

# WASHINGTON STATE INFRASTRUCTURE ASSISTANCE COORDINATING COUNCIL (IACC) INCOME SURVEY GUIDE

## Introduction

This guide outlines a step-by-step survey process to be used by applicants for funding assistance to evaluate if:

- A. A community meets the primary national objective of the Community Development Block Grant (CDBG) program for infrastructure projects; or**
- B. A community qualifies for enhanced loan terms or grants for the following programs:**
  - Drinking Water State Revolving Fund (DWSRF)
  - Centennial Clean Water Program (Centennial)
  - Water Pollution Control Revolving Fund (CWSRF)
  - Public Works Board Construction Loan Program (PWB)
  - USDA Rural Development (RD)

These instructions are necessary to develop, administer, and document a statistically valid income survey to determine the community's percentage of Low-and Moderate-Income (LMI) persons for the CDBG program, and the Median Household Income (MHI) for non-CDBG programs.

This guide is accessible online at <http://www.infracfunding.wa.gov/>. Refer to Appendix A for funding program contact information.

## Definitions

The following definitions explain terms used throughout this income survey guide:

### **A. Low- and Moderate-Income (LMI) Persons**

An "LMI person" is an individual whose household income is no more than 80 percent of the median household income for the county. Household income limits are adjusted according to household size.

The CDBG Income Limits are updated annually and are available at [www.commerce.wa.gov/cdbg](http://www.commerce.wa.gov/cdbg).

### **B. Median Household Income (MHI)**

The median household income (MHI) represents the middle value (if the number of surveys is odd) or the average of the two middle values (if the number of surveys is even) in the ordered list of data values. The median divides the total list of values

into two equal parts: one-half of the data values fall below the median and one-half of the values exceed the median.

### **C. Area or Universe**

The area is the total number of households or connections within the entire system, unless the applicant demonstrates that the survey should apply to a sub-population only. Consult with funding agency representatives (see Appendix A) to ensure the area or universe is identified appropriately.

### **D. Sample Size**

A sample size is a number of households that have been randomly selected from an area. Random selection of an adequate-sized sample ensures that it is representative of the area from which it has been drawn. By sampling a portion of the households residing within the area served by the system, estimates may be made about the incomes of all residents of that area. Please refer to Step 3 for more detail.

### **E. Total Household Income**

Total Household Income is all, taxable and nontaxable, income earned by all members of the household for the latest tax year (a survey conducted in 2016 would be for tax year 2015). Income includes (but is not limited to) wages, business, retirement, supplemental security, public assistance, disability, unemployment and investment income, Veterans Affairs (VA) payments, alimony and so forth. Income received by children under the age of 15 for work such as baby sitting, paper routes, or lawn mowing does not need to be included.

## **Step One: Appoint a Survey Coordinator from an Entity or Organization**

The first step of a survey process is to appoint a Survey Coordinator from a survey entity or organization to oversee the survey process. The Coordinator must contact the funding agency before conducting the survey to ensure that the survey method is acceptable and then after the survey to confirm the effort yields statistically valid results. Depending on the size of the population or target area surveyed, surveys typically take planning, coordination, and effort over a period ranging from several days to several months. The Coordinator should lead the process and provide oversight through all steps, from beginning to end.

Most funding agencies require an applicant to use a third party or other resource available, like a volunteer (not related with the system), a university or consultant. **The applicant must contact each funding agency to determine requirements specific to the program, and to determine whether the third party is approved by the funding agency to conduct the survey.** It is equally important to obtain a commitment from the person selected to see the process through; to be clear about

expectations of the job; and to establish effective communication channels with local elected officials.

## **Step Two: Define Survey Area**

This step of the survey process is designed to yield a definition of the survey area. Completion of this step is dependent on identifying the physical boundaries of the geographic area to be surveyed, and the households that exist within the defined geographic area.

### **A. Identify geographic boundaries of the survey area.**

The survey area must conform to geographic boundaries of, and must be done for the entire area being served by the system, unless an applicant demonstrates the survey should apply to a sub-population or service area being improved. Consult the specific funding agency to ensure the area or universe is identified appropriately.

### **B. Identify households within the survey area.**

To complete the process of defining the survey area, all households in the area being served by the system must be identified.

After all households, including their site address, have been identified, the Survey Coordinator must assign a household sampling number to each household within the survey area.

## **Step Three: Select Survey Sample From the Households Within The Area**

Once the survey area has been defined, the next step is to select a survey sample of households within the survey area. To complete this step, it is necessary to: determine the appropriate sample size; determine unoccupied homes; establish a process to replace unreachable and other non-response households; and draw the survey sample.

### **A. Determine sample size needed to generate the minimum number of required responses.**

The next step is to determine the sample size needed to generate the minimum number of responses required for the income survey. If the minimum number of responses is not obtained, the survey will not be considered valid. **The Survey Coordinator should verify the required number of responses with each funding agency.**

To help determine sample size, use a calculator similar to the tool found at <https://www.surveymonkey.com/mp/sample-size-calculator/>. To use the calculator, first enter the total number of households in the 'Population Size' field, and leave the default 'Confidence Level' at 95%. Then enter 5% in the Margin of Error field. Then hit 'Calculate', and the tool will calculate the required sample size for you. An example is shown in Figure 1 below.

**Figure 1**  
**SurveyMonkey Sample Size Calculator**

The image shows the SurveyMonkey Sample Size Calculator interface. At the top, the SurveyMonkey logo is visible, along with navigation links for Home, How It Works, Examples, Survey Services, and Plans & Pricing. The main heading is "Sample Size Calculator". Below this, there is a brief explanation: "How many people do you need to take your survey? Even if you're a statistician, determining sample size can be tough. To make it easy, try our sample size calculator. We give you everything you need to calculate how many responses you need to be confident in your results." The calculator section is titled "Calculate Your Sample Size:" and contains three input fields: "Population Size:" with the value 239, "Confidence Level (%):" with a dropdown menu set to 95, and "Margin of Error (%):" with the value 5. A "Calculate" button is located below these fields. To the right of the input fields, a large box displays the "Sample Size" as 148. A small note at the bottom right of the calculator area states: "\*This sample size calculator uses a normal distribution (50%) to calculate your optimum sample size."

**B. Establish a process to replace unreachable and other non-response households within the sample.**

The sample size indicates the number of valid responses that must be received, not necessarily the number of households that will need to be contacted. The response must include complete and accurate information on the respondent's income level and household size. Over sampling is one way to deal with unreachable households, unoccupied homes and other non-response situations.

**C. Draw Samples.**

Every household in the survey area needs to have an equal chance of being included in the sample. To ensure an equal chance, a random sample may be drawn using a random numbers table or Microsoft Excel generated random numbers.

It is advisable to over-sample when unreachable households, unoccupied homes and other non-response situations are encountered. They may be replaced with

households in the over-sample list in the order replacements were selected. For example, if a list of 200 households is drawn in an effort to obtain 152 interviews, the 153<sup>rd</sup> household in the sample list should replace the first household written off as “unreachable”.

Better survey results will be obtained if households are not too quickly written off as unreachable. If a door-to-door survey is conducted, two or more passes through the area (at different times) should be attempted. With a telephone survey, attempt three calls before replacing a household.

#### **D. Using Artificial Household Responses to Meet the Required Sample Size.**

After making a reasonable effort to collect enough valid responses, the Surveyor Coordinator may use up to 10 percent “artificial household responses” to meet the sample size requirement. For example, if the sample size calculator requires 150 responses but only 135 valid responses have been received, up to 15 artificial household responses may be used to validate the survey and determine the MHI and LMI for the survey area. A “reasonable effort” is a minimum of two community visits to collect responses by going door-to-door. A written or verbal refusal does not require a second site visit. Interview attempts to reach every household in the survey sample must be documented.

For MHI calculations, the Survey Coordinator will tally each artificial household response using a household income equivalent to the highest income survey response. For LMI calculations, the Survey Coordinator will classify each artificial household response as above the CDBG income limits with an estimated household size based on the average household size calculated from all valid survey responses.

### **Step Four: Select Survey Method**

The Survey Coordinator should decide which survey method or combination of survey methods is best for an area, considering the number of people available to assist, the size of the sample needed, and the means available for identifying households to interview. Any survey method selected should provide a means for households with limited English proficiency (LEP) to respond to the survey. Please refer to 65 CFR 50123 or to the Department of Justice website [www.lep.gov/resources/resources.html](http://www.lep.gov/resources/resources.html) for the specifics of this requirement.

- A. Telephone survey** - The interviewer places a telephone call to a previously determined household, identifies the head of the household or a knowledgeable person, proceeds with the interview, and accurately records the answers.
- B. Door-to-door survey** - The interviewer introduces themselves, and makes contact with someone qualified to speak for the household (e.g., head of

household, spouse of the head of household, or someone in the household who is mature and knowledgeable about household income). Next, the interviewer identifies the purpose of the survey, solicits participation from the respondent, and accurately records the answers or allows the respondent to complete a survey questionnaire themselves.

**C. Mail survey** - To conduct a mail survey, the Survey Coordinator needs a list of household mailing addresses; a questionnaire; stamped, self-addressed return envelope; and postage. Consideration must be given to multiple unit residences, such as apartment buildings, which may have only one billing address but represent several households to be surveyed. With mail surveys, one or more follow-up efforts may be needed to produce the required number of responses.

**D. Combination survey.** Generally, two or more of the methods listed above are used to complete a valid income survey. For example, when no one is home to answer a door-to-door survey, a note may be left requesting that the occupants telephone the interviewer. A letter may be mailed to residents of the target area informing them of the date a survey will occur and a time an interviewer(s) will be in the area.

## **Step Five: Income Survey Questionnaire**

The income survey questionnaire should be designed to get accurate responses to questions on the respondents' household income and household size. Consistent and accurate responses are more likely obtained when questionnaires include a standard introduction explaining the purpose of the survey and ensuring the respondents' answers will be kept confidential.

Since questions about income are personal, interviewees may be reluctant to answer them. This is especially true if the reason for the question is not understood. One way to handle this problem is to structure the interview process to first explain why income information is needed, and then to ask the essential questions about household size and income. Please refer to Attachment 1: Income Survey Questionnaire.

## **Step Six: Publicize Survey Process**

To promote citizen participation, provide advance notice of the upcoming income survey. A notice in a local newspaper or announcements at churches or civic organizations can let people know that a survey will be conducted to determine the income levels of the area. People will be more likely to cooperate if they know in advance how, why and when the survey will be conducted.

As with all aspects of the survey and questionnaire, any publicity must be worded so it does not bias the results. For example, it is better to say that the community is applying for funding assistance and, as part of the application, the community has to provide

current estimates of the incomes of the residents of the service area. It is not appropriate to say that, in order for the community to receive the desired funding, a survey must be conducted to show most of the residents have low incomes.

## **Step Seven: Recruit and Train Survey Staff**

### **A. Recruit staff**

The Survey Coordinator may hire professional interviewers or volunteer persons from local community groups as long as they are not connected to the system. Colleges that offer courses on civics, public policy, or survey research may be willing to assist as a means of providing their students with practical experience and credit.

It is best to choose interviewers whom can make respondents feel comfortable, who will hold the attention of the respondent, ask the questions as they are written, follow respondent selection procedures, and accurately record the responses.

### **B. Train staff**

Interviewers should read the questions exactly as they are written. If the respondent does not understand the question or gives an unresponsive answer, the interviewer should repeat the question exactly as written. Questions should be read in the order in which they are written. The respondent's answers should be recorded neatly and accurately as they are provided. Before proceeding to the next interview, the interviewer should review the questionnaire to be sure that every answer is clear and accurately recorded. This simple check helps to avoid the need to re-contact the respondent for clarification.

## **Step Eight: Conduct Interviews**

Interviewers should attempt to contact respondents at a time when they are most likely to get a high rate of response. Telephone interviews are conducted early in the evening when most people are home. Door-to-door interviews also may be conducted early in the evening or on weekends. Attempts should be made at different times to reach anyone in the original sample missed by the initial round of interviews.

The interviewer should avoid selecting a time or method that will yield biased results. For example, interviewing only during the day from Monday to Friday probably will miss families where both spouses work. Since these families could have higher incomes than families with only one employed member, such a methodology may lead to biased results.

Remember, interviewers also should follow the set procedures for replacing non-respondents or unreachable households as discussed in Step 3. After the interview, the interviewer must write the sampling number equivalent or a unique identifier on the

completed questionnaire. This will serve as the tracking number for the Survey Coordinator.

### **Step Nine: Evaluate Questionnaires**

Interviewers should return completed surveys to the Survey Coordinator. The Survey Coordinator should ensure that each survey is complete and clearly answered. Incomplete or ambiguous responses can be clarified by re-contacting the respondent.

### **Step Ten: Record Survey Results**

**A. Record Median Household Income (MHI) data for non-CDBG programs:**

The Survey Coordinator should record and organize income survey data to determine the MHI. A tally sheet similar to **Figure 2** can be used to report household income survey data.

**Figure 2**  
**Household Income Responses**

<u>Household Sampling #</u>	<u>Reported Income(\$)</u>
<i>add rows as needed</i>	<i>add rows as needed</i>
<b>Median Household Income</b>	
<b>Number of Households Interviewed</b>	



**B. Record LMI data for CDBG program:**

The Survey Coordinator should organize and record LMI survey data for determining eligibility for the CDBG program. A tally sheet similar to Figure 3 below can be used to tabulate households of different sizes as above and below the CDBG Income Limits. An Excel version of the tally sheet can also be found at <http://www.commerce.wa.gov/cdbg> or by contacting CDBG staff.

**Figure 3**  
**Sample Survey Tally Sheet for CDBG**

Survey #	1-Person Family		2-Person Family		3-Person Family		4-Person Family		5-Person Family	
	Above	Below	Above	Below	Above	Below	Above	Below	Above	Below
	\$35,250		\$36,750		\$41,350		\$45,900		\$49,600	
1		25300								
2			42000							
3								33000		
4					55000					
5	41000									
6				34000						
7						36000				

**Step Eleven: Summarize and Analyze Survey Results**

**A. Determining MHI for non-CDBG programs:**

Using sorted household income survey data, identify the median household income (MHI) for the survey universe.

**B. Determining LMI for CDBG program:**

Household size and income data is summarized in **Figure 4 - Households to Persons Above and Below Income Limits**. The LMI percentage is calculated in **Figure 5 – Income Survey Worksheet for CDBG**. Excel versions of Figures 4 and 5 are available at <http://www.commerce.wa.gov/cdbg> under the Guidance Materials link or by contacting CDBG staff.

**Figure 4**  
**Households to Persons Above and Below Income Limits**

Household Size	<b>BELOW</b> Low- and Moderate Income Limits		<b>AT or ABOVE</b> Low- and Moderate Income Limits	
	Households (get from tally sheet)	Persons (A) x (B) = (C)	Households (get from tally sheet)	Persons (A) x (D) = (E)
<b>Number of Persons (A)</b>	<b>Number (B)</b>	<b>Number (C)</b>	<b>Number (D)</b>	<b>Number (E)</b>
1				
2				
3				
4				
5				
6				
7				
8				
9 or more				
Subtotals				
<b>Total Number of Households Interviewed (Total B + Total D)</b>				
<b>Total Number Persons (Total C + Total E)</b>				

**Figure 5**  
**Income Survey Worksheet for CDBG**

1.	Enter the current estimated total number of households in the service area. Do not count known vacant residences or mainly commercial businesses. This number should match what is reported on your CDBG application's Project Summary Form.	
2.	Enter the current estimated total number of persons in the service area. This number should match what is reported on your CDBG application's Project Summary Form.	
3.	Enter the total number of valid surveys received. Refer to last line in "Households to Persons" table, "Total Number of Households Interviewed."	
4.	Enter the total number of <b>persons</b> in the responding households. Refer to last line in "Households to Persons" table, "Total Number of Persons Interviewed."	
5.	Average household size from valid surveys. [Divide line 4 by line 3].	
6.	Enter the total number of <b>persons</b> living in the low- and moderate-income households interviewed. Refer to total of Column C in the "Households to Persons" table.	
7.	Resulting LMI percentage -- Divide line 6 by line 4. This is the estimated percentage of low- and moderate-income persons living in the service area.	

## **Step Twelve: Retain and Submit Documentation of Survey Process and Results**

Maintain survey documentation consisting of completed questionnaires, a list of respondents, a description of the sampling procedures, and survey tabulations.

- A. Retain completed surveys.** These serve as documentation that the survey was conducted, the proper questions asked, and that the sample was adequate. To maintain confidentiality, save the cover sheets separately from the survey questions. If necessary, they can be matched later for verification.
  
- B. Retain a list of households of the original sample, a list of households actually interviewed, and, if applicable, a list of artificial household responses used to meet the required sample size.** Compile a list of households that were in the original sample and those households that were actually interviewed. Also describe the process used to replace unreachable, other non-respondent households, and to calculate artificial household responses.
  
- C. Retain sampling procedures.** Written documentation should describe the method used to select sample households.
  
- D. Retain data.** Data may be retained on a disk, a spreadsheet or a table.
  
- E. Submit data, documentation of survey process and results to the funding program for verification.**



### Appendix A: Contact and Other Program Information

Funding Program	Drinking Water State Revolving Fund (DWSRF) Centennial Water Fund (Centennial)Clean Water State Revolving Fund (CWSRF)	Public Works Board (PWB) Construction Loan Program	USDA Rural Development (RD)	Community Development Block Grant (CDBG)
<b>Contact Information</b>	<p>DWSRF - Department of Health Karen Klocke - (360) 236- 3003 <a href="mailto:Karen.Klocke@doh.wa.gov">Karen.Klocke@doh.wa.gov</a> <a href="http://www.doh.wa.gov/ehp/dw">http://www.doh.wa.gov/ehp/dw</a></p> <p>CWSRF/Centennial - Department of Ecology Daniel Thompson - (360) 407-6510 <a href="mailto:daniel.thompson@ecy.wa.gov">daniel.thompson@ecy.wa.gov</a> <a href="http://www.ecy.wa.gov">http://www.ecy.wa.gov</a></p>	<p>Public Works Board Department of Commerce</p> <p>Connie Rivera (360) 725-3088 <a href="mailto:connie.rivera@commerce.wa.gov">connie.rivera@commerce.wa.gov</a> <a href="http://www.pwb.wa.gov">http://www.pwb.wa.gov</a></p>	<p>USDA RD</p> <p>Janice Roderick (360) 704-7739 <a href="mailto:janice.roderick@wa.usda.gov">janice.roderick@wa.usda.gov</a> <a href="https://www.rd.usda.gov/wa">https://www.rd.usda.gov/wa</a></p>	<p>Department of Commerce CDBG</p> <p>Kaaren Roe (360) 725-3018 <a href="mailto:Kaaren.roe@commerce.wa.gov">Kaaren.roe@commerce.wa.gov</a> <a href="http://www.commerce.wa.gov/cdbg">http://www.commerce.wa.gov/cdbg</a></p>
<b>Differences in Income Survey Requirements</b>	<p><b>Purpose:</b> To determine median household income (MHI) for Affordability Index (AI) or hardship calculations.</p>		<p><b>Purpose:</b> To determine median household income (MHI) for the loan/grant fund.</p>	<p><b>Purpose:</b> To determine percent of low and moderate -income (LMI) persons in service area. LMI percent must be at least 51% for area benefit CDBG grant funds.</p>
	<p><b>Alternative MHI data sources:</b></p> <ul style="list-style-type: none"> <li>• Other funding source’s approved MHI determination</li> <li>• American Community Survey (ACS) data</li> </ul>		<p><b>Alternative MHI data sources:</b> American Community Survey (ACS) data</p>	<p><b>Alternative LMI data sources:</b> HUD’s LMI percent calculations based on ACS data.</p>
	<p><b>Survey income question:</b> Amount of annual household income.</p>			<p><b>Survey income question:</b> Household size and annual household income to determine if household income is at/above or below LMI income limit.</p>
	<p><b>Acceptable Timeframe:</b> Income surveys must be conducted within past 3 years and meet funding agency’s guidelines.</p>			<p><b>Acceptable Timeframe:</b> Surveys conducted after January 1, 2016.</p>
	<p><b>Third-party surveyor:</b> Required and must be approved prior to conducting survey.</p>			<p><b>Third-party surveyor:</b> Recommended but not required. Survey methodology must be approved prior to conducting survey.</p>