.

6.3.1. Identifying and Gaining Access to the Correct Address

To speak with a resident at a sampled address, the interviewer must first locate and confirm the sampled address and then gain access. For most addresses, this will be a straightforward task that only requires mapping resources. For multi-unit buildings or more rural communities where addresses are not as clearly labeled, this may be a more challenging task. It is important for field interviewers to stick to the addresses on their list. Interviewers should not add people who ask to be surveyed or nearby addresses. Interviewers should take the following steps to ensure that they are approaching the correct household and prepare themselves to knock on the door:

- Refer to the case management log to confirm address.
- Use a community or online map, as needed, to identify the location.
- If the sampled address is a multi-unit building, refer to the case log to determine which apartments are sampled. If you cannot gain entry to a multi-unit building, leave some "Sorry We Missed You" cards for the residents.
- If an address appears vacant or uninhabited, note that in the case management log.
- Before knocking on the door, check the case log to see if the case has received any prior contacts. This information will help the interviewer be prepared to customize their approach. Prior contacts include:
  a. An advance letter or postcard.
  b. Previous visit with no contact.
  c. An interviewer previously spoke to someone in the household.

6.3.2. Determining Eligibility and Gaining Cooperation

Before a survey can be completed with a resident, an interviewer needs to take several steps to confirm that they are interviewing the appropriate person. This is critical to ensuring that the data accurately reflects the community. The following guidelines (written as instructions to the interviewers) will help interviewers to determine eligibility of sampled addresses prior to completing a survey with respondents.

1. If you knock on the door and no one is at home, leave behind a "Sorry We Missed You" card. Put the material near the mailbox or somewhere else that will be secure from the elements and from direct view. Do not leave the card in the mailbox! It is a violation of federal law to leave anything in mailboxes other than items delivered by the United States Postal Service.
2. When someone answers the door, identify yourself by name and explain that you are working on a study on behalf of their community. You can provide the name of the town and share a letter from the relevant town official. Rely on your materials: name badge, advance letter (if applicable), community letter of support, flyer, etc., to provide legitimacy and validation to the study.
3. Determine the number of families in the household. This will impact how you discuss participation with the initial respondent and your "gaining cooperation" message.
4. Identify an eligible survey respondent. This can be any adult (at least 18 years old) who is knowledgeable about the family income levels.
5. If there is no one available to take the survey at that time (or they are busy), you can schedule a time to visit later or provide them with a "Sorry We Missed You" card asking them to complete the survey online.
6. Record the outcome information immediately. Always record each interaction or visit in your case log, as it will be important if you or another staff member needs to revisit the address.

> **TIP**
>
> Include role-playing exercises as part of the interviewer training. It is important to practice before knocking on doors.

Knocking on a stranger's door can be a challenging situation, both for the interviewer and the resident. Interviewers will likely only have a short time to communicate their reason for visiting and gain cooperation. Therefore, it is important that the interviewer learn how to quickly and clearly introduce themselves and state the purpose of their visit. It is also helpful to anticipate potential concerns from residents and be prepared to respond to those. The following "gaining cooperation" talking points should be reviewed with interviewers as part of their training. Include role-playing exercises in training that will give interviewers a chance to practice their doorstep speeches in their own words. Practicing will help interviewers feel comfortable and sound confident.

- Always be polite, professional, discrete, and clear about your purpose.
- Always be truthful! If you do not know an answer, offer to follow up later with additional information.
- Always use titles of respect (such as Sir, Madam, Mr., Ms., or Mrs.). Do not treat people with familiarity.
- Describe the project as an important community survey.
- Explain that the study's purpose is to provide data to be used in the community's application for federal and state funding to support community development projects.
- Emphasize that this is legitimate research that is supported by the community.
- Be sensitive to the fact that you are imposing on their time. If possible, obtain family size and income, as these are the most critical information for the survey.
- Be aware that the person who answers the door may not be the person who needs to complete the survey. This gatekeeper can prevent you from getting to the appropriate survey respondent, however, so you may need to gain their cooperation first. We must leave this person with the desire to convey a pleasant experience to the respondent.
- Income may be a sensitive topic. Explain that only the average income for the area is reported. While we ask for total annual family income in order to apply for grants with different rules at the state and local level, only average income is ever reported.
- Assure residents that their responses will be kept confidential and their names will not be associated with their data. Their responses will only be reported in summary form.

6.3.3. Administering the Survey

Once the resident agrees to participate, administering the survey can take less than 5 minutes, though total time spent with a respondent may be longer if they have questions. If you add questions to the survey, you may need to revise the time estimate for completion. Keep the survey as short as possible. This section details how the example survey should be administered per each question. When the interviewer has a willing and eligible survey respondent, they should open the survey on the tablet. (These instructions apply to Survey123 but are similar for all survey tools.)

1. Read the introductory text.
2. Enter the first ID for the sampled address (these are all capital letters). Note: it may be easier to enter the ID in advance and delete the survey if the resident is not home.
3. Confirm that the address populated in the survey is correct.
4. Ask the respondent if the address is their current residence (if it is not, ask if you can speak to a someone who lives there most of the time).
5. Ask how many people live at the address.
6. Ask how many residents are related to the respondent.
    a. If there are non-family members in the household, you will want to ask if someone from another family in the household is available to do a second survey using the second unique ID.
    b. If a member of the second family is not available at the time when the first is surveyed, it is recommended that only the first family be surveyed. Repeated attempts to survey the second family could unduly burden the first family.
7. Ask for exact income: You may either type the answer in yourself or hand the tablet to the respondent.
    a. Clarify that the request is for the combined gross annual income for all the family members, before taxes.
    b. You may help them calculate it based on their monthly income if they only provide that.
    c. Make sure that you are getting the total income for the **family,** not everyone in the household.
8. If the respondent refuses to provide the total family income, click “Refuse” and ask them to indicate if their family income is higher or lower than the amount displayed on the screen.
9. Ask the series of demographic questions. These are all optional. You may either read them to the respondent or allow them to answer directly on the tablet.
10. Ask the respondent for his or her phone number. This is optional but is helpful for spot checking or verifying data that appears to be entered incorrectly.
11. Thank them for participating.

6.4. Additional Considerations

The following is a summary of other aspects of in-person data collection that are important to consider and plan for:

- **Confidentially guidelines:** No names should be included in any of the materials provided to interviewers. It is critical that interviewers do **not** enter any responses about income or family size into a case management sheet. That information should only be entered in the online survey (e.g., Survey123 application). If you are using a paper survey to enter information, responses should be kept in an envelope once completed. Names and the address of the household should not be included on the paper sheet with the survey responses. This will ensure that no income information is associated with any of the names provided in our survey list.
- **Materials storage:** Interviewers should protect all study materials and resources to ensure that privacy is maintained. This includes tablets or smartphones that have the survey or case management applications, as well as all paper materials, particularly paper case management logs. It is critical that the list of sampled addresses remains confidential. When not in use, all materials should be stored in a secure location. Materials and tools should not be left in cars or out in the open where others could see them. Interviewers should not share this information with family, friends, or colleagues. To protect Personally Identifiable Information, if personal mobile devices are utilized, do not install the Survey123 Field App. Instead, use the online survey link in the field, as the respondent would, provided that there is sufficient mobile data coverage in the sampling area.
- **Residents can complete the survey themselves:** If a respondent is concerned about confidentiality and would like to complete the survey themselves, it is reasonable for the interviewer to hand the tablet or paper survey to the resident while at their doorstep. The interviewer can be available to answer questions or provide technical support as needed.

- **Encountering non-English language needs:** Spanish-language versions of the survey instrument, advance letter, flyer, and other outreach materials were developed for the pilot test and are available for use and modification. Interviewers may not need to be fluent in Spanish if they have outreach materials in Spanish and can hand the tablet to respondents to complete the Spanish-language instruments. If non-fluent interviewers encounter a Spanish-speaking resident, do not assume that the resident does not understand English. Speak clearly, in a normal volume, and share the written materials. If there is an English-speaking household member, that person may also be able to translate. Communities should consider other foreign language translations if relevant to a significant number of people. If that is not possible, the interviewer should disposition the case as "Other foreign language household."
- **Safety issues:** Give interviewers clear instructions on how to report any incidents they encounter while in the field. Interviewers should work in pairs but may split up based on their comfort levels. If any land is posted as private property or "No Trespassing" (or "Beware of Dog"), it is recommended that interviewers do not attempt to approach the address to complete the survey and assign the case the "Inaccessible" disposition in the case log. They may leave a "Sorry We Missed You" card.
- **Technical challenges:**
  - > If interviewers are using tablets, there may be problems with glare on the screen on particularly sunny days. This may vary depending on the tablets that are used. It is recommended to test the tablets your interviewers will use to understand the extent of this problem, in advance.
  - > If using Survey123, make sure to close the program between interviews, especially if it is more than a few minutes. Survey123 will run in the background and drain the battery if not closed manually.
  - > If the interviewer cannot get the survey application to accept the ID, they can use a universal ID to access the case. This option should be used sparingly—only if they are on the doorstep with a willing respondent and experience this technical problem. All the survey tools created for the pilot test have this functionality. To use the universal ID:
    - o Confirm that the address is correct, then enter "SOS" in the ID field. *(The supervisor should assign a unique ID to this case later.)*
    - o Manually enter the address (include ZIP Code).
    - o Make a note in the case management log that the SOS option was used.

ANYTOWN EXAMPLE

Ms. Jones prepares to launch the in-person interview effort. She adds the remaining 70 addresses plus the 32 "field" address sample to a new tab in the Excel spreadsheet—this will allow the team to keep track of which addresses are in the door-to-door sample. Ms. Jones recruits four staff members who will conduct the survey in the field. She plans to send both teams out for 1 week. She obtains two low-priced handheld tablets and loads Survey123 onto each. Each team is given one tablet that they share, as well as "Sorry We Missed You" cards, informational flyers, copies of the paper survey, and a paper copy of the case management log. The survey team has name badges with the town logo and a letter signed by the mayor explaining the purpose of the survey.

Ms. Jones works with the teams to plan their first day of visits using Google Maps. Using the printout of the case management log, the teams divide the addresses geographically. The teams visit the assigned addresses. They find that emphasizing the importance of the survey to securing funding for town projects and the assurances of data privacy are effective communication strategies. They also find that some people prefer to enter their own family income on the tablet rather than tell it to the surveyors. Other respondents only will reveal whether their annual family income is above or below the appropriate income limit. The teams are courteous and professional in all interactions with their Anytown neighbors.

At the end of the day, the teams meet in the city offices and upload the results of the completed surveys. They also update the electronic version of the case management log. Ms. Jones reviews the results and marks all the cases where a survey was completed, a house was found to be vacant, or the teams received a firm refusal from a resident as "Closed," then prints out a new version of the case management log. The teams meet the next morning and go through the same process of dividing the addresses they will visit. Over the next week, the teams visit each address at least three times, varying the day of the week and time of day for each attempt.

7 Case Management

Case management refers to tracking the progress that interviewers make on their daily visits to sampled households. Regardless of the size of the interview team or household sample, some level of case management must be used to document outcomes of in-person visits to maximize each contact and reduce the burden on residents. Case management will be discussed in three ways: (1) a description of information that should be included in a case management log, (2) how interviewers use case management tools in their daily work, and (3) how supervisors will need to utilize tools to support interviewers and track overall progress. If you are also collecting data electronically, by phone, or mail, it is particularly important to note completed cases to avoid duplicative visits.

7.1. Case Management Logs

A case management log should be used to keep all interviewers and supervisors up-to-date on the status of each case (sampled address). The format of this log may vary based on the resources available to your team as well as the level of technical knowledge of your interviewers. Regardless of the format, it is critical that case management logs be updated daily by all interviewers and supervisors. If using an electronic log, interviewers should sync their tablets via Wi-Fi at the beginning and end of each day or enter notes from a hardcopy log into an electronic spreadsheet (the case management log) at the end of the day. This will ensure that the most recent information for each case is available to the entire team.

In the pilot tests, Google Sheets, saved in Google Drive, was used for the case log. It is also viable to use Microsoft OneDrive or any other cloud-based service that allows sharing across multiple users. Google Sheets can be downloaded onto the tablet, allowing the interviewers to make immediate updates to the log. The benefit of this approach is that updates can be synced with the master log file maintained by supervisors whenever it is connected to the internet. However, it can be difficult to switch between a survey application and Google Sheets while standing at the door of a potential respondent. In addition, depending on the quality of the tablet used, the application may not be fully compatible with the touch screen. The pilot test team found that it was easier to use a paper copy of the case management log in the field and enter the information online at the end of each day. A paper case management log is feasible and manageable, especially for smaller communities.

Using a paper log may be particularly useful if the interviewers have less technical familiarity with tablets and have difficulty navigating the survey application and case log simultaneously. In this case, using a paper log and entering the data into the

Table 3. Recommended Fields for Case Management Logs

FIELD NAME	DESCRIPTION
Address	Sampled address (suggested breakdown between street number and name).
ID 1–3	Each case (address) is linked to three unique IDs. An ID is required to take the survey, but each ID should only be used for one family to ensure that the income for each family record is unique.
Survey Status	"Complete," "Partial Complete,"* or "Pending." This should be updated by an interviewer or supervisor for any survey completed via web by the respondent or in-person by an interviewer.
Mail/Field	Indicates if the address was mailed an advance letter (M) or not (F).
Open/Closed	All cases start as "Open." The status will change to "Closed" after a complete survey or three visits.
Team 1/2/3 (separate fields)	Team that makes the first, second, or third visit.
First/Second/Final Visit Outcomes (separate fields)	These fields should be updated with the outcome disposition for each visit to a sampled household.
Number of Families	If more than one family is at this address, provide the number in this field.
Notes	Anything that will be important to track regarding the visit or the address that does not fit into any of the other visit fields.
Date of First Visit/Phone or Online Completion	The date of the first visit to the household or the date the survey was completed online or by phone.

** "Partial Complete" will be used when the sampled unit has multiple families.*

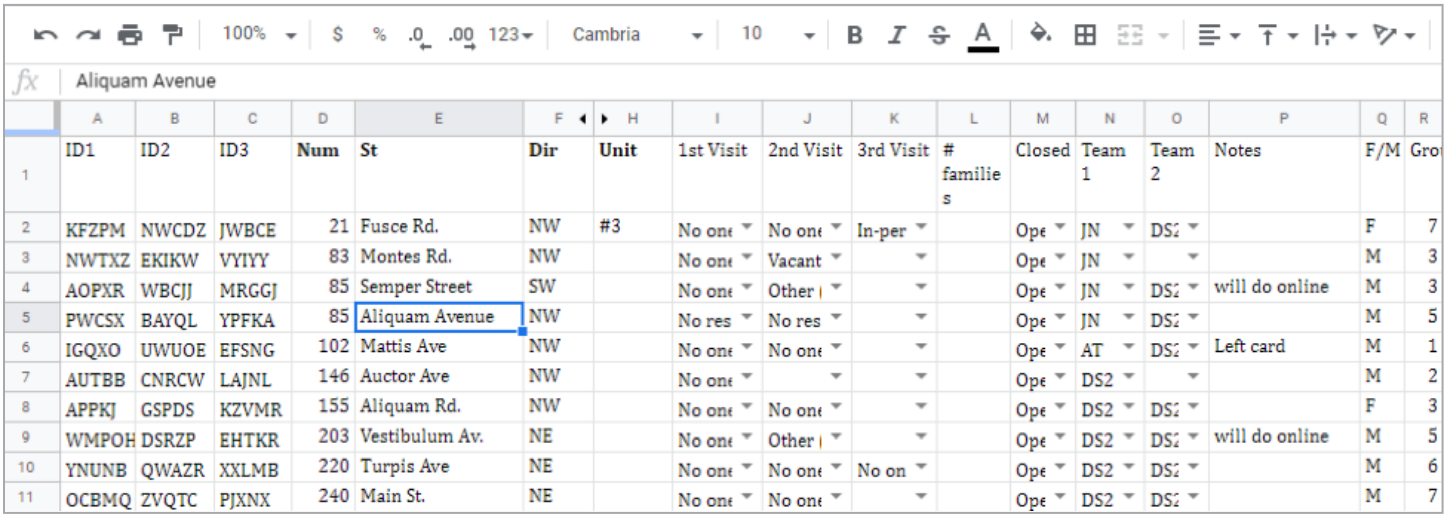
master case management log at the end of the day via a computer may be more efficient. Regardless of the platform used, the case management log should allow for interviewers to record several key components of their visits. It is recommended that the log include the fields presented in Table 3 to allow for accurate updates to the status of each address.

An outcome disposition list is used to document the result of each visit by interviewers. Outcome disposition codes can be entered in the case management log to allow for a quick summary of the status of each case. These dispositions also provide important information about past visits to interviewers when more than one team visits an address. The outcome disposition list in Table 4 is an example of codes that can be used during data collection. The most useful codes are those that communicate if an interviewer does **not** need to visit the address again (i.e., survey complete, vacant address, or refusal). Codes that indicate progress toward a resident completing a survey are also helpful. These dispositions should be accompanied by a note explaining any important details about the visit: For example, a soft appointment disposition (Code 13) may be used when a resident says that she is about to leave for work, but would be home Saturday morning to complete the survey. The interviewer could assign a "soft appointment" disposition and make a note that Saturday morning is a good time to revisit that address. **Interviewers must assign a disposition code for every visit to the household.** See Figure 5 for an example of an online version of the case management log.

Table 4. Outcome Disposition Codes

CODE	DISPOSITION DESCRIPTION
1	Completed in person
2	Completed online
3	Completed by phone (if conducting surveys by phone, with or without a toll-free line)
4	Vacant address
5	Refusal
6	Other foreign language household
7	Inaccessible
8	Partial complete (pending for additional family at address)
9	No one at home; left "Sorry We Missed You" card
10	No one at home
11	No one 18 or older at home
12	No resident at home
13	Soft appointment (e.g., come back later this morning)
14	Hard appointment (e.g., come back in an hour)
15	Sampling question (e.g., cannot identify which unit to survey)
16	Other (see note)

Figure 5. Example of a Case Log in Google Sheets



Aliquam Avenue

	A	B	C	D	E	F	H	I	J	K	L	M	N	O	P	Q	R
1	ID1	ID2	ID3	Num	St	Dir	Unit	1st Visit	2nd Visit	3rd Visit	# families	Closed	Team 1	Team 2	Notes	F/M	Gro
2	KFZPM	NWCDZ	JWBCE	21	Fusce Rd.	NW	#3	No one	No one	In-per		Ope	JN	DS2		F	7
3	NWTXZ	EKIKW	VYIYY	83	Montes Rd.	NW		No one	Vacant			Ope	JN			M	3
4	AOPXR	WBCJJ	MRGGJ	85	Semper Street	SW		No one	Other			Ope	JN	DS2	will do online	M	3
5	PWCSX	BAYQL	YPFKA	85	Aliquam Avenue	NW		No res	No res			Ope	JN	DS2		M	5
6	IGQXO	UWUOE	EFSNG	102	Mattis Ave	NW		No one	No one			Ope	AT	DS2	Left card	M	1
7	AUTBB	CNRCW	LAJNL	146	Auctor Ave	NW		No one				Ope	DS2			M	2
8	APPKJ	GSPDS	KZVMR	155	Aliquam Rd.	NW		No one	No one			Ope	DS2	DS2		F	3
9	WMPOH	DSRZP	EHTKR	203	Vestibulum Av.	NE		No one	Other			Ope	DS2	DS2	will do online	M	5
10	YNUNB	QWAZR	XXLMB	220	Turpis Ave	NE		No one	No one	No on		Ope	DS2	DS2		M	6
11	OCBMQ	ZVQTC	PJXNX	240	Main St.	NE		No one	No one			Ope	DS2	DS2		M	7

Note: Data in this figure are only for display purposes and are not associated with any communities.

7.2. Case Management Tasks for Interviewers

Case management logs are critical to helping interviewers understand the status of their cases, determine previous contacts made with the sampled address, prioritize which addresses to visit each day, and efficiently plan daily routes. To do this, the case management log should list all sampled addresses, the current survey status, and the interviewer assigned to each case. This will allow the interviewer to review their individual cases while also permitting access to any additional cases that the supervisor may decide needs their efforts. **Interviewers should update the case management log after each visit to a household. This is the only way to ensure that accurate information about contacts with each household are recorded.** This spreadsheet should also be updated nightly by the project supervisor (see Section 7.3). Initial case assignments will be made by the supervisor, but teams can collaborate in the field. All interviewers should have access to all sampled addresses to allow for redistribution of cases in the field.

Before *beginning* work each day, interviewers should do the following:

1. Check in with their supervisor to receive any relevant updates to the case assignments or the survey of cases. Update the case log accordingly.
2. Meet with team members to confirm assignments and make any necessary adjustments.
    a. Identify and prioritize pending cases.
    b. Plan their route. The goal is to cluster visits to as many cases as possible at once.
3. Schedule their day:
    a. Consider the day of the week/time of day when neighborhoods were previously visited and try to visit at a different time.
    b. Restock any materials that will be used in door-knocking (e.g., flyers, "Sorry We Missed You" cards).

Before *ending* their day, interviewers should do the following:

1. Transmit updates to the survey data and case log per the instructions set out by the supervisor. This may involve syncing the case log with the master document via Wi-Fi or entering information from the paper logs.
2. Charge the tablet overnight so that it will have full power the next morning.
3. Connect with team members and supervisor to discuss any challenging cases, obstacles encountered, or effective strategies implemented.

7.3. Supervising Case Management

The supervisor needs to provide clear direction to interviewers regarding when and how they transmit their data. This may mean connecting to Wi-Fi before and after each shift so that case management data and survey data are transmitted to the master data file in a timely fashion, or it could mean requiring that data entry or information from paper logs be reviewed daily.

After the case management log is updated, the supervisor can use it to track progress and support field interviewers. Supervisors can determine if additional interviewers are needed in specific locations or if certain cases should be prioritized.

The supervisor will further use the log to troubleshoot obstacles identified by the interviewers. For example, if a sampled address originally did not have a unit number and the interviewer reports that it is a multi-unit building, the interviewer can note the case in the log as "sampling question." The supervisor can determine which unit(s) should be sampled and update the log appropriately so that on a follow-up visit, the interviewer can attempt to survey the appropriate residents.

Before each new round of survey visits, supervisors should update the case log from the prior round of visits.

8 Data Analysis and Management

After completing data collection, it is time to clean the data and calculate the results. The goal is to determine if the area surveyed was populated by at least 51 percent LMI persons. While the sampling unit is the residential address, the analysis is conducted for individuals at the family level. If more than one family resides at an address, surveys may be collected for each of those families. As described in the previous sections, the survey tool is set up to allow for multiple families at each address to complete a survey using a unique family ID. Each survey completed for a family will count toward the total number of responses required to achieve income estimates as described in Section 4.1. Most addresses will have only one family in residence, in which case only one survey will be completed for that address.

8.1. Cleaning Data

Before you begin data analysis, you must review and clean the data. You will need to look for any irregularities or unusual values. Look for outliers, such as unusually large family sizes or incomes over $1 million. These may indicate a data entry error. If the family provided a phone number, call to verify the data. You may also confer with the interviewers to see if they recall the household. If the data cannot be verified, it should be removed from the analysis. For paper surveys, a quality control and assurance check should be undertaken after responses are entered to assure data integrity and validity.

In cases where the respondent declined to provide family size and income but did provide other information, the entire survey should still be counted as a "refusal." These families do not need to be included when calculating income.

If you need to manually enter data, all of the Excel analysis tools in the Toolkit include a manual input option. If you enter data from paper surveys, the spreadsheet will automatically calculate the income level of the community. You may also use the Excel tools to combine data from the paper surveys and other data collection modes.

8.2. Overview of Analysis

Depending on the data tool used to complete the surveys, there will be some differences in how you approach the analysis; overall, calculating the income level is simple in any program. First, make sure that each row of data is for a single family. Once you have reviewed and cleaned the data (as discussed in Section 8.1) and are confident that you have a dataset with only valid income responses, you can begin the analysis.

The calculation of percentage of LMI persons uses the total number of persons in all families as the denominator and the total number of persons in LMI families as the numerator.

In the example where there are 80 families with valid income data, let's say there are a total of 200 individuals, 100 of whom are in LMI families. This translates to 50 percent of the persons in the sample being LMI, which is insufficient to apply for CDBG funds. If 110 persons were in LMI families, our result would be 55 percent, which is sufficient to apply for CDBG funds. This is the formula for calculating the percentage of LMI persons:

Figure 6. Income Calculation

Percentage of persons that are LMI =

$$\frac{\textit{number of persons in LMI families}}{\textit{total number of persons in all families}}$$

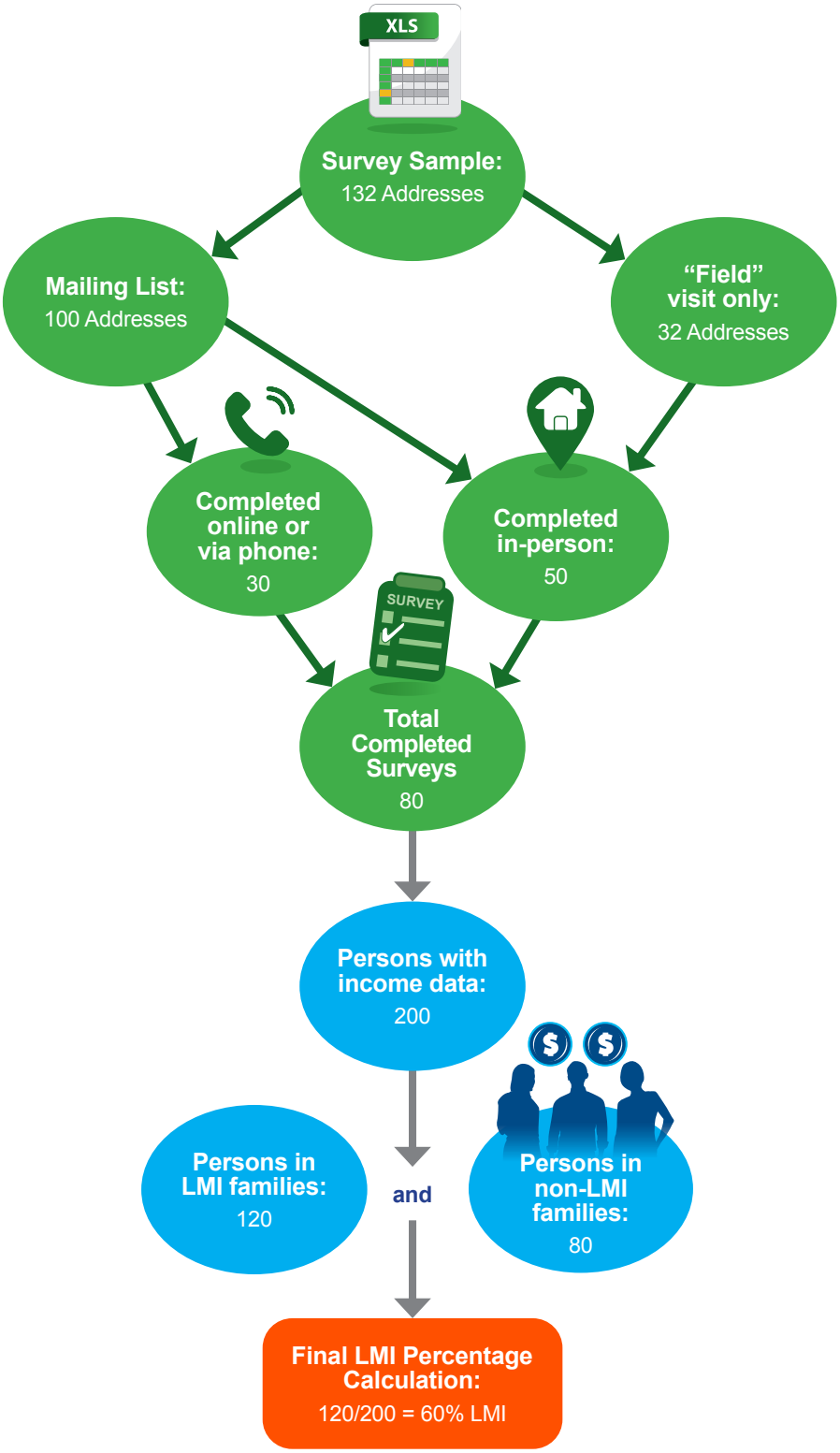
This is the basic calculation you will need to perform, regardless of how you gather the data. If you use one of the Excel tools in the Toolkit, a report can be generated with the information needed for the grant application. See Figure 7 for an illustration of the entire survey process.

ANYTOWN EXAMPLE

Ms. Jones now has the data necessary to calculate the percentage of LMI persons for Anytown. Overall, the teams find that 4 addresses were vacant and 3 were actually retail establishments, which means the true sample was 125 addresses, rather than 132 as originally expected. The town completed 80 total family surveys, including several with multifamily households. Five families were excluded due to incomplete income information. The 80 surveys represent a total of 200 persons.

For the 80 families with valid income data in the dataset, each individual is counted at the income level assigned to that family. Anytown's survey data reveals that 120 of 200 individuals lived in families with a total family income at 80 percent of median income or less. This translates to 60 percent of the persons in the sample being LMI—which is sufficient to apply for CDBG funds. Ms. Jones submits the findings to the mayor, who is happy to include the estimate in her town's state CDBG application.

Figure 7. Calculating the Number of Housing Units to Visit and Total Number of Surveys Completed



9 Conclusion

The purpose of this guidebook was to provide tools for your community to undertake its own income survey. As part of the CDBG Income Survey Toolkit, you will find links to all of the materials mentioned in this guidebook, such as survey instruments, user guides, cards, letters, and Excel tools. All outreach materials are also translated into Spanish (unless otherwise noted).

Fielding a survey requires careful planning. This guidebook discusses each step of the process, including obtaining a list of addresses, deciding on a survey strategy, developing and cleaning the sampling frame, publicizing the survey, determining a data collection timeline, preparing outreach materials, and training individuals to execute in-person interviewing. We discuss survey tool options, whether you are collecting information online, sending out a paper survey, or going door-to-door. The type of tool you decide to use will make a difference in the outreach strategy and training you provide for the survey team. We provide several options that can be used online or on a handheld device, as well as paper surveys that can be easily customized for your area.

A vital part of the process is drawing a sample that will be representative of your community. Simple random sampling is appropriate for small communities or small geographical areas. A comprehensive sampling frame—that is, a list of all the residential addresses in the area—is the key item needed to draw a good sample. You will need to draw a sample larger than the minimum number of responses required, called an oversample, to ensure you meet your target (not everyone will respond to the survey!).

Publicizing the survey is critical to gaining acceptance and getting good response rates. A flyer to help publicize the survey can be customized using your town's logo or letterhead. You can add details specific to your community, such as projects you have funded in the past with CDBG funds or the project you are proposing related to the survey, as well as contact information for your community. Distributing the survey can be done via several methods. You can send letters, emails, make phone calls, go door-to-door, or use a combination of methods to reach the sampled respondents. All of the materials needed for this process are available as part of theToolkit.

The guidebook provides guidance on in-person interviewing activities, including materials needed for the survey team, hiring, training, and protocols for visiting sampled households. In-person interviewing will likely be necessary to collect enough survey responses to inform the income estimates, even if a multimodal survey approach is used.

Case management is critical to tracking the progress of the survey responses for multimodal or in-person survey efforts. Regardless of the size of the interview team or household sample, some level of case management must be used to document outcomes of in-person visits to maximize the potential for contact and reduce resident burden. If you are also collecting data electronically, by phone, or by mail, it is particularly important to note completed cases in the case log so that residents are not burdened with additional requests to complete the survey.

The final step in the survey process is calculating the results and determining if the service area includes at least 51 percent LMI persons. While the sampling unit is the residential address, the analysis is conducted for individuals at the family level. If more than one family resides at an address, surveys may be completed for each of those families, as feasible. Each survey completed for a family will count toward the total number of responses required to make income estimates. You can use the Excel analysis tools to import data from an online survey tool or enter data directly from a paper survey. The Excel tools allow for an easy way to calculate the results.

Following the processes laid out in this guidebook and using the other resources in the Toolkit are intended to help reduce the burden on communities when conducting these surveys.

Appendix A: Comparison of Survey Apps (February 2020)

A.1. Summary of Income Survey Tool Options

Table A-1 presents the eight survey tool options researched or tested by the research team. The cost estimates are from February 2020. To use these tools, each community will need to purchase and maintain its own software. Detailed user guides for Survey123, Fulcrum, Microsoft Forms, and Qualtrics are available as part of the CDBG Income Survey Toolkit.

Table A-1. Comparison of Survey Tools

TOOL	LICENSING COST	MODE	PROS	CONS
Survey123 and Survey123 Connect	Approximately $500–800 per year for one user account that may be shared. Included with subscription to ArcGIS (an Esri product). Will need to download Survey123 Connect to program with full functionality.	In-person or online. Has offline mode for handheld tablet.	May be customized for each location. Additional questions may be added. Can upload details for any specific community (would need to update for new fiscal years). Can auto-load data based on a unique ID.	Programming burden is rather high, but if you use the provided template, basic changes are relatively simple.
Microsoft Forms	Included with an Office 365 subscription. Costs vary.	Onine only. No offline mode.	Simple to program. User-friendly interface. If you already have a Microsoft subscription, likely included. Easy to add additional questions.	Cannot auto-load data based on a unique ID. Can only add income limits for one area at a time.
Fulcrum	$38 per month for a single license that may be shared across users. $360 for annual license.	In-person only. Has offline mode for handheld tablet.	Can preload all income limit information for the entire country (would need to update annually). Works well for door-to-door surveying. Can auto-load data based on a unique ID.	Not appropriate for self-administration. Fulcrum is not designed to be shared via email or web, and the interface is not as user-friendly as Qualtrics or Survey123. In an in-person interview, it is possible to show the respondent a screen to allow for self-entry of sensitive questions.
Survey Monkey	$372 per year (annual subscription). $37 per month (month-to-month cost.	Online only. No offline mode.	Simple, low cost, accessible. Easy to add additional questions.	Might be suitable to use in combination with another tool.
Qualtrics	$1,485–$31,600/year. Priced by number of respondents (5,000–25,000), options, and level of data security.	Online only. In-person possible with more expensive subscription. Offline mode in more expensive versions.	Intuitive, easy-to-use interface. Easy to add additional questions.	Cannot auto-load data based on unique IDs. Can only add income limits for one area at a time.
Custom-Made Application	Development cost approximately $200,000 (not covered by the current work plan). Would require approximately $40,000 annually for staff and software maintenance.	Depends on development choices.	Could be designed with HUD's exact specifications.	Functionality limited by design. Adding new items would be limited to those allowed by the initial design. Ongoing maintenance would be costly.
CSPro	None for the software. Paid training would be a good investment.	Phone or in-person only. Offline only; no web-based syncing.	Can be designed with precision to the exact survey requirements. Support from the U.S. Census Bureau.	Only available for Windows or Android devices. Major undertaking to program survey.

Appendix B

ANYTOWN EXAMPLE

In January, Mayor Smith of Anytown (population 2,000), learns that the town does not meet the income requirements to apply for CDBG funds from the state because the estimated percentage of LMI persons from American Community Survey (ACS) is below the 51 percent threshold. Mayor Smith reviews ACS guidance from HUD and sees that the margin of error (MOE) for her city is 25 percent, which indicates that a more precise estimate of LMI might be possible. She decides to carry out an income survey. Reviewing the CDBG Income Survey guidebook, Mayor Smith tasks the town clerk, Roberta Jones, with taking the lead on the survey. As one of her first tasks, Ms. Jones drafts a confidentiality statement for all the town staff to sign stating that any information they collect will not be shared and will remain confidential. Ms. Jones also draws up a timeline for the survey steps and works with the Mayor and other staff to finalize it.

Ms. Jones reviews all the available HUD materials and uses some of the language from the sample flyer to draft a press release. She updates the flyer to add details about Anytown, including how they used CDBG funds in the past and what they plan to do if the town receives funding again. Staff members post the flyers at town hall, the post office, and a popular coffee shop to get the word out. The mayor asks the local newspaper to publish a story about the upcoming survey.

Ms. Jones decides that Anytown will use a multimodal approach to data collection to maximize response rates and minimize staff effort. They will first send a mailing, directing people to take the survey online, then follow up in-person. Anytown finds that they have access to Survey123 via an Esri license, so they elect to use that as the online survey application. Ms. Jones downloads the sample survey from the HUD website and edits the introduction to add the name of her town. She updates the income limits in the template to reflect her county's most recent limits, posted by HUD. Ms. Jones then consults the User Guide for Survey123 to make sure she understands all the technical requirements. The next steps must wait until after she has a clean address list and has drawn the sample.

The next step for Anytown is to locate a good list of all the occupied residential addresses in the area. Ms. Jones decides to use the local utility roll. Many utility customers have a street address and a P.O. Box as the mailing address, and many of the P.O. Boxes are out of town. In those cases, the P.O. Box is probably for the owner of the property, not the resident. Ms. Jones also knows that local mail delivery only goes to P.O. Boxes. She reviews the list and adds the names of the Anytown residents she knows that are not already listed. Though there is no local P.O. Box listed for the residents at several street addresses, these households still need to be included in the sampling frame. If these addresses are included in the random sample, they will need to receive an in-person visit rather than a mailing. Ms. Jones creates a column in her address spreadsheet to indicate whether each address is a "field" or "mail" address. Ms. Jones removes any addresses she knows have been vacant for a long term or are commercial properties, as well as businesses, offices, churches, and the community center.

Ms. Jones is now confident that she has a correctly formatted list of all the residential addresses in Anytown. This is the sampling frame from which survey participants will be selected. She next generates IDs for each address. She decides to go to "Random.org" and follow the suggestions in the guidebook. She has 1,800 addresses in the list and, therefore, will need 5,400 unique IDs. After generating the IDs, she copies and pastes them into the three columns that she already created. She also generates 1,800 random numbers, which she pastes into the previously created column called "Random Number" to assist with the random sampling process.

Ms. Jones updates the background files for Survey123, which include the local ZIP Codes, the addresses, and the unique IDs for each address. She pastes **all** the clean residential addresses into the files in case she needs to add an additional sample for any reason. She refers to the Survey123 user guide for this part of the process. After updating the background files, it is time to draw the sample. To do this in Excel, Ms. Jones selects all the columns. She then sorts by the column "Random Number," sorting the addresses into a completely randomized order.

ANYTOWN EXAMPLE *continued*

Ms. Jones uses the sample size calculator in the Toolkit to determine the minimum number of completed surveys to meet HUD's recommendation for valid data. Because Anytown's ACS estimate had a MOE of 25 percent, HUD's guidance suggests that a maximum 10 percent MOE should be used to calculate the sample size for the local survey. The calculator determines that 66 completed surveys are needed; Ms. Jones decides to oversample by 100 percent to allow for up to half of the selected households to not respond to the survey while still meeting the minimum number of survey responses necessary. Since the town must complete at least 66 surveys, she selects the first 132 addresses on her list. She copies the 132 addresses to a new tab of the workbook that she names "Full Sample."

Ms. Jones now prepares the mailing from the "Full Sample" list. She sorts the list by the "Mailing" column, which indicates whether there is a local mailing address for the household or whether it can only be contacted through an in-person visit. She copies all the addresses that she plans to send a letter to into a new tab of the workbook called "Mailing List." The mailing list has 100 addresses. Ms. Jones finalizes the letter, adds the mayor's signature, and sets up the mail merge in Microsoft Word. She will add the name of the resident, their address, and the unique IDs as merge fields in the letter. She also includes the URL for the survey and adds the QR code in the header of the letter. She prints the addresses on mailing labels, as well as an informational flyer for each letter. Ms. Jones works with other staff members to prepare the mailing. They fold letter and flyer together so that the banner on the flyer is the first thing someone would see when opening the envelope.

After mailing the letters, Ms. Jones creates another spreadsheet to track the responses. She decides to do this in Google Sheets to make it easy to access remotely. She adapts the spreadsheet example from the HUD guidebook and adds columns for the three unique IDs, the address, spaces for surveyors to add their initials, and a column for the different types of responses. She also adds fields for the random number and whether the address got a mailing.

After a week, Anytown receives 20 responses online via Survey123. Ms. Jones marks those responses as "Online Complete" in the case management log. She prepares a postcard mailing to the 80 addresses that did not respond yet. After another week, they get 10 more responses.

Ms. Jones prepares to launch the in-person interview effort. She adds the remaining 70 addresses plus the 32 "field" address sample to a new tab in the Excel spreadsheet—this will allow the team to keep track of which addresses are in the door-to-door sample. Ms. Jones recruits four staff members who will conduct the survey in the field. She plans to send both teams out for 1 week. She obtains two low-priced handheld tablets and loads Survey123 onto each. Each team is given one tablet that they share, as well as "Sorry We Missed You" cards, informational flyers, copies of the paper survey, and a paper copy of the case management log. The survey team has name badges with the town logo and a letter signed by the mayor explaining the purpose of the survey.

Ms. Jones works with the teams to plan their first day of visits using Google Maps. Using the printout of the case management log, the teams divide the addresses geographically. The teams visit the assigned addresses. They find that emphasizing the importance of the survey to securing funding for town projects and the assurances of data privacy are effective communication strategies. They also find that some people prefer to enter their own family annual income on the tablet rather than tell it to the surveyors. Other respondents only will reveal whether their family income is above or below the appropriate income limit. The teams are courteous and professional in all interactions with their Anytown neighbors.

ANYTOWN EXAMPLE *continued*

At the end of the day, the teams meet in the city offices and upload the results of the completed surveys. They also update the electronic version of the case management log. Ms. Jones reviews the results and marks all the cases where a survey was completed, a house was found to be vacant, or the teams received a firm refusal from a resident as "Closed," then prints out a new version of the case management log. The teams meet the next morning and go through the same process of dividing the addresses they will visit. Over the next week, the teams visit each address at least three times, varying the day of the week and time of day for each attempt.

Ms. Jones now has the data necessary to calculate the percentage of LMI persons for Anytown. Overall, the teams find that 4 addresses were vacant and 3 were actually retail establishments, which means the true sample was 125 addresses, rather than 132 as originally expected. The town completed 80 total family surveys, including several with multifamily households. Five families were excluded due to incomplete income information. The 80 surveys represent a total of 200 persons.

For the 80 families with valid income data in the dataset, each individual is counted at the income level assigned to that family. Anytown's survey data reveals that 120 of 200 individuals lived in families with a total family income at 80 percent of median income or less. This translates to 60 percent of the persons in the sample being LMI—which is sufficient to apply for CDBG funds. Ms. Jones submits the findings to the mayor, who is happy to include the estimate in her town's state CDBG application.

Appendix C: Supporting Materials

Supporting Materials

Throughout the guidebook, we discussed various documents, tools, and applications you can use to help field your own survey. This appendix provides a brief description of each item that is available and a link to its location on the CDBG Income Survey Toolkit Exchange site.

Due to the COVID-19 pandemic, please review your local and Centers for Disease Control and Prevention guidance regarding in-person activities before carrying out in-person surveying.

C.1. Survey Instruments

All the survey instruments and the income card must be updated with current income limits for local areas.

This card can be customized with the income levels for the local area. It should be used when using a paper survey in a door-to-door survey effort.	Income Survey Card (DOCX)
A paper version of the in-person survey, in English and Spanish. The introduction is designed to be read out loud. There are prompts to encourage participation if a hesitant respondent is encountered. Available in English and Spanish.	Income Survey In-Person English | Spanish (DOCX)
A mail-out version of the survey in English and Spanish. This version has a longer introduction and is meant to be read by the respondent. Available in English and Spanish.	Income Survey Mail Out English | Spanish (DOCX)
The Qualtrics application may be used via a 30-day free trial or a paid subscription. A user-friendly but more expensive option. If you need offline access for use with handheld devices, check with Qualtrics for the options. Please read the user guide before downloading.	Qualtrics Income Survey (QSF)
Survey123 is available as an add-on to an Esri subscription and prices will vary. The survey was field tested and works well for respondents to use on their own or on handheld devices (mobile phones or tablets). Available in English and Spanish. Please read the user guide before downloading.	Survey123 Elements (ZIP)
Fulcrum is an application that is best used in the field on a handheld device (mobile phone or tablet). Please read the user guide before downloading.	Fulcrum App (fulcrumapp)
Microsoft Forms is best used by respondents directly. It is easy to access and understand. Available in English and Spanish. Please read the user guide before clicking the link to modify the survey.	Microsoft Forms (link)

C.2. User Guides

Please read each guide carefully before modifying the survey applications. Please consider the strengths and weaknesses of each application; some may be better suited for your survey effort than others.

- Fulcrum User Guide (PDF)
- Microsoft Forms User Guide (PDF)
- Qualtrics Survey Instrument User Guide (PDF)
- Survey123 User Guide (PDF)

C.3. Outreach Materials

All of the outreach materials may be customized with information about the local area, including the name of the city or town, contact information, and updated links and IDs. Each item is also translated into Spanish.

A customizable flyer that may be posted in the local area and included in the personalized mailing.	Income Survey Flyer (DOCX)
A customizable sample survey request letter to mail to each address selected for the survey. The letter should be customized for the local area, including adding the local letterhead and updating the survey URL and any other methods used to access the survey. Any elements of the letter that will not be used may be deleted; additional details may be added.	Income Survey Letter (City) (DOCX)
The postcard is designed as a reminder to take the survey and mailed to individual residents if they have not responded to the survey after receiving the initial letter.	Reminder Post Card (DOCX)
The sample letter from the mayor is designed to be shown to a resident on the doorstep if undertaking an in-person survey. It is not meant to be mailed to residents. The letter is designed to remind the recipient of the personalized letter they may have received.	Income Survey Letter (Generic) (DOCX)
The “mayor’s” letter is designed to be shown to a resident on the doorstep if undertaking an in-person survey. The letter expresses support for the survey effort from the town mayor.	Income Survey Letter (Mayor) (DOCX)
The “sorry we missed you” card is meant to be left at the door-step as part of an in-person survey effort when residents are not home.	Sorry We Missed You Card (DOCX)

C.4. Microsoft Excel Data Entry and Analysis Tools

Data collected in Survey123, Fulcrum, Microsoft Forms, or Qualtrics can be copied into the appropriate Excel workbook for analysis. In addition, all of the spreadsheets can be used to input data manually from a paper survey or other source. The tools will calculate the percentage of persons in the sample who are low or moderate income. To use the manual data calculations, you will need to add the local area low- to moderate-income limits using the CDBG Income Limits.

- Fulcrum and Microsoft Forms Data Entry and Analysis (XLSM)
- Qualtrics Data Entry and Analsyis (XLSM)
- Survey123 Data Entry and Analysis (XLSM)

C.5. Case Management Resources

Case management is a critical part of any survey effort. It helps you track the number of attempts made to survey any given respondent (or address) and if the attempts were successful.

A summary of the process for implementing case management. Can be customized for your area and shared with the survey team.	Case Management Process (DOCX)
The paper case log provides a format for printing the addresses for a door-to-door survey. At the end of the day, each survey team can enter the results in the online version of the case management log (e.g., a shared Excel file or a google sheet).	Case Management Log-Paper (DOCX)
An Excel workbook to help track cases in the field and calculate the number of responses obtained.	Case Management Log-Shared (XLS)