

APPENDIX 1

Guidance for Surveying Low- and Moderate Income Status of CDBG Service Area

THE FIRST STEP: DEFINE THE SERVICE AREA

Defining the service area of the proposed CDBG project is the first, and most important, step in the income survey process. Defining the service area will tell you if you need to conduct an income survey, who to survey, what type of survey to use, etc.

Boundaries of the service area may not coincide with officially recognized boundaries or census tracts. Service area boundary examples include: a street paving project that benefits a portion of the community; a fire station project that serves the community and rural unincorporated areas in 2 or more counties; and a rural water district that serves the community and a portion of the surrounding rural area. The boundaries of the service area are defined by the proposed project.

REASONS TO CONDUCT AN INCOME SURVEY

An income survey may need to be conducted in order to determine if the service area of the proposed CDBG project meets the low to moderate income area benefit (LMA) CDBG national objective. Income surveys are normally conducted when the US Census Bureau data for the service area does not meet the 51% low- and moderate income persons (LMI) threshold, but the local government entity applying for CDBG funds has reason to believe that the service area is actually at or above 51% LMI. If the US Census Bureau data is near 51% LMI or if local social and/or economic factors have changed significantly since the last US Census, it may be worthwhile to conduct an income survey if the local government believes that the service area is truly at or above 51% LMI.

An income survey may also need to be conducted because of the service area itself. If the service area is not coterminous with the census tract(s), it will be necessary to conduct an income survey to determine if the area meets the 51% LMI threshold. If the service area includes a census tract, but also includes rural areas that are not a part of the census tract, the entire service area must be surveyed. It is not acceptable to use US Census data for a portion of the service area and an income survey for the remainder of the service area. You may use both sets of data only if they each meet the 51% threshold individually—these two sets of data cannot be added together in an attempt to meet the 51% LMI threshold.

WHO TO SURVEY?

The Department of Housing and Urban Development (HUD) requires a measure of families in the service area in order to meet the LMA national objective. HUD defines the family as “all persons living in the same household who are related by blood, marriage, or adoption.” For the purposes of CDBG and HUD, the population that needs to be surveyed is the families that will benefit from the proposed activity.

HUD also defines the difference between family (defined above) and household, which is “all persons occupying the same housing unit regardless of their relationship to each other.” Remember, when conducting the income survey, the population that needs to be measured is FAMILIES, not households. Households may actually contain more than one family. This becomes important if a survey is sent to a household containing more than one family. The individual selected will answer the questions as they pertain to his/her FAMILY, not the household.

However, determining the number of families in the service area may need to be based on households in the service area (please see “What Families are in the Service Area” below) because the information available to you about your sample, or service area, is largely relevant to households. This is acceptable. Keep in mind that while a list of households can be used to compile an estimate of families in the service area for purposes of determining overall numbers and sample size, the survey itself needs to be answered based on HUD’s definition of family.

Once the survey has been conducted, the number of LMI individuals is extracted from the family data. The number of LMI individuals in the families surveyed is the basis for the LMI percentage that must meet the 51% threshold.

WHAT FAMILIES ARE IN THE SERVICE AREA?

Once the service area has been defined, the families within that service area need to be identified. As stated above, a resource that will provide a list of all of the families in the service area is difficult to come by. To estimate the number of families in the service area, it is acceptable to use lists that will provide the number of households in the service area. Such resources might include utility service lists, telephone directories, tax rolls, or simply going door-to-door in small areas.

Each of these methods has some hazards associated with it. For instance, telephone directories will exclude people who either don’t have phones or who exclusively use cell phones. Tax rolls will identify the property owner, but not necessarily residents. You will need to use your best judgment in determining which resource is best. Again, the service area and the characteristics of the service area need to be taken into consideration when choosing a resource.

In general, the number of families and the number of households in a service area will not differ to such a great extent that it will invalidate your survey. Furthermore, knowledge of the service area can help you determine if a greater effort is necessary to try to specifically determine the number of families in the area. For example, if one portion of the service area is predominantly apartment complexes and, based on your knowledge of the service area, you have a pretty good idea that these apartment complexes are largely households containing more than one family, you may need to go door-to-door in these areas or make a greater effort to actually identify the number of families in the service area.

WHAT TYPE OF SURVEY TO USE

After the number of families in the service area has been determined, the choice between a census survey and a random sample survey needs to be made. A census survey includes the entire population that will benefit from the proposed activity and is generally recommended for populations of 200 families or less. A random sample survey uses a subset of the population chosen on a random basis to make assumptions about the whole population and is recommended for populations of 200 or more families.

Census Survey

The census survey needs to have a very high response rate. Preferably, the response rate should be 100%. That being said, the LMI percentage calculation for a census survey is not based upon the number of LMI respondents and the total number of respondents. Rather, the percentage is based upon the number of LMI respondents and the total number of individuals in the service area. Those from families that do not respond are automatically considered non-LMI individuals. This eliminates the need for the Department

to require a specific response rate and encourages those conducting the survey to strive for high response rates in order to meet the 51% threshold.

Step 1: Determine the total number of families in the service area. This may be done with the resource deemed most accurate for the community or through more thorough methods if it is determined that such measures are necessary for the service area. You will need to survey each family on this list.

Step 2: Follow steps 4-6 under Random Sample Survey steps (beginning on page 5 of the appendix).

Random Sample Survey

There are specific steps that need to be taken to ensure the reliability and validity of the random sample survey. The Department is providing the following working model that should be followed to help increase the reliability and validity of your survey. All of the following guidelines are in accordance with HUD CPD 05-06 (<http://www.hud.gov/offices/cpd/lawsregs/notices/2005/05-06.pdf>) and social science research methods.

Step 1: Determine your sample size.

- a) Go to <http://surveysystem.com/sscalc.htm>
- b) Enter a confidence level of 95% and a confidence interval of 4
- c) Enter the number of FAMILIES (or households based on the list used to determine total number in the service area)

The number that is calculated in this step is the number of surveys that must be completed.

Step 2: Oversampling

It is acceptable to oversample by 20%. For example, if you have a total of 500 families in the service area, the sample size calculator in step 1 (above) will tell you that you need a total of 273 completed surveys, but you may actually choose a sample of up to 328 ($273 * 20\% = 54.6$; $55 + 273 = 328$).

It is important to attempt to obtain responses from the original randomly chosen families (in our example, these would be the first 273 chosen). In the event of a non-response from one of these families, a method for follow-up, including how many times to follow-up with a family and how they will be reached for follow-up (mail, phone, etc.), needs to be created.

While it is most accurate and random to obtain surveys from the original families chosen (again, in our example the first 273), these families may be replaced by families in the oversample if the follow-up procedures are unsuccessful and you are unable to get a response. The recommended method for replacement requires that surveys NOT be sent to the oversample until they are needed as replacements (the oversample is the additional 55 families as calculated above). Then, the first family that is a non-respondent would be replaced by the 274th family, the second family would be replaced by the 275th family, etc. It is preferred that the oversample surveys only be sent out as it is determined that they are needed as replacements.

In consideration of simplicity and time constraints, it is acceptable to send out all surveys at once and only use the oversample surveys returned as needed for replacements. If you choose to use this method for replacement, you must keep specific documentation of the surveys sent out, the responses, the follow-up attempts, the replacement family/survey used, where they fell on the initial list, etc. If you receive more surveys than determined by the sample size using this method, do not include all of the data in your results.

If you choose to send out the sample and oversample surveys at the same time, you must attempt to replace the first non-respondent with the first family on the oversample list, second non-respondent with the second family, etc. If the first family from the oversample did not respond, you should attempt to follow up with this family before moving on to the next. Using whoever happened to respond in the oversample for replacement is not random and will make your results less accurate. The replacement methods outlined above must be strictly followed to ensure the reliability and acceptance of your results.

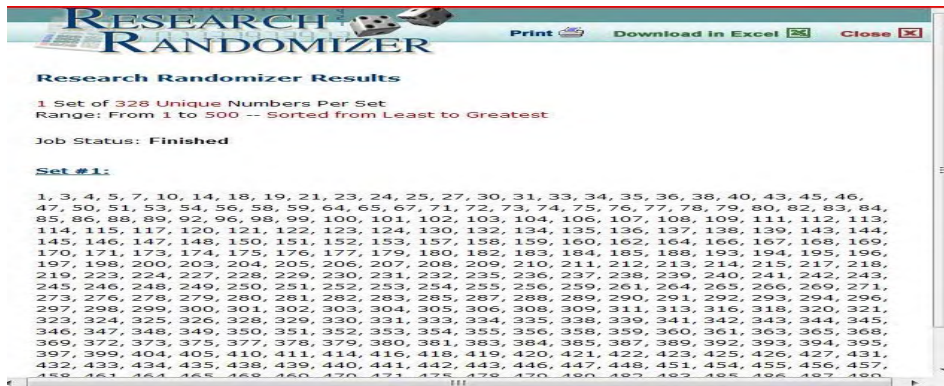
It is not acceptable to oversample by more than 20%. Oversampling of this magnitude can significantly reduce the reliability of your survey. Income surveys that sample in excess of 20% will not be accepted by the Department.

Step 3: Randomly Select the Sample

To randomly select the sample, numbers must be assigned to the entire population in the service area. Using whichever resource was determined as the most accurate for determining the population of the service area, create a list and number that list. Each family in the service area will be included in the numbered list.

Next, use a random number generator to produce the desired number of random numbers. The Department recommends using a random number table or using the random number generators at www.randomizer.org or www.random.org. For both of these random number generators, you will need to enter the required number of random integers required (in our ongoing example, 273 or 328 with the oversample). You will also need to enter the parameters for the values. In our example, the parameters would be 1 to 500, as 500 is the total number of families on the list). So, in our example, you will then be given a total of 328 random numbers between 1 and 500. The families whose numbers on the list correspond to those from the random number generator are the families that should receive surveys.

In the sample random number table below, the families on our hypothetical list that would receive surveys includes family 1, family 3, family 4, family 5, etc.



Source: www.randomizer.org

Step 4: Creating the Survey Instrument

- a) **INCOME DATA:** In order to gather data on low-to-moderate income families, you must use the HUD Section 8 income limits. These change each year and are specific to each county. This data can be found at [www.huduser.org/datasets.il.html](http://www.huduser.org/datasets/il.html).

FY 2008 Income Limits Summary

Adams County, Nebraska										
FY 2008 Income Limit Area	Median Income	FY 2008 Income Limit Category	1 Person	2 Person	3 Person	4 Person	5 Person	6 Person	7 Person	8 Person
Adams County	\$56,700	Very Low (50%) Income Limits	\$19,850	\$22,700	\$25,500	\$28,350	\$30,600	\$32,900	\$35,150	\$37,400
		Extremely Low (30%) Income Limits	\$11,900	\$13,600	\$15,300	\$17,000	\$18,350	\$19,700	\$21,100	\$22,450
		Low (80%) Income Limits	\$31,750	\$36,300	\$40,800	\$45,350	\$49,000	\$52,600	\$56,250	\$59,850

Source: <http://www.huduser.org/datasets/il.html>

The above sample includes the income limits for Adams County. Be sure to use the income limits specific to your county when creating your survey instrument. If your service area covers two different counties, you will need to create two separate survey instruments with the appropriate income limits.

- b) **SURVEY QUESTIONS:** The next step in creating the survey instrument is developing the survey questions. At a minimum, the survey must include questions about family size and total family income. For example, you could ask:

How many persons are there in your family including yourself? Family as defined by HUD is “all person(s) living in the same household who are related by birth, marriage or adoption.” An individual living in a housing unit that contains no other persons related to him/her is considered to be a one-person family for this purpose; however, a dependent who is living outside of the home (e.g. students living in a dormitory or other student housing) is considered for these purposes to be part of the family upon which he/she is dependent, even though he/she is living in another housing unit. Adult children who live at home with their parents are considered to be part of the family for this purpose and their income must be counted in determining the total family income.

Is the current, combined income of all family members residing at this address above or below _____? (appropriate income amount as determined at [www.huduser.org/datasets.il.html](http://www.huduser.org/datasets/il.html)) Income should be defined as all monies received by

all members of the family who are age 15 or older, including gross wages and salaries, bonuses, tips, interest, dividends, social security, other retirement, supplemental security income, welfare, disability, VA payments, unemployment, alimony, etc. A family that is involved in a business where the finances are interrelated with the family budget (such as a farmer) should consider their income as net after expenses, as reported to the Internal Revenue Service.

Question Wording

Question wording is important to survey instrument design because good questions promote accurate answers, help you gather the desired data, and can increase the validity of your results (Johnson, Joslyn, & Reynolds, 2001). Avoid double-barreled questions, which ask two questions within one question. For example, “Do you think the village needs street repairs and additional paved streets?” asks two questions in one. If a respondent believes that the village streets are in need of repair, but does not believe that additional paved streets are a main concern for the village, that respondent would not be able to accurately answer the question.

It is also important to avoid ambiguity in survey questions. As seen above in the sample questions, be sure to accurately define concepts within the questions. Income and family are two concepts that could be interpreted in many different ways. Without a clear definition, the survey is not collecting the same data from each respondent. Ambiguity can destroy the validity and reliability of your survey and should be avoided at all costs.

Leading questions must also be avoided. A leading question includes cues that lead a respondent to a particular answer. For example, for CDBG, including information about the necessity of having at least 51% LMI individuals within the service area could lead individuals to incorrectly report their income in order to qualify for CDBG funding. Choice of words in the question can also lead respondents to a particular answer. For instance, research has shown that people respond more favorably to “providing assistance to the needy” than to helping those on “welfare.” The inclusion of leading questions in your survey can create bias and invalidate your results from a methodological standpoint.

Overall, avoid references to CDBG, low-income people, etc. in your survey instrument design. This also applies to any cover sheets, introductory paragraphs, or publicity about the survey.

Step 5: Publicizing the Survey

Publicizing when the survey will be conducted, how it will be conducted, and why it will be conducted can significantly increase your response rate. Most importantly, providing information regarding the reason for conducting the survey can make people less hesitant about answering questions regarding personal income information. While you cannot specifically state in your publicizing efforts that the survey is being conducted to apply for CDBG funds or to find out how many low-to-moderate income people are in the area, you can provide some general information. For example, you can tell people that a current estimate of incomes in the service area is necessary in order to apply for grant funds.

It is extremely important to avoid creating any bias in your survey results by including information that could lead respondents to answer the survey questions in a particular way. If a

respondent refuses to answer the questions without knowing exactly why the survey is being conducted, you should consider that person a non-respondent and take the appropriate measures to replace that respondent.

Step 6: Conducting the Survey

When you are ready to actually conduct the survey, you need to choose your survey method. Survey methods include telephone surveys, mail surveys, and face-to-face interviews. You may choose one or a combination of methods. For instance, you may choose to initially mail out surveys and then use the telephone method for follow-ups. Each method has strengths and weaknesses. Please see the chart below for a comparison of the strengths and weaknesses of each method. It is up to you to choose the method most appropriate for your individual circumstances and available resources.

Summary Comparison of the Three Survey Methods

Dimension of Comparison	Mailed Questionnaire	Face-to-Face Interview	Telephone Interview
Cost	Moderate	High	Low
Data Quality			
Response Rate	Low	High	Moderate/High
Respondent Motivation	Low	High	High
Interview Bias	None	Moderate	Low
Sample Quality	Low	High	Moderate
Interview Length	Short	Very Long	Long
Ability to Probe and Clarify	None	High	High
Speed	Low	Low	High
Interviewer Supervision	None	Low	High
Anonymity	High	Low	Low
Ability to use computer assistance during process	None	Possible	High
Dependence on respondent's reading and writing abilities	High	None	None
Control of Context and Question Order	High	High	High

Source: <http://www.hud.gov/offices/cpd/lawsregs/notices/2005/05-06.pdf>

If you choose to use either the telephone interview method or the face-to-face interview method, there are additional steps that need to be taken to train the interviewers. Interviewers must receive some amount of training in order to ensure that the interviewer asks the questions in the same way, in the same order, and does not inadvertently bias the results.

There are several topics that need to be addressed with the interviewers during training (Trochim, 2001). First, the interviewers, unlike the respondents, need to know exactly why the study is being done. Knowing why the study is being done and why it is important will motivate the interviewers make every attempt to get respondents to answer the pertinent questions. It is also important for the interviewers to understand why sampling is so important to the survey results. If the interviewer understands the importance of the random sample, they will be more likely to follow the lists that were chosen via random sample. Most importantly, interviewers need to understand interviewer bias and how to avoid it. Subsequently, they need to understand that they have to remain neutral and cannot share with the respondent the reasons for the survey nor can they tell the respondent how to answer.

It is also useful to walk through the survey with the interviewers and actually rehearse the interview in order to prepare the interviewers for actual situations they may run into when conducting the interviews for the actual study. Finally, you must also make sure that the interviewers understand who should actually be interviewed for the survey—for instance, to gather data on family income, you will want to only speak to the someone who will have information on income for the entire family. In other words, determine who would have the knowledge you are trying to capture and communicate this to the interviewers.

RESULTS (BOTH CENSUS SURVEY AND RANDOM SAMPLE SURVEY)

After administering the survey, it is time to tabulate the results. Use the table below to determine your results (this table is also found in Exhibit E of the CDBG application).

Tabulated Income Survey Results									
Family Size	1 Person	2 Person	3 Person	4 Person	5 Person	6 Person	7 Person	8 Person	Total
# Above									families
Income Limit									people
									people
# Below									families

You will also need to complete Exhibit E from the CDBG application, the Low-to-Moderate Income Worksheet. This will determine your percentage of LMI individuals in the service area. Remember, if you have conducted a census survey, this percentage will be based upon the total number of people in the service area, not the total number of individuals in the pool of respondents. If you conducted a random sample survey, the percentage will be based upon the random sample.

If the LMI percentage is in the range of 51%-54% and you conducted a random sample survey, you will need to conduct further analyses. This is due to the fact that the confidence interval is 4. For example, if your study shows that 53% of the individuals in the service area are LMI, the true percentage could be

either 4% above or below this number. These additional analyses will indicate whether or not you have a normal distribution and further demonstrate the validity and reliability of your results.

There are two additional analyses you will need to conduct. You will need to compare the average size of the LMI families to the average size of above LMI families. These numbers should be fairly close. Second, you will need to compare the percentages of LMI families to percentages of above LMI families for each family size. This can be done using Table C, a copy of which is found below.

TABLE C
Table for Comparing the Distribution of
Family Size by Family Income

Number of Persons in Family	Families With Low-Mod Incomes		Families Above Low-Mod Incomes	
	Number	Percent	Number	Percent
One				
Two				
Three				
Four				
Five				
Six				
Seven				
Eight				
Nine or more				
Total		100%		100%

The percentages of above and below for each family size should be fairly close together. Also, most of the families in both LMI and above LMI categories should be largely grouped around the averages to indicate a normal distribution. The presence of a large number of families on the edges of the distribution should include a demographic explanation---for instance, maybe the community has a large elderly, widowed population and this materializes in a large number of one person families.

Another useful analysis is the identification of the mean, median, and mode for family size in both the low-mod income and above low-mod income categories. These statistics are simple to calculate and, if all of the numbers are equal or close to equal, you can conclude that your survey findings are probably accurate. The mean is simply the average. The median is the exact middle value. To find the median, list all respondents' family size in numerical order (for example, your list may start out as 1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 2, 2, 2, etc.) and then locate the number in the center of the responses. Simply add one to the total number of families in your sample and divide by two. The response located at that particular spot is the median. Finally, the mode is the family size that occurs most often. Inserting your numbers into a spreadsheet can make the process of finding the mean, median, and mode very simple.

AFTER YOUR SURVEY IS COMPLETE (BOTH RANDOM SAMPLE AND CENSUS SURVEY)

Be sure to document your results carefully. You must keep all completed surveys, a list of the households that were surveyed, and document your selection process. This is relevant regardless of whether a census survey or a random sample survey was conducted.

The Department will accept surveys that have been conducted within the last four years. A survey that was conducted after January 1, 2005 will be accepted by the Department, provided that the survey was conducted in accordance with HUD regulations and is determined to be methodologically sound.

COMMON MISTAKES TO AVOID IN RANDOM SAMPLE SURVEY METHODS

- 1) Make sure your sample is truly random. If you choose your responses from only a portion of the population, your results will not be accepted by the Department. For example, if a community needs assessment survey was conducted and income questions were asked on that survey, you cannot randomly sample from the responses you received unless you received a 100% response rate (nothing less!!!). (Besides, if you receive a 100% response rate, there is no need to randomly choose a sample—you would simply conduct a census survey.) In this circumstance, there will be people who did not respond to the needs assessment survey and these people have no chance of being in your random sample. A random sample requires that each person in the population has an equal chance of being chosen. If you are randomly choosing from only a portion of your population, you are not conducting a random sample!
- 2) You cannot survey a portion of your service area, use census data for another area, and then add those numbers together to try to meet the 51% threshold of low- and moderate-income persons. If the census data covers a portion of your service area and the census data for that area states that the area is at least 51% low- and moderate-income persons, you may survey the remainder of the service area—however, the area that you survey must reach the 51% threshold on its own. Again, you may use both types of data, but they must each meet the 51% threshold on their own—you cannot add these numbers together.
- 3) Do not oversample by more than 20%. As your sample size grows larger, the randomness and reliability (replicability) of your random sample survey decrease significantly.

References

Trochim, W.M.K. (2001). *The Research Methods Knowledge Base*. (2nd ed.). Cincinnati, OH: Atomic Dog Publishing.

Johnson, J.B., Joslyn, R.A., & Reynolds, H.T. (2001). *Political Science Research Methods*. (4th ed.). Washington, D.C.: CQ Press.